TAHOE REGIONAL PLANNING AGENCY

Tahoe Transportation DISTRICT

FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

SR-89 Corridor Management Plan

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Prepared By:

Design Workshop, Inc.

Karen Mullen-Ehly, Inc.

Fehr & Peers

LSC Transportation Consultants

ORCA Consulting

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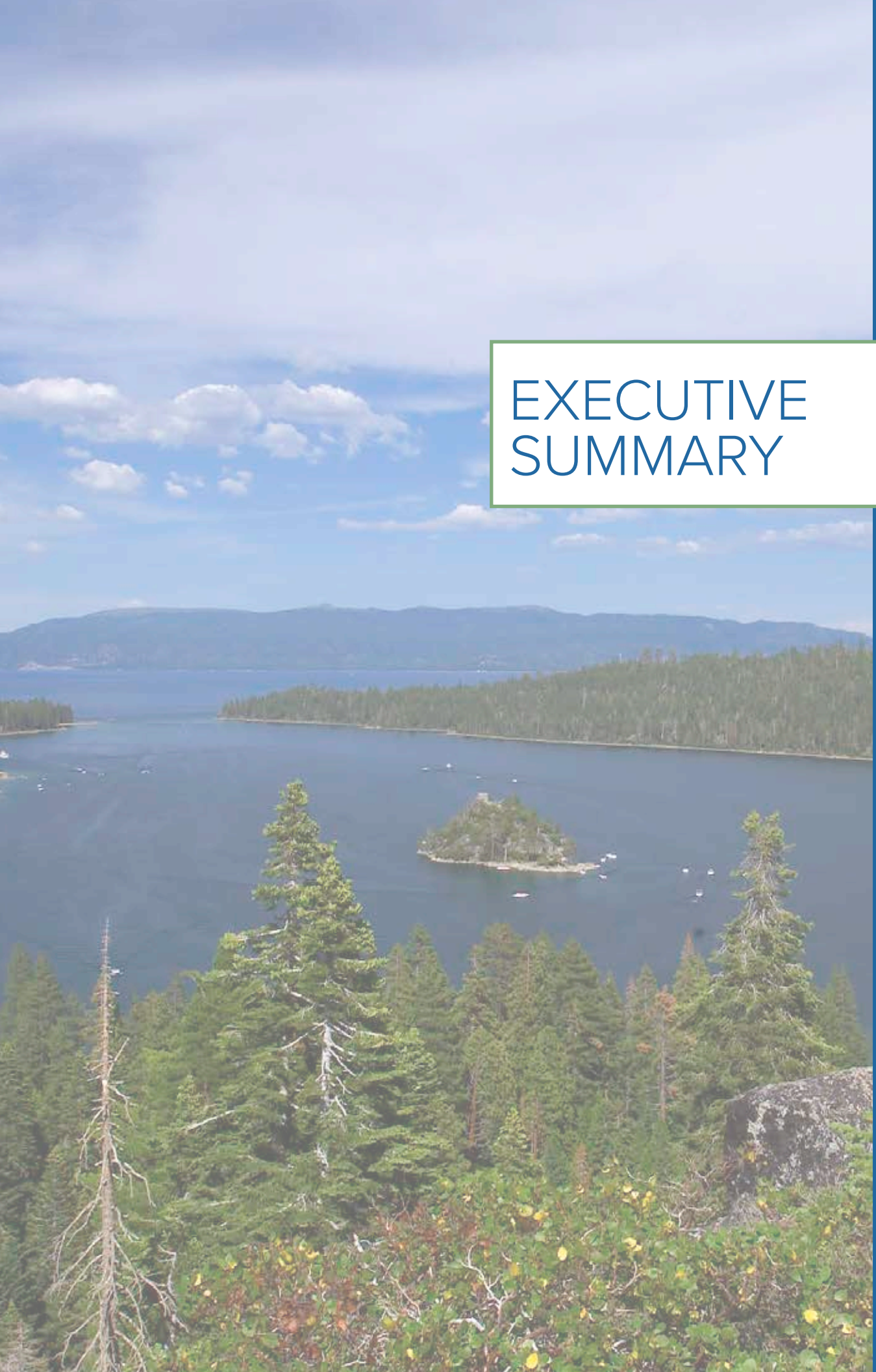


EXECUTIVE SUMMARY

PRESERVING AN ICON BY INCREASING TRAVEL CHOICES

State Route (SR) 89, a two-lane mountain roadway, is the only access route to many of Lake Tahoe's popular recreation areas and serves an average of 1.8 million visitors annually (per the Linking Tahoe Corridor Connection Plan). The highway traverses 17.5 miles of Lake Tahoe's spectacular southern and western shoreline. Among its many natural, cultural, and recreational resources, it is home to Emerald Bay, one of California's 36 National Natural Landmark sites. Renowned for its spectacular beauty, Emerald Bay is one of Lake Tahoe's most popular and photographed locations. The vantage point from viewpoints such as Inspiration Point and Vikingsholm offer views of the bay and the expansive lake beyond.

The variety of natural and cultural resources abound in the corridor, making it the jewel of Lake Tahoe. A special place to be and an important place to protect so it is not loved to death.

CORRIDOR DISTINCTION

In addition to the iconic destination of Emerald Bay, the variety of corridor recreation options makes this corridor distinct. These natural resources and related public access brings a mix of short visit stops, longer day use activities, and overnight backcountry stays. Following are just a few notable items:

- Emerald Bay is one of California's 36 National Natural Landmark sites
- The longest stretch of easily accessible, large sandy public beaches, such as Pope Beach and Baldwin Beach
- The most public campground spaces in the Tahoe basin
- Portals into the backcountry and Desolation Wilderness, the most visited wilderness in the nation
- Significant winter and off-season visitation
- Mix of public lands and private concessionaires
- Washoe traditional and cultural sites

Plan Need

The corridor is one of the most visited and most popular within the Tahoe Region. Visitor demand during peak season (Memorial Day through Labor Day) exceeds infrastructure and staffing/operational capacity at recreation destinations. During the winter, parking areas are closed forcing visitors to park along the roadside to access backcountry skiing and to site-see. Avalanche risks prompt road closures through Emerald Bay, restricting access for emergencies, evacuation, recreation, and commutes. The lack of infrastructure, operational and enforcement strategies, and resources to address the high visitation levels results in negative impacts to visitor travel experience, environment, cultural resources, lake clarity, safety, congestion and quality of life.

The Linking Tahoe: Corridor Connection Plan (LTCCP) states that the "single biggest transportation issue associated with the SR 89 Recreation Corridor is addressing the congestion and parking issues through Camp Richardson and Emerald Bay."

average of **1,800,000** annual visitors

up to a **30** minute delay

KEY TAKEAWAYS FROM RESEARCH AND 2018 DATA COLLECTION

Key takeaways related to the SR 89 corridor from the Linking Tahoe: Corridor Connection Plan and 2018 data collection include the following:

- With 1.6 million annual vehicle trips or 4.9 million person trips made to the Inspiration Point/Emerald Bay area in 2014, it is the most popular attraction in the corridor and possibly the Lake Tahoe Basin.
- Congestion and parking issues through Camp Richardson and Emerald Bay are the biggest transportation issues. Over 500 vehicles parked along the highway near Emerald Bay on a peak summer day. Motorists searching for parking and queues to enter recreation areas are primary drivers of congestion during the summer.
- The highway runs through the middle of two major recreation areas at Camp Richardson and Emerald Bay with high volumes of vehicles, bicycles, and pedestrians creating congestion and safety issues.
- Narrow roadways and minimal shoulders are not conducive for bike and pedestrian use.
- There are no bike and pedestrian facilities north of Camp Richardson and LTBMU beaches.
- There is limited parking at Emerald Bay/Eagle Falls, scenic overlooks, and other trailhead locations.
- The last year transit serviced the corridor was in 2018 and cars often illegally parked in bus stops.
- The corridor hosts a diverse array of recreation activities. Length of stay ranges from a quick photo-opp to a weeks-long overnight backcountry trip. There is significant need for recreation access throughout the year, particularly for winter backcountry access.
- Daily summer traffic volumes are highest at the south end of the corridor with 26,000 vehicles per day near the U.S. Highway 50/South Tahoe "Y" intersection and lowest at the north end of the corridor with 5,900 vehicles per day at Tahoma in 2016.
- Traffic congestion in 2018 caused an estimated average of 12 minutes of delay and a maximum delay of 30 minutes.
- There was an average of 29 reported crashes per year between 2013-2017, 11 resulted in injuries.

Plan Purpose

The State Route Highway 89 (SR 89) Recreation Corridor Management Plan (CMP) sets forth a vision and coordinated set of goals for land managers to work toward. The document sets the stage for why change is needed, summarizes recommended strategies to collaboratively manage the corridor, and includes a series of phased projects to achieve the vision of shifting the way people arrive to their recreation destinations from being auto-dominated to more transit and multi-modal focused.

The SR 89 Recreation Corridor Management Plan is an umbrella document for other plans and projects within the corridor. It creates a central vision and is a mechanism through which land managers can work together to achieve common goals.

Goals

Following is a summary of the six goals established for the corridor. These goals were also used to evaluate alternatives and concepts.

Provide a Quality Travel Experience for All. Create a variety of easy, flexible, and enjoyable ways for visitors and residents to plan for, arrive to, experience, and depart the corridor and recreation sites. Recognize that visitors refers to anyone (both local and non-local) recreating in the corridor.

Improve the Environment. Enhance the multi-modal transportation system and implement roadway improvements to manage congestion, reduce VMT and greenhouse gas (GHG) emissions, improve the clarity of Lake Tahoe, protect cultural resources, and enhance wildlife connectivity.

Advance Safety. Enhance facilities and utilize management strategies that reduce the potential for traffic incidents and enhance emergency access and evacuation routes.

Create Comfortable, Connected, and Convenient Transit and Trail Systems. Expand and manage the multi-modal transportation system to effectively improve access for all users to manage congestion, encourage walking and biking, and provide transit options.

Fund the Vision. Secure sustainable funding to build, operate, maintain, and renew a multi-modal transportation system that transforms the vision from concept to reality.

Set the Stage for Implementation, Maintenance, and Operations. Develop and identify the foundational roles and responsibilities, policies, and agreements needed to execute strategies and adaptively manage the corridor today and into the future.

Toolkit Recommendations to Address Issues

Resource, recreation, and operational issues face the corridor. The issues are interrelated and the strategies available to address them are also connected. The CMP recommends an integrated approach for projects and operational strategies. Tools are used in coordination with one another to maximize their benefit or effectiveness. Results should be monitored and strategies adjusted to achieve a more managed and car-free experience where the impacts of visitor use are reduced.

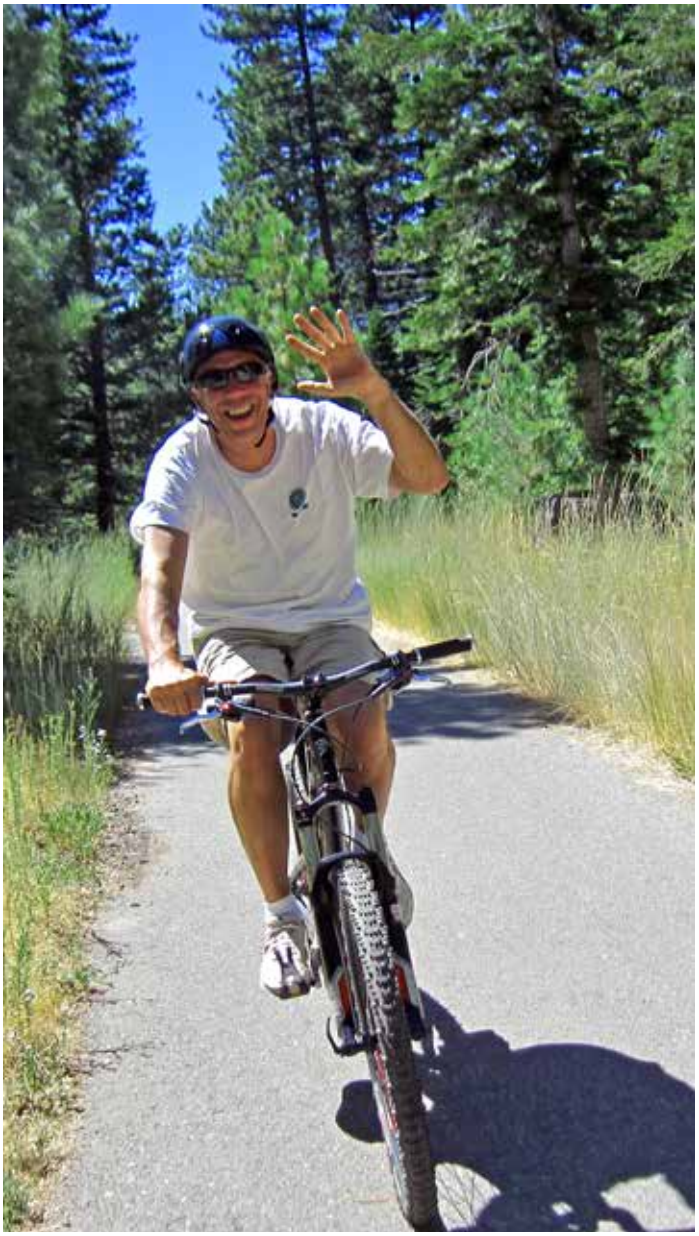
Interconnected set of management tools are used in tandem to achieve a consistent set of recommendations throughout the recreation corridor.

Corridor Recommendations

- **Completion of** the Tahoe Trail
- **Transit &** reservation system during the summer months and peak weekends
- **Roadside parking** restricted/ relocated with increased enforcement and fine
- **Recreation zone speed** limit developed for peak season
- **Point source** congestion management at Pope Beach Road and Jameson Beach Road
- **Winter and off-season access** improvements/year-round recreation access for backcountry and site-seeing needs
- **Technology** infrastructure
- **Increased operational** resources and coordinated management approach

Connecting Strategies with Issues

Shared challenges related to recreation access were organized into a set of 28 key issues (listed to the right). Recommended strategies to address the challenges were identified and a summary of action steps, metrics, potential project leads and partners, and a list of how the strategies relate to other recommendations was provided. The correlated list of issues and strategies is also found as a table in the appendix.



The Pope/Baldwin Bike Path is highly used for both recreation access and as recreation in and of itself.

List of Key Issues Addressed in the Plan

- Item 1 | Gap in Tahoe Trail
- Item 2 | Pedestrians in Highway
- Item 3 | Lack of Consistent Transit Service
- Item 4 | Bus Stops & Turnarounds Needed in Emerald Bay
- Item 5 | Motorists Congest Roads when Searching for Parking
- Item 6 | Visitation Surge Occurs at Peak Times
- Item 7 | Overnight Users Need Access
- Item 8 | Parking Lots Closed in Winter
- Item 9 | Emerald Bay Road Design Restricts Transit
- Item 10 | Lack of Year-Round Access Through Emerald Bay
- Item 11 | Limited Areas for Emergency Response
- Item 12 | High Traffic Speeds Near High Volumes of Pedestrians
- Item 13 | Limited Operations Budgets
- Item 14 | Lack of Piers and Operations to Support Water Taxi Service
- Item 15 | Lack of Technology Infrastructure
- Item 16 | Traffic Congestion at Pope Beach Road and at Eagle's Nest Campground
- Item 17 | Traffic Congestion at Jameson Beach Road
- Item 18 | Visitation is not Dispersed
- Item 19 | Pope to Baldwin Bike Path Bike Path has High Use Volumes
- Item 20 | Lack of Recreation Gateway, Visitor Info, & Consistent Wayfinding
- Item 21 | Events Can Impact Congestion
- Item 22 | Roadway is a Barrier for Wildlife Movement
- Item 23 | Overhead Powerlines Create a Fire Risk
- Item 24 | Roadside Parking Degrades Effectiveness of Stormwater Features
- Item 25 | Vikingsholm Parking Needs Repairs
- Item 26 | Implementation is Tough and Needs Partnerships and Executive Buy-in
- Item 27 | Lack of Public/Private Partnerships
- Item 28 | Climate Change

TRAVEL FRAMEWORK ANALYSIS AND RECOMMENDATION

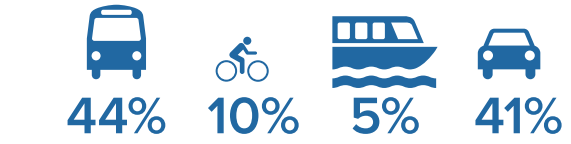
To develop a recommended transit framework a travel analysis was completed that factored in visitation patterns, operational feasibility, and other considerations. The outcomes revealed the need to use not only shuttle and bicycle operations and facilities, but also services, such as water taxis and a parking and transit reservation system, to disperse visitation throughout the day. To be fiscally achievable, revenue from the corridor parking management system needs to be allowed to be reinvested into operations and maintenance of the corridor and its transportation system.

Overall, the new system significantly reduces the number of cars driving within the corridor every month. Significant elements of the framework include the following:

- Completing the Tahoe Trail
- Establishing a predictable and sustainable funding source to pay for the parking management system and subsidize the transit, parking, and trails operations and maintenance
- Using a reservation system along with congestion pricing for transit and parking areas to disperse arrival and departure times throughout the day
- Creating an exciting marketing and branding program to encourage transit use and conducting follow-up surveys to adjust the program as needed
- Intercepting visitors at both the southern and northern ends of the corridor to allow for short shuttle runs to make more roundtrips with fewer buses while connecting the transit system to the mainline transit services operating in the South Shore and North Shore to encourage park-once strategies that allow visitors to reach Emerald Bay without ever using a car
- Restricting/relocating roadside parking, increasing enforcement, and significantly increasing fines
- Allowing thru traffic
- Addressing congestion issues in the Pope to Baldwin Segment
- Adaptively managing the corridor over time
- Conducting a regional recreation visitation study
- Coordinating projects to maximize funding options and benefits
- Establishing a Corridor Management Team and an Executive Team to cooperatively implement the plan

37,400 fewer cars in the **Corridor** every summer month

How People Arrive to the Corridor in the Summer[1]



✓ Tahoe Trail Completed

✓ Thru Traffic Allowed

Roadside Parking Relocated

Transit Service

Bus Routes

- Y to Emerald Bay every 15 minutes
- Sugar Pine Point State Park to Emerald Bay every 15 minutes
- Coordinate transit routes to connect with main line transit systems from South Lake Tahoe and from North Lake Tahoe

Water Taxi Routes

- South Shore: 2 boats running hourly from 10:30-6:30 (from Camp Richardson to Emerald Bay)
- North Shore: 1 boat running every 2 hours from 10:30-6:30 (from Homewood or Sugar Pine Point State Park to Emerald Bay)

MANAGING VISITATION

The CMP establishes a travel framework based on the 2018 visitation. The system could accommodate a modest future increase of 5 percent. Increased recreation demand needs to be addressed at a regional level. Transit, trails, and parking management programs provide tools to shift use patterns to reduce impacts and to monitor and control demands as appropriate. The system can also scale up or down to meet desired management levels.

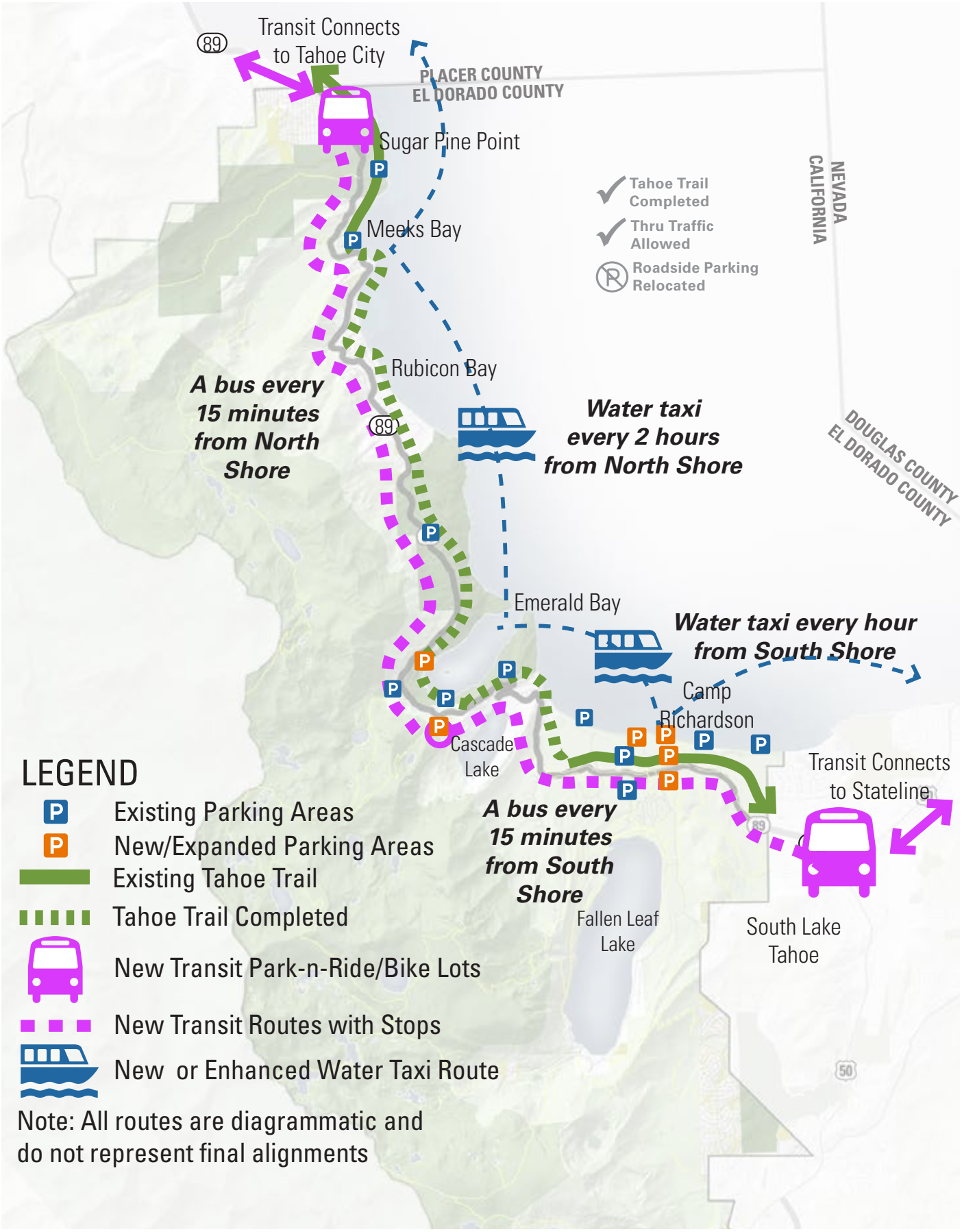


Figure 1: Recommended Travel Framework

Phasing and Implementation

The travel framework is recommended to be implemented in three phases. Infrastructure and operational projects are required to support each phase. Phasing considers those projects that represent quick wins, efforts that are already funded or have environmental documentation completed, and strategies that must be set in place as a foundation for other projects to build from. As project funding becomes available, some projects may move up in phasing.

Implementation of CMP recommendations requires continued collaboration to address challenges, seek solutions, and have project champions to usher projects forward. A Corridor Management Team will work together to provide a coordinated approach to maintenance and operations.

The SR 89 Recreation Corridor crosses state and federal lands and has multiple organization operating within it, making management challenging. No single agency can address the many issues that are a by-product of roadside parking. As experienced with the SR 28 corridor, a corridor champion, executive team, and a management structure is needed to bring parties together to resolve shared issues.

Phase I Key Projects

- Conduct the Tahoe Trail feasibility study
- Develop a funding/financing plan with phase improvements
- Improve the Vikingsholm and Eagle Falls parking lots, develop transit stops, and link facilities with the Tahoe Trail from the vista lookout past the Vikingsholm parking lot
- Address congestion at Pope Beach Road and Jameson Beach Road
- Construct shared use paths along Jameson Beach Road, Baldwin Beach Road, and Pope Beach Road
- Develop a marketing and branding program for the travel framework
- Develop a reservation system for transit and parking management
- Develop turnarounds for emergency and transit vehicles
- Conceptual route for a north/south multi-use trail connector
- Evaluate site capacities within the corridor and adjust recommendations accordingly

Phase II Key Projects

- Construct the Tahoe Trail from Spring Creek Road to Emerald Bay and from Meeks Bay to Emerald Bay
- Develop a funding/financing plan with phase improvements
- Improve and construct piers and increase operation budgets for enhanced water taxi access
- Develop park-n-ride/bike lots in the Y area and at Sugar Pine Point State Park and convert Bayview Campground to a transit/parking node that also addresses off-season/winter access
- Address congestion in the Pope to Baldwin Segment through use relocations
- Implement LTBMU parking and circulation projects in Pope to Baldwin Segment
- Increase capacity for cyclist access to Camp Richardson
- Install technology infrastructure
- Develop a South Shore transit maintenance facility

Phase III Key Projects

- Construct the Tahoe Trail around Emerald Bay and maintain the trail
- Develop a funding/financing plan
- Evaluate need for a small parking area (15 spaces) by north Emerald Bay gates for off-season/winter access
- Conduct a regional visitation strategy to accommodate displaced visitation
- Adaptively manage the corridor and fine tune the travel framework, operations, and marketing program
- Consider bike lanes or widened shoulders throughout corridor
- Install technology infrastructure

Visitor Experience Cycle Implications

The Visitor Experience Cycle (VEC) defines five phases that are cyclical in nature: Anticipation, Arrival, Experience, Departure, and Savor. The VEC serves as a valuable model for gauging the impact of the CMP across the full spectrum of the visitor journey, for the purposes of ensuring overall balance and in identifying gaps. The CMP summarizes the impact each phase of improvements will have on visitor experience and makes recommendations for continued usage studies, on-site and post-visit surveys, and social media feedback analysis to gauge the impact of each individual initiative to build use of the transit system and to refine efforts.

A Note on COVID-19

In March of 2020, as development of the CMP was finishing, COVID-19 was declared a pandemic by the World Health Organization. Priorities of agencies and organizations appropriately shifted to address the immediate and critical needs associated with the pandemic. Regions such as Lake Tahoe, where the economy is driven by tourism, have incurred substantial economic hits and are projecting significant budget shortfalls. Because of these unprecedented times, the CMP recognizes that it is a long term plan and implementation of recommended projects and planning efforts may be delayed as jurisdictions, agencies, and organizations recover and as funding dollars may be prioritized on health and safety efforts prior to being earmarked for the corridor.

In addition to highlighting budget constraints, COVID-19 has also shown the urgency and need for the recommendations outlined in the CMP. Recreation areas, such as National Parks, that can control access through reservations and permits have been able to create opportunities for access to the outdoors while also maintaining physical distancing guidelines. The transportation framework presented in the CMP includes many similar tools needed to manage recreation and visitation levels.

The corridor is highly used for recreation access in both the winter and summer.

Commitment to Continued Partnerships, Funding, and Addressing Barriers

Implementation of CMP will take persistence, rigor, and a commitment to the partnership approach. Many of the challenges must be addressed at executive levels and staff level discussions must be consistent and focused on collaborative problem-solving. Upon completion of this plan, an agreement must be established to maintain the commitment to implementation. Executive Level meetings must continue with participation by lead agencies, high-level issues must be risen to the level of the Bi-State Working Group on Transportation, and a Corridor Management Team must be developed at the agency staff level.

As shown in the below figure, the focus of the Executive Team is to work through procedural, legislative, enforcement, capacity, funding, environmental review, and other high priority issues. The Corridor Management Team supports the Executive Team and works together to create attractive grant funding applications, leverage resources, and create an operating plan that works corridorwide. Managing change for SR 89 requires partnering agencies to continue engaging the community and working together to implement projects, resolve issues as they arise, and further develop funding sources. The CMP promotes long term agency collaboration through a SR 89 Recreation Corridor Management Team made up of partnering agency representatives.

At times the Management Team should set up Technical Advisory Committees to address various needs throughout the year. It is not the intent to have this Corridor Management Team direct individual agency goals or their budgets but to establish a partnership that collaboratively works toward addressing their shared issues including budgetary constraints. In the future, partnering agencies may find efficiencies that could be gained by sharing resources.

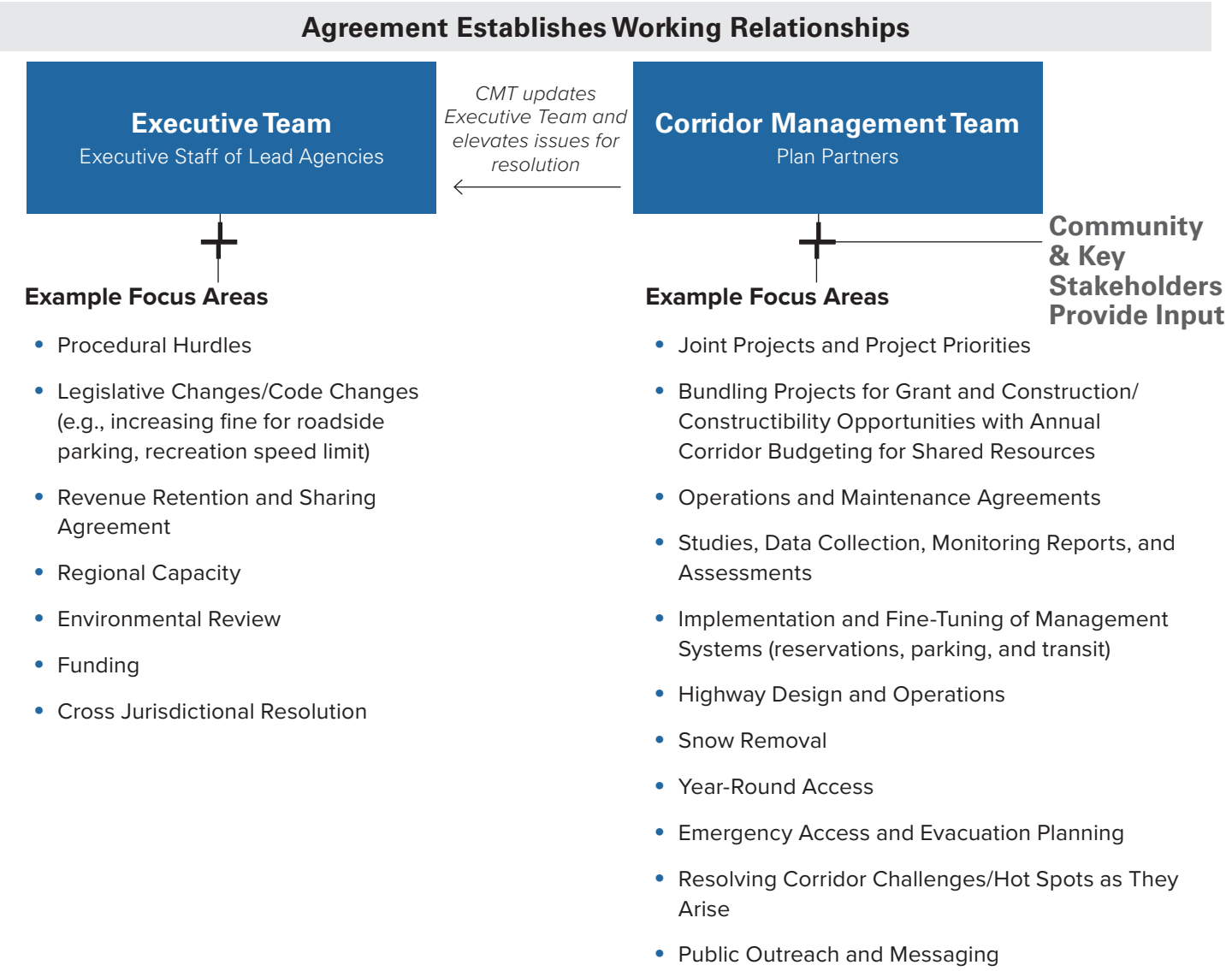
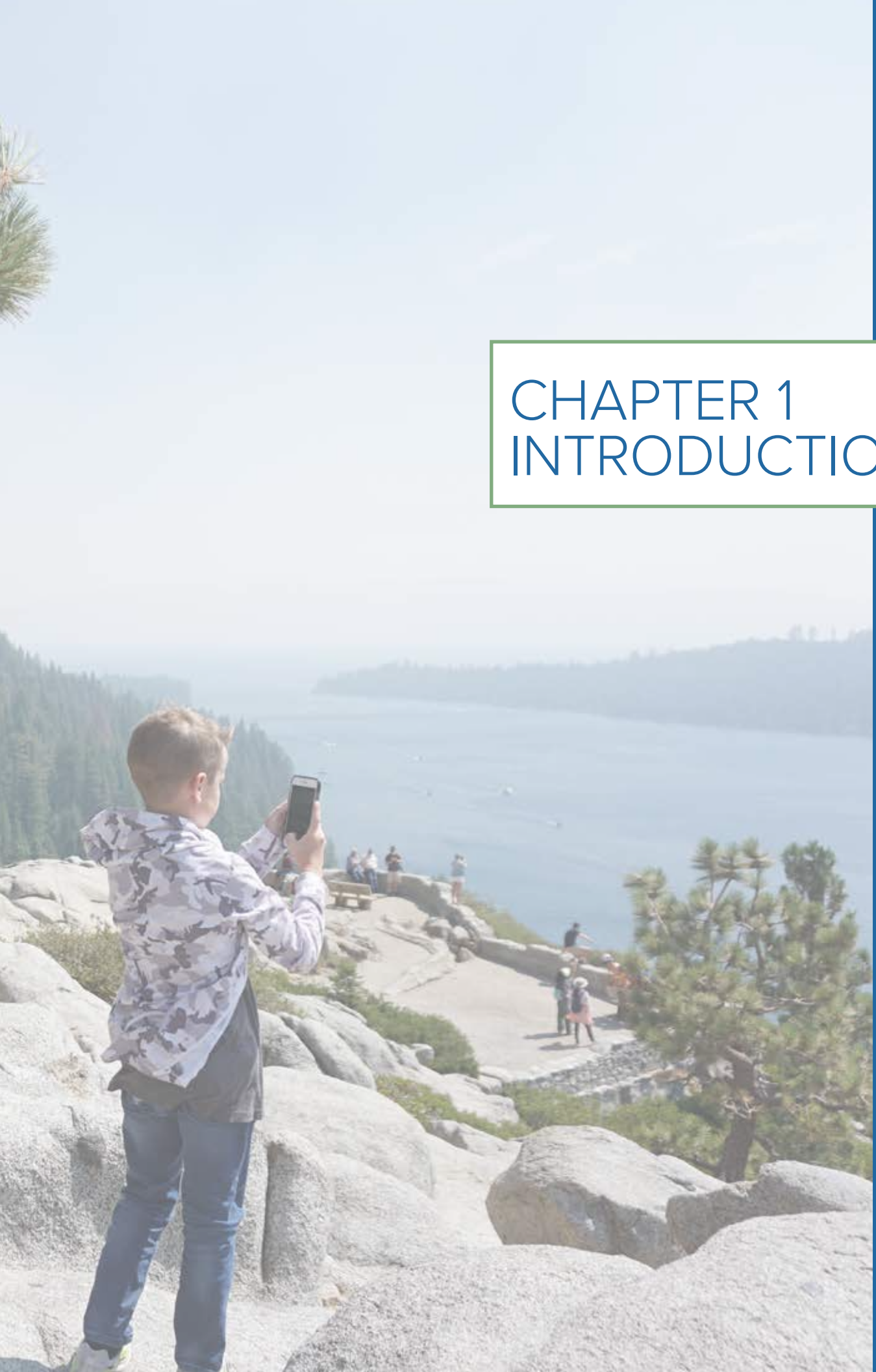


Figure 2: Focus Areas of Executive Level and Staff Level Teams to Implement Recommendations and Address Barriers



CHAPTER 1
INTRODUCTION

INTRODUCTION

The State Route Highway 89 (SR 89) Recreation Corridor Management Plan (CMP), led by the Tahoe Regional Planning Agency (TRPA), Tahoe Transportation District (TTD), and the USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU), brought together 17 agencies and organizations to develop transportation and visitation management strategies that address the shared challenges related to the corridor's extensive transportation and recreation demands. The CMP sets forth a vision and coordinated set of goals for partners to work toward. The document sets the stage for why change is needed, summarizes recommended strategies to collaboratively manage the corridor, and includes a series of phased projects to achieve the vision for shifting the way people arrive to their recreation destinations from being car-focused to more transit and multi-modal access.

Corridor Planning and the Regional Transportation Plan

Corridor planning is an organizing framework to support regional transportation policy, align partners, and accelerate project implementation. The approach requires multi-agency collaboration, commitments, and resources to address shared issues across jurisdictional boundaries. The Tahoe basin is divided into six corridors based on their unique mix of transportation, recreation, and daily life. Corridor plans serve as overarching planning documents that guide the overall vision and strategies for each corridor.

The corridor planning framework is the bridge for implementation and long term operation of projects that implement the Lake Tahoe Regional Transportation Plan. Corridor planning aligns projects to maximize funding and considers opportunities and challenges from multiple stakeholder views. Projects and management strategies developed as part of this corridor plan are integrated into the 2020 Regional Transportation Plan. As projects move toward implementation, project champions are needed to drive progress while working with partners and the public to consider long term operations and maintenance of the entire corridor.

The SR 89 Recreation Corridor Management Plan is an umbrella document for other plans and projects within the corridor. It creates a central vision and is a mechanism through which land managers can work together to achieve common goals.

IMAGINING THE FUTURE

The Tahoe Trail beautifully winds its way along the west shore of Lake Tahoe. It welcomes users to explore the SR 89 corridor by bike and by foot. As the trail brings people to Emerald Bay, the Jewel of Lake Tahoe, pull-offs and vistas invite you to take a moment to enjoy the expansive beauty of the bay and the lake. Convenient, frequent and reliable transit serving the corridor's recreation destinations allows residents and visitors alike to easily visit and recreate without needing a car. Staffing and operation levels are balanced with the need to manage visitation and protect the special natural and cultural resources that make the SR 89 corridor an extraordinary place to be. This future is made possible through funding and continued partnerships and collaborations. As a team, all agencies work together to address challenges and seek solutions.

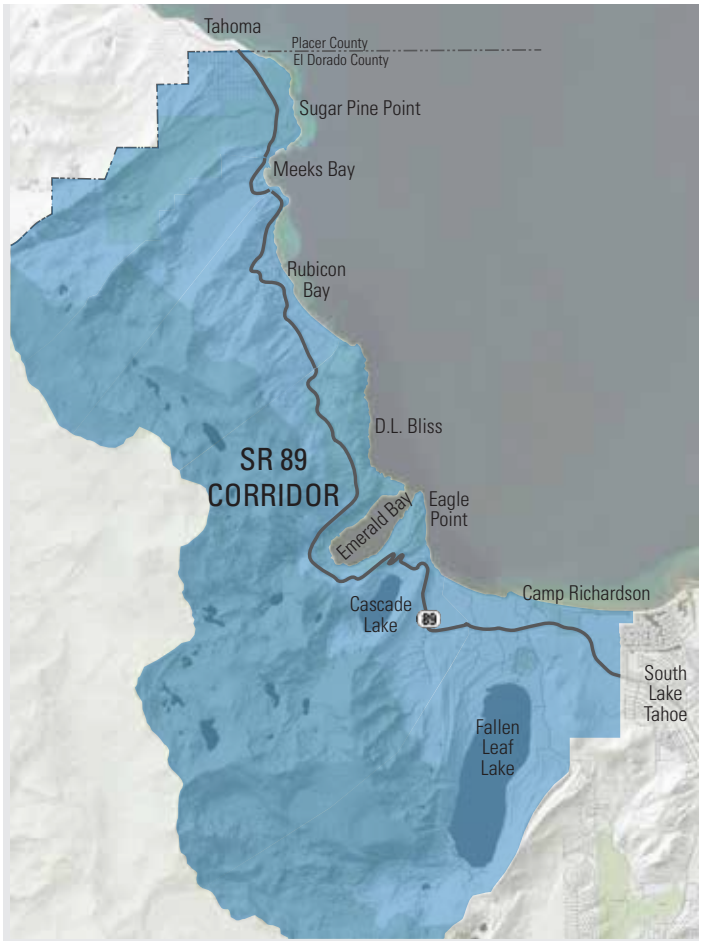


Figure 3: SR 89 Recreation Corridor

Relationship to Linking Tahoe: Corridor Connection Plan

The Tahoe Transportation District (TTD) developed the 2017 Linking Tahoe: Corridor Connection Plan (LTCCP or Corridor Connection Plan), which provided recommendations for all internal and external corridors for the Lake Tahoe Region. The SR 89 CMP uses the LTCCP as a baseline for data and high-level management strategies. The LTCCP describes the vision for the different corridors in Lake Tahoe. The SR 89 CMP describes more specific action items to achieve the vision.

Corridor Location

State Route Highway 89 (SR 89) is a two-lane mountain roadway running from Meyers, California north along the West Shore of Lake Tahoe to North Lake Tahoe and beyond. It is the only access route to many of Lake Tahoe's popular recreation areas and serves an average of 1.8 million visitors annually (per the Linking Tahoe Corridor Connection Plan). The SR 89 corridor includes 17.5 miles of highway and adjacent recreation uses from West Way in El Dorado County north to the El Dorado/Placer County line at Sugar Pine Point State Park.

Views across Emerald Bay to Lake Tahoe are the highlight of many visitors and a significant source of recreation opportunities for residents and visitors.

KEY TAKEAWAYS FROM RESEARCH AND 2018 DATA COLLECTION (SEE APPENDIX)

Key takeaways related to the SR 89 corridor from the Corridor Connection Plan and 2018 data collection include the following:

- With 1.6 million annual vehicle trips or 4.9 million person trips made to the Inspiration Point/Emerald Bay area in 2014, it is the most popular attraction in the corridor and possibly the Lake Tahoe Basin.
- Congestion and parking issues through Camp Richardson and Emerald Bay are the biggest transportation issues. Over 500 vehicles parked along the highway near Emerald Bay on a peak summer day. Motorists searching for parking and queues to enter recreation areas are primary drivers of congestion during the summer.
- The highway runs through the middle of two major recreation areas at Camp Richardson and Emerald Bay with high volumes of vehicles, bicycles, and pedestrians creating congestion and safety issues.
- Narrow roadways and minimal shoulders are not conducive for bike and pedestrian use.
- There are no bike and pedestrian facilities north of Camp Richardson and LTBMU beaches.
- There is limited parking at Emerald Bay/Eagle Falls, scenic overlooks, and other trailhead locations.
- The last year transit serviced the corridor was in 2018 and cars often illegally parked in bus stops.
- The corridor hosts a diverse array of recreation activities. Length of stay ranges from a quick photo-opp to a weeks-long overnight backcountry trip. There is significant need for recreation access throughout the year, particularly for winter backcountry access.
- Daily summer traffic volumes are highest at the south end of the corridor with 26,000 vehicles per day near the U.S. Highway 50/South Tahoe "Y" intersection and lowest at the north end of the corridor with 5,900 vehicles per day at Tahoma in 2016.
- Traffic congestion in 2018 caused an estimated average of 12 minutes of delay and a maximum delay of 30 minutes.
- There was an average of 29 reported crashes per year between 2013-2017, 11 resulted in injuries.

THE CHALLENGE

The LTCCP states that the "single biggest transportation issue associated with the SR 89 Recreation Corridor is addressing the congestion and parking issues through Camp Richardson and Emerald Bay."

Visitor demand during peak season (Memorial Day through Labor Day) exceeds infrastructure and staffing/operational capacity for significant recreation destinations. The lack of infrastructure, operational, and enforcement strategies and resources to address the high visitation levels results in negative impacts to visitor travel experience, environment, cultural resources, lake clarity, safety, congestion, and quality of life.

The corridor is one of the most visited and most popular within the Tahoe Region. The Corridor Connection Plan reported that the corridor saw an average of 1.8 million annual visitors during 2014. RRC Associates' Summer 2014 Visitor Research Summary for the North Lake Tahoe Resort Association showed 47 percent of respondents indicated spending time in Emerald Bay during their trip. And analysis of the 2018 data collection estimated over 16,000 people visited Emerald Bay every day.

During the summer, vehicular queues begin forming between 8:00 AM and 10:00 AM at beach entries, trailheads, and off-highway vista points. The back-ups stretch into the highway and create congestion and travel delays. Emergency responders and transit operators are often significantly impacted by the congestion.

Not enough designated off-highway parking spaces exist to meet the demand of visitors arriving by vehicle to Emerald Bay and Camp Richardson recreation areas. As a result, motorists search for places to park along narrow shoulders, and because recreation sites are not connected, motorists must enter and exit the highway multiple times when they visit more than one destination. The search for parking increases congestion, leads to traffic incidents, increases erosion, and impacts water quality projects. Additionally, visitors who park along the highway must walk along the shoulder or within the roadway to reach their destination.

In the winter, SR 89 through Emerald Bay closes during and after winter storms due to avalanches and narrow shoulders. This impacts emergency responders and commuters who must travel around the East Shore to reach places of employment, meetings, or the grocery store.

Seasonality and variability in winters requires adaptive management. When the highway is open during the winter, it is a desirable location for backcountry ski access and for taking in the view. Because of operational requirements, most Forest Service parking lots generally close mid-October through mid-May. People must park along the roadway to access winter recreation sites. During the shoulder season and winters with little to no snowfall, vehicles park on the shoulder because the LTBMU parking lots are closed. Due to climate change trends, reduced snowfall at Lake level occurs more frequently. Therefore, the need to provide access during winter months is increasing.

Addressing the congestion and parking issues near Pope Beach and Camp Richardson and through Emerald Bay present the biggest transportation challenge for the corridor.

THE VISION

The LTCCP describes the transportation vision for the corridor's future and the CMP builds upon that description as summarized in the vision statement to the right. Transit and active transportation facilities are at the heart of how people are envisioned to access recreation areas. Natural and cultural resources are protected. Convenient, frequent transit services, with an interconnected system of walking and biking paths, connect people to the places they want to visit. Technology is used both as part of parking management systems and for real-time visitor information.

THE VISION | PRESERVING AN ICON BY INCREASING TRAVEL CHOICES

Provide a safe and seamless travel experience that inspires every visitor and resident to walk, bike, or use transit to access the corridor's diverse recreation offerings to better manage congestion, enhance environmental resiliency, and allow people to focus on enjoying the special nature of Lake Tahoe's southwest shoreline.

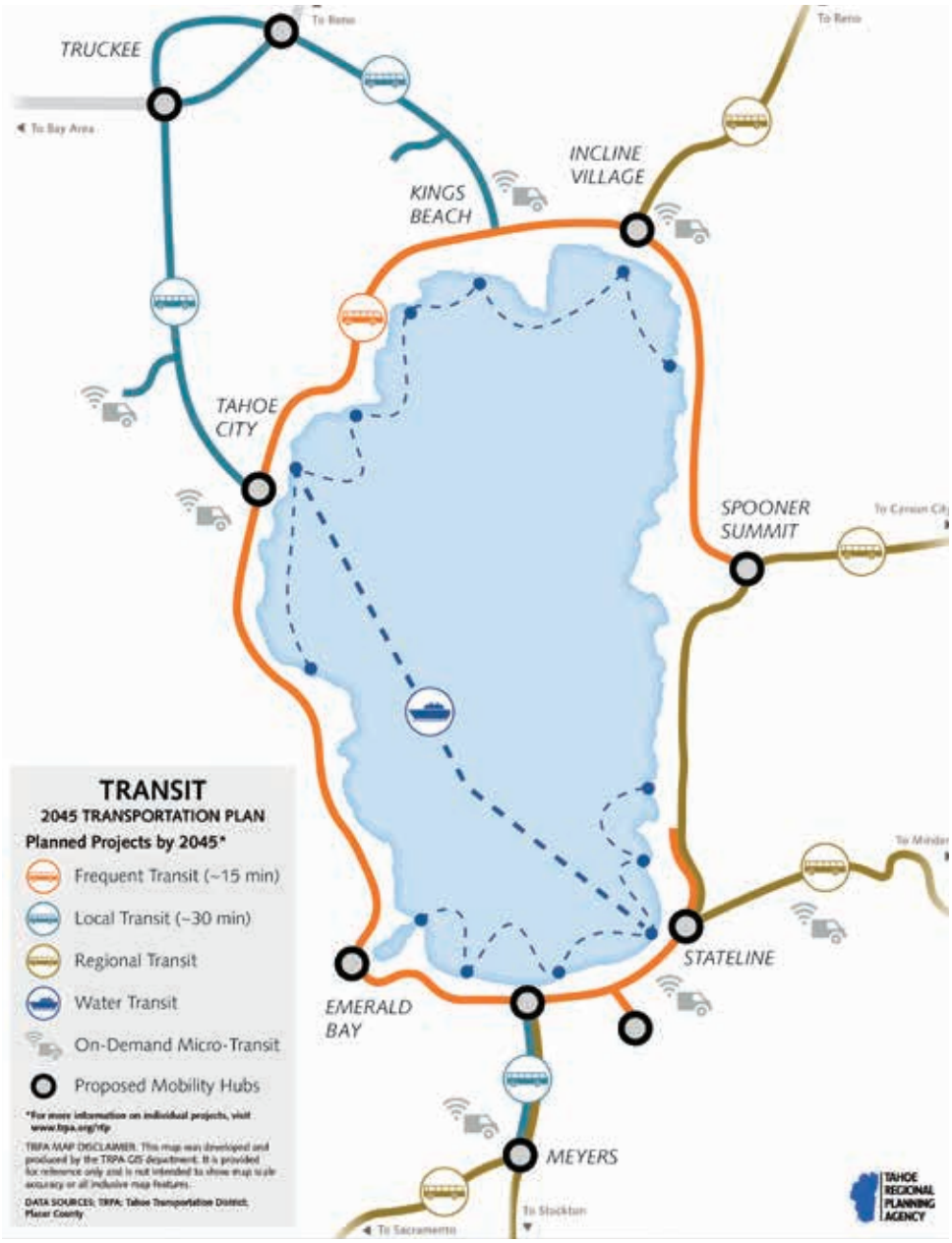


Figure 4: Regional Transit Vision Diagrammed in the Regional Transportation Plan

PROJECT PARTNERS AND PROCESS

A number of agencies manage, administer, and/or operate lands within the corridor. A Steering Committee, comprised of the TTD, TRPA, and the LTBMU brought these entities together to develop a plan that addresses the shared issues spanning jurisdictional boundaries. A large portion of the roadway travels through public lands managed by either the LTBMU or the California Department of Parks and Recreation (CDPR). The highway itself is operated by the California Department of Transportation (Caltrans).

Plan partners were organized into a Project Development Team and included the following entities:

- Tahoe Transportation District (TTD)
- Tahoe Regional Planning Agency (TRPA)
- USDA, Lake Tahoe Basin Management Unit (LTBMU)
- California Department of Parks and Recreation (CDPR)
- California Department of Transportation (Caltrans)
- El Dorado County (EDC)
- Washoe Tribe
- California Highway Patrol (CHP)
- California Department of Forestry and Fire Protection (CDF)
- Lake Valley Fire Protection District (LVFPD)
- Fallen Leaf Fire Department (FLFD)
- Meeks Bay Fire Protection District (MBFD)
- Placer County (PC)
- City of South Lake Tahoe (SLT)
- Tahoe Truckee Area Regional Transit (TART)
- Truckee North Tahoe Transportation Management Association (TNTTMA)
- Tahoe Fund

Plan partners worked with corridor stakeholders to evaluate transit options and develop project recommendations for the corridor as a whole.

OUTREACH

A robust stakeholder and public engagement effort was conducted as part of the planning effort. It included Project Development Team meetings, focus group meetings, stakeholder workshops, public open houses, webinars, in-person surveys, and on-line surveys to expand the number of responses, and quality of input.

Project Development Team Meetings

The plan partners met seven times as part of the Project Development Team during the project process:

- Vision and values
- Existing data summary
- Visitor experience workshop and best practices
- Data collection and alternatives overview (see Appendix F for the Existing Conditions Summary Report)
- Draft strategies and roles and responsibilities
- Mobility alternatives, evaluation criteria, and roles and responsibilities
- Admin draft, approvals, and implementation

In addition to the group meetings with plan partners, 15 one-on-one meetings were conducted, 11 presentations were given to agency boards, and three Washoe Tribe consultations were held to provide transparency and gain endorsement from decision-makers.

Stakeholder Meetings

Stakeholder meetings invited plan partners, other resident business people, and interested property owners and encouraged collaboration and input from those who may partner in the corridor outcomes. Nine stakeholder meetings were held. The first series of meetings were organized into four focus groups: homeowner association representatives; in-corridor recreation and business providers; neighboring recreation and business providers; and advocacy, chamber, and conservancy group representatives.

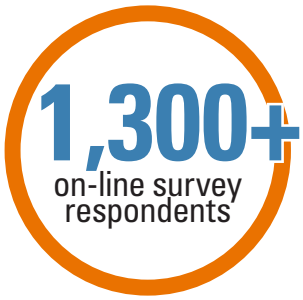
The next series of stakeholder meetings combined the focus groups and engaged participants in mapping out corridor strengths and opportunities as part of a world cafe facilitated exercise. The following stakeholder meeting invited the group to develop transportation alternatives while balancing the trade-offs for operations and budget needs. The final stakeholder meeting was held over Zoom to review the draft CMP.

Between the organized stakeholder meetings, project team members met with homeowners in the Rubicon Bay and Meeks Bay areas to walk potential trail alignments and discuss opportunities and challenges. In total, 20 presentations or meetings were conducted with homeowner association groups.

Public Outreach

An on-line survey and intercept survey were conducted during initial project phases to gather input from both corridor users and a cross-section of residents and visitors. Over 1,300 responses were collected from the on-line survey. A project website was established and an email database developed to share project updates, allow for comments, and to answer questions. Over 950 emails were on the project update list and thousands of comments and questions were received. These comments were used to inform and shape the plan recommendations.

Open houses were held in both the north and south ends of the corridor and three webinars were conducted to share transportation and project alternatives and recommendations. Over 160 viewers participated in the webinar. Overall, participants expressed support for a more car-free experience for recreation access and desire for completion of the Tahoe Trail.



over **325** **webinar** participants to two events

950+ on email contact list

65 meetings to **engage & partner with**

17 partner agencies & organizations | businesses & concessionaires | non-profits | HOAs | residents | recreation users & visitors

CORRIDOR MANAGEMENT

Seeing change in the corridor requires implementing multi-benefit projects and managing the corridor across jurisdictional boundaries while also recognizing each agency's mission and goals. The CMP is organized with this goal in mind. It identifies opportunities for partnerships and collaborations among agencies to complete projects and fund their implementation, maintenance, and operations.

The plan's primary goals relate to safety, natural and cultural resources, transportation, the travel experience, and funding and implementation. These elements align with individual agency management plans, conceptual studies, and other governing documents. Technology facilitates achieving corridor goals and its application is considered throughout the corridor to aid implementation and management.

Technology

Innovations in technology increase the ability for agencies to manage and maintain the corridor in a beneficial way. Apps for mobile phones and tablets can be coupled with parking kiosks or embedded sensors to quickly distribute information and allow potential users to identify desirable recreation destinations and potential parking locations and availability. Intelligent Transportation Systems (ITS) such as digital message systems boards seen on resident highways can be used to instantly notify drivers of changing road conditions and corridor opportunities. Radio can be used to distribute messaging.

The world of technology is continually evolving and provides more and more options for assisting jurisdictions and agencies to reach their goals. Continual consideration, review, and incorporation of innovative advances should occur throughout every aspect of corridor management.

In order to leverage the management tools available through new technologies, the gaps in broadband and cellular coverage in the corridor must be addressed and parking and recreation access information needs be able to utilize Intelligent Transportation Systems (ITS). Projects that improve the corridor's technology infrastructure are of critical importance to achieve the goals and objectives set in this plan.

Integration of Resource Management

The integration of resource management requires continual agency coordination and cooperation. Each entity is responsible for the implementation of their individual agency management plans. This document does not supersede

Seeing change in the corridor requires implementing multi-benefit projects and managing the corridor across jurisdictional boundaries while also recognizing each agency's mission and goals.

that requirement. Rather, it highlights the connectivity between resource management and the corridor. Resource areas can not be appropriately planned without considering safe, appropriate access and potential user needs. Likewise, recreation access should be thoughtfully planned to minimize and reduce impacts on natural and cultural resources. Depending on the nature and scale of the project, TRPA staff may either approve the project or take it to the Hearings Officer or Governing Board for approval. Requirements for when a project must go to the Hearings Officer or the Governing Board are described in the TRPA Code of Ordinances.

Related Documents

The first steps toward coordination includes recognizing and building from resource and management plans relating to the corridor. The CMP does not supersede these documents. Rather, it recognizes their importance and directs land use managers to be aware of what management actions others may be completing or contemplating within the corridor to coordinate goals and projects.

A list of relevant plans and project sources as of June 2020 is presented below. The recommendations described in the CMP align with the common goals and objectives found in these documents and current planning efforts.

- 1969 Sugar Pine Point State Park General Development Plan
- 2005 Draft TRPA Regional Recreation Plan
- 2007 LTBMU Recreation Facility Improvements List
- 2008 Caltrans Water Quality Project Eagle Falls Viaduct to Meeks Creek
- 2009 Camp Richardson Resort Vision Plan
- 2010 Replacement of Taylor Creek Education Center
- 2011 LTBMU South Shore Corridor: An Approach to Sustainable Recreation
- 2011 City of South Lake Tahoe General Plan
- 2011 Meeks Bay BMP Retrofit
- 2012 Caltrans SR 89 Transportation Corridor Concept Report

- 2012 Meeks to Sugar Pine Class 1 Bike Path Study
- 2012 North-South Transit Connection Alternatives Analysis
- 2012 TRPA Regional Plan Update
- 2013 Camp Richardson Resort Campground and Vehicle Circulation BMP Retrofit
- 2013 LTBMU Fallen Leaf Lake Trail Access and Travel Management Plan
- 2014 Tallac Historic Facilities BMP Retrofit
- 2015 & 2018 Tahoe Prosperity Center Measuring for Prosperity: Community and Economic Indicators for the Lake Tahoe Basin
- 2015 Meeks Bay Resort Conceptual Design
- 2015 North Lake Tahoe Tourism Master Plan
- 2015 Tahoe Valley Area Plan
- 2015 LTBMU Integrated Management and Use of Roads, Trails and Facilities
- 2016 Linking Tahoe: Active Transportation Plan
- 2016 Regional Transportation Improvement Plan
- 2016 TART Short Range Transit Plan
- 2016 LTBMU Land Management Plan
- 2017 Linking Tahoe: Corridor Connection Plan
- 2017 Linking Tahoe: Regional Transportation Plan (update in progress)
- 2017 Long Range Transit Master Plan
- 2017 TTD Short Range Transit Plan
- 2017 LTBMU Integrated Management and Use of Roads, Trails and Facilities
- Over 40 Corridor Environmental Improvement Projects
- Final Alternatives Memo for Meeks Bay Resort to Sugar Pine Point SP Class 1 Bike Path
- Plan Area Statements
- 2017 Tahoe-Truckee Plug-In Electric Vehicle Readiness Plan

In-Progress Planning Initiatives

- Lake Tahoe West Restoration Partnership
- Meeks Bay Restoration Project
- 2020 Lake Tahoe Regional Transportation Plan Update
- Mayala Wata Restoration Project at Meeks Meadow
- Vikingsholm Visitor Parking Lot and Entrance Renovation
- The Lake Trail Multi-Use Single Track Trail Project

Plan partners must continue to work together, in alignment with individual agencies missions, goals, and governing documents.

CORRIDOR AND PLAN ORGANIZATION

Within this plan, projects and strategies are presented both from an overall corridor perspective and then by projects within each of the five segments. Each segment has defining physical characteristics, land uses, recreation opportunities, transportation, and visitor use patterns. As such, the challenges and potential strategies for each segment may vary while also being dependent on an overall corridor approach.

The five segments of the SR 89 corridor include:

- Pope to Baldwin
- Emerald Bay
- Rubicon Bay
- Meeks Bay
- Sugar Pine Point

Plan Organization

The SR 89 Recreation Corridor Management Plan consists of a series of corridorwide strategies and recommendations built from an analysis of corridor issues and opportunities and discussions and evaluation of those opportunities with plan partners, stakeholders, and public. The plan is organized into the following chapters:

- Chapter 2 | Corridor Plan Importance
  - Describes what makes the SR 89 corridor special and summarizes the shared challenges associated with recreation access. A series of goals are established and anticipated environmental benefits are identified.
- Chapter 3 | Implementation Strategies
  - Connects corridor issues with recommendations. A series of 28 key challenges are described in coordination with a set of strategies to address each topic. Plan partners may use the individual summary sheets to align future projects with corridor management strategies. The list of strategies is also summarized as a project matrix in the appendix.

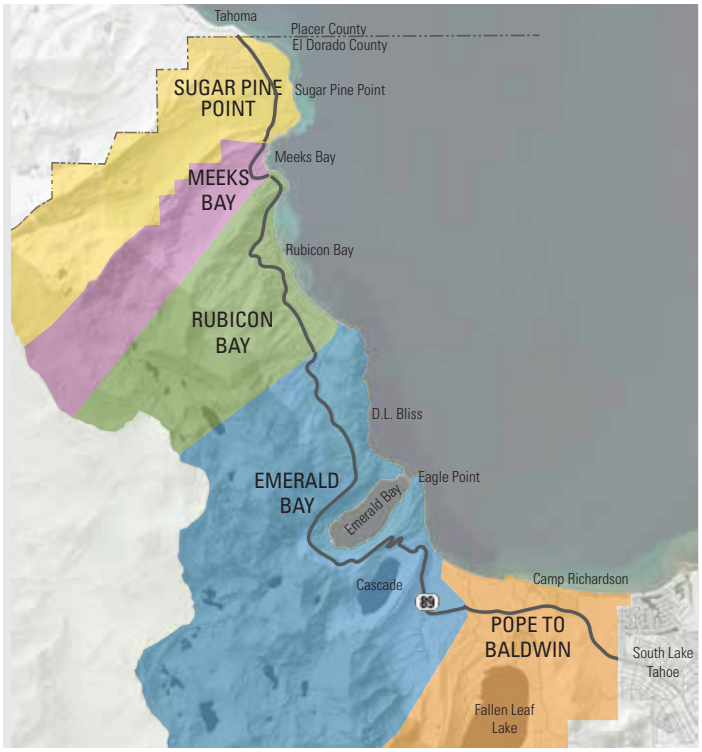


Figure 5: Segments of the SR 89 Recreation Corridor

- Chapter 4 | Travel Analysis
  - Summarizes the mobility alternatives explored during the plan process. Discusses key findings that informed the development of a recommended travel framework.
- Chapter 5 | Recommended Travel Framework
  - Presents three phases of transit, trails, and technology improvements and corresponding infrastructure improvements to move the corridor toward a more car-free experience.
- Chapter 6 | Corridor Projects – Action Plan by Segment
  - Presents, by corridor segment, the series of infrastructure and management projects that should be implemented to achieve the desired travel framework and corridor goals. The list of projects is also summarized as a project matrix in the appendix.
- Chapter 7 | Visitor Travel Experience
  - Discusses the stages of a visitor's travel experience cycle and how corridor recommendations relate to each stage.

- Chapter 8 | Implementation, Monitoring, and Management

  — Explains the importance of adaptive management to analyze and refine strategies moving forward. Roles and responsibilities for corridor projects and maintenance are presented along with the establishment of an Executive Team, Corridor Management Team, and project leads.

MOVING TO IMPLEMENTATION

The CMP creates a platform for continuing the coordinated corridor approach developed through the Linking Tahoe Corridor Connection Plan and SR 89 CMP processes. Moving forward, an Executive Team, Corridor Management Team, and project champions must be established to implement the plan and realize change. An agreement or other legal document should be developed amongst the partner agencies to document the Management Team's structure and decision-making framework.

The document summarizes current plan recommendations, core strategies, and actions to implement projects and move the corridor towards its goals. It identifies a broad-based vision and means to achieve results. It is anticipated that concessionaires who may operate sites under a Special Use Permit would work through their respective agency to achieve the CMP goals.

This process takes time and commitment. It is likely that new opportunities and challenges will arise that alter strategies to achieve corridor goals. As circumstances change, the Management Team should modify the project list and adjust recommended action items accordingly.

Programs are administered, managed, and implemented by a multitude of agencies at different levels of government under a wide array of statutory and regulatory authorities. Moving forward means the Management Team must continue the alignment of the various programs and a champion is needed as a call to action to achieve desired outcomes.

The appendix contains a summary of recommended projects, the existing conditions data summary, and calculations for estimated parking requirements. This information can be used for planning and future grant applications.

Partnerships & Governance

As part of the development of the CMP, participating agencies and governing bodies entered into a Project Charter. The charter documented their commitment to multi-agency coordination within the corridor, development of the CMP, and working together to address SR 89's shared challenges. Additional multi-agency agreements will be developed as specific projects move forward.

The intent is for the CMP to be a living document. Partnering agencies are encouraged to establish an Executive Team and a Corridor Management Team. A participating staff member from each agency should, at a minimum, meet quarterly to address continued challenges, seek solutions, prioritize projects, and collaborate to seek funding opportunities in the corridor. This requires an update of the Project Charter or development of a new agreement upon completion/approval of the CMP.

The CMP recommends that an agreement be developed that allows funds generated within the corridor to be used for new projects and maintenance within the corridor. Current management structures do not allow for that approach. Therefore the plan identifies methods by which the approach may be implemented.

USING THE PLAN

- Identify core issues and desired conditions for a potential project
- Identify corresponding issues and recommended strategies for corridor management (see Chapter 3)
- Review corridor recommended projects to identify project correlations (see Chapter 4)
- Identify potential partners and funding sources
- Coordinate with the Corridor Management Team to coordinate and implement projects
- Utilize data from the Existing Conditions Summary Report (see appendix) as part of grant applications to show project benefits and detailed data

MAINTAINING THE PLAN

- Develop an Executive Team and a Corridor Management Team from the plan partners (see Item 26 in Chapter 3)
- Meet according to current project needs and long-term coordination
- Coordinate projects and management strategies
- Update consolidated project list annually
- Provide annual progress reporting

Environmental Compliance

The CMP is a planning study that provides an overall vision of the corridor and recommendations that could be implemented by one or more of the several agencies with jurisdiction over land and/or facilities to achieve that vision. The CMP makes recommendations but does not approve any projects, and any implementation of recommended actions would be at the discretion of the various agencies and subject to full environmental review. The CMP is a tool for agencies to identify potential projects, and also identify other agencies that may make an appropriate partner in environmental review and implementation. Although a single agency might serve as the project proponent, it is anticipated that they would collaborate with other agencies to coordinate projects and consider the cumulative impacts of all projects identified in the CMP.

Some CMP-implementing actions would result in physical changes to the environment, requiring environmental review and permitting in accordance with Federal, TRPA, and State of California laws, as applicable. The environmental review process requires consideration of all direct, indirect, and cumulative effects of the proposed actions. If significant adverse effects on the environment are anticipated, project alternatives would be evaluated, as well as feasible mitigation.

CMP projects implemented with federal funds, located on federal lands, or that require approval by one or more federal agencies are also required to comply with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's regulations implementing NEPA (40 Code of Federal Regulations [CFR] Section 1500 et seq.). The NEPA lead agency is typically the federal agency with the primary approval authority for the federal action to be implemented.

For transportation projects receiving federal funds, either the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) (operating administrations under the U.S. Department of Transportation) is typically the Federal lead agency. The LTBMU would likely be the NEPA lead agency, when National Forest System (NFS) lands are involved.

Lands managed by the LTBMU and by California Department of Parks and Recreation (CDPR) are located throughout the SR 89 corridor. In instances where a CMP project (such as the Tahoe Trail) would be located on NFS lands, the LTBMU may be the appropriate NEPA lead agency. Where multiple federal agencies approvals are required (e.g., where a project is located on NFS land and receives federal funding), a cooperative agreement between the federal agencies would be made to designate the NEPA lead agency. In instances where a CMP project (such as the Vikingsholm parking lot improvements) would be located on CDPR lands, the CDPR may be the appropriate CEQA lead agency.

TTD serves the unique role of sponsoring, allocating funds for, implementing, and managing transportation projects throughout the Basin. TTD may acquire, own, and operate public transportation systems and parking facilities serving the region. TTD also has the ability to receive specific tax revenue to support transit and transportation facilities. TTD can and has led CEQA and has been instrumental in coordinating with TRPA and NEPA lead agencies to facilitate completion of the appropriate environmental review.

Several other agencies plan, evaluate, approve, finance, and implement roadway and transit projects of their own. Some of these projects also involve facilities that are intended to satisfy non-motorized transportation and recreational demands, but also have utility as part of the broader transportation network. These agencies include Caltrans and El Dorado County, among others. Each has its own unique set of characteristics affecting the timing and strategy for the environmental review process, including varying project objectives, lead agencies, jurisdictional locations, degree of urgency in the implementation schedule, potential funding sources, and requirements for environmental compliance.

In addition to environmental review, projects described in the CMP would be subject to permitting. The breadth of permitting required for individual projects would depend on the location and characteristics of the project.

All projects under the CMP resulting in physical landscape changes would be subject to TRPA permitting and approval in accordance with the Tahoe Regional Planning Compact (Public Law 96-551), the Code of Ordinances, and the Rules of Procedure. TRPA is responsible for ensuring that projects within the Tahoe Region are consistent with the Regional Plan and Regional Transportation Plan, and for conducting environmental review of discretionary projects. Depending on the nature and scale of the project, TRPA staff may either approve the project or take it to the Hearings Officer or Governing Board for approval. Requirements for when a project must go to the Hearings Officer or the Governing Board are described in the TRPA Code of Ordinances.

CHAPTER 2 CORRIDOR PLAN IMPORTANCE

A SPECIAL PLACE

The SR 89 Recreation Corridor traverses 17.5 miles of Lake Tahoe's spectacular southern and western shoreline. Among its many natural, cultural, and recreational resources, it is home to Emerald Bay, one of California's 36 National Natural Landmark sites. Renowned for its spectacular beauty, Emerald Bay is one of Lake Tahoe's most popular and most photographed locations. The vantage points such as Inspiration Point and Vikingsholm offer views of the bay and the expansive lake beyond.

Almost 12 miles of undeveloped shoreline welcome beach access to sites such as Meeks Bay, Sugar Pine Point State Park, Baldwin Beach, Camp Richardson, and Pope Beach. Seven trailheads provide day hike access to waterfalls and alpine lakes as well as backcountry and wilderness access for overnight recreation opportunities.

In addition to the stunning vistas and recreation opportunities, the corridor is home to natural and cultural resources of significant importance. Ospreys and Bald Eagle nests occur throughout portions of the corridor. Significant clusters of Osprey nests are found in Emerald Bay. The Tallac Historic site, Vikingsholm, and the Hellman-Ehrman Mansion are three historic cultural sites along the corridor. The Washoe Tribe holds the lands as sacred. Not only do they operate the Meeks Bay Resort, but they have an annual cultural festival on the Grand Lawn of the Heller Estate and they practice cultural activities near Taylor Creek and at a site that is planned to be a future home of a Washoe Cultural Center.

The variety of natural and cultural resources abound in the corridor, making it the jewel of Lake Tahoe. A special place to be and an important place to protect so it is not loved to death.

Land Use and Terrain

Eighty-eight percent of the SR 89 corridor has a land use designation of conservation or open space. The public lands are primarily owned or managed by the USDA Lake Tahoe Basin Management Unit (USFS-LTMBU or LTBMU) and California State Parks (CSP or State Parks). Due to the high percentage of public lands, only 2,784 residential units are located in the corridor. Of these units, 93.5 percent are single family. Eighty-three percent of the single family units are for seasonal/recreational use. Compared to other corridors in the Tahoe Region, the SR 89 corridor has the highest percentage of seasonal ownership and the lowest land use density (13 persons per square mile).

Views of Emerald Bay are prized by residents and visitors alike.

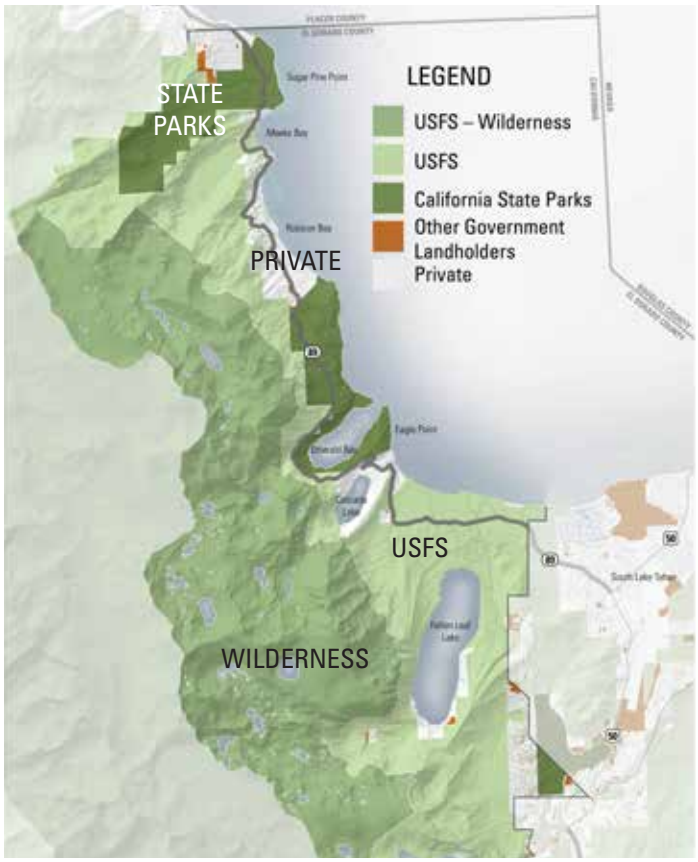


Figure 6: Ownership | SR 89 Corridor

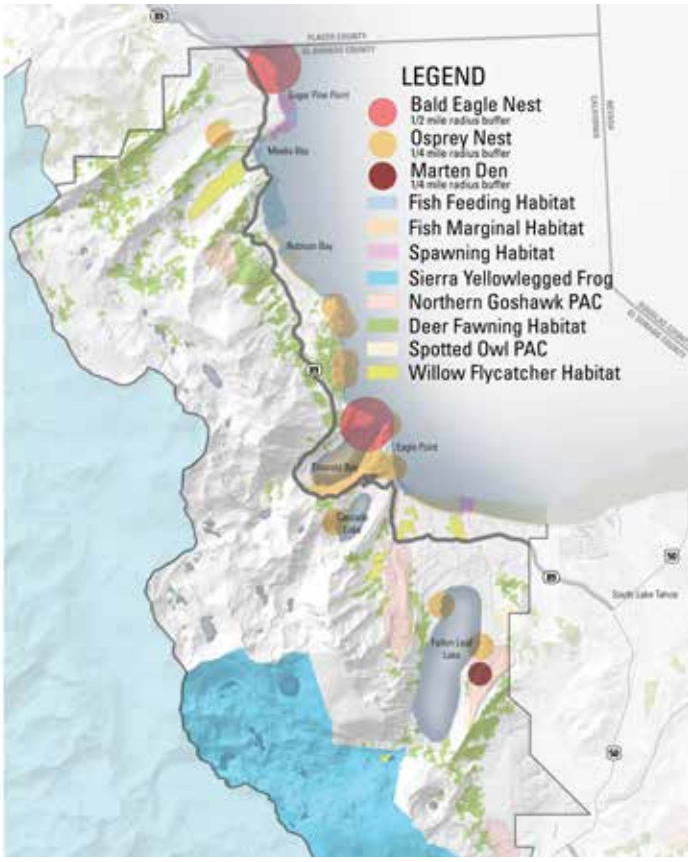


Figure 7: Natural Resources | SR 89 Corridor

Recreation activities in the corridor occur year-round. Winter recreation includes activities such as cross-country skiing, snow play, sight seeing, and backcountry access.

Gently sloping lands are located in the southern and northern areas of the corridor. The terrain steepens around Cascade Lake and through Emerald Bay and D.L. Bliss. The steep escarpments of Emerald Bay and surrounding slopes are the result of glaciers carving out the bay. Avalanche chutes and landslide remnants speak to the abrupt terrain. The upland areas west of Rubicon Bay also begin to quickly rise through the residential neighborhoods and LTBMU lands.

Recreation Destinations and Use

The Existing Conditions Summary Report can be found in the appendix and includes a more in-depth review of corridor research and data collection efforts. The SR 89 corridor has a variety of both summer and winter recreation opportunities. Second to the east shore of Lake Tahoe, it offers the longest stretch of continuous, undeveloped publicly accessible shoreline which makes beach-going a popular activity. Day hikes, sight-seeing, and camping are also high demand activities. Distinct to this corridor, the area has a mix of both short vista stops, longer day use activities, and even longer overnight backcountry activities. The number of different activities and the well-publicized and highly-recognized Emerald Bay landscape combine to create one of Lake Tahoe's most visited locations.

The LTCCP used cell phone data to identify destination hot spots in Lake Tahoe. Additionally, the 2020 RTP used 2019 Streetlight cell phone data to identify regional hot spots. Both analyses showed that the area around Emerald Bay has high volumes of activity in the summer and winter. Camp Richardson is a minor hot spot in the summer.

The LTCCP estimated the corridor hosted an average of 1.8 million annual visitors in 2014. A third of the visitors likely recreated on beaches and in campsites from Pope Beach to Baldwin Beach. Records for Pope Beach, Camp Richardson, and Baldwin Beach tallied 637,938 visitors who paid for parking in the summer of 2017. An analysis of 2018 visitation to Emerald Bay estimated 16,180 persons visited Emerald Bay in 2018 on an average busy summer day. Of those, 10,653 had a potential to shift to transit. The analysis estimated 5,920 persons visited the Pope to Baldwin Segment on an average busy summer day in 2018.

Winter recreation access in the corridor is as important as summer access.

Emerald Bay (which includes Inspiration Point; Bayview campground and trailhead; Eagle Falls trailhead; and Emerald Bay State Park with Vikingsholm, Eagle Point campground, and a boat-in campground) likely accounts for the highest volume of visitors. State Park's records show that throughout the 1980's through early 2000's, annual attendance ranged from 500,000 to 600,000 just for the State Park facilities. Day hikers, sightseers, and people traveling around the Lake are not included in those counts.

The Tahoe Prosperity Center's 2018 Measuring for Prosperity Report showed that summer lodging revenues have consistently grown since the 2009/2010 season. From 2009/2010 to 2016/2017, revenues grew by 84 percent in Zephyr Cove and Stateline, Nevada; by 83 percent for South Lake Tahoe; and by 36 percent for the North Shore. These numbers reflect the growing demand for visitation in Lake Tahoe and the subsequent desire for recreation access.

CORRIDOR DISTINCTION

In addition to the iconic destination of Emerald Bay, the variety of corridor recreation options makes this corridor distinct from other corridors. **These natural resources and the public access bring the mix of short visit stops, longer day use activities, and overnight backcountry stays.** Following are just a few notable items:

- Emerald Bay is one of California's 36 National Natural Landmark sites
- The longest stretch of easily accessible large sandy public beaches, such as Pope Beach and Baldwin Beach
- The most public campground spaces
- Portals into the backcountry and Desolation Wilderness
- Significant winter and off-season visitation
- Mix of public lands and private concessionaires

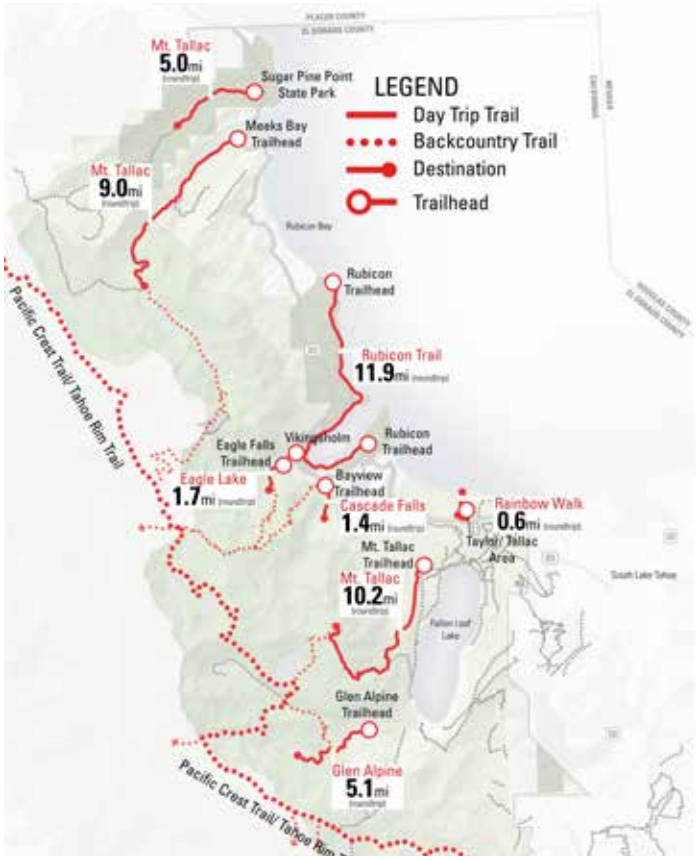


Figure 8: Trails and Trailheads | SR 89 Corridor

Figure 9: Publicly Owned Accessible Shoreline

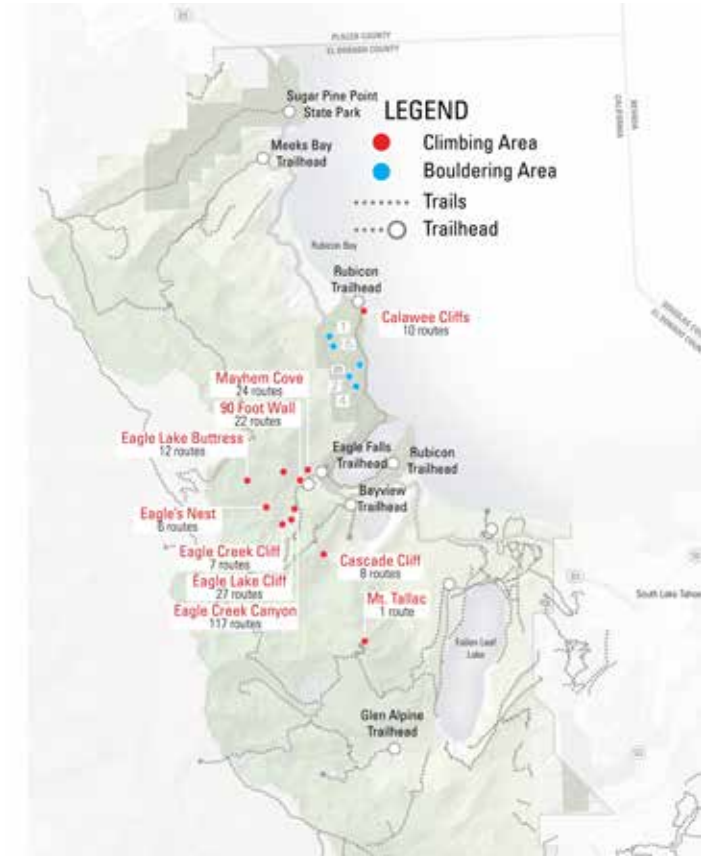


Figure 10: Climbing and Bouldering Locations | SR 89 Corridor

Figure 11: Winter Recreation Access | SR 89 Corridor

KEY ISSUES

The corridor's mix of scenic, recreation, residential, and natural and cultural resources make it attractive for people to visit and live. **However, the demand for visitation has risen to a level that is not sustainable for the current infrastructure and operational capacity.** As discussed in Chapter 1, and stated in the LTCCP, the "single biggest transportation issue associated with the SR 89 Recreation Corridor is addressing the congestion and parking issues through Camp Richardson and Emerald Bay."

The Need: Visitation demand has exceeded existing infrastructure resulting in the following key transportation and visitor management issues:

- Safety concerns
- Increased environmental disturbance and stormwater run-off resulting in degraded lake clarity
- Impact to cultural resources
- Poor visitor travel experience which has a risk for economic impacts as the area has reached a saturation point
- Congestion and traffic

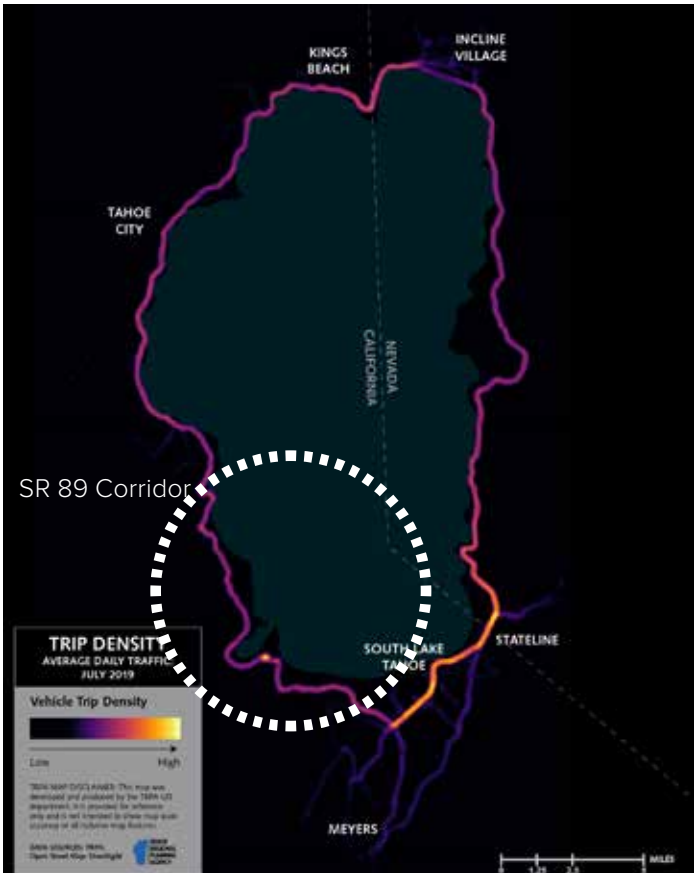


Figure 12: Hot Spot Destinations, July 2019, per the RTP

The corridor is also subject to growing visitation. Anticipated growth for the Sacramento Valley, Bay Area, and Reno regions will result in continued increase in visitation volumes. The Association of Bay Area Government's projections (also used in the 2020 RTP) show a twenty-seven percent increase by 2040 and projects an increase of 3.8 million people for a total of 10.4 million people living in those Northern California counties by 2060. The Economic Development Authority of Western Nevada also projects a population growth of almost 55,000 people by 2023 in the five-county region of Washoe County, Carson City, Douglas County, Lyon County, and Storey County. This growth will create added demand for recreation access in Lake Tahoe and amplifies the need to develop an approach to manage visitation now before it continues to increase.

The CMP establishes a travel framework based on the 2018 visitation. The system could accommodate a modest future increase of 5 percent. Increased recreation demand needs to be addressed at a regional level. Transit, trails, and parking management programs provide tools to shift use patterns to reduce impacts and to monitor and control demands as appropriate. The system can also scale up or down to meet desired management levels.

The following pages include a summary of the defining elements and key issues associated with each corridor segment.

Pope to Baldwin Segment

Defining Elements

This segment serves as the southern gateway to recreation destinations along SR 89 to the north. The roadway transitions from five-lanes to two-lanes near the intersection with West Way. Federal lands flank the roadway, providing access to beaches, trails, equestrian facilities, historic and interpretive sites, a restaurant, lodging, and more.

The popular recreation segment has multiple concessionaires operating on LTBMU lands with a visitor center and a historic site. Beach access and camping are top recreation activities.

Visitor Activities

Recreation sites include:

- Pope Beach
- Camp Richardson Resort (note that Camp Richardson Marina is a separate, private facility)
- Camp Richardson Corral
- Tallac Historic Site
- Fallen Leaf Campground
- Kiva Picnic Area
- Kiva Point
- Taylor Creek Visitor Center
- Taylor Creek SnoPark
- Mt. Tallac Trailhead
- Baldwin Beach
- Desolation Wilderness Access

POPE TO BALDWIN SEGMENT | KEY ISSUES

Challenges within the Pope to Baldwin Segment are associated with the demand for beach access and high levels of pedestrian activity along the highway. Key issues to be addressed through the CMP include:

- Traffic congests, especially near the SR 89/ Jameson Beach Road and the SR 89/Pope Beach Road intersections, as visitors arrive to beach facilities and as drivers stop for pedestrians.
- Parking along the highway creates traffic congestion as with drivers turn around and search for shoulder parking.
- The queue into the Eagle's Nest Campground spills onto the highway when many campers arrive in a short period of time.
- Multiple ingresses and egresses off SR 89 serve individual recreation areas with few off-highway vehicular linkages between sites.
- Lack of dedicated transit infrastructure which would allow transit to bypass congested areas.
- Gaps in the multi-use trail network to connect to some of the recreation sites.
- Use of unimproved Fallen Leaf road as a bypass.
- Special events in the corridor are sources of significant traffic, create additional demand for parking, and can impact traffic flow.
- Some uses have created unintended congestion due to pedestrians crossing the highway. This has prompted the need to reassess vehicular and pedestrian patterns and the locations of uses such as the ice cream shop and bike rental.

The beaches of Camp Richardson are a major summer recreation destination.

Emerald Bay Segment

The Emerald Bay Segment extends from Baldwin Beach Road, wraps around Emerald Bay, and includes D.L. Bliss State Park.

Defining Elements

Emerald Bay, one of California's 36 National Natural Landmark sites, is one of Lake Tahoe's most popular and photographed locations and is the corridor's most heavily used segment. In addition to numerous summer recreation activities, winter recreation in the segment includes backcountry skiing and site seeing. The Lake Tahoe Visitor Authority's 2015 Visitor Profile Study reported that 7 percent of summer visitors and 5 percent of fall visitors chose Tahoe South as their destination because of access to Emerald Bay. The North Lake Tahoe Resort Association's Visitor Research from the summer of 2014 found that 47 percent of survey respondents indicated spending time at Emerald Bay during their visit. This data reinforces the importance of Emerald Bay as a year-round destination for visitors.

D.L. Bliss State Park and Emerald Bay State Park neighbor each other. The adjacency means that although Emerald Bay may receive the majority of visitors, the impacts of the visitation are also felt at D.L. Bliss. Parking at D.L. Bliss also fills quickly on a peak summer day. The two state parks are connected by the Rubicon Trail, which can be a recreation destination in and of itself. Hikers can either start to the north at the D.L. Bliss Rubicon Trailhead or to the south at the Emerald Bay Rubicon Trailhead near Eagle Point Campground. The 7.3-mile trail wraps around the edge of Lake Tahoe's cliffs and coves, has pristine views of the lake and the bay, and provides access to Vikingsholm.

Extending north from the Pope to Baldwin Segment, the two-lane highway climbs and winds its way through a series of switchbacks before it traverses the ridge line between Cascade Lake and Emerald Bay. The hairpin turns, narrow profile, steep adjacent slopes, magnificent views, and high levels of visitor activity slow motorists. The tight turns limit the size of vehicles that can reach Emerald Bay from the south. For example, large tour buses cannot navigate the turns and Caltrans designates the highway as a "KPRA (King Pin to Real Axle) Advisory" Route. Trucks that have more than 30 feet between the king pin and rear axles are not advised, The steep roadway and curves also restrict the type of transit vehicles that can serve this segment.

KEY ISSUES

Challenges within the Emerald Bay Segment are tied to the site's popularity and the variety of activities which range from a quick photo, short day hikes, rock climbing, beach access, and overnight backcountry access. Visitor demand during peak season exceeds off-highway parking capacity, resulting in significant roadside parking and pedestrians walking in and along the highway. Key issues to address include:

- Over 500 cars parking along the highway on an peak summer day create traffic congestion as drivers search for shoulder parking.
- High volumes of pedestrians walk along and in the roadway.
- Narrow roadway design with steep shoulders and hairpin turns impact transit access.
- Lack of avalanche control impacts year-round access for emergency responders and residents.
- Off-highway parking areas are closed in the winter and a part of the off-season and snow is not removed. Therefore, people park along the highway shoulder for access to backcountry skiing.
- Lack of designated facilities for transit pull-offs.
- Lack of shared-use path facilities for off-highway bicycle and pedestrian circulation and access.
- High volumes of visitors with limited facilities, funding, and staff resources.
- Difficulty enforcing no-parking areas. Enforcement of illegal roadside parking is constrained by lack of funding, consistent strategies, technology, ticket pricing, and operational requirements (such as an officer being present to tow a ticketed vehicle).
- A need for wildlife crossings to be assessed and accommodated for, especially at the viaduct.
- Stormwater impacts from vehicles parking on the viaduct and other shoulder areas.
- Physical constraints of the area. The viaduct and Vikingsholm parking area have subsiding soils which require creative engineering. The need for improvements also provides an opportunity to address multiple corridor issues.
- Lack of technology infrastructure to implement new strategies for parking management, transit, and enforcement.

Visitor Activities

Although the majority of the segment is comprised of public lands, there are areas of private lands around Cascade Lake and Cascade Road. Recreation residence tracts are on some LTBMU lands in Emerald Bay and in Spring Creek.

The segment is the most visited in the corridor with a range of user activities that require different management strategies. Public lands in this segment are primarily managed by the LTBMU and by California State Parks (CSP). LTBMU lands include facilities that support sightseeing, hiking, beach-going, boating, backpacking, and camping.

Key recreation sites include:

- Eagle Point Campground
- Inspiration Point Vista
- Bayview Campground
- Bayview Trailhead (day hikes and wilderness access)
- Eagle Falls Trailhead (day hikes and wilderness access)
- Emerald Bay State Park
- Emerald Bay Boat Camp
- Vikingsholm
- Fannette Island
- D.L. Bliss State Park
- D.L. Bliss Campground
- Rubicon Trail
- Beach areas in Emerald Bay State Park and D.L. Bliss State Park

Emerald Bay hosts a variety of summer and winter recreation activities from sightseeing to backcountry overnight camping and skiing.

Rubicon Bay Segment

The Rubicon Bay Segment extends from D.L. Bliss State Park to just south of Meeks Bay. It includes the longest lakefront section of contiguous privately-owned residential lands within the corridor.

Defining Elements

Rubicon Bay, also known as Tahoe's Gold Coast, is home to lakefront and mountainside residential properties. The highway travels north from D.L. Bliss State Park toward Meeks Bay. Private lands border the Caltrans right-of-way for the majority of the segment. Forest Service and California Tahoe Conservancy lands are interspersed in the neighborhoods and LTBMU lands are located upland of the residential areas. The proximity of public lands with recreation opportunities near the highway prompts the need to address access needs for skiing, hiking, biking, and bouldering.

The highway and adjacent lands have relatively gentle grades around the Four Ring Road properties. The road grades steepen as it enters Rubicon Bay and creates a bench between the lakefront properties to the east and upland properties to the west. The terrain slopes away from the highway to the east and the west. Therefore, neighborhood roads intersecting with SR 89 typically have grades steeper than 5 percent.

There are few informal pull-offs and shoulder parking areas throughout this segment. This is due in large part to the narrow shoulders, adjacent private lands that slope away from the highway, and the lack of direct access to public recreation sites.

Visitor Activities

This segment is characterized by the high percentage of private lands bordering the highway. There is no public beach access. Upland trails are accessed through the neighborhoods or highway turnouts, but no formal trails or trailhead facilities are present. Trails are primarily intended to be accessed by walking or biking from the resident neighborhoods. Backcountry access is primarily from parking in highway turnouts.

KEY ISSUES

The CMP seeks to minimize visitor impacts to residential areas while providing dedicated active transportation facilities to allow people to walk or bike to recreation destinations in the adjacent Meeks Bay and Emerald Bay segments. Key issues to be addressed include:

- Lack of a shared-use path to connect people to recreation areas by an off-highway bike path.
- Lack of broadband.
- Need for trail and backcountry access in winter and summer.
- Lack of consistent or reliable transit connectivity.

Scenic views are provided along the LTBMU old roadbed.

Meeks Bay Segment

The Meeks Bay Segment includes the highway corridor as it wraps around Meeks Bay from south to north.

Defining Elements

SR 89 curves around Meeks Bay Resort and Campground. Meeks Bay Resort and Campground are on Forest Service lands with residential areas located to the north and south. LTBMU owns and manages the public lands in the Meeks Bay Segment. The Washoe Tribe operates Meeks Bay Resort Facilities and a concessionaire operates the campground. Meeks Meadow has tribal cultural and ecological function opportunities. There is an existing, non-operational marina. The Meeks Bay Restoration Project is underway to determine the future of the marina and planning for environmental restoration and site improvements.

During the summer, pedestrians often cross the highway as they walk from their cars parked along the highway to the beaches and recreation areas to the west. Because the road bends around the recreation site, pedestrians often have short sight distance to see oncoming traffic. The posted speed limit is 40 miles per hour which can create a conflict with pedestrians and the recreation activity during the busy summer months.

Visitor Activities

Meeks Bay trailhead is located on the west side of SR 89. The dirt parking area provides access to Lake Genevieve and Desolation Wilderness. It is a popular trailhead in the summer and winter for trail and recreation access.

Recreation activities in the summer include the following:

- Visiting the beach and swimming
- Camping
- Biking
- Boating
- Hiking
- Picnicking

KEY ISSUES

Although the Meeks Bay Segment does not have the traffic congestion and high volumes of visitation seen at other recreation sites in the corridor, there is opportunity for improvement. As visitation to Lake Tahoe increases, the pressures currently affecting the Meeks Bay area could increase. Key issues to be addressed include:

- The need to continue the Tahoe Trail and connect it to Rubicon Bay neighborhoods and other recreation destinations to the south.
- Lack of pedestrian crossing facilities to cross SR 89.
- Vehicles traveling at speeds not conducive for pedestrian crossings and volumes during peak season and roadway curves with short sight distance.
- Unmanaged roadside parking and unorganized trailhead parking.
- The need for winter access.
- Cultural access for the Washoe Tribe.
- Private lands to the north and south of Meeks Bay Resort and Campground make connectivity of trails and other features difficult.

Meeks Bay Resort has opportunities for water activities, camping, picnicking, and overnight lodging.

Sugar Pine Point Segment

The Sugar Pine Point Segment extends from the northern edge of Meeks Bay to the Placer County/El Dorado County line in Tahoma and includes Sugar Pine Point State Park. The state park provides an important recreation access for locals.

Defining Elements

This segment is the northern gateway to the recreation corridor to the south. The highway is bordered by both residential and public lands. Small neighborhoods are located north of Meeks Bay. Tahoma, a census designated place, includes residential and small commercial areas in both El Dorado County and Placer County. The West Shore Trail (or Tahoe Trail) extends from the Placer County line south to Meeks Bay. Within this segment, the shared-use path mostly parallels the roadway.

Visitor Activities

California State Parks is the primary public land manager within the segment. Additional public lands are owned and managed by the LTBMU and the Conservancy. Private lands border most of the highway which provides access to public recreation areas. Sugar Pine Point State Park does not see the visitor volumes associated with Emerald Bay, but visitation continues to increase.

Tahoma and Homewood areas create a northern gateway to the corridor and offer a small number of food and beverage opportunities. These are the last commercial areas before a traveler heads south through the recreation corridor. Most of the other food and beverage offerings in the corridor, such as those at Meeks Bay Resort and Camp Richardson Resort, are provided as part of concessionaire facilities on public lands.

Sugar Pine Point State Park provides opportunities to hike, swim, fish, camp, and explore a nature center and historic site. In the winter, cross-country skiing is available. The park also rents facilities for special events. Key recreation sites in the segment include:

- Sugar Pine Point State Park
- Sugar Pine Point Campground
- Beach areas in Sugar Pine Point State Park
- Hellman-Ehrman Estate picnic area, beach, and pier

Additional recreation sites, such as Homewood Resort, are located north of the corridor in Placer County and are considered as part of the broader planning context.

KEY ISSUES

The Sugar Pine Point Segment includes a mix of both residential development and public recreation areas, including Sugar Pine Point State Park. Although the segment does not have the traffic congestion and high volumes of visitation seen at other recreation sites in the corridor, there is opportunity for improvement. As visitation to Lake Tahoe increases, the pressures currently affecting the Sugar Pine Point State Park could increase. Key issues to be addressed include:

- Roadside parking in Tahoma, which is north of the study area, creates congestion for the corridor to the north.
- Visitors to the State Park often park along the highway and cross the highway to avoid an entry fee.
- Lack of a formal transit pull-off or turnaround complicates the operation of existing transit routes.
- Lack of vehicular turnouts and turnarounds to facilitate emergency access and evacuation.

Hellman-Erhman Mansion, a historic building called Pine Lodge, establishes a strong cultural sense of place for the state park.

DESIRED CONDITIONS

Cooperative management of the corridor requires land managers and agencies to agree to a common set of goals and objectives for what they want to achieve as they address the issues associated with visitor travel demands. In 2018-2019, discussions with land managers revealed common concerns that the level of visitation exceeds the capacity that the infrastructure and staffing levels are able to support in order to avoid undesirable impacts to the corridor's natural and cultural resources and resident's quality of life.

Managers of public lands strive to manage visitor access and recreation use while protecting natural and cultural resources. This process is inherently complex and can be further challenged with the quantity and variety of facilities and limited funding.

A balance is needed between three components in order for land managers to plan for and manage capacity and use levels across jurisdictional boundaries:

- anticipated visitor experience (solitary to increased interactions),
- natural and cultural resource protection, and
- available infrastructure facilities and budget for staffing and management.

Striking the balance requires adaptive management to establish the desired conditions for each element and to actively monitor and review data to adjust strategies.

Overall, the desired conditions for the SR 89 Recreation Corridor require an increase in operational capacity to effectively administer visitor management strategies and reduce impacts on natural and cultural resources. It is recognized that the visitation levels experienced during 2018 and 2019 are not sustainable without more coordinated management approaches that control how people arrive to recreation destinations. The desire is for an even distribution of visitors throughout the day and a more organized transportation approach which eliminates the chaos caused from visitors parking and walking along the highway.

Corridor management works cooperatively across jurisdictional boundaries to balance the protection of natural and cultural resources and providing quality visitor experiences with available infrastructure and operational facilities and budgets.

Goals

The following six goals and corresponding objectives have been set for the corridor. These goals were also used to evaluate alternatives and concepts.

Provide a Quality Travel Experience for All. Create a variety of easy, flexible, and enjoyable ways for visitors and residents to plan for, arrive to, experience, and depart the corridor and recreation sites. Recognize that visitors refers to anyone (both local and non-local) recreating in the corridor.

Objectives

- Manage visitation levels to align with natural, physical, social, and operational resources.
- Manage and distribute visitation across time and place to smooth peak periods.
- Use technology and marketing to increase visitors' and residents' confidence of a "known" or expected high-quality travel experience.
- Provide equitable access to recreation destinations, ensure access for underserved populations.
- Manage congestion and access to meet resident's travel needs.
- Remain sensitive to the cultural resources and traditions of the Washoe Tribe.
- Allow for year-round access to the variety of desired recreation experiences while balancing the need for resource protection.
- Provide a seamless travel experience that extends from pre-trip planning throughout the visitor trip.

Improve the Environment. Enhance the multi-modal transportation system and implement roadway improvements to manage congestion, reduce VMT and greenhouse gas (GHG) emissions, improve the clarity of Lake Tahoe, protect cultural resources, and enhance wildlife connectivity.

Objectives

- Balance congestion management to stabilize traffic flow and reduce idling and delays while also encouraging users to shift to alternative modes of transportation.
- Improve Lake clarity by reducing the amount of fine sediments reaching Lake Tahoe.
- Enhance wildlife connectivity and minimize impacts to habitat areas.
- Protect habitat for native flora and fauna from degradation.
- Protect cultural resources from overuse.
- Restore and manage historical resources.
- Celebrate Washoe cultural heritage.
- Reduce the risk of wildfire.

The Pope-Baldwin Bicycle Trail connects the neighborhoods south of the corridor to recreation destinations.

Advance Safety. Enhance facilities and utilize management strategies that reduce the potential for traffic incidents and enhance emergency access and evacuation routes.

Objectives

- Minimize conflicts between motorists, pedestrians, and cyclists.
- Address roadway design and management strategies that prevent year-round vehicle and emergency response access through Emerald Bay.
- Use ITS and create the infrastructure for technology to assist with emergency response by allowing visitors to connect and communicate with first responders.
- Provide turnouts to facilitate emergency access and response.
- Coordinate corridor enhancements to improve emergency response access to both upland and lakeward lands.
- Improve traffic flow to address evacuation needs, allow for forest fuels management, and minimize delays for emergency response.

Create Comfortable, Connected, and Convenient Transit and Trail Systems. Expand and manage the multi-modal transportation system to effectively improve access for all users to manage congestion, encourage walking and biking, and provide transit options.

Objectives

- Create a separated, shared use path to promote active transportation, disperse recreation, complete the Tahoe Trail through the corridor, provide a high-quality user experience, and serve a broad spectrum of users.
- Increase transit mode share and reduce the number of single occupancy vehicle trips entering the corridor.
- Provide frequent and convenient transit service that accommodated recreation gear and balances visitation demands with operational constraints.
- Respond to seasonal travel demands and maximize system efficiencies.
- Provide a coordinated transit system that connects with regional park once strategies.
- Plan for emerging e-bike technology and shared mobility services.

Transit that is frequent and convenient and can accommodate recreation gear has an opportunity to reduce the environmental and management impacts associated with large numbers of people using a personal vehicle to recreate in the corridor.

Fund the Vision. Secure sustainable funding to build, operate, maintain, and renew a multi-modal transportation system that transforms the vision from concept to reality.

Objectives

- Establish partnerships to increase the breadth of funding opportunities and sources.
- Develop sustainable funding sources and agreements that can be used to operate transit services and maintain infrastructure improvements.
- Explore new and innovative funding structures that allow for revenue generation to be reinvested into the corridor or to fund project implementation.

Set the Stage for Implementation, Maintenance, and Operations. Develop and identify the foundational roles and responsibilities, policies, and agreements needed to execute strategies and adaptively manage the corridor today and into the future.

Objectives

- Coordinate the planning and design of projects and group projects by geographic area for cost savings, appropriate sequencing, efficiencies in constructibility, and implementation, and reduced impacts to traffic flow during construction.
- Align with agency goals and desired conditions to support, enhance, and enable management decisions.
- Utilize partnerships to effectively and efficiently maintain, manage, and operate corridor enhancements, transit services, and supporting infrastructure.

The Tahoe Trail extension between Sugar Pine Point State Park and Meeks Bay demonstrates the progress that can be achieved by using partnerships and shared goals to develop multi-benefit projects in the corridor.

THE OPPORTUNITY

An analysis of corridor users and their travel patterns show that there is an opportunity to develop successful car-free strategies for arrival to corridor destinations.

Corridor Visitation

The majority of visitors to the SR 89 corridor are overnight visitors, meaning they stay in Tahoe at least one night. The LTCCP found that 90 percent of visitors in the corridor were overnight visitors. 2018 intercept survey results showed a similar breakdown: 89 percent overnight visitors and 11 percent day visitor.

Travel Patterns

In 2018, over 86 percent of corridor visitors responded to an intercept survey that they arrived to the corridor by car. In the Pope to Baldwin Segment, almost 10 percent use a bike to travel to the corridor since the Pope Baldwin Bike Path provides easy access from nearby homes and tourist accommodations. In the northern portion of the corridor, the recent extension of the West Shore Trail from Sugar Pine Point State Park south to Meeks Bay will allow more visitors a car-free option to reach the beaches of Meeks Bay Resort.

In 2018, LSC Transportation Consultants evaluated travel patterns. As part of an intercept survey and a windshield survey, travelers were asked from which direction they arrived to the corridor and to which direction they would leave. Results showed that the majority of recreation area users return via the direction they came. For example, 75 percent of Pope to Baldwin Segment respondents arrived to the corridor from the south and then returned to the south. Twenty-five percent of the segment's respondents indicated that they arrived from the north and would return to the north.

Similarly, at Eagle Falls 59 percent of respondents arrived to the corridor from the south and then returned to the south. Thirty-seven percent indicated that they arrived from the north and would return to the north.

This data indicates the potential success for transit services associated with park-n-ride/bike locations at the northern and southern ends of the corridor. Users would be able to hop on a shuttle to their recreation destination and return to the park-n-ride via the shuttle at the end of their activity. Connecting the park-n-ride/bike locations to mainline transit systems in South Lake Tahoe and North Lake Tahoe also allows people an opportunity to access the transit shuttles from their tourist accommodation or home without ever having to get in a car.

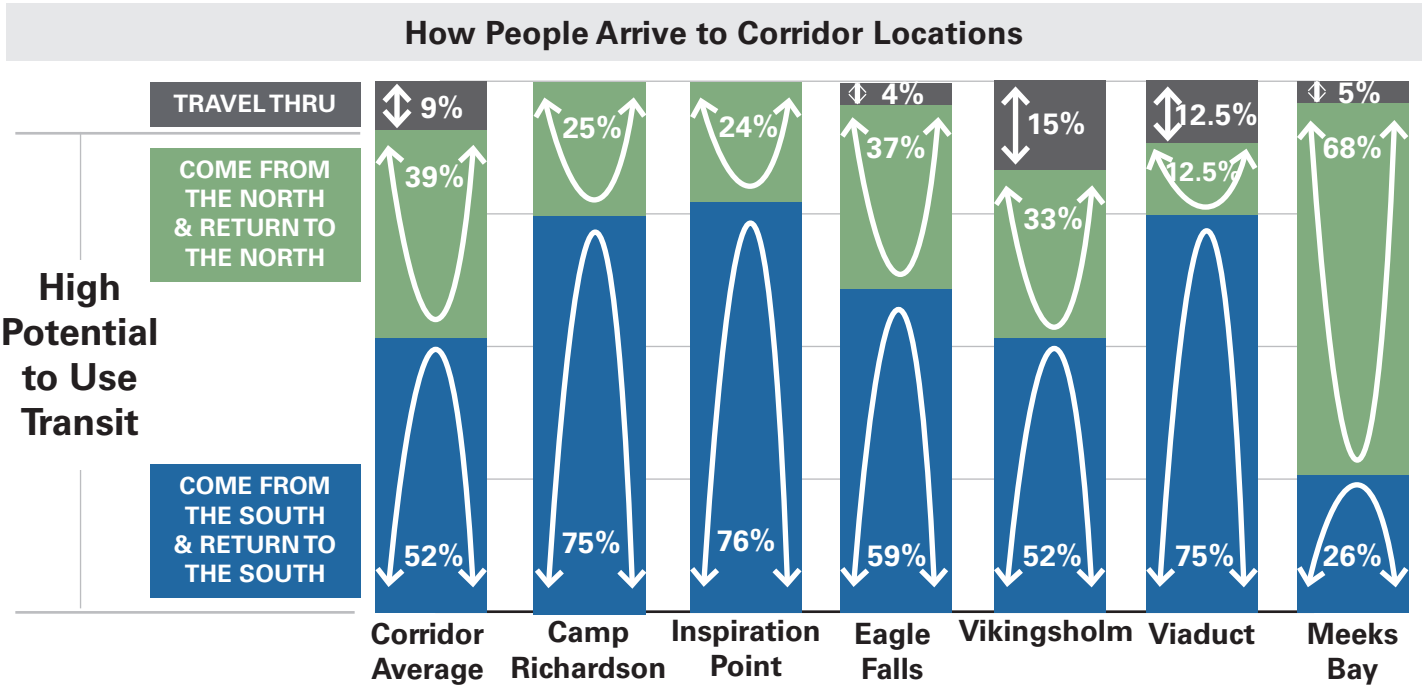


Figure 13: Corridor Travel Patterns Show that Park-n-Ride Transit Solutions are Viable

ANTICIPATED ENVIRONMENTAL GAINS

In 1982, TRPA adopted nine environmental threshold categories and 148 threshold standards which set environmental standards for the Lake Tahoe Basin and indirectly defined the capacity of the Region to accommodate additional land development.

There are nine threshold areas:

- Air Quality
- Water Quality
- Soil Conservation
- Vegetation
- Fisheries
- Wildlife
- Scenic Resources
- Noise
- Recreation

Implementation of CMP projects is anticipated to create environmental gains. Table 1 provides a brief indication of where significant gains might be realized in relation to TRPA thresholds. It is not intended to be a complete analysis, but it sets the stage for considering what the primary positive combined impacts of implementing the CMP may be.

Moving forward, individual projects will establish metrics by which progress can be tracked and success measured. These metrics will align with the TRPA thresholds and be coordinated with elements already being regularly evaluated.

Emerald Bay is home to the most concentrated areas of active osprey nests around Lake Tahoe. It is also one of the most highly visited sites on the lake. Visitation management along the corridor should consider how strategies can also reduce human impacts on these special sites.

Photo by California State Parks

ANTICIPATED ENVIRONMENTAL GAINS	
TRPA Threshold	Description
Air Quality	• Improved air quality by managing congestion through parking management strategies and providing transit can improve air quality. • Reduced VMT by shifting use to transit and bicycling.
Water Quality	• Reduced air pollution and the subsequent deposition of nitrogen and fine sediment by reducing private automobile use through improvements to public transit and alternative transportation modes. • Maximized use of water quality mitigation funds for multi-benefit projects to support erosion control and stormwater pollution control projects. • Reduced erosion from shoulder parking and unauthorized trails.
Soil Conservation	• Restricting roadside parking and restoring disturbed areas will reduce erosion and benefit soil conservation.
Scenic Resources	• Improved visual quality from both the roadway and from Lake Tahoe with relocated shoulder parking to off-highway areas. Unauthorized parking along the roadside blocks views to the lake and detracts from the scenic quality of scenic roadways. • Improved visual quality with enhanced roadway aesthetics. Designing highway structures (walls, slope protection, revegetation, etc.) to use appropriate materials and colors can improve the visual quality of the roadway.
Wildlife	• Enhanced connectivity of wildlife habitat areas by providing improved wildlife crossings, where appropriate, can prevent habitat degradation. • Balancing visitor levels with operational budgets for management and protection of natural and cultural resources can prevent habitat degradation and improve habitat for special interest species.
Fisheries	• Improved fish habitat and stream flows by coordinating projects to support these goals. Bridge designs should enhance stream flows and reduce unnatural blockages for fish movement, where appropriate.
Vegetation Preservation	• Improved access supports implementation and achievement of forest treatment programs and wetland and meadow conservation. • Reduced risk of wildfire by under-grounding electric utilities and improving emergency access to increase the ability for responders to quickly address wildfires.
Recreation	• Increased mileage of new trails developed and reduction in trail gaps. • Increased connectivity of non-motorized trails to recreation sites. • Increased transit service to recreation sites. • Increased outdoor recreation opportunities able to be accessed by bike or transit from tourist accommodations and residential areas. • Increased trail or transit connections between off-site parking areas and recreation sites. • Increased number of people who know how to access recreation sites without using a personal vehicle. • Improved quality of experience for scenic drivers. • Improved overall quality of experience as the experience of getting to the recreation destination is improved. • Improved overall experience by maintaining the variety of experiences and setting the appropriate expectation for the type of experience for recreation site and activity.
Noise	• Vehicular travel is one of the predominant noise sources in the basin. Based on available status and trend information, the 2015 Threshold Evaluation Report stated that existing programs by LTBMU, TRPA, and CHP are “mostly effective in reducing noise in rural outdoor recreation areas”. Reducing private automobile use and improving public transit and access to bike trails will further reduce noise impacts from personal vehicles.

Table 1: Anticipated Gains in TRPA Thresholds

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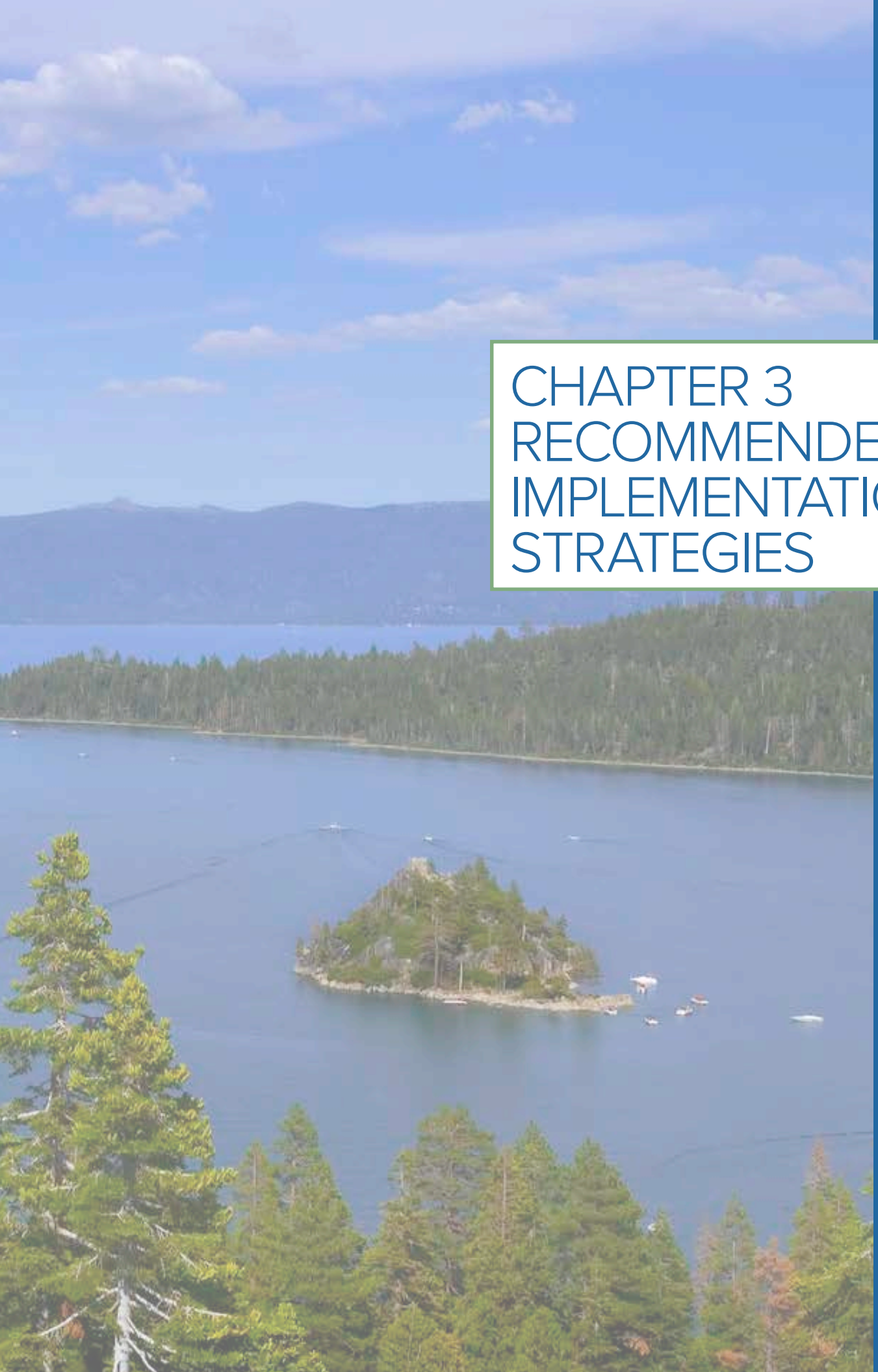


CHAPTER 3 RECOMMENDED IMPLEMENTATION STRATEGIES

Taylor Creek, in the Pope to Baldwin Segment, captures the beauty of the region's marshes and their critical role in preserving lake clarity.

CORRIDOR TOOLKIT

This chapter summarizes the tools and strategies recommended for implementation throughout the corridor and within individual corridor segments. It connects strategies to existing and potential challenges facing the corridor.

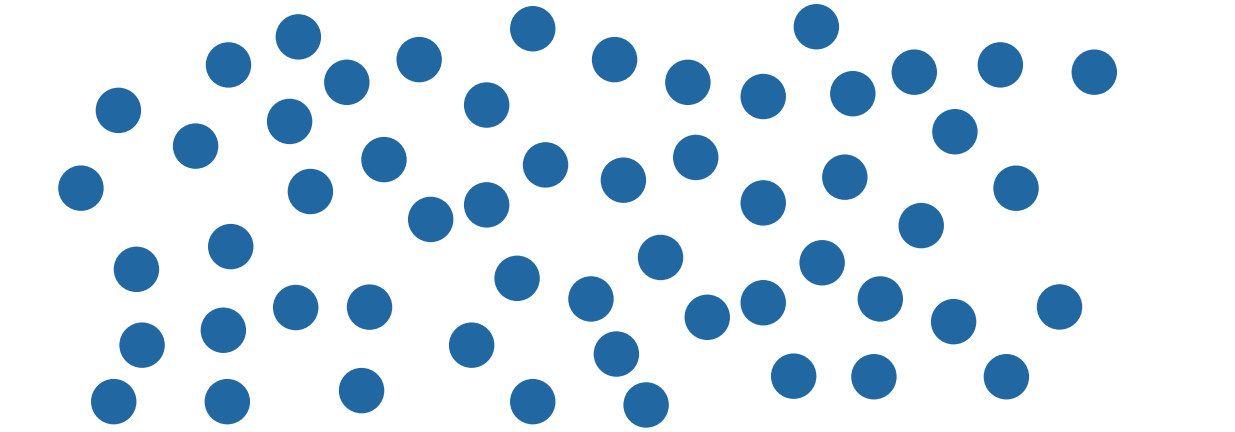
A number of management tools exist for land managers and agencies to consider as they address challenges associated with recreation access. Ideas were shared by stakeholders and members of the public. These concepts were tested against goals to determine viability for success.

Evaluation Criteria

The following questions were used to qualitatively assess potential tools and strategies. The criteria considered how well a strategy could achieve corridor goals while also recognizing funding and operational limitations and regulatory conditions.

1. To what extent does the strategy allow for improved visitor experience and recreation access without increasing congestion and delay on the highway?
2. To what extent does the strategy reduce the number of vehicles accessing recreation sites?
3. To what extent does the strategy provide a viable alternative to parking along the side of the road?
4. To what extent does the strategy manage visitation levels in a way that aligns with the desired conditions for natural, cultural, physical, social, and operational resources?
5. To what extent does the strategy manage congestion?
6. To what extent does the strategy improve visual quality?
7. To what extent does the strategy improve environmental quality and reduce the amount of fine sediments reaching Lake Tahoe?
8. To what extent does the strategy improve emergency access and response?
9. To what extent does the strategy reduce conflicts among vehicles and bicyclists and pedestrians?
10. To what extent does the strategy equitably serve a broad range of users?
11. To what extent is the strategy supported by the public?
12. How likely is the strategy to be competitive for state or federal funding sources or create a sustainable funding stream?
13. Will improvements take a long time (low score) to complete or are they easy to implement (high score)?
14. To what extent does the strategy not significantly impact operational or maintenance budgets?
15. To what extent can the proposed project enhance the ability of partners to leverage funding sources, improve constructibility, reduce construction time, and provide cost savings.

CONCEPTS GENERATED BY STAKEHOLDERS & COMMUNITY INPUT



TESTED AGAINST GOALS

CORRIDORWIDE TOOLS & STRATEGIES

TRANSIT & SHUTTLE SERVICES

- Create recreation route shuttle
- Connect with mainline transit systems
- Incorporate water transit
- Frequent and convenient
- Focus on shifting visitor behavior in the Pope to Baldwin and Emerald Bay Segments

PARKING MANAGEMENT & ENFORCEMENT

- Restrict and improve ability to enforce no roadside parking
- Leverage paid parking to fund transit and the operations and maintenance of new trail and parking facilities
- Utilize strategies such as reservations, congestion-based pricing, time limits, & progressive pricing
- Provide access to parking lots year-round

TECHNOLOGY SYSTEMS & INFORMATION ACCESS

- Provide real-time travel information
- Coordinate with regional and resident marketing for trip planning
- Create a sense of entry to the corridor
- Provide a consistent and coordinated approach to parking management

ACTIVE TRANSPORTATION

- Connect Tahoe Trail from Spring Creek Road to Meeks Bay
- Increase biking to recreation destinations
- Reduce congestion from pedestrian crossings
- Minimize at-grade pedestrian and bike crossings

INFRASTRUCTURE IMPROVEMENTS

- Address road design and operations to facilitate year-round access through Emerald Bay
- Improve technology infrastructure
- Improve wildlife crossings and address
- Provide emergency pull-offs
- Improve emergency response access facilities

Interconnected Strategies

Resource, recreation, and operational issues face the corridor. The issues are interrelated and the strategies available to address them are also connected. For example, restricting/relocating roadside parking areas without increasing enforcement, increasing fines, installing barriers, and providing alternative methods for more managed access can result in pushing the roadside parking to alternate locations and frustrated visitors.

The CMP recommends an integrated approach for projects and operational strategies. Tools are used in coordination with one another rather than independently. Results should be monitored and strategies adjusted to achieve a more managed and car-free experience where the impacts of visitor use are reduced.

An interconnected set of management tools are used in parallel to achieve a consistent set of recommendations throughout the recreation corridor.

CORRIDOR RECOMMENDATIONS

Eight overarching and interconnected recommendations are established for the overall corridor and specific corridor segments. These recommendations are intended to be used together to realize the corridor vision of a balanced and managed multi-modal corridor experience. The following pages summarize the eight recommendations.

Corridor Recommendations

- **Completion of** the Tahoe Trail
- **Transit &** reservation system during the summer months and peak weekends
- **Roadside parking** restricted/ relocated with increased enforcement and fine
- **Recreation zone speed** limit developed for peak season
- **Point source** congestion management at Pope Beach Road and Jameson Beach Road
- **Winter and off-season access** improvements/year-round recreation access for backcountry and site-seeing needs
- **Technology** infrastructure
- **Increased operational** resources and coordinated management approach

Completion of the Tahoe Trail around the West Shore

Within the corridor, the Class I, separated shared-use path system in the corridor ends at Spring Creek Road in the south and at Meeks Bay Resort in the north. Completion of the trail has the potential to provide a beautiful way for people to reach recreation destinations along the corridor without needing a car. Similar to the East Shore Tahoe Trail, the West Shore Tahoe Trail will also be a recreation opportunity in and of itself. It provides another benefit by offering a place for people to walk between recreation areas without walking on the highway.

Continued collaboration with stakeholders, including land managers and homeowners, can assess the feasibility of various alignments which can then move forward in phases to completion. The trail completion through the SR 89 Recreation Corridor will be a spectacular section of the Tahoe Trail's route around Lake Tahoe.

Figure 14: Conceptual Completion of the Tahoe Trail

Corridor Transit and Reservation System for Summer and Peak Weekends

During the peak summer months, a coordinated transit and parking management system will offer a viable alternative for access to corridor destinations. The framework of the recommended system is discussed in greater detail in Chapter 5 and will require land managers, agencies, and vendors to cooperatively manage parking in a consistent and collaborative approach. The transit framework incorporates a shuttle system and water taxi service to reduce the use of personal vehicles in the corridor and develop a system to manage visitation volumes and distribution. Water taxis should accommodate some bicycles so passengers can ride when they reach their destination. The approach also enhances the visitor experience by increasing equitable access on Lake Tahoe. For example, rental boats can be expensive and not everyone feels confident using a kayak or paddle board.

The transit framework can be expanded and used for recreation access during peak weekends, In particular, there is demand for winter backcountry access. A winter shuttle pilot was provided by the Tahoe Backcountry Alliance during 2019/2020. There is a desire to expand that service.

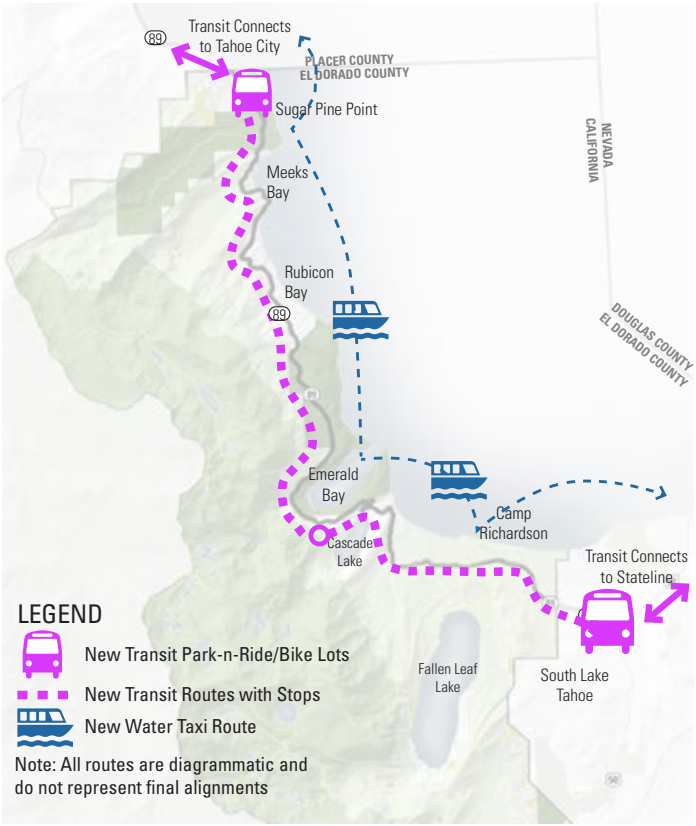


Figure 15: Conceptual Transit Framework for Summer season and Peak Weekends

Roadside Parking and Enforcement Recommendations

Shifting use patterns and managing visitation requires transit strategies be coupled with changes to roadside parking and the travel way. Parking along the roadside should be restricted when alternative access through transit and bike options are provided. Enforcement of no roadside parking can be enhanced through the use of barriers, utilizing technology, significantly increasing fines, and developing consistent zones or stretches where no roadside parking is allowed. Zones must be long enough that the parking is not pushed into nearby areas, such as residential zones. Increased fines will require approval at a state level. Visitation use associated with roadside parking is intended to be shifted to other modes of access such as transit and bike.

Parking areas for trail access should be organized and incorporated into the overall parking management strategy. Adaptive parking restrictions are needed to restrict roadside parking during peak seasons, but may allow for some parking during shoulder seasons and in select areas for trail access.

Figure 16: Priority Areas for Restricting Roadside Parking | Additional Areas to Be Restricted from Meeks Bay Past Sugar Pine Point State Park as Alternative Access is Provided

Recreation Zone Speed Limit During Peak Season

High volumes of pedestrians and bicycle activity occur in corridor recreation areas during the summer and on peak days during the winter. The speed limit through the corridor does not reflect the increased number of people walking or biking near the roadway. In similar areas, Nevada has the ability to implement a variable speed limit in recreation zones that can be activated during high use days. The strategy is akin to school zones where a reduced speed limit is put in place when appropriate. The recreation zone speed limit will require a change to California's vehicle code, but it offers a method for reducing the potential for traffic incidents and heightening driver's awareness of the need for reduced speed in certain locations.

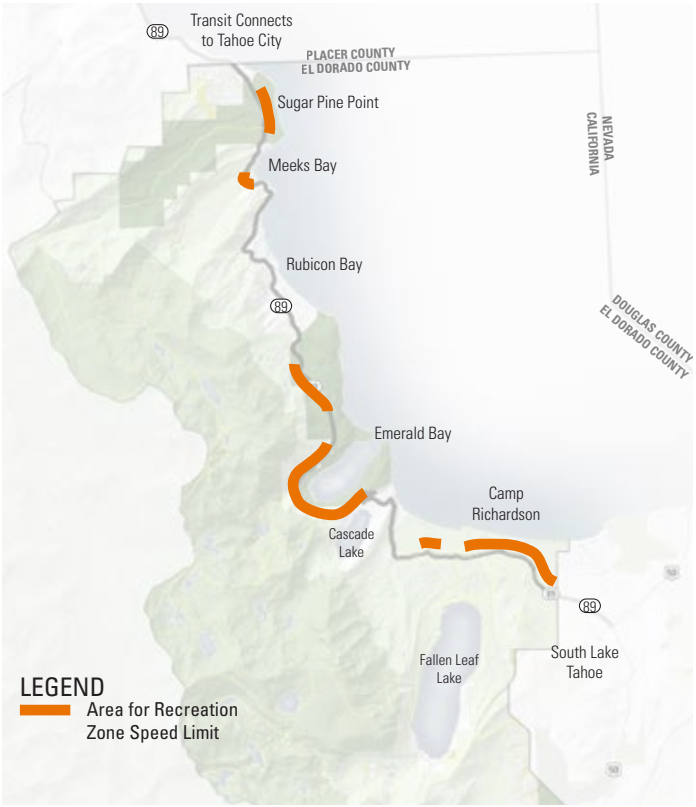


Figure 17: Priority Areas for Implementing a Recreation Zone Speed Limit

Point Source Congestion Management at Pope Beach Road and Jameson Beach Road

Traffic flow through the Pope to Baldwin Segment is severely impeded by vehicles queued for entry into Pope Beach and by pedestrians crossing the highway at Jameson Beach Road. The delays caused by these queues reduces the desirability of transit use because the lack of a transit only bypass lane requires shuttles to wait in the same traffic.

Addressing the congestion requires a suite of coordinated strategies that can be implemented and monitored in phases. The desired conditions manage congestion while also incentivizing a shift from personal vehicles to transit or active transportation modes.

Recommendations include parking management strategies for all areas, including Pope Beach. Entry modifications to Pope Bach can reduce the likelihood of vehicles backing up onto the highway. Modifications should also be designed to prevent parking along Pope Beach Road. At Jameson Beach Road, the restriction of roadside parking is coordinated with potential land use shifts, modifications to the pedestrian crossing, and altering the crossing of the Pope Baldwin Bike Path to improve traffic flow. Additionally, creating an internal vehicular route can disperse visitation throughout the recreation segment and connect parking areas off the highway.

Additional detail for the strategies is provided in Items 17-19 of this chapter.

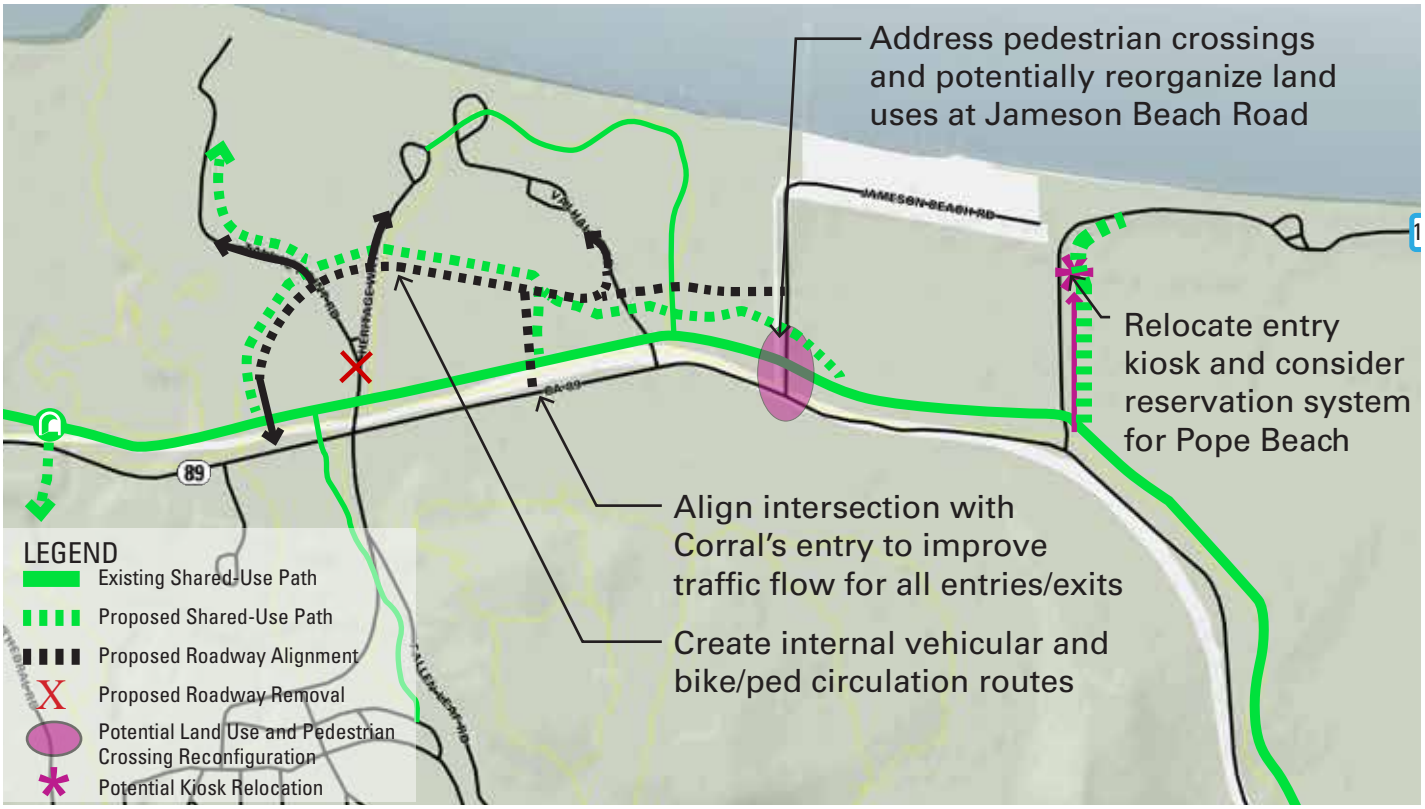


Figure 18: Conceptual Diagram of Point Source Congestion Strategies

Winter and Off-Season Access Improvements

Roadway design and management operations restrict year-round access (and emergency access) around Emerald Bay. The highway is not only used for access to recreation destinations, it also serves a vital role for emergency access along the west shore and for commuters traveling between the north and south shores for work. Avalanche risks can often trigger road closures. Additionally, the narrow road corridor along the ridgeline between Emerald Bay and Cascade Lake constrains transit operations, reduces opportunities to incorporate a Class I bicycle facility, and hampers emergency access. The tight switchbacks also pose a challenge.

A Project Study Report should evaluate the challenges and opportunities for roadway modifications and operational measures to manage potential avalanches and rockfall. These strategies are discussed in more detail in Items 8, 9, and 10. The Project Study Report should detail implementation projects to move forward while recognizing the overall desired conditions for corridor management and continued control of large trucks and tour buses in Emerald Bay.

There is demand for corridor recreation access both in the winter and off-seasons. Access to strategic off-highway parking lots is needed for winter backcountry access. Demand for site-seeing in Emerald Bay is high throughout the year. Changes in snowpack conditions and warmer winters has increased the need to accommodate site-seeing access throughout the year and not just during the summer.

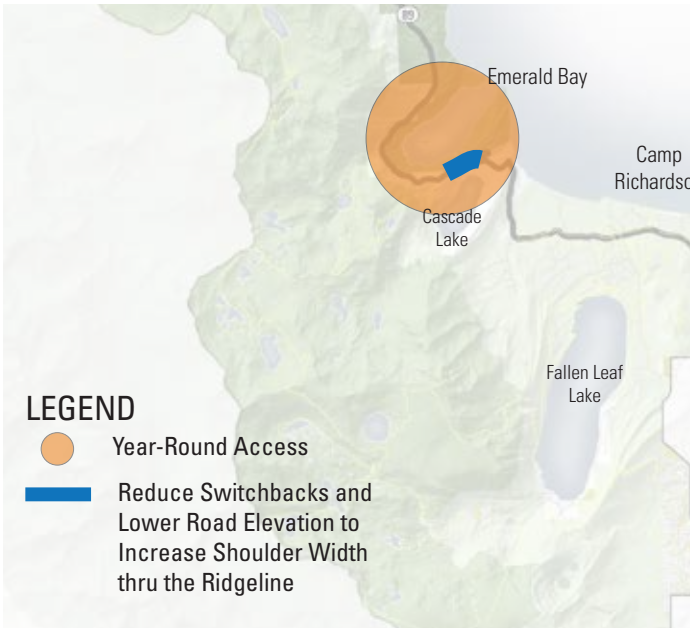


Figure 19: Conceptual Diagram for In-depth Evaluation of Year-round Access Opportunities

Technology Infrastructure Improvements

As discussed in Chapter 1, technology innovations can be used to manage and maintain the corridor. But access to cellular and fiber infrastructure hamper the ability to use these resources. Throughout the corridor, the gaps in technology access should be addressed. Every infrastructure project should consider opportunities to incorporate technology infrastructure as a goal. Co-location with existing utilities and with the Tahoe Trail should be evaluated. Technology applications and management systems should be consistent or compatible throughout the Basin to make the systems easy to use and access for visitors and residents. ITS should be used to communicate real-time information to visitors regarding corridor conditions, parking, and transit options. And the need for a traffic operations center to make ITS work should be addressed.

Figure 20: Priority Areas for Enhancing or Providing Technology Infrastructure

Increased Operational Resources and Coordination

Land managers and agencies have limited budgets and are asked to maximize the use of each dollar. Deferred maintenance and minimal staffing levels hamstring the ability to increase management strategies because the limited resources are already fully allocated to address existing visitation levels and facility infrastructure. The CMP recognizes that increased operational and facility resources are needed to manage the corridor. Continued coordination between agencies to implement the recommended projects and strategies is required. As described in Item 26, an Executive Team and a Corridor Management Team should be developed along with a formalized agreement for collaboration, decision-making, and potential cross-jurisdictional roles and responsibilities. The goal is to continue to address challenges, seek solutions, and identify project champions. These items will be memorialized through an agreement upon completion of the CMP and initiation of the Tahoe Trail feasibility study.

CONNECTING STRATEGIES WITH ISSUES

The strategies detailed on the following pages connect the dots between the corridor's 28 key shared issues (listed below) and the set of strategies recommended to address the issues. The summary includes action steps, how success will be measured, potential project leads and partners, and a list of how the strategies relate to other recommendations. The correlated list of issues and strategies is also found as a table in the appendix.

Chapters 4 and 5 support this list by detailing the analysis and development of the travel framework for multi-modal access. Chapter 6 describes the series of specific projects along the corridor that are required to implement the strategies.

Item List

- Item 1 | Gap in Tahoe Trail
- Item 2 | Pedestrians in Highway
- Item 3 | Lack of Consistent Transit Service
- Item 4 | Bus Stops & Turnarounds Needed in Emerald Bay
- Item 5 | Motorists Congest Roads when Searching for Parking
- Item 6 | Visitation Surge Occurs at Peak Times
- Item 7 | Overnight Users Need Access
- Item 8 | Parking Lots Closed in Winter
- Item 9 | Emerald Bay Road Design Restricts Transit
- Item 10 | Lack of Year-Round Access Through Emerald Bay
- Item 11 | Limited Areas for Emergency Response
- Item 12 | High Traffic Speeds Near High Volumes of Pedestrians
- Item 13 | Limited Operations Budgets
- Item 14 | Lack of Piers and Operations to Support Water Taxi Service
- Item 15 | Lack of Technology Infrastructure
- Item 16 | Traffic Congestion at Pope Beach Road and at Eagle's Nest Campground
- Item 17 | Traffic Congestion at Jameson Beach Road
- Item 18 | Visitation is not Dispersed
- Item 19 | Pope to Baldwin Bike Path has High Use Volumes
- Item 20 | Lack of Recreation Gateway, Visitor Info, & Consistent Wayfinding
- Item 21 | Events Can Impact Congestion
- Item 22 | Roadway is a Barrier for Wildlife Movement
- Item 23 | Overhead Powerlines Create a Fire Risk
- Item 24 | Roadside Parking Degrades Effectiveness of Stormwater Features
- Item 25 | Vikingsholm Parking Needs Repairs
- Item 26 | Implementation is Tough and Needs Partnerships and Executive Buy-in
- Item 27 | Lack of Public/Private Partnerships
- Item 28 | Climate Change

ITEM 1 | GAP IN TAHOE TRAIL

DESCRIPTION

The Tahoe Trail ends at Spring Creek Road in the south and at Meeks Bay Resort in the north, leaving an approximate 11-mile gap in bicycle access to recreation destinations and through cyclists along the west shore of Lake Tahoe.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- CDPR
- TTD
- CALTRANS
- TRPA
- El Dorado County

ASSOCIATED STRATEGIES AND PROJECTS

- Item 2, Item 15, Item 23, Item 26
- Projects: CW-1.01, WS-2.01, WS-2.02, WS-2.03, WS-3-01, WS-4.01

STRATEGIES

- Complete a feasibility study for shared-use path alternatives along the west shore.
- Continue to work with residents, property owners, and land managers to develop the preferred alignment for the Tahoe Trail.
- Phase implementation of the remaining segments of the Tahoe Trail so that phases are constructed from destination to destination. For example, one phase of the construction could encompass the trail from the vista point east of Eagle Falls through the Vikingsholm parking and entrance area. This approach could leverage partnerships and improve connectivity. Other phases may be associated with the restoration project at Meeks Bay, the connection of Meeks Bay to D.L. Bliss, the connection of D.L. Bliss to Emerald Bay, and the connection to the existing trail at Spring Creek Road to Emerald Bay.

SUCCESS MEASUREMENT

- Tahoe Trail completion with no gaps along the West Shore.
- Miles of trail constructed.

ITEM 2 | PEDESTRIANS IN HIGHWAY

DESCRIPTION

High volumes of pedestrians walk along and in the roadway in heavily used areas such as the Pope to Baldwin and Emerald Bay Segments. 375 cars parked alongside the highway and the viaduct in Emerald Bay on an average busy summer day in 2018 forcing, pedestrians to walk in the roadway.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- CDPR
- TTD
- CALTRANS
- TRPA
- CHP
- EDC Sheriff

ASSOCIATED STRATEGIES AND PROJECTS

- Item 1, Item 3, Item 23, Item 26
- Projects: CW-1.01, WS-2.01, WS-2.02, WS-2.03

STRATEGIES

- Implement strategies associated with Item 1 and incorporate a walkway or shared-use path around Emerald Bay in coordination with and connected to off-highway parking lots.
- Implement strategies associated with Item 5 and restrict/relocate roadside parking.

SUCCESS MEASUREMENT

- Miles of sidewalk or Tahoe Trail developed around Emerald Bay offering a pathway off the highway for pedestrian use.
- Number of roadside parking spaces “relocated” or shifted to another mode.
- Reduction in traffic incidents.
- Decrease in emergency response times.
- Measurable reduction in congestion levels.
- Improved lake clarity.
- Number of pedestrian and bikes using new trail system.
- Number of miles of No Parking Zone implemented as alternative modes of transportation have shifted to organized parking, transit, and trail systems.

ITEM 3 | LACK OF CONSISTENT TRANSIT SERVICE

DESCRIPTION

Lack of consistent, frequent, and marketed transit within the corridor negatively impacts the number of people able to arrive to recreation destinations without a car.

ASSOCIATED STRATEGIES AND PROJECTS

- Item 1, Item 4, Item 5, Item 26
- Projects: CW-1.02, CW-1.03, CW-1.04, CW-1.05, CW-1.06, WS-1.01, WS-1.03, WS-1.08, WS-1.09, WS-1.10, WS-1.11, WS-1.14, WS-2.04, WS-2.06, WS-2.07, WS-2.08, WS-2.11, WS-2.12, WS-2.13, WS-2.14, WS-4.03, WS-5.01, WS-5.02

STRATEGIES

- Develop an easily accessible, frequent, fun, and consistent transit system, that provides recreation access and can carry recreation equipment, to serve corridor recreation destinations during the summer months. Consider an express transit service to Emerald Bay from a park-n-ride area south of Emerald Bay. Consider expanding transit to other peak weekends during the winter and off-season.
- Reduce the demand for park-n-ride facilities. Coordinate transit services with mainline systems from accommodation areas. Partner with private shuttles, including those from area hotels and accommodations to service the corridor from lodging.
- Implement and enforce no roadside parking recommendations.
- Develop and implement a unified branding and marketing strategy to promote no-car access options to recreation areas.
- Implement point source congestion management strategies throughout the Pope to Baldwin Segment to reduce delays and increase transit ridership.
- Establish a sustainable funding source that addresses varying land manager requirements while collecting revenue from parking and/or transit to subsidize transit operations and the operation of a parking management system. The administrator of the system should be an entity that can work with partner agencies to pool resources as well as pursue additional funding sources such as applying for State Transit Assistance (STA) funds and grant programs.
- Utilize a reservation system for shuttle use to distribute peak use and provide a system that can be used to reduce visitation, if needed, with the understanding that shifting recreation use and unmet demand will need to be addressed as part of a basinwide approach.
- Enhance the bus stops and pull-offs through Emerald Bay to improve transit operations and increase reliability.
- Develop turnaround locations (such as a roundabout) near the north gate at Emerald Bay and as part of parking/shuttle stop improvements at Bayview Campground for buses to turnaround.

ITEM 3 | CONTINUED

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- CDPR
- TRPA
- CHP
- EDC Sheriff
- Micro-transit, water taxi operators, and tour companies

HIGHER LEVEL DISCUSSION

- Findings for restricting roadside parking are needed per the California vehicle code
- Significantly increasing fine will need to be discussed at a state level
- Addressing increasing visitation demand needs to occur at a regional level

- Incorporate visitor experience opportunities as part of the transit system to encourage use.
- Identify a location near the Y or West Way that can be developed as a park-n-ride/bike to serve corridor users entering the corridor from the south.
- Utilize the underutilized parking area at Sugar Pine Point State Park as a park-n-ride/bike location in the northern area of the corridor. Improvements should allow for the facility to also improve TART service and bus turnaround for the north shore.
- Develop public/private partnerships to deliver water taxi operations and promote use of water taxi options to reach recreation destinations and create a desired recreation experience in and of itself. Water taxis should accommodate some bicycles so passengers can ride when they reach their destination. Private operations present an opportunity to help meet corridor goals and provide visitor experience benefits, but they are not a substitute for public transit.
- Explore public/private solutions, including opportunities for micro-transit and tour companies to provide services that are compatible with the corridor vision and desired outcomes.

SUCCESS MEASUREMENT

- Reduction in vehicle congestion along the highway.
- Mode share targets for each travel framework phase hits minimum of 80 percent of target.
- Visitor awareness of shuttle program.
- Results of travel surveys indicate a positive experience.
- 15 percent of visitors utilize a park-once strategy and access transit from their accommodations.
- Increased operations budget for land managers.
- Transit and parking management system have sustainable funding source.

ITEM 4 | BUS STOPS & TURNAROUNDS NEEDED IN EMERALD BAY

DESCRIPTION

Bus stop and turnaround locations are limited in Emerald Bay and vehicles are often illegally parked in the bus stop.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- CALTRANS
- LTBMU
- CDPR
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 3
- Projects: WS-2.05, WS-2.11, WS-2.12, WS-2.13, WS-2.14

STRATEGIES

- Formalize bus stop pulloff locations in Emerald Bay so the design is integrated as part of the following areas:
  - Northbound pulloff at Inspiration Point
  - Northbound pulloff at Vikingsholm Parking lot
  - Southbound pulloff part of redesigned roadside parking area at Eagle Falls
  - Southbound pulloff part at Inspiration Point or as part of a redesign of Bayview Campground to a small off-highway parking lot and shuttle stop to meet winter and shoulder season recreation access needs when the summer shuttle is not in operation
  - Turnarounds at Emerald Bay's northern and southern gates and as part of the Bayview transit pulloff
- Implement elements discussed in Item 3.

SUCCESS MEASUREMENT

- Transit reliability and ridership increased.

ITEM 5 | MOTORISTS CONGEST ROADS WHEN SEARCHING FOR PARKING

DESCRIPTION

Summer recreation users arriving to beach entries, trailheads, and off-highway vista points by car creates significant congestion as motorists use the highway as a defacto parking lot and search for a place to park along the side of the road. The traffic congestion, also caused by lack of real-time information, impacts emergency response operations and overall traffic flow.

ASSOCIATED STRATEGIES AND PROJECTS

- Item 1, Item 3, Item 4, Item 26
- Projects: CW-1.02, CW-1.03, CW-1.04, WS-1.03, WS-2-04, WS-2.06, WS-2.07, WS-2.14, WS-4.05, WS-5.05

STRATEGIES

- Restrict/relocate roadside parking from the Pope to Baldwin Segment to D.L. Bliss and shift to off-highway parking lots or park-n-ride/bike locations or park-once strategies from lodging accommodations and/or other recreation sites.
- Implement an adaptive management strategy to monitor roadside parking impacts near Sugar Pine Point State Park and Meeks Bay and restrict/relocate parking when alternative access is provided.
- Significantly increase fine for parking along the roadside in restricted areas.
- Utilize barriers, striping, and No Parking Zones to provide consistency and clarification for visitors and to assist in enforcement of roadside parking restrictions.
- Utilize technology to help enforce roadside parking restrictions – use of license plate readers for ticketing.
- Consider opportunities for third-party ticketing/warnings to increase enforcement.
- Develop and implement a unified branding and marketing strategy to promote no-car access to recreation areas.
- Utilize ITS to notify motorists of transit opportunities, when parking is full, and of sustainable access opportunities.
- Utilize real-time information (through the use of technology such as cameras, counters, ITS, and cell data) to inform the public of travel conditions and allow land managers to adapt strategies.
- Develop turnaround locations (such as a roundabout) near the north gate and south gates at Emerald Bay where motorists can return to park-n-ride locations or off-highway parking lots without creating congestion issues.

ITEM 5 | CONTINUED

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- Caltrans
- LTBMU
- CDPR
- CHP
- EDC Sheriff
- TRPA

HIGHER LEVEL DISCUSSION

- Findings for restricting roadside parking are needed per the California vehicle code
- Significantly increasing fine will need to be discussed at a state level

- Implement a multi-modal travel system (i.e., shuttle, bike path, water taxi) to provide access to a sustainable number of visitors who would otherwise be displaced from the restriction/ relocation of roadside parking. Water taxis should accommodate some bicycles.
- Improve bus stops to meet accessibility requirements, enforce no parking in bus stops, and connect bus stops to recreation areas by shared-use pathways.
- Develop a coordinated corridor parking management system that is implemented in tandem with transit and other implementation strategies and is either part of or aligned with a regional system. The management system should be designed to meet desired corridor outcomes. The parking management system should incorporate a reservation system as described in Item 6.
- Establish a predictable and sustainable funding source to pay for the parking management system and subsidize the transit, parking, and trails operations and maintenance. The system should address land manager requirements, such as fees for entry versus parking. The administrator of the system should be an entity that can work with partner agencies to pool resources and pursue other funding sources such as applying for State Transit Assistance (STA) funds and grant programs.

SUCCESS MEASUREMENT

- 50 percent reduction in the length of delay time to get through the corridor.
- Mode share targets for each travel framework phase hits minimum of 80 percent of target.
- Visitor awareness of shuttle program.
- Results of travel surveys indicate a positive experience.
- 15 percent of visitors utilize a park-once strategy and access transit from their accommodations.
- Transit and parking management system have a predictable and sustainable funding source.
- Miles of No Parking Zones created

ITEM 6 | VISITATION SURGE OCCURS AT PEAK TIMES

DESCRIPTION

Demand for recreation access peaks in the corridor from 10AM to 3PM creating stress on the transportation system and causing crowding and congestion.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- CDPR
- TRPA
- Vendors

ASSOCIATED STRATEGIES AND PROJECTS

- Item 3, Item 5, Item 26
- Project CW-1.04

STRATEGIES

- Develop and implement a reservation system to disperse and manage demands throughout the day.
- Reservation system should provide options for different groups (e.g., pools for locals, pools for underserved groups that can't afford congestion pricing).

SUCCESS MEASUREMENT

- Peak hour curve is flattened with more people arriving earlier or later in the day. (Similar to Muir Woods case study.)
- Increased turnover rate in select areas, such as vista points, to enhance visitor photo opportunities.

ITEM 7 | OVERNIGHT USERS NEED ACCESS

DESCRIPTION

Parking facilities at Eagle Falls and Bayview trailheads are used by overnight recreation users accessing Desolation Wilderness.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- TRPA
- Tahoe Rim Trail Association

ASSOCIATED STRATEGIES AND PROJECTS

- Item 3, Item 5
- Projects: WS-2.06, WS-2.07

STRATEGIES

- Develop a transit system with early morning and late evening runs that serves overnight backcountry users and include parking and transit pass as part of the backcountry permit.

SUCCESS MEASUREMENT

- Sustained recreation access and travel experience to Desolation Wilderness access as measured by the number of backcountry users who reserve parking and/or transit passes as part of their backcountry permit.
- Number of backcountry visitors with a positive experience accessing the backcountry under the new system.

ITEM 8 | PARKING LOTS CLOSED IN WINTER

DESCRIPTION

Off-highway parking areas are closed in the winter and a portion of the off-season, causing recreation users to park along the highway shoulder to access recreation sites. Mild winters and winters with low snow levels result in significant sightseeing in Emerald Bay. Changes due to climate change increase the frequency of mild winters or snow levels at higher elevations. These changes increase the need to provide parking in the corridor during the winter.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- CDPR
- Caltrans
- TTD
- TRPA
- Backcountry Alliance

ASSOCIATED STRATEGIES AND PROJECTS

- Item 5, Item 7
- Projects: S-1.17, WS-1.18, WS-2.18, WS-3.04, WS-4.06, WS-5.06

STRATEGIES

- Keep strategically located parking lots open year-round.
- Coordinate management strategies to allow for snow removal of parking areas in the winter after highway snow removal efforts are completed.
- Adaptively manage corridor parking areas to strategically identify roadside areas that may be appropriate for recreation access in the winter and off-season when transit is not operating.

SUCCESS MEASUREMENT

- Number of winter parking spaces available.
- Visitor experience rating increases due to safe available parking to their winter recreation destination.

ITEM 9 | EMERALD BAY ROAD DESIGN RESTRICTS TRANSIT

DESCRIPTION

Roadway design, including hairpin turns and narrow shoulders, restricts transit access to Emerald Bay. Buses are restricted in capacity which impacts the cost of providing service.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- CALTRANS
- LTBMU
- CDPR
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 1, Item 26
- Project WS-2.09

STRATEGIES

- Conduct a Project Study Report (PSR) of Emerald Bay and SR 89 south of Emerald Bay near Cascade Road to evaluate roadway design elements such as the following, while considering potential effects on visitation access from tour buses:
  - Striping the fog line and rebuilding the shoulder of SR 89 near Cascade Road.
  - Removing the final/tightest switchback as SR 89 enters Emerald Bay just west of Eagle Point Campground.
  - Lowering the elevation of SR 89 along the ridgeline as the roadway passes between Emerald Bay and Cascade Lake to allow for a widened shoulder and guard rails.

SUCCESS MEASUREMENT

- Improved frequency and reliability of transit service to Emerald Bay.
- Reduction in cost of transit service.

ITEM 10 | LACK OF YEAR-ROUND ACCESS THROUGH EMERALD BAY

Photo courtesy of Caltrans

DESCRIPTION

Roadway design and operations restrict year-round access around Emerald Bay. This impacts commuters, emergency responders, and recreation access.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- CALTRANS
- LTBMU
- CDPR
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 11, Item 26
- Projects: WS-2.09, WS-2.18

STRATEGIES

- Conduct a Project Study Report (PSR) of Emerald Bay to evaluate roadway design elements as discussed in Item 9 and to evaluate avalanche control features and management strategies to improve year-round access.

SUCCESS MEASUREMENT

- Minimum road closures of SR 89 in the winter.

ITEM 11 | LIMITED ACCESS FOR EMERGENCY RESPONSE

DESCRIPTION

Limited access for emergency response and evacuation activities and to conduct fuels management and forest health management activities recommended by Lake Tahoe West Restoration Partnership.

PROJECT LEAD(S) & KEY PARTNERS

- CALTRANS
- LTBMU
- CDPR
- TRPA
- TTD
- CHP
- EDC Sheriff
- Cal Fire
- TFFT
- NT Fire
- PC Sheriff

ASSOCIATED STRATEGIES AND PROJECTS

- Item 10
- Projects: WS-1.12, WS-1.13, WS-1.14, WS-2.08, WS-2.16, WS-2.17, WS-3.03, WS-4.04, WS-5.04

STRATEGIES

- Improve Fallen Leaf Road for emergency response and evacuation needs. Install access gates and fire locks, if needed.
- Improve the Camp Richardson, Emerald Bay, and Sugar Pine Point State Park piers to have a multi-use function for lakeward emergency access.
- With potential land use reconfigurations at Jameson Beach Road, repurpose existing structures for summer police/fire staging and administration, operations.
- Develop emergency access and evacuation pullouts at regular intervals and sign and enforce no parking in pullouts, vehicles must not be left unattended.
- Consider a first responder base station at Camp Richardson.
- Designate and improve the road construction staging area west of Bayview Campground at Emerald Bay as a helipad access site.
- Develop evacuation plan.
- Provide strategically located turn around points (roundabouts, hammerheads, or pullouts) allowing emergency responders the ability to turn around and respond in the opposite direction.
- Provide helipad access.

SUCCESS MEASUREMENT

- Emergency pull-outs located every 1/2 to 1 mile.
- Increased in-corridor emergency response staging locations.

ITEM 12 | HIGH TRAFFIC SPEEDS NEAR HIGH VOLUMES OF PEDESTRIANS

DESCRIPTION

Motorists travel through high use recreation areas at high travel speeds, even during peak summer periods.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- CALTRANS
- LTBMU
- CDPR
- CHP
- EDC Sheriff
- TRPA

HIGHER LEVEL DISCUSSION

- Recreation zone speed limit will need to be discussed at a state level to revise California vehicle code

ASSOCIATED STRATEGIES AND PROJECTS

- Item 26
- Project CW-1.11

STRATEGIES

- Implement a recreation corridor speed limit that allows for reducing the speed limit around recreation sites during the summer and other peak recreation use days.

SUCCESS MEASUREMENT

- Implementation of recreation zone speed limit.

ITEM 13 | LIMITED OPERATIONS BUDGETS

DESCRIPTION

Recreation use levels and limited operations and maintenance budgets have stretched land manager's ability to protect natural and cultural resources, address litter, and improve existing facility infrastructure from user impacts.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- CDPR
- TTD
- CALTRANS
- CHP
- EDC Sheriff
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 3, Item 5, Item 26
- Projects: CW-1.04, CW-1.07

STRATEGIES

- Identify revenue generation and cost-saving opportunities.
- Support requests for increased budgets for operations and maintenance (annual and capital) including staffing of recreation areas and implementation of capital projects to manage user behavior, minimize impacts on natural and cultural resources, and align garbage management needs with operational resources.
- Manage corridor access to disperse use during peak periods and establish a framework for organizing and managing visitor arrivals.
- Develop agreements to allow revenue to stay local for reinvestment into the corridor.
- Utilize total asset management planning for facilities to consider full life-cycle costs.

SUCCESS MEASUREMENT

- Increased operation budgets for land managers to meet goals for public lands (including resource protection and visitor access.)
- Flexibility to spend dollars across jurisdictional boundaries.

ITEM 14 | LACK OF PIERS AND OPERATIONS TO SUPPORT WATER TAXI SERVICE

DESCRIPTION

The need for improved piers and lack of staffing prevent the opportunity for water taxis to serve Camp Richardson, Emerald Bay, and Sugar Pine Point State Parks. The lack of improved piers impacts ADA/ABA access and prevents emergency response teams from easily accessing the water.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- CDPR
- LTBMU
- TRPA
- EDC Sheriff
- Cal Fire

ASSOCIATED STRATEGIES AND PROJECTS

- Item 5, Item 11, Item 13, Item 26
- Projects: WS-1-14, WS-2.08, WS-5.09

STRATEGIES

- Improve the piers at Camp Richardson and Emerald Bay and construct a new pier at Sugar Pine Point State Park to meet water taxi requirements and to double as emergency/public safety facilities.
- Increase staffing budgets to monitor and oversee uses at the piers.

SUCCESS MEASUREMENT

- Pier improvements completed and operational needs met.

ITEM 15 | LACK OF TECHNOLOGY INFRASTRUCTURE

DESCRIPTION

Lack of power, broadband, cellular infrastructure, and fiber communications in the corridor impedes the ability to provide real-time travel information and implement corridor recommendations.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- CDPR
- CALTRANS
- TRPA
- CHP
- EDC Sheriff
- Liberty Utilities
- Technology providers

ASSOCIATED STRATEGIES AND PROJECTS

- Item 1, Item 26
- Projects: CW-1.01, CW-1.13, WS-1.07, WS-2.01, WS-2.2, WS-2.03, WS-2.10, WS-3.01, WS-3.02, WS-4.01, WS-4.02, WS-5.03

STRATEGIES

- Improve ITS infrastructure, address needs for a traffic operations center, and utilize ITS as key element of visitor communications to provide real-time information.
- Enhance broadband and fiber service where feasible.
- Co-locate technology and power infrastructure with the Tahoe Trail and roadway and infrastructure improvements.
- Evaluate opportunities for microcell technologies where other infrastructure enhancements are not feasible.
- Evaluate opportunities with each project to co-locate or enhance existing utility infrastructure such as replacement of aging infrastructure or lack of utility infrastructure.
- Install electric vehicle charging stations.

SUCCESS MEASUREMENT

- Access to technology improved along the corridor to support operations and real-time travel information.
- Improved utility infrastructure throughout the corridor.
- Electrification for vehicles and transit.

ITEM 16 | TRAFFIC CONGESTION AT POPE BEACH ROAD & EAGLE'S NEST CAMPGROUND

DESCRIPTION

Traffic congestion associated with Pope Beach entry and Eagle's Nest Campground.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- Vendor
- TTD
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 5, Item 26
- Project WS-1.02

STRATEGIES

- Implement recommendations associated with overall congestion management (Item 5).
- Extend bike path to Pope Beach.
- Relocate the entry kiosk and turn-around further north along Pope Beach Road to increase the vehicle capacity for queue along Pope Beach Road and off SR 89.
- Add a second entry lane along Pope Beach Road to increase throughput and decrease congestion. Consider an expedited lane for visitors without watercraft.
- Explore legislative changes that would allow agencies an opportunity to flatten the demand curve through variable pricing (come early, come late and pay a lower rate).
- Consider utilizing a reservation system to distribute demand.
- Utilize ITS to notify motorists of transit opportunities, when parking is full, and of alternative transportation options.
- Install electric vehicle charging stations at Pope Beach.
- Analyze Eagle's Nest Campground entry for possible operational improvements which may include a left turn lane, or a two-way left turn lane, or an improvement within the campground to hold a larger queue.

SUCCESS MEASUREMENT

- Reduced travel delays and vehicular queue along SR 89 at Pope Beach Road and Eagle's Nest Campground entry.

ITEM 17 | TRAFFIC CONGESTION AT JAMESON BEACH ROAD

DESCRIPTION

Pedestrians crossing SR 89 at Jameson Beach Road cause vehicle delay.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- Vendors
- Caltrans
- TTD
- CHP
- EDC Sheriff
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 5, Item 26
- Project WS-1.04

STRATEGIES

- Utilize adaptive management to address the issue in stages and evaluate improvements.
- Phase 1: Relocate the crosswalk from the eastern leg of the intersection to the western leg. Consider installing a rail barrier at the eastern leg of the intersection to enforce use of the western leg, thereby allowing a free left turn by motorists exiting Jameson Beach Road. Relocate the Pope Baldwin Bike Path to behind the General Store.
- Phase 2: Restrict roadside parking. This will reduce the number of pedestrian crossings associated with people parking along the highway and using the pedestrian crossing to either reach the facilities located on either side of the roadway.
- Phase 3: Relocate the bike rental and ice cream shop uses to the northern side of the roadway and consider creating an outdoor plaza and use area associated with the relocated facilities. The existing buildings could be repurposed for offices for administrative uses and potentially emergency responder staging.
- Phase 4 (if success measures aren't met through Phase 1-3 efforts): Install a signal at the intersection to further control pedestrian movement across the highway.
- Analyze and consider additional operational improvements such as median turn lanes and intersection improvements.

SUCCESS MEASUREMENT

- Reduced travel delays and vehicular queue along SR 89 at Jameson Beach Road.
- Reduced number of pedestrian crossings by at least 75 percent.

ITEM 18 | VISITATION IS NOT DISPERSED

DESCRIPTION

Disconnected recreation sites and parking lots within the Pope to Baldwin segment discourages visitation of recreation areas west of Camp Richardson and increases the frequency of motorists exiting and entering the highway to find parking.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- Vendors
- Washoe Tribe
- Caltrans
- TTD
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 5, Item 26
- Project WS-1.03

STRATEGIES

- Implement recommendations associated with overall congestion management and source specific issues occurring at Pope Beach Road and Jameson Beach Road (Items 5, 16, and 17).
- Create an off-highway vehicular circulation route (with parallel shared-use pathway) that connects the use areas associated with the Tallac Historic Site and Jameson Beach Road to reduce the number of intersections along SR 89 and allow motorists to access underused parking areas (such as the Taylor Creek Visitor Center parking area) and disperse users to underutilized sites.
- Create shared-use path connections from the Pope to Baldwin Bike Path to beach recreation sites such as Camp Richardson and Baldwin Beach.
- Implement off-highway parking projects associated with the LTBMU approved projects as of 2020 (off-highway parking lot improvements for Kiva Point, Tallac, Valhalla, volunteer RV campground, Valhalla entrance, Baldwin Beach entrance, and snow play area off Fallen Leaf Road).

SUCCESS MEASUREMENT

- Increased dispersed use among recreation sites in the Pope to Baldwin Segment.
- Fully utilized off-highway parking lot resources within the segment.
- Reduced travel delay in the segment.

ITEM 19 | POPE TO BALDWIN BIKE PATH HAS HIGH USE VOLUMES

DESCRIPTION

The Pope to Baldwin Bike Path has high volumes of users in the summer which discourages some users from biking to recreation destinations in the Pope to Baldwin Segment.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- Caltrans
- TTD
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Project WS-1.16

STRATEGIES

- Create a cycle track in the Pope to Baldwin Segment utilizing the previously used roadside parking location to increase the capacity for cyclists to ride to their recreation destinations. Consider the shared use of the cycle track for priority transit access to bypass congested areas. Move the existing path to behind the General Store.
- Enhance the natural surface trails west of the highway to facilitate bike access from Gardner Mountain to the Camp Richardson area.
- Enhance the existing Pope to Baldwin Bike Path through the development of turnouts and vistas to allow slower moving users an opportunity to stop and take in the sites and move out of the way of other cyclists.
- Consider a left turn pocket for campground access.

SUCCESS MEASUREMENT

- Increased number of users arriving to the Pope to Baldwin segment by bicycle.

ITEM 20 | LACK OF RECREATION GATEWAY, VISITOR INFO, & CONSISTENT WAYFINDING

DESCRIPTION

Recreation corridor lacks a gateway that announces users have transitioned into a special area, visitor information and marketing strategies that promote transit, and consistent wayfinding to enable travelers to easily locate their destinations.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- CDPR
- CALTRANS
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Projects: CW-1.14, WS-1.19, WS-5.07

STRATEGIES

- Create recreation gateways at the southern and northern ends of the corridor.
- Incorporate visitor travel information into the Taylor Creek Visitor Center and potential new park-n-ride/bike locations in the corridor to share information about the recreation corridor and parking and transportation options.
- Implement Vikingsholm parking and visitor facility improvements per California State Park capital improvement program.
- Build off regional corridor branding to establish a consistent aesthetic and easy to understand wayfinding program.
- Promote regional marketing and communication strategies to build awareness of the proposed transportation system.

SUCCESS MEASUREMENT

- Improved wayfinding and visitor experience. Increased place recognition for overall corridor.

ITEM 21 | EVENTS CAN IMPACT CONGESTION

DESCRIPTION

Special events in the corridor are an economic driver, but they are also sources of significant traffic, create additional demand for parking, and can impact traffic flow if not managed.

PROJECT LEAD(S) & KEY PARTNERS

- LTBMU
- CDPR
- CALTRANS
- TTD
- CHP
- EDC & EDC Sheriff
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 26

STRATEGIES

- Create a checklist for event permits/approval so that permittees acquire all of the necessary permits and notify all of the required parties. Develop a coordinated calendar so events do not occur during the same time.
- Establish a travel access framework that can be utilized during large corridor events such as Octoberfest.
- Enhance ability to host more special events in order to generate more revenue for corridor operations.

SUCCESS MEASUREMENT

- Coordinated permit and notification system.

ITEM 22 | ROADWAY IS A BARRIER FOR WILDLIFE MOVEMENT

DESCRIPTION

Roadway presents a barrier to wildlife movement from habitat areas to the lake.

PROJECT LEAD(S) & KEY PARTNERS

- Caltrans
- TRPA
- LTBMU
- CDPR

ASSOCIATED STRATEGIES AND PROJECTS

- Projects: WS-1.20, WS-2.19, WS-3.05, WS-4.07, WS-5.08

STRATEGIES

- Create a wildlife crossing near West Way to facilitate wildlife movement under the roadway.
- Create a wildlife crossing in the Emerald Bay area to facilitate wildlife movement under the roadway.
- Design Meeks Creek Bridge and fish crossing structures to facilitate wildlife movement.

SUCCESS MEASUREMENT

- Reduced wildlife/vehicular incidents.

ITEM 23 | OVERHEAD POWERLINES CREATE A WILDFIRE RISK

DESCRIPTION

Wildfire risk is increased with above ground powerlines in the corridor.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- CDPR
- Cal Fire
- TRPA
- Liberty Utilities

ASSOCIATED STRATEGIES AND PROJECTS

- Item 1
- Projects: W-1.01, CW-1.13, WS-2.01, WS-2.02, WS-2.03, WS-3.01, WS-4.01

STRATEGIES

- Where feasible, underground powerlines and co-locate utilities with the Tahoe Trail corridor. Include conduit for future fiber-optic upgrades. Hardening of the infrastructure may be acceptable when undergrounding is not feasible.
- Consider electric vehicle charging needs as part of utility projects.

SUCCESS MEASUREMENT

- Powerlines undergrounded.

ITEM 24 | ROADSIDE PARKING DEGRADES EFFECTIVENESS OF STORMWATER FEATURES

DESCRIPTION

Stormwater improvements are degraded and do not function due to vehicles parking in them.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- Caltrans
- LTBMU
- CDPR
- CHP
- EDC Sheriff
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Item 5
- Projects: WS-1.03, WS-2.04, WS-2.06, WS-2.07

STRATEGIES

- Implement strategies associated with Item 5 and restrict/relocate roadside parking.
- Restore disturbed areas.

SUCCESS MEASUREMENT

- No vehicles parking in stormwater improvement areas.
- Improved lake clarity.

ITEM 25 | VIKINGSHOLM PARKING NEEDS REPAIRS

DESCRIPTION

The viaduct and Vikingsholm parking area have subsiding soils which require creative engineering and improving the Vikingsholm parking lot.

PROJECT LEAD(S) & KEY PARTNERS

- CDPR
- TTD
- LTBMU
- CALTRANS
- TRPA

ASSOCIATED STRATEGIES AND PROJECTS

- Project WS-2.05

STRATEGIES

- Implement Vikingsholm parking and visitor facility improvements per California State Park capital improvement program.
- Encourage a multi-agency approach to the new improvements that consider leveraging partnerships and increasing grant options by incorporating a segment of the Tahoe Trail from Vikingsholm to the wedding vista. Including Eagle Falls parking, transit pull-offs, and the Tahoe Trail as part of the project can reduce overall construction costs and interruption to traffic flow for visitors by consolidating project improvements.
- Consider tour bus access and management as part of parking lot planning and design.

SUCCESS MEASUREMENT

- Reconstruction and renovation of the Vikingsholm parking area with visitor facilities and placemaking.

ITEM 26 | IMPLEMENTATION IS TOUGH & NEEDS PARTNERSHIPS & EXEC BUY-IN

DESCRIPTION

Implementation is tough and requires ongoing partnerships both at staff levels and at higher executive and bi-state levels to move recommendations forward and address funding issues.

ASSOCIATED STRATEGIES AND PROJECTS

- Agreement (modeled from the SR 28 Inter-local Agreement)
- Implementation of plan strategies and projects is tightly connected to the partnership moving forward and establishing project leads to champion plan implementation.

STRATEGIES

- Continue convening the Bi-State Working Group on Transportation and establish Executive Level conversations by lead agencies to address procedural, legislative, code, enforcement, capacity, funding, environmental review, cross jurisdictional resolution, and other high priority issues.
- It is recognized that top-level agency support is needed for agency staff to participate and have adequate time and operational dollars to be engaged in the partnership. And executive involvement is critical to allow decision-making and conflict resolution to occur for challenging issues.
- Formalize agency partnerships, decision-making process, conflict resolution, and roles and responsibilities through an agreement modeled from the SR 28 CMP Inter-local Agreement (see appendix). The agreement, or memorandum of understanding, should document the commitment to work together and leverage joint projects to address the shared issues.
- Develop a Corridor Management Team (CMT) at the staff level to move forward implementation strategies. The CMT should work together to address challenges and fine tune operations and maintenance elements. Staff should coordinate project priorities and focus on finding opportunities for joint projects to leverage funding and maximize project benefits by having a corridorwide perspective. Discussion topics include, but are not limited to Tahoe Trail completion, project coordination, continued public outreach, implementation and fine-tuning of the parking management and reservation system, monitoring visitation levels and resolving corridor challenges/hot spots as they arise, congestion, creative solutions, safety, emergency access, evacuation planning, year-round access, roadway design,

ITEM 26 | CONTINUED

PROJECT LEAD(S) & KEY PARTNERS

- TRPA
- LTBMU
- TTD
- CDPR
- Caltrans
- EDC
- Washoe Tribe
- CHP
- CDF
- LVFPD
- FLFD
- MBFPD
- PC
- SLT
- TART
- TNT-TMA
- Tahoe Fund

SUCCESS MEASUREMENT

- Agreement signed.
- Executive team continues and engages high level support from all lead agencies.
- Necessary legislative changes enacted and agreements made for plan implementation and revenue.
- Partnership formed and decision-making process established and agreed upon.
- Regular meetings occur.
- CMP is implemented.

avalanche control, enforcement, leveraging funding, bundling projects, joint grant applications, and litter management.

- The CMT should consider the following to be effective:
  - Decision-making rules should be established, i.e., deciding whether consensus is required to move forward on a given action. It should be recognized that land managers have final authority for decisions on their lands while having a goal for consistency in the overall approach for the corridor. Projects and implementation actions should be made in consideration to how they help the overall corridor achieve its goals.
  - Staff from a lead agency should be identified to set agendas, send meeting invites, secure meeting venues, and record meeting minutes and outcomes. The lead agency can rotate every year to two years.
  - A partnership chair should be determined to help set agendas and run meetings.
  - Establish a regular meeting schedule (at least quarterly and for enough time to have a rich and productive discussion where outcomes and roles and responsibilities are reviewed).
  - Accountability is essential. Each meeting should result in specific actions assigned to individuals or agencies and a timeline for their completion.
  - Conflict resolution should occur quickly. Engage decision-makers early to get buy-in and clear direction.

ITEM 27 | LACK OF PUBLIC/PRIVATE PARTNERSHIPS

Photo by Camp Richardson

DESCRIPTION

Private operators can help shift visitor trips from personal vehicles to higher occupancy transportation modes. Operators should work toward corridor goals and desired outcomes for the protection of natural and cultural resources and visitor travel experience. Micro-transit, tours, water taxis, and private shuttles can support visitor management and provide opportunities for interpretation and improved visitor experience, but they are not a substitute for public transit.

PROJECT LEAD(S) & KEY PARTNERS

- TTD
- LTBMU
- CDPR
- TRPA
- Micro-transit, water taxi operators, and tour companies

ASSOCIATED STRATEGIES AND PROJECTS

- Item 3
- Projects: CW-1.02, CW-1.03, CW-1.04, CW-1.05, CW-1.06, WS-1.01, WS-1.03, WS-1.08, WS-1.09, WS-1.10, WS-1.11, WS-1.14, WS-2.04, WS-2.06, WS-2.07, WS-2.08, WS-2.11, WS-2.12, WS-2.13, WS-2.14, WS-4.03, WS-5.01, WS-5.02

STRATEGIES

- Explore public/private solutions, including opportunities for micro-transit and tour companies to provide services that are compatible with the corridor vision and desired outcomes. Private operations should acknowledge the need to manage visitation levels as part of the overall corridor strategy.
- Designate areas for tour bus parking, private shuttles, and ride-share curb space to prevent negative impacts associated with private operators parking in bus stops and viewpoints and disrupting the parking management system. For example, the proposed Bayview parking area can be designed to accommodate a certain number of tour buses. Visitors can then explore the rest of Emerald Bay by trail connections, public transit, and/or micro-transit. This would reduce conflicts that tour buses may pose in smaller parking areas.
- Establish a permit system with fee for private operations where the fee is reinvested into the corridor transportation system. The permit system should consider the size and number of tour buses allowed and timing of arrivals in order to achieve desired outcomes of dispersing visitation and managing overall visitation numbers.
- Evaluate opportunities for public or private micro-transit or shuttles, consistent with corridor capacity and vehicle requirements, to reduce congestion and greenhouse gases within the corridor related to recreation travel.
- Support shuttles or tour operators with bike/gear trailers to encourage people to park their vehicles and travel the corridor without a personal vehicle. The schedule for private operations with bike trailers may not be as impacted by off-loading/on-loading time for bicycles and other recreation gear.

SUCCESS MEASUREMENT

- Reduced number of private vehicles on SR 89.

ITEM 28 | CLIMATE CHANGE

DESCRIPTION

Global changes to climate patterns results in vulnerabilities and impacts to environmental, economic, and social systems.

PROJECT LEAD(S) & KEY PARTNERS

- TRPA
- LTBMU
- TTD
- CDPR
- Caltrans
- EDC
- Washoe Tribe
- CHP
- CDF
- LVFPD
- FLFD
- MBFPD
- PC
- SLT
- TART
- TNT-TMA
- Tahoe Fund

ASSOCIATED STRATEGIES AND PROJECTS

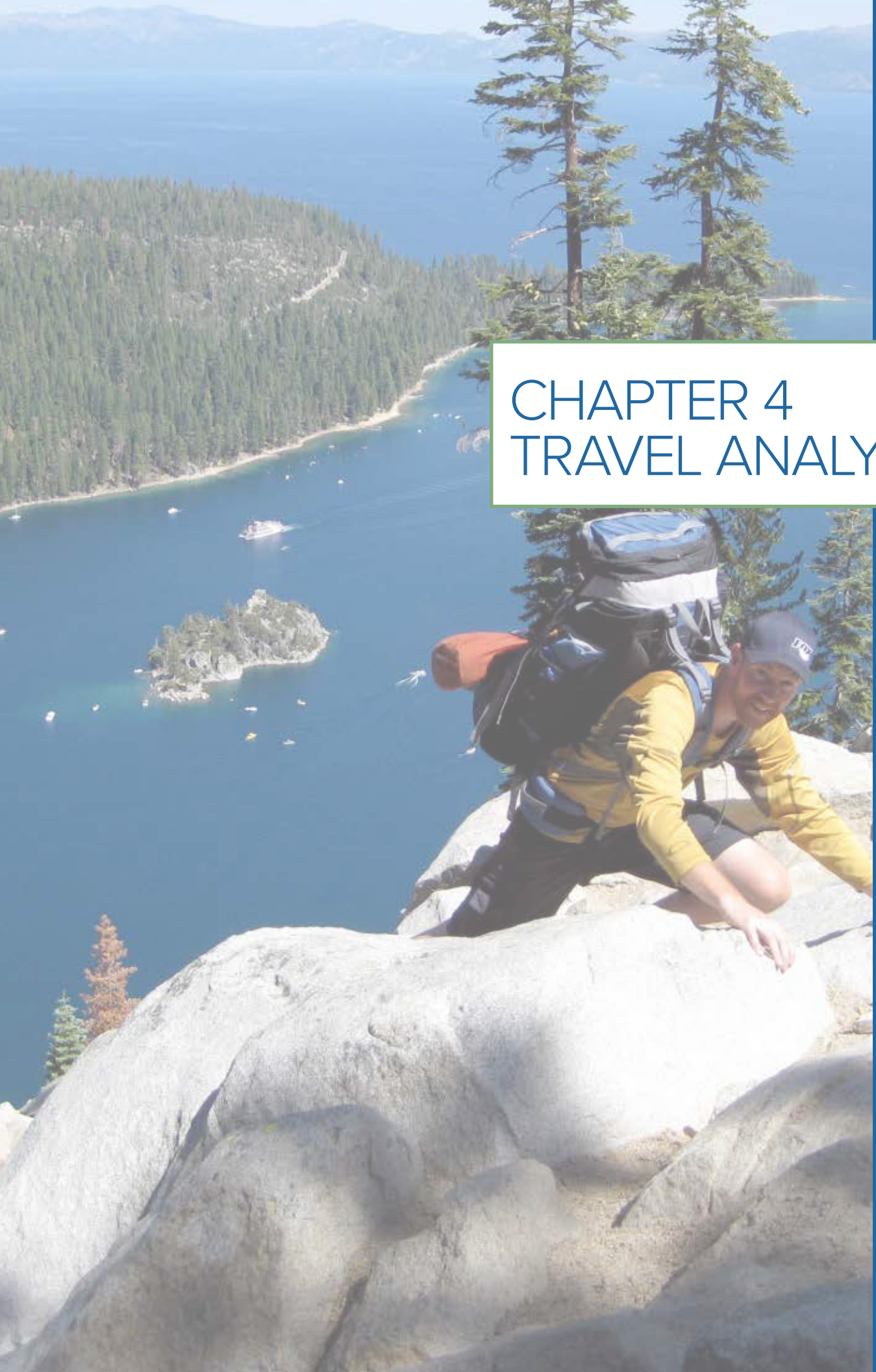
- Item 3, Item 8, Item 10, Item 11, Item 15, Item 23, Item 24
- Projects: CW-1.02, CW-1.03, CW-1.04, CW-1.05, CW-1.06, WS-1.01, WS-1.03, WS-1.08, WS-1.09, WS-1.10, WS-1.11, WS-1.14, WS-2.04, WS-2.06, WS-2.07, WS-2.08, WS-2.11, WS-2.12, WS-2.13, WS-2.14, WS-4.03, WS-5.01, WS-5.02

STRATEGIES

- Improve access for fuels reduction and forest health management activities recommended by Lake Tahoe West Restoration Partnership.
- Where feasible, underground powerlines and co-locate utilities with the Tahoe Trail corridor. Include conduit for future fiber-optic upgrades. Hardening of the infrastructure may be acceptable when undergrounding is not feasible.
- Install electric vehicle charging stations.
- Prioritize the use of electric buses and water taxis fueled by clean energy, to the extent their use is not cost prohibitive.
- Design facilities to reduce risks of flooding, manage runoff, and be inviting during times of climatic imbalance, such as extreme heat or drought.
- Implement multi-modal strategies and parking management programs and construct associated infrastructure to reduce VMT and GHG.
- Establish individual project goals and metrics to reduce impacts on natural resources and provide benefits to accelerate threshold attainment.
- Track visitation patterns, including changes and increases associated with climate change. Adapt strategies to address changes in patterns.
- Coordinate with and implement strategies from climate action plans around the region.

SUCCESS MEASUREMENT

- Reduced environmental impact and accelerated threshold attainment.
- Increased number of fuels reduction projects in the corridor.



CHAPTER 4
TRAVEL ANALYSIS

MOBILITY ALTERNATIVES

The strategies recommended in Chapter 3 reinforce the need for an integrated and coordinated approach to corridor management. Central to being able to address the issues associated with recreation access is the need to change how people arrive to the corridor during the summer (from Memorial Day to Labor Day). This chapter summarizes the results of a travel analysis conducted to evaluate a range of transit service plans and their required capital and operational needs. In addition to providing transit and bike facilities, the outcomes revealed the need to use a reservation system, to disperse visitation throughout the day, and to develop partnerships with water taxis to meet access needs. To be fiscally achievable, revenue from the corridor parking management system needs to be allowed to be reinvested into operations and maintenance of the corridor and its transportation system.

Alternatives | How You Arrive in the Summer?

The travel analysis evaluated a range of options for how people could arrive to their recreation destinations during the summer. As shown in Figure 22, the spectrum of alternatives ranged from being auto dominant to car free. In all options, roadside parking would be restricted and thru traffic would be allowed.

The following three routes were evaluated in the transit model:

- SnoPark or the Y to Emerald Bay
- Stateline to Emerald Bay
- Sugar Pine Point State Park to Emerald Bay

How Many People to Accommodate?

As a starting point, the transit model used visitation data collected in 2018 as a baseline to test how many buses, routes, and operational dollars would be needed to move Emerald Bay and the Pope to Baldwin Segments' 2018 estimated daily visitation and 2045's projected visitation per the LTCCP (annual increase of one percent). These numbers were used for reference only. It is recognized that different visitation projections are available for the Tahoe region. The analysis showed a viable transit system could only accommodate a visitation increase of approximately 5 percent over the 2018 visitation. Increased recreation demand needs to be addressed at a regional level. Transit, trails, and parking management programs provide tools to shift use patterns to reduce impacts and to monitor and control demands as appropriate. The system can also scale up or down to meet desired management levels.

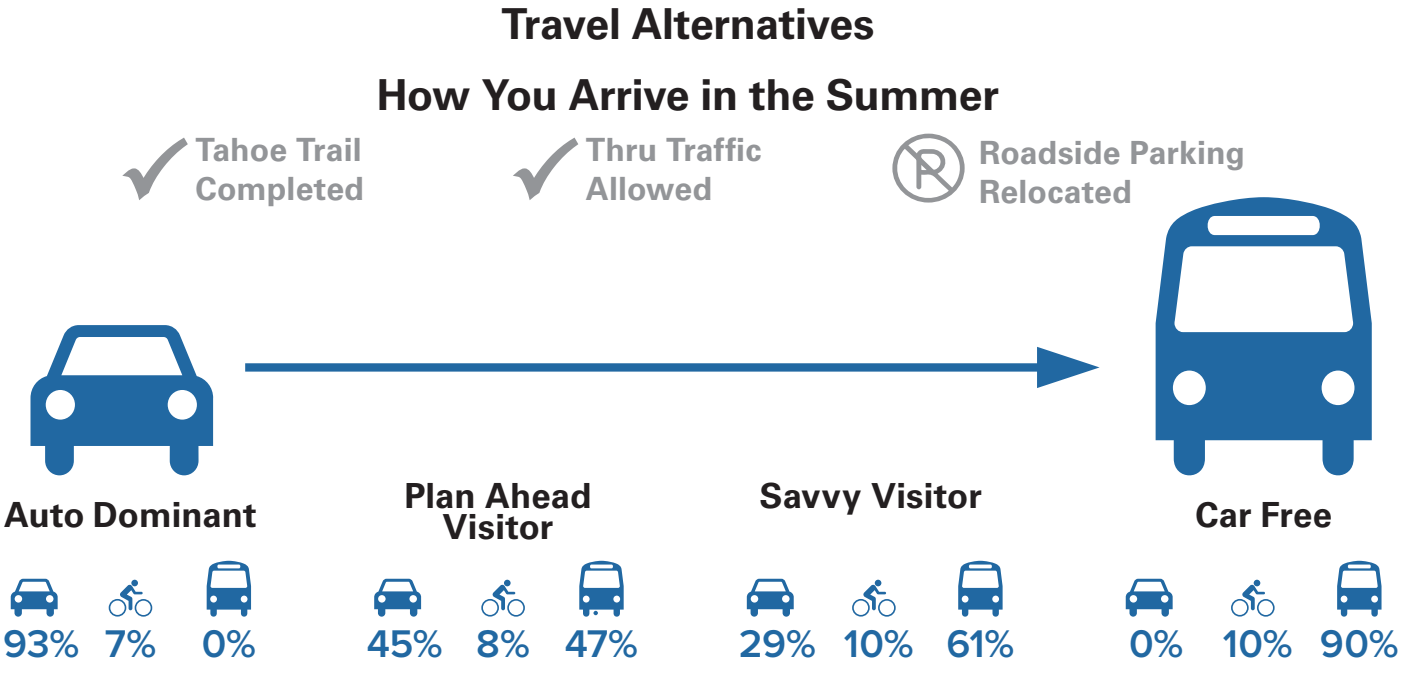


Figure 21: Spectrum of Travel Alternatives Evaluated

A Baseline for Analysis | 2018 Visitation

The estimated daily number of visitors arriving to Emerald Bay and the Pope to Baldwin area on a busy summer day in 2018 is shown in Figures 23 and 24. The calculation was made using travel data collected in 2018, such as length of stay, number of people per vehicle, number of available parking spaces, occupancy, and numbers of cars parked along the highway shoulder. The travel analysis assumed the same travel pattern observed in 2018.

Within the Emerald Bay Segment, data collection included a visual study to evaluate how long a car stayed. This information was used to understand what percentage of visitors were likely only coming to take a picture or enjoy the view and then leave. Out of the 16,180 people estimated to visit Emerald Bay on a busy summer day in 2018, 5,527 of them stayed less than 20 minutes. For the transit analysis, these visitors would be unlikely to shift to transit. Therefore, the model used a number of 10,653 as its design number.

Within the Pope to Baldwin Segment, the estimated number of visitors on a busy summer day in 2018 was 5,920. Of that number, it was estimated that 2,262 of them arrived and parked along the highway shoulder. For the analysis it was recognized that the off-highway parking lots serve a significant portion of the segment's visitors. The model assumed the continued use of the existing parking lots in every option and looked at the opportunity to shift the travel behavior of those people that would be displaced with the restriction of roadside parking.

Outcomes

The figures on the following pages summarize the key takeaways from the travel analysis for each alternative. Note that the projected fleet costs is not inclusive of all costs. For example, electrification and the construction of a maintenance yard to service the buses is not included.

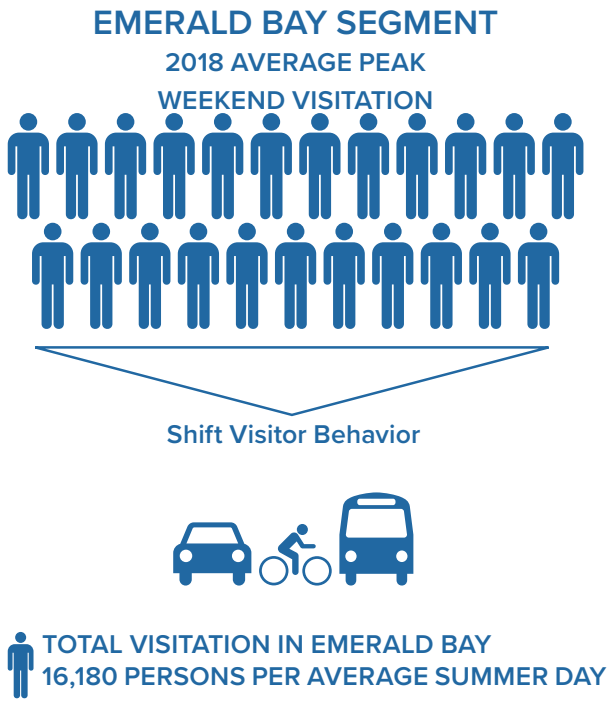


Figure 22: Average Number of Daily Visitors to Emerald Bay in 2018

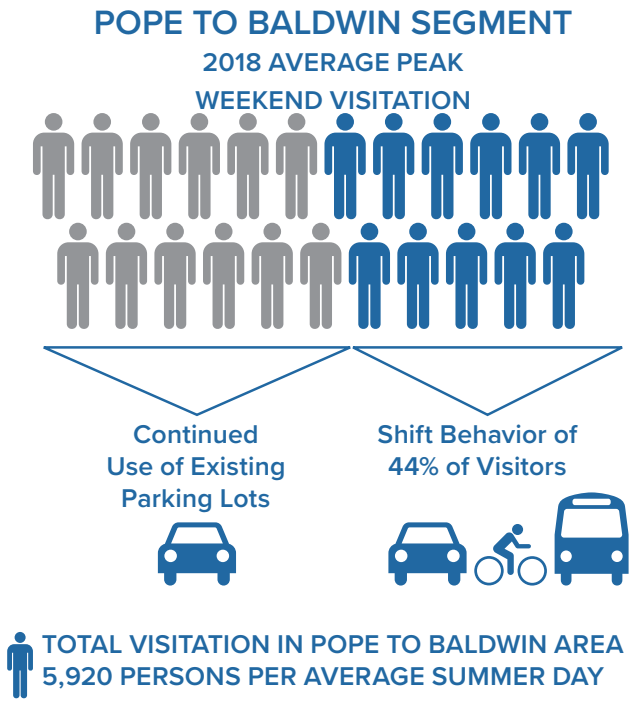
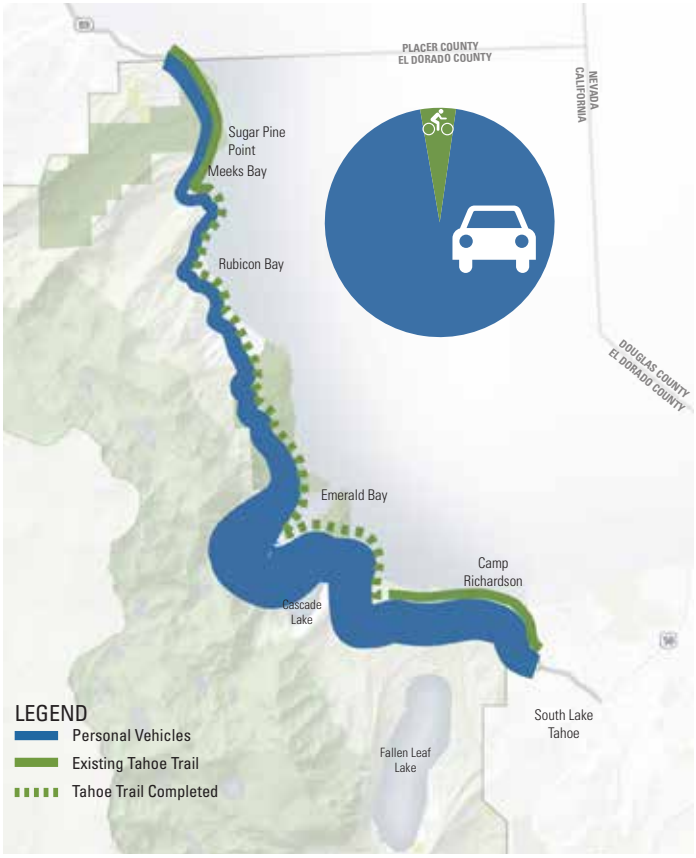


Figure 23: Average Number of Daily Visitors to the Pope to Baldwin Segment in 2018

Auto Dominant Alternative



How People Would Arrive in the Summer

93% 7% 0%

Tahoe Trail Completed

Thru Traffic Allowed

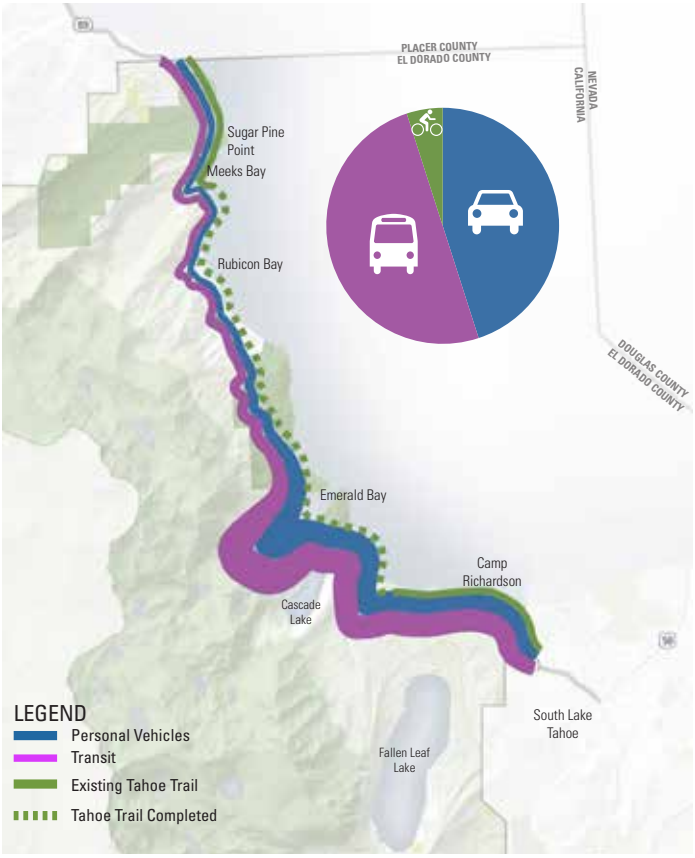
Roadside Parking Relocated

Assessment

Requires construction of large parking lots within the corridor and near Emerald Bay and does not meet corridor goals to reduce the number of cars driving to Emerald Bay

Figure 24: Travel Analysis | Auto Dominant Alternative

Plan Ahead Alternative



How People Would Arrive in the Summer

45% 8% 47%

Tahoe Trail Completed

Thru Traffic Allowed

Roadside Parking Relocated

Number of Buses & Costs

2035 Projected Visitation[1]

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*	*Projected Annual Operating Costs*
19	**26**	$10,260,000	$3,675,200

A bus every 5-10 minutes from SnoPark to Emerald Bay

2045 Projected Visitation[1]

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*	*Projected Annual Operating Costs*
48	**65**	$25,920,000	$12,043,711

A bus every3-5 minutes from the Y to Emerald Bay + a bus every 10 minutes from Stateline to Emerald Bay

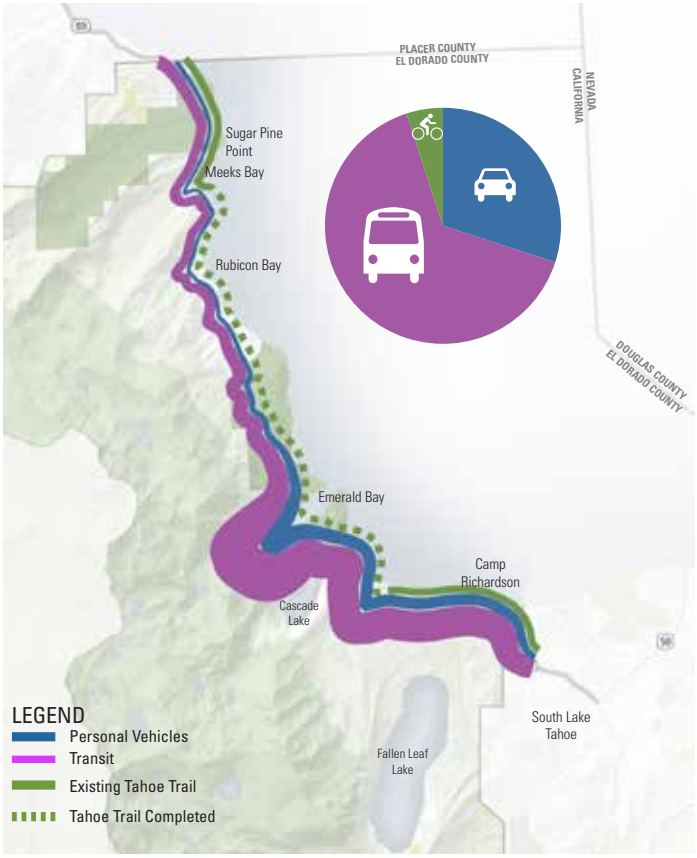
Assessment

Fleet size and operational costs are high for long term consideration – could evaluate with reservation system and minimum visitation increase

Figure 25: Travel Analysis | Plan Ahead Alternative

[1] Utilizes the Linking Tahoe: Corridor Connection Plan projections of a 1 percent annual visitation increase.

Savvy Visitor Alternative



How People Would Arrive in the Summer

29% 10% 61%

Tahoe Trail Completed

Thru Traffic Allowed

Roadside Parking Relocated

Number of Buses & Costs

2035 Projected Visitation[1]

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*	*Projected Annual Operating Costs*
25	**34**	$13,500,000	$4,137,200

A bus every 5 minutes from SnoPark to Emerald Bay

2045 Projected Visitation[1]

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*	*Projected Annual Operating Costs*
67	**90**	$36,180,000	$13,698,273

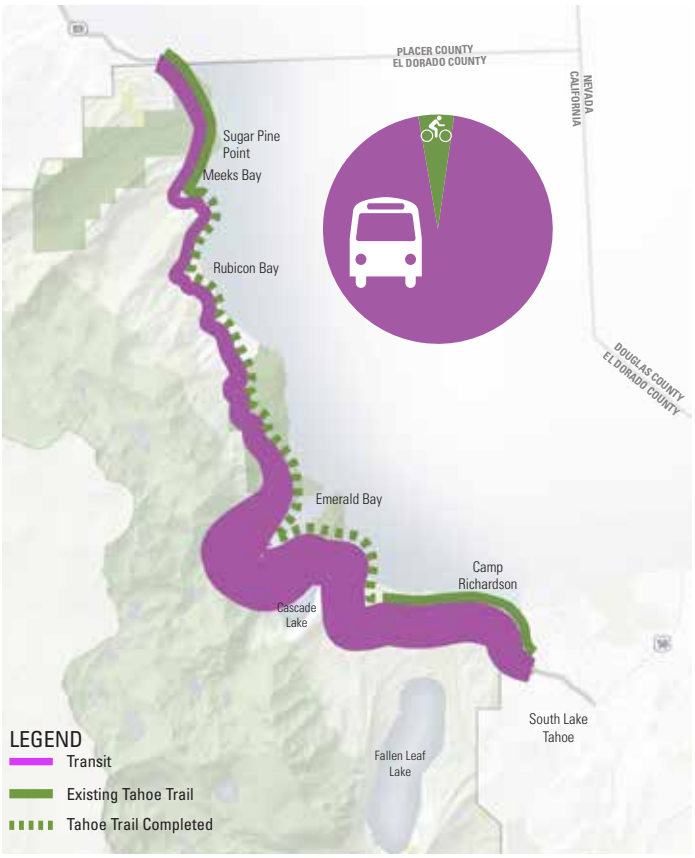
A bus every 2-4 minutes from the Y to Emerald Bay + a bus every 5-10 minutes from Stateline to Emerald Bay

Assessment

Moves toward a vision for car free experience, but the fleet size and costs are unsustainable

Figure 26: Travel Analysis | Savvy Visitor Alternative

Car Free Visitor Alternative



How People Would Arrive in the Summer

0% 10% 90%

Tahoe Trail Completed

Thru Traffic Allowed

Roadside Parking Relocated

Number of Buses & Costs

2035 Projected Visitation[1]

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*	*Projected Annual Operating Costs*
38	**51**	$20,520,000	$4,959,200

A bus every 3-7 minutes from SnoPark to Emerald Bay

2045 Projected Visitation[1]

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*	*Projected Annual Operating Costs*
92	**124**	$49,680,000	$16,474,571

A bus every 2-3 minutes from the Y to Emerald Bay + a bus every 3 minutes from Stateline to Emerald Bay

Assessment

Achieves a vision for car free experience, but the fleet size and costs are unsustainable

Figure 27: Travel Analysis | Car Free Alternative

[1] Utilizes the Linking Tahoe: Corridor Connection Plan projections of a 1 percent annual visitation increase.

GENERAL CONCLUSIONS

An auto dominant option does not meet corridor goals and requires the construction of large amounts of parking near Emerald Bay – an area physically and environmentally constrained. This option was considered, but did not move forward for further study.

The fleet requirements (size), operating cost, and capital costs of a car free transit option on its own are likely going to overwhelm an agency trying to provide the bus service. Therefore, shuttle service on its own is likely not a viable mode for the long term. Parking management and corridor management tools, such as a reservation system for the transit system and parking areas, are also needed to disperse visitation throughout the day. Private partnerships with water taxis can supplement transit access and provide a unique visitor experience opportunity for a portion of visitors. Water taxis should accommodate some bicycles so passengers can ride when they reach their destination.

OUTCOMES

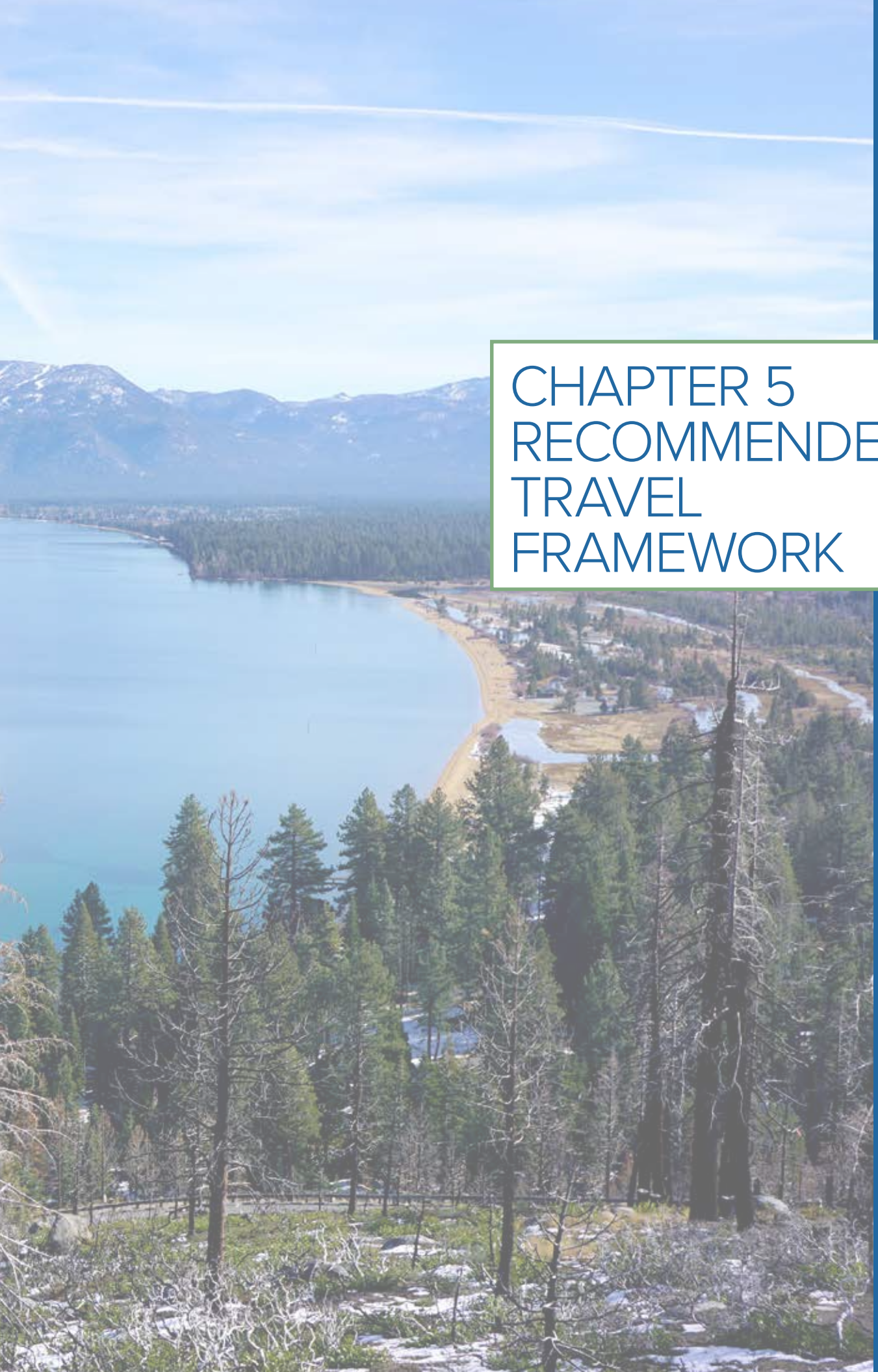
The outcomes of the study revealed the need to consider reservations and parking management in addition to shuttle and bicycle alternatives. The analysis showed a viable transit system could accommodate a modest visitation increase of approximately 5 percent over the 2018 baseline estimate. Increased recreation demand needs to be addressed at a regional level.

To be fiscally achievable, the transportation system needs to utilize a reservation system to distribute visitation demand throughout the day. Transit, trails, and parking management programs provide tools to shift use patterns to reduce impacts and to monitor and control demands as appropriate. The system can also scale up or down to meet desired management levels.

	PLAN AHEAD ALTERNATIVE		SAVVY VISITOR ALTERNATIVE		CAR FREE ALTERNATIVE	
	2035 Projected Visitation[1]	2045 Projected Visitation[1]	2035 Projected Visitation[1]	2045 Projected Visitation[1]	2035 Projected Visitation[1]	2045 Projected Visitation[1]
Bus %	47%	47%	61%	61%	90%	90%
Bike %	8%	8%	10%	10%	10%	10%
Vehicle %	45%	45%	29%	29%	0%	0%
Bus Frequency	5-10 Minutes	3-5 Minutes	5 Minutes	2-4 Minutes	3-7 Minutes	2-3 Minutes
Fleet Size	19	48	25	67	38	92
Fleet Size with Spares	26	65	34	90	51	124
Water Taxis						
Projected Fleet Costs (not inclusive of all costs)	$ 10,260,000	$ 25,920,000	$ 13,500,000	$ 36,180,000	$ 20,520,000	$ 49,680,000
Projected Annual Operating Costs	$ 3,675,200	$ 12,043,711	$ 4,137,200	$ 13,698,273	$ 4,959,200	$ 16,474,571

Table 2: Comparative Analysis of Travel Alternatives

[1] Utilizes the Linking Tahoe: Corridor Connection Plan projections of a 1 percent annual visitation increase. Used for analysis purposes only (see narrative in the above green call-out box.)



CHAPTER 5 RECOMMENDED TRAVEL FRAMEWORK

An early morning in fall or spring offers a rare opportunity to enjoy Emerald Bay by bike and see few cars.

OVERVIEW

The travel analysis summarized in Chapter 3 illustrated the need to consider multiple management strategies to accommodate the corridor's visitation and have a transit system that is operationally sustainable. Only using shuttle buses and bike paths for recreation access does not meet the corridor goals. The recommended travel framework expands upon the transit analysis discussed in Chapter 3 and incorporates these management tools:

- Use a reservation system for transit and parking areas to disperse arrival and departure times throughout the day – planning assumption is to distribute the number of people arriving to be within 20 percent of the average or a 35 percent reduction from the peak
- Incorporate water taxi service (that can accommodate some bicycles) to supplement shuttle service access
- Develop transit system that intercepts visitors at both the southern and northern ends of the corridor to allow for short shuttle runs to make more roundtrips with fewer buses
- Connect the transit system to the mainline transit services operating in the South Shore and North Shore to encourage park-once strategies that allow visitors to reach Emerald Bay without ever using a car
- Utilize existing off-highway parking lots and use parking management strategies such as congestion pricing to encourage a car-free corridor experience

The travel framework is recommended to be implemented in three phases. The first phase leverages existing resources such as the underutilized parking area at SnoPark to begin transit service to Emerald Bay. The second phase includes shuttles serving the corridor from both the south and the north and a water taxi route from the north shore to Emerald Bay. The third and final phase increases the frequency of shuttles serving the corridor and incorporates water taxi service from the south shore to Emerald Bay. Each of the phases include additional management strategies and infrastructure projects that are described on the following pages.

The phasing considers those projects that represent quick wins, efforts already funded or have environmental documentation completed, and those strategies that must be set in place as a foundation for other projects to build from. As project funding becomes available, some projects may move up in phasing.

MUIR WOODS NATIONAL MONUMENT CASE STUDY

- Muir Woods National Monument requires a reservation for either a seat on a shuttle to the monument or a parking space at the monument
- The reservations have a timed arrival with no restriction on length of stay
- The system is funded through a $10 entry fee
- The system has reduced peaks in daily visitation (peak reduced by 45-50 percent)

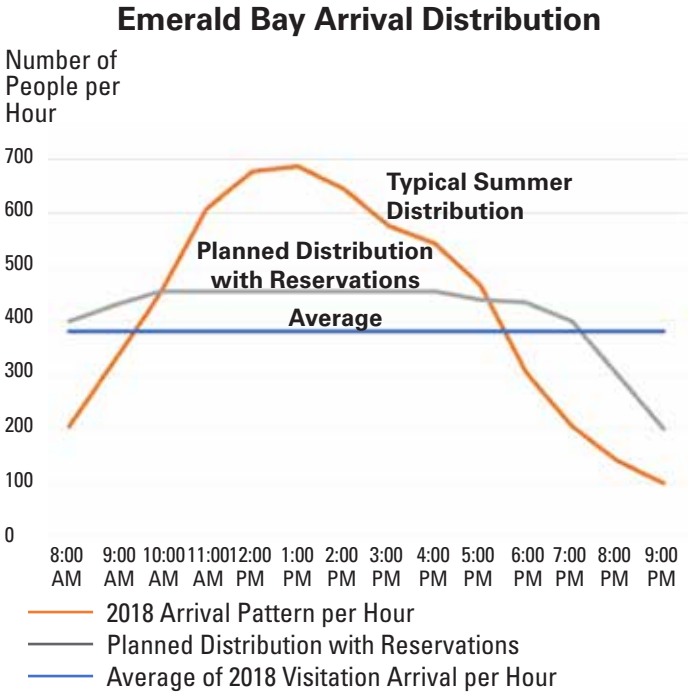
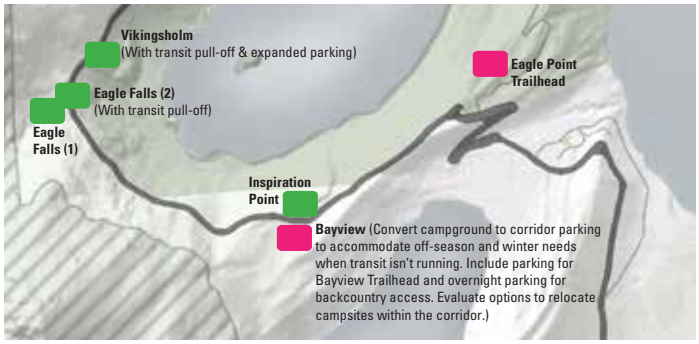


Figure 28: Emerald Bay Arrival Distribution



Vista Parking

- Reservations and/or metered and congestion-pricing to encourage turnover
- No overnight parking

Corridor Parking

- Reservations and/or metered and congestion-pricing
- Overnight parking requires permit (parking fee included in permit)

Figure 29: Parking Strategies for Emerald Bay

PHASE I TRAVEL FRAMEWORK

The first phase of the travel framework is intended to initiate change in the corridor by temporarily utilizing existing facilities and beginning a transit service for Emerald Bay. A bus will run every 30 minutes from the SnoPark to Emerald Bay. The SnoPark's proximity to Emerald Bay increases the number of people potentially served and the likelihood of someone stopping to transition to a shuttle. During this phase it is anticipated that some improvement has been made to the manage the congestion associated with Pope Beach and the Jameson Beach Road intersection. In-depth studies will be conducted in this phase to evaluate the Tahoe Trail feasibility and identify a preferred alignment and to identify a permanent park-n-ride/bike location near the Y or West Way. The reservation and parking management system should be established and revenue generation initiatied to fund the sytem and corridor improvements.

Projects and operations associated with the Phase I travel framework are summarized in the box on page 84.

7,500 fewer cars in **Emerald Bay** every summer month

How People Arrive to Emerald Bay in the Summer[1]

15% 0% 85%

Thru Traffic Allowed

Roadside Parking Relocated

Transit Service

Bus Routes

- SnoPark to Emerald Bay every 30 minutes

Fleet Size	*Fleet with Spares*	*Projected Fleet Costs*[2]	*Projected Annual Operating Costs*
2	**3**	$1,000,000	$636,000

[1] Percentages based on 2018 Emerald Bay baseline visitation estimate

[2] Not inclusive of all costs (e.g., electrification, maintenance facility, etc.)

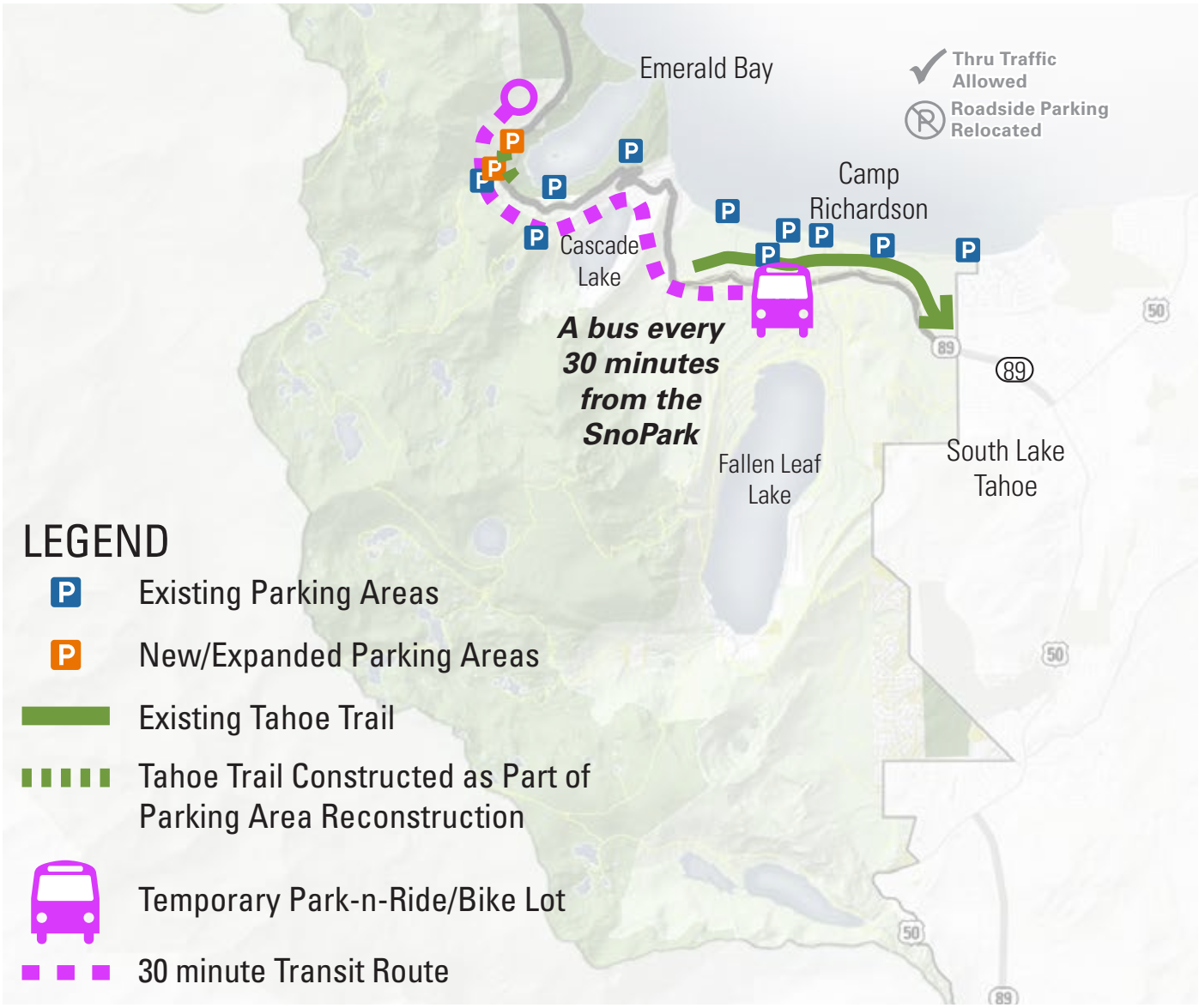


Figure 30: Phase I Travel Framework

Phase I Supporting Infrastructure Projects

Phase I projects associated with the Phase I travel framework include operational, planning, and design efforts that achieve the following:

- Leverage existing resources
- Offer early wins to build momentum for future projects
- Build a platform for operation and coordination in the corridor (e.g., for parking management and transit)
- Evaluate and design project alternatives and opportunities in more detail so they can be constructed in future phases
- Provide facilities needed to support Phase I transit service (enhancements to existing facilities and turnarounds for buses in Emerald Bay)
- Implement projects that have been previously planned and approved
- Improve traffic flow through the Pope to Baldwin Segment

Some projects will be implemented over time and are included in all three phases. For example, improving technology infrastructure and undergrounding utilities may occur as part of other projects and will occur over time in all three phases.

PHASE I SUPPORTING INFRASTRUCTURE AND OPERATIONAL ELEMENTS

- Develop a funding/finance plan with each phase
- Tahoe Trail Feasibility Study
- Evaluate individual site capacities for the corridor, including boat-in capacity for Emerald Bay, and adjust corridor transit and access recommendations based on findings
- Develop reservation, parking management, and revenue system for transit and parking areas and initiate revenue collection
- Utilize a consistent, coordinated system for paid parking at vista points and off-highway parking lots in Emerald Bay
- Reduce roadside parking in Emerald Bay and utilize barriers to assist with increased enforcement and fines for no parking areas
- Phase I point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas to improve traffic flows and encourage transit use
- Transit stops at Eagle Point Campground, Inspiration Point, Eagle Falls Viewpoint, Vikingsholm
- Transit turnaround improvements near Emerald Bay's north gate
- Project Study Report completion for year-round access and road design improvements through Emerald Bay
- Improve the Vikingsholm and Eagle Falls parking lots, develop transit stops, and link facilities with the Tahoe Trail from the vista lookout past the Vikingsholm parking lot
- Northbound viewpoint parking near Eagle Falls
- Improve SnoPark area for bus circulation and delineate parking
- Convert future emergency pull-outs and viewpoints in Emerald Bay to temporary parking – pave and install temporary meters
- Jameson Beach Road shared use path
- Baldwin Beach Road shared use path
- Pope Beach Road shared use path
- Utilize ITS advance signage & marketing of transit route
- Real-time transit and parking app
- Increased operation budgets
- Evaluate park-n-ride/bike locations at the Y and West Way
- Improve Fallen Leaf Road for emergency and recreation access
- Helipad site designation west of Bayview campground
- Recreation corridor gateway signage and consistent wayfinding and marketing program
- Improved technology infrastructure
- Utility undergrounding
- Incorporate wildlife crossings with Caltrans bridge replacement near Meeks Bay

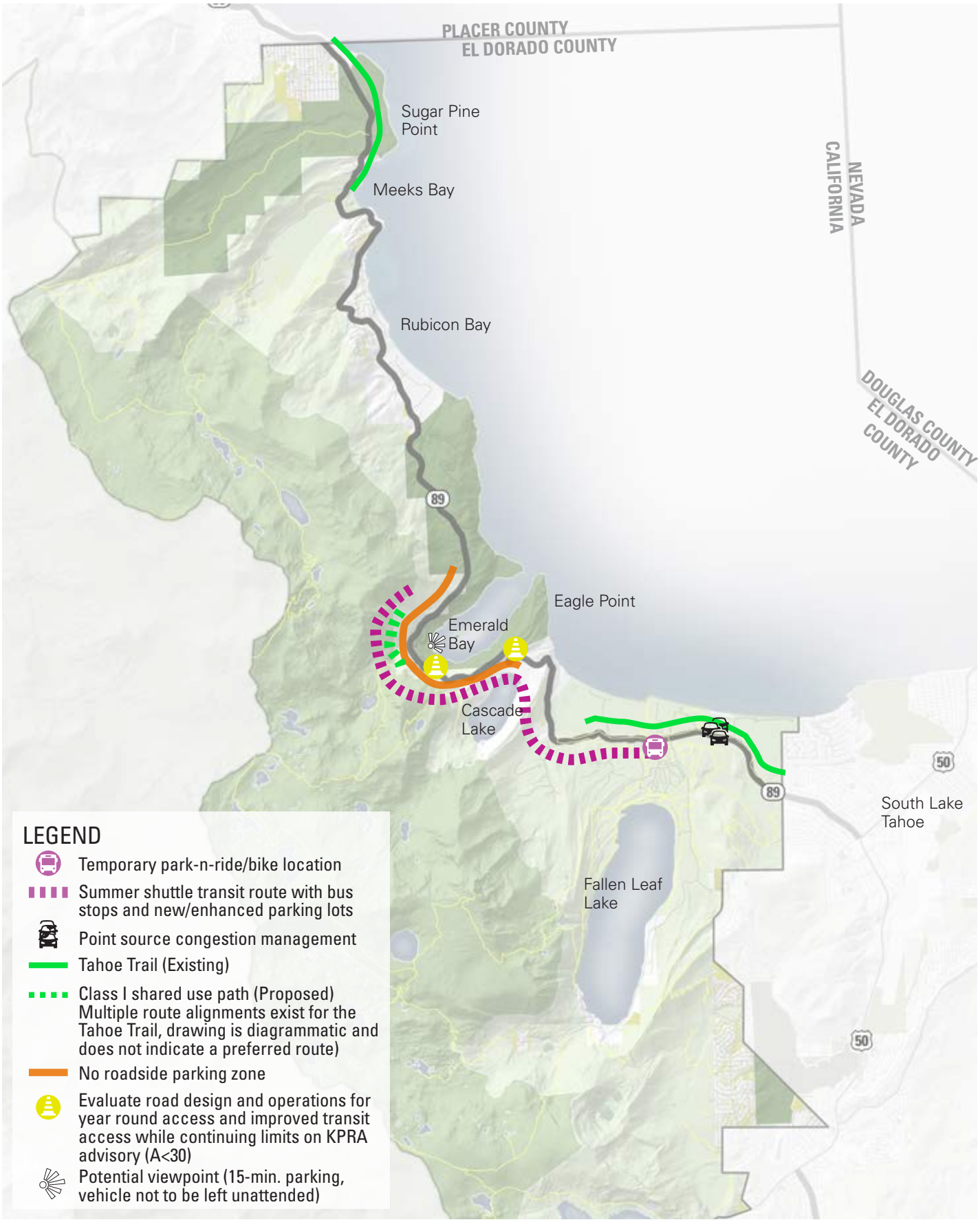


Figure 31: Recommended Projects | Phase I

PHASE II TRAVEL FRAMEWORK

The second phase of the travel framework establishes more permanent transit service through the corridor with park-n-ride/bikes located at both the southern and northern ends of the corridor. Buses run every 15 minutes from the south end to Emerald Bay and every 30 minutes from the north to Emerald Bay. A subsidized, private water taxi with the ability to accommodate some bicycles operates from the north and south shores and sections of the Tahoe Trail have been completed from the south and the north to Emerald Bay. It is recognized that private water taxis present an opportunity to help meet corridor goals and provide visitor experience benefits, but they are not a substitute for public transit.

Projects and operations associated with the Phase II travel framework are summarized in the box on page 88.

25,400 fewer cars in the **Corridor** every summer month

How People Arrive to the Corridor in the Summer[1]

29%	3.5%	1.5%	66%

✓ Thru Traffic Allowed

Ⓟ Roadside Parking Relocated

Transit Service

Bus Routes

- Y to Emerald Bay every 15 minutes
- Sugar Pine to Emerald Bay every 30 minutes

Water Taxi Routes

- South Shore: 1 boat running every 2 hours from 10:30-6:30 (from Camp Richardson to Emerald Bay)
- North Shore: 1 boat running every 2 hours from 10:30-6:30 (from Homewood or Sugar Pine Point State Park to Emerald Bay)

Fleet Size	*Fleet with Spares*	*Water Taxis*	*Projected Fleet Costs*[2]	*Projected Annual Operating Costs*
7	**9**	**1**	$9,500,000	$2,444,000

[1] Percentages based on 2018 Emerald Bay and Pope to Baldwin Segment baseline visitation estimate

[2] Not inclusive of all costs (e.g., electrification, maintenance facility, etc.)

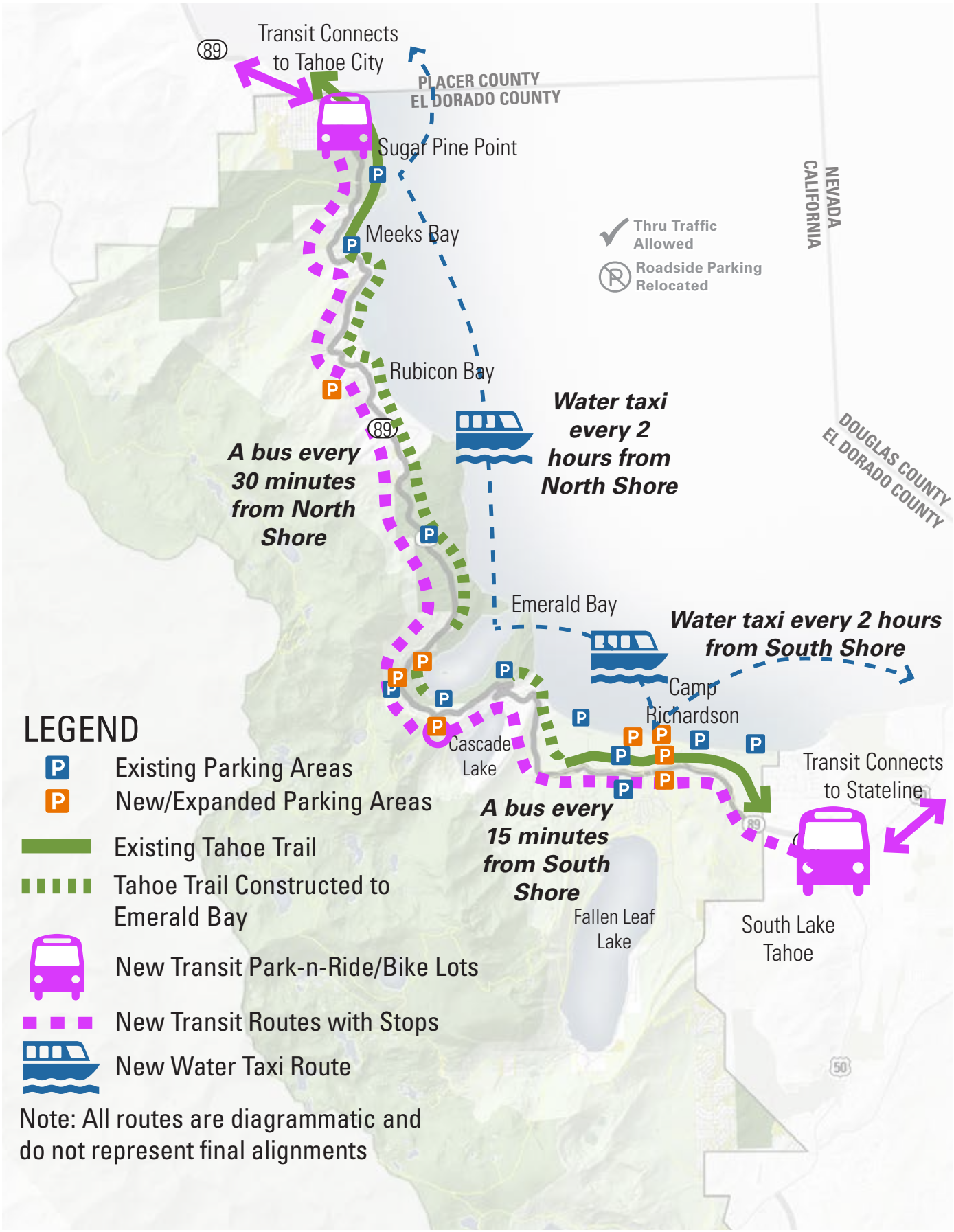


Figure 32: Phase II Travel Framework

Phase II Supporting Infrastructure Projects

Phase II projects include operational, planning, and design efforts that achieve the following:

- Provide facilities needed to support transit service (park-n-rides/bike, piers, and bus stops)
- Construct Tahoe Trail segments that allow for bike access to Emerald Bay
- Implement projects that have been previously planned and approved
- Improve the capacity for bike access to the Pope to Baldwin Segment
- Continue improvements for traffic flow through the Pope to Baldwin Segment
- Monitor and evaluate improvements and address visitation demands through a regional study

Some projects will be implemented over time and are included in all three phases. For example, improving technology infrastructure and undergrounding utilities may occur as part of other projects and will occur over time in all three phases.

PHASE II SUPPORTING INFRASTRUCTURE AND OPERATIONAL ELEMENTS

- Monitor and assess Phase I projects, access patterns, visitor experience, and operations – adjust below recommendations and marketing strategies based on findings
- Develop a funding/finance plan with each phase
- Tahoe Trail segments implemented: Spring Creek Road to Eagle Point Campground and Boat-in-Campground Road to Meeks Bay
- Develop public/private partnership with water taxi to supplement access
- Phase II transit service
- Restrict roadside parking in Emerald Bay and Pope to Baldwin Segments and utilize barriers to assist with increased enforcement of no parking areas
- Phase II transit stops throughout corridor
- Phase II reservation and parking management and fee system
- Develop a park-n-ride/bike in the Y area or by West Way and connect transit system to South Lake Tahoe's transit mainline
- Formalize a park-n-ride/bike at Sugar Pine Point State Park and connect transit system to North Lake Tahoe's transit mainline
- Phase II point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas
- Convert Bayview campground to small parking/bus pull-off that will also provide off-highway parking for the off-season and winter when transit is not running (40-70 spaces); design parking to accommodate a limited number of tour buses with restricted size; evaluate options to relocate Bayview campsites with the corridor
- Construct or improve piers (Sugar Pine Point State Park, Emerald Bay, and Camp Richardson) and increase operations budget to accommodate water taxi service
- Implement LTBMU planned parking and circulation projects in Pope to Baldwin Segment
- Increase capacity for cyclist access to Camp Richardson, consider developing a cycle track or expanding the bike path
- Evaluate trail access needs and options in alignment with local plans
- Operational measures to allow for off-season and winter access to strategic parking lots
- Formalize emergency turnouts
- Gardner Mountain trail access
- Conduct a regional visitation strategy
- Increased operation budgets
- Improved technology infrastructure
- Utility undergrounding
- Incorporate wildlife crossings where possible
- Develop a South Shore transit maintenance facility

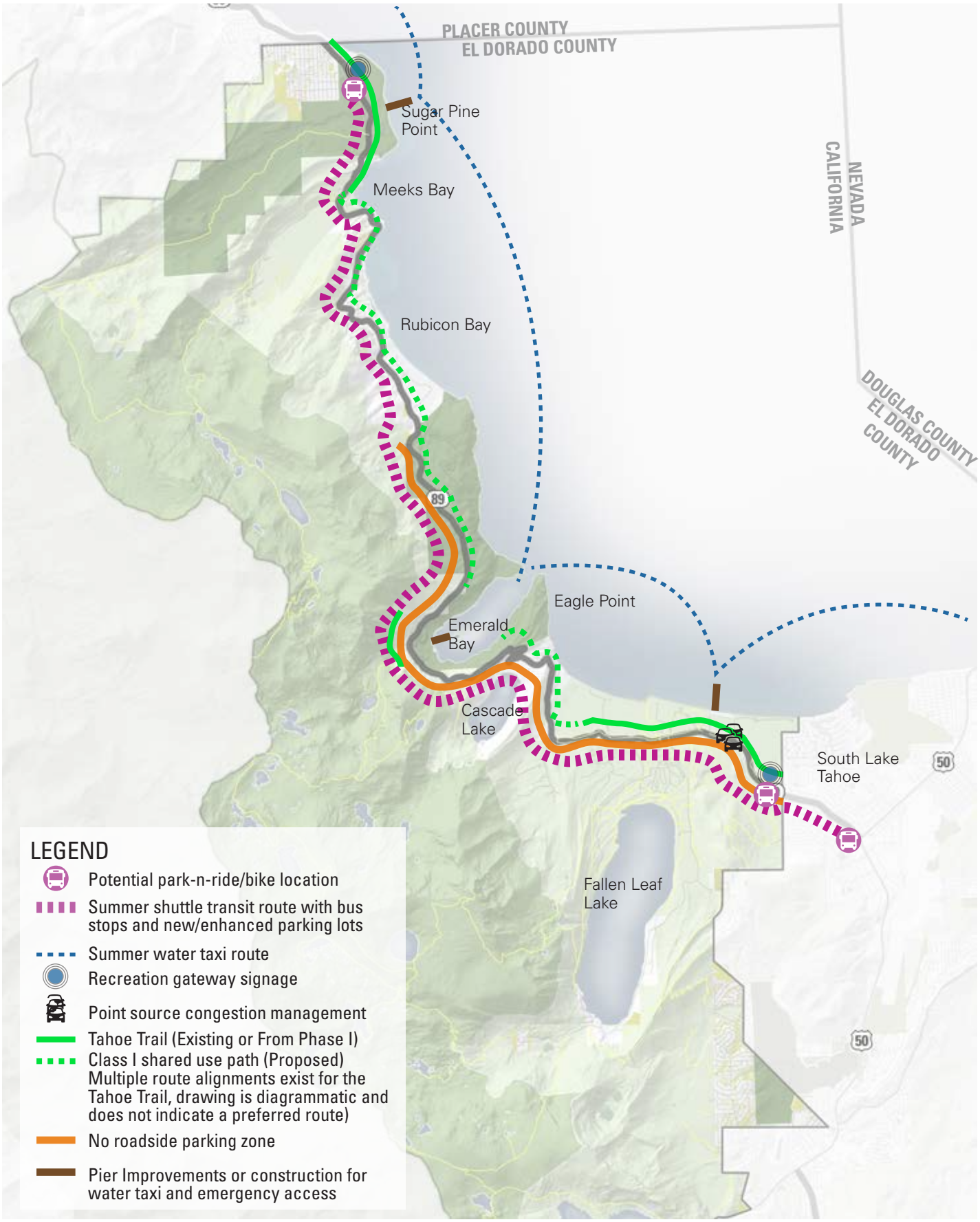


Figure 33: Recommended Projects | Phase II

PHASE III TRAVEL FRAMEWORK

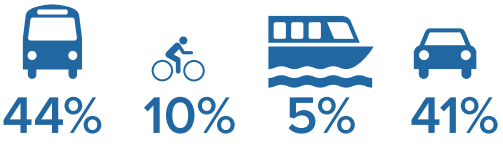
The third and final phase of the travel framework increases transit service and sees the completion of the Tahoe Trail around Emerald Bay. Buses run every 15 minutes from both the south and north park-n-ride/bikes to Emerald Bay. Water taxis also operate from the north shore and south shore to serve Emerald Bay. Additional projects and operations are summarized in the box below.

The transit model has the capacity to accommodate visitation growth of a modest 5 percent. The system can scale up or down to meet desired management levels. For example, additional people could be accommodated by increasing the number of buses or water taxis in service or increasing parking management techniques to encourage turnover and reduce length of stays. The Phase III fleet size and costs represent an operationally sustainable transit model and additional visitation could exceed the capacity of recreation areas. Outcomes of the individual site capacity studies conducted in Phase I and the regional visitation study completed in Phase II should be considered when evaluating whether to accommodate additional visitation or to scale down the transit system based on management needs and natural and cultural resource impacts.

Projects and operations associated with the Phase III travel framework are summarized in the box on page 92.

37,400 fewer cars in the **Corridor** every summer month

How People Arrive to the Corridor in the Summer[1]



- Tahoe Trail Completed
- Thru Traffic Allowed
- Roadside Parking Relocated

Transit Service

Bus Routes

- Y to Emerald Bay every 15 minutes
- Sugar Pine to Emerald Bay every 15 minutes

Water Taxi Routes

- South Shore: 2 boats running hourly from 10:30-6:30
- North Shore: 1 boat running every 2 hours from 10:30-6:30 (from Homewood or Sugar Pine Point State Park to Emerald Bay)

Fleet Size	*Fleet with Spares*	*Water Taxis*	*Projected Fleet Costs*[2]	*Projected Annual Operating Costs*
9	**12**	**3**	$13,500,000	$3,193,200

[1] Percentages based on 2018 Emerald Bay and Pope to Baldwin Segment baseline visitation estimate

[2] Not inclusive of all costs (e.g., electrification, maintenance facility, etc.)

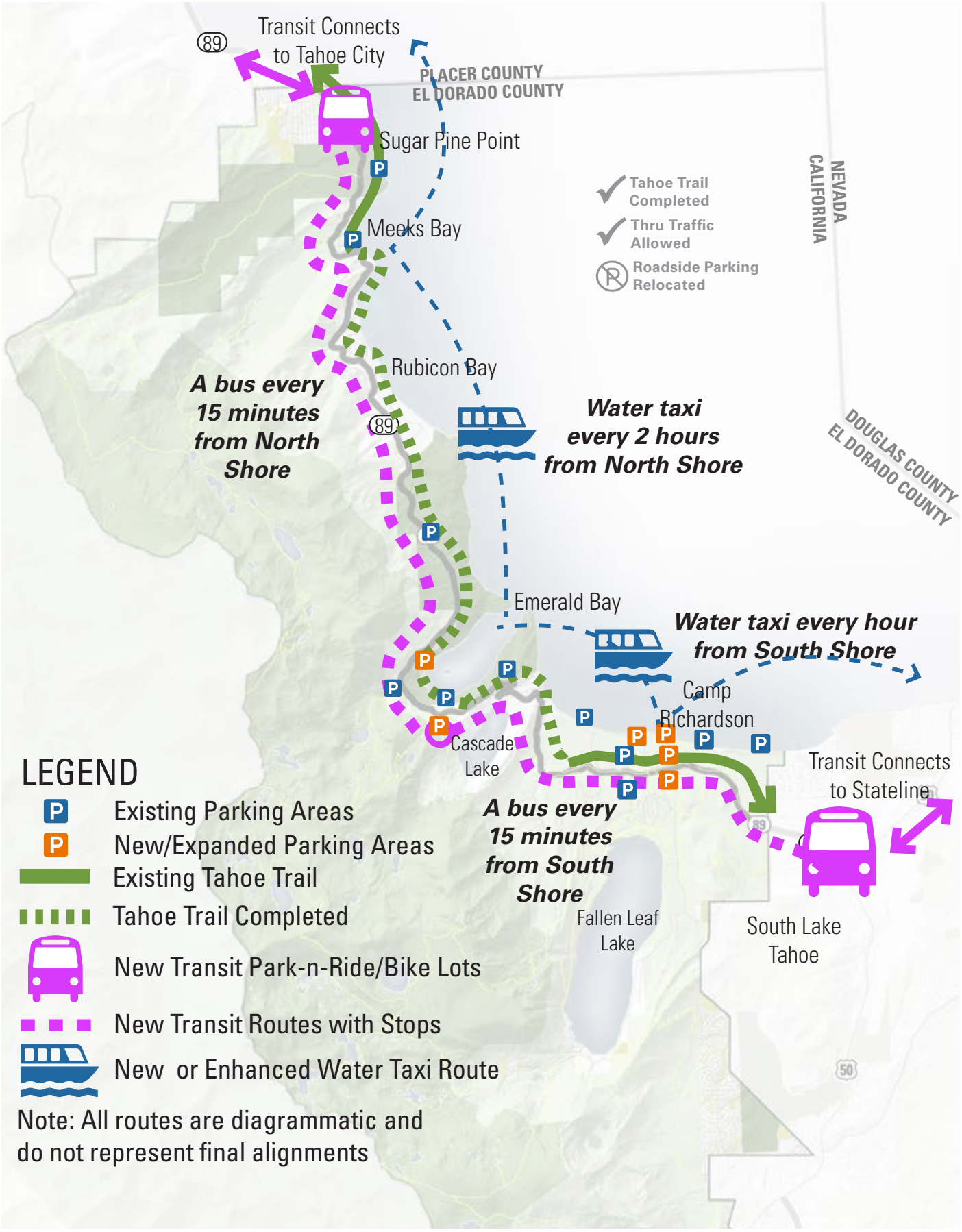


Figure 34: Phase III Travel Framework

Phase III Supporting Infrastructure Projects

Phase III projects include operational, planning, and design efforts that achieve the following:

- Enhance and fine tune transit support facilities, operations, and parking management
- Construct Tahoe Trail segment around Emerald Bay
- Continue improvements for traffic flow through the Pope to Baldwin Segment
- Monitor and evaluate improvements and adjust to ensure corridor objectives are met

Some projects will be implemented over time and are included in all three phases. For example, improving technology infrastructure and undergrounding utilities may occur as part of other projects and will occur over time in all three phases.

PHASE III SUPPORTING INFRASTRUCTURE AND OPERATIONAL ELEMENTS

- Monitor and assess Phase II projects, access patterns, visitor experience, and operations – adjust below recommendations and marketing strategies based on findings
- Develop a funding/finance plan with each phase
- Complete the Tahoe Trail around Emerald Bay
- Increase partnership with water taxi to supplement access
- Phase III transit service and roadside parking relocations with temporary parking improvements
- Phase III reservation and parking management and fee system
- Expand park-n-ride/bike facilities in the Y area or by West Way
- Phase III point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas
- Evaluate need for a small parking area (15 spaces) by north Emerald Bay gates for off-season/winter access
- Formalize emergency turnouts
- Increased operation budgets
- Improved technology infrastructure
- Utility undergrounding
- Incorporate wildlife crossings where possible
- Consider bike lanes or widened shoulders throughout corridor
- Monitor roadside parking impacts and consider relocating/restricting roadside parking near Meeks Bay Resort and Sugar Pine Point State Park when alternative access is provided through transit and bike facilities

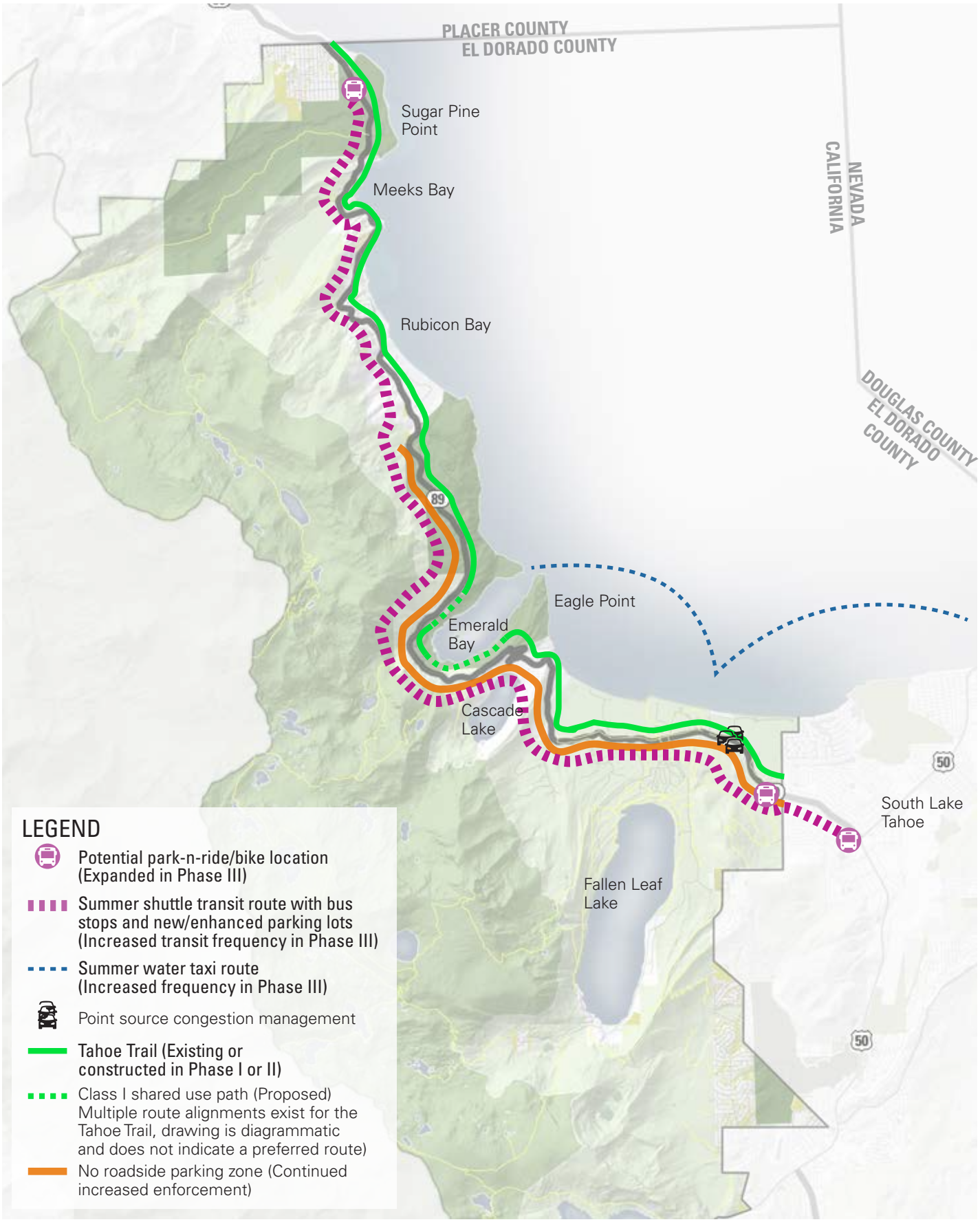


Figure 35: Recommended Projects | Phase III

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CHAPTER 6 CORRIDOR ACTION PLAN BY SEGMENT

Corridor recreation activities range from beach going, site seeing, hiking, and biking, to backcountry camping and skiing.

OVERVIEW

This Chapter summarizes, by segment, the recommended infrastructure and planning projects that support the recommended strategies presented in Chapter 3 and the travel framework described in Chapter 5. A project list is included in the appendix for easy referencing and updating as results are monitored and tactics modified and adjusted. The project list builds upon the strategies and actions developed in the RTP and the LTCCP and projects that have been reviewed and approved through separate planning and design processes.

The project list provided in the appendix organizes the action steps by corridor location. First the corridorwide projects are discussed and then the projects for each segment are included, starting from the south and working toward the north. The appendix matrix includes the project category, potential phasing, anticipated project lead(s), and potential project partners.

Similarly, this chapter presents the projects first from a corridorwide perspective. Second it illustrates and lists the projects by corridor segment (south to north).

CORRIDORWIDE PROJECTS

Corridorwide projects establish the foundation for coordinated management of the corridor. Projects included in this summary may be implemented within an individual segment but also represent the overall approach to address corridor issues. For example, conducting a feasibility study for the Tahoe Trail encompasses efforts to identify overall trail connectivity from Spring Creek Road north to Meeks Bay. Individual segments for completion of the Tahoe Trail are specifically listed in each corridor segment. A list of projects to occur throughout the corridor is shown in the box to the right.

Corridor Recommendations

Completion of the Tahoe Trail

Transit & reservation system during the summer months and peak weekends

Roadside parking restricted/ relocated with increased enforcement and fine

Recreation zone speed limit developed for peak season

Point source congestion management at Pope Beach Road and Jameson Beach Road

Winter and off-season access improvements/year-round recreation access for backcountry and site-seeing needs

Technology infrastructure

Increased operational resources and coordinated management approach

CORRIDORWIDE PROJECTS

- Develop a funding/finance plan with each phase
- Conduct Tahoe Trail Feasibility Study
- Evaluate individual site capacities for the corridor, including boat-in capacity for Emerald Bay, and adjust corridor transit and access recommendations based on findings
- Phase I, II, and III transit service and roadside parking relocations with temporary parking improvements
- Consider bike lanes or widened shoulders throughout corridor
- Reservation, parking management and fee system framework and revenue collection
- ITS and shuttle marketing
- Real-time transit and parking app
- Increased operation budgets
- Formalize emergency turnouts
- Operational measures to allow for off-season and winter access to strategic parking lots
- Increase technology infrastructure
- Utility undergrounding
- Incorporate wildlife crossing improvements, where appropriate
- Develop a South Shore transit maintenance facility (likely built outside of the corridor, but impacts feasibility for transit service)
- Wayfinding
- Real-time visitor information
- Conduct a regional visitation strategy
- Recreation corridor gateway signage and consistent wayfinding and marketing program

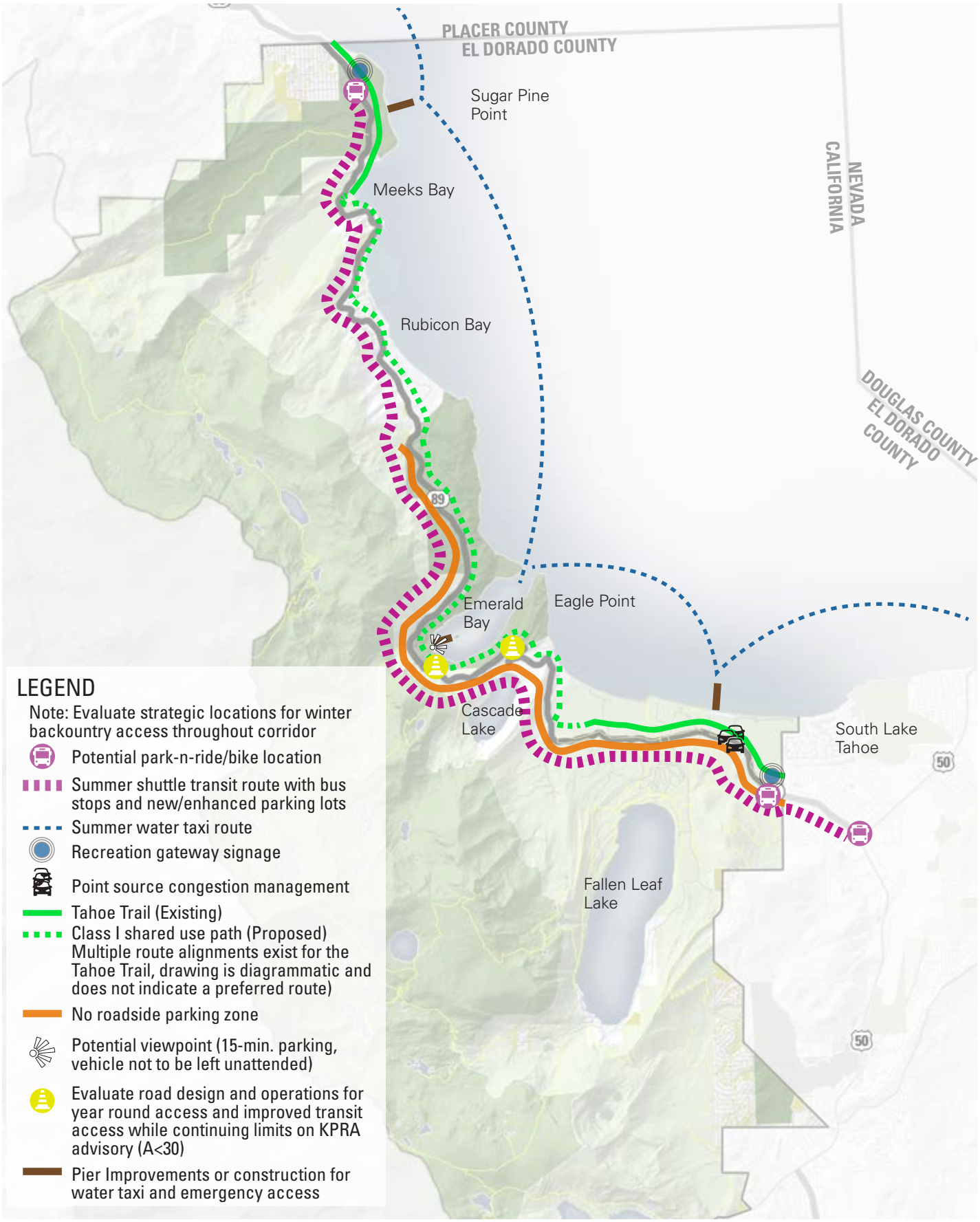


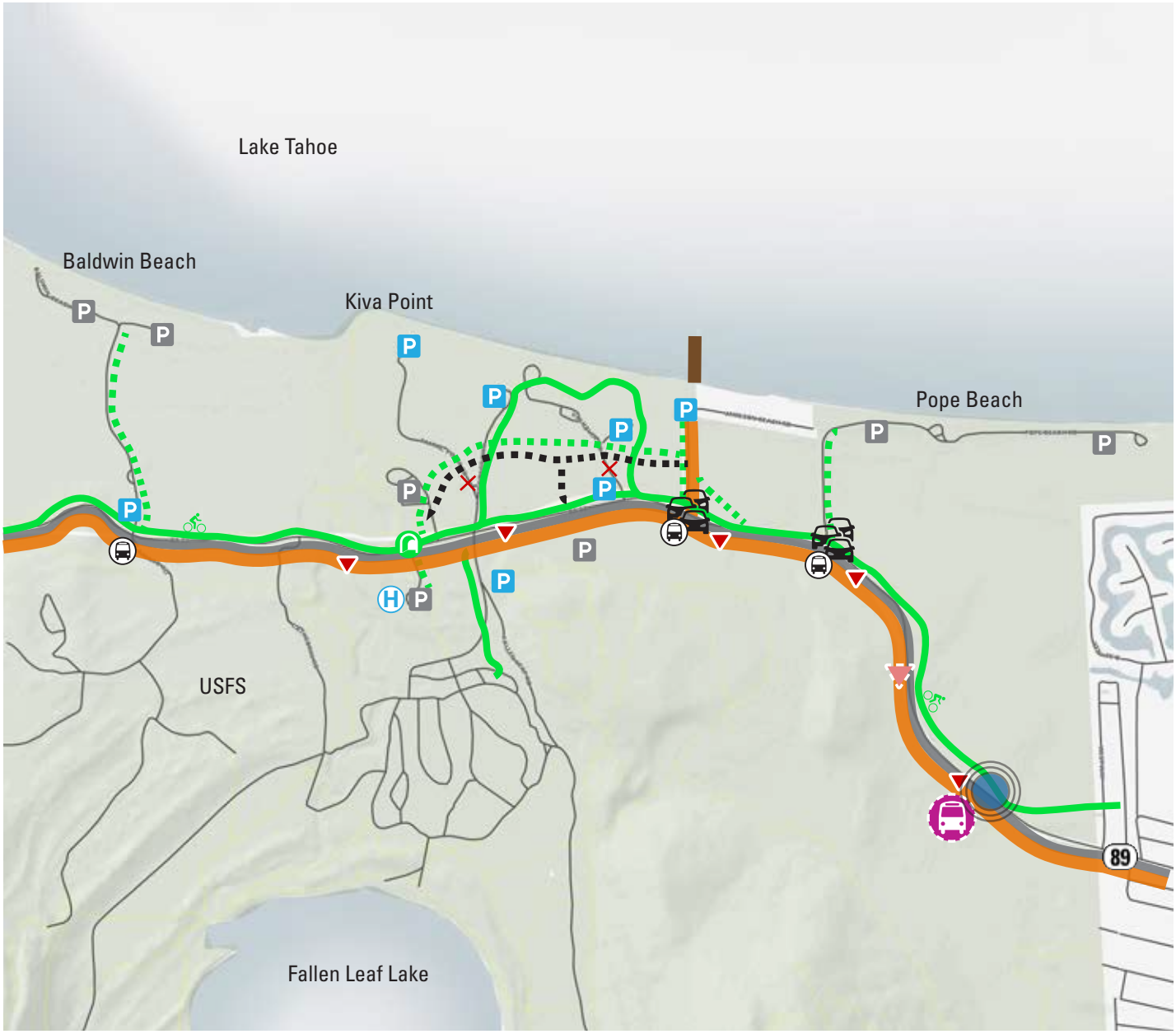
Figure 36: Recommended Projects | Corridorwide

POPE TO BALDWIN SEGMENT | PROJECTS

Projects in the Pope to Baldwin Segment include facilities and tactics that address congestion associated with entry into Pope Beach, pedestrians crossing at Jameson Beach Road, and cars trolling the highway looking for parking. In addition to the projects recommended to support transit services, active transportation facilities such as new Class I shared use paths and the potential for a seasonal cycle track, are included. A list of projects to occur in the Pope to Baldwin Segment is shown in the box to the right.

PROJECTS SUMMARY FOR POPE TO BALDWIN SEGMENT

- Phase I, II, and III transit service and roadside parking relocations with temporary parking improvements
- Phase I, II, and III point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas
- SnoPark parking and temporary transit stop improvements
- Jameson Beach Road shared use path
- Baldwin Beach Road shared use path
- Pope Beach Road shared use path
- Implement LTBMU planned parking and circulation projects in Pope to Baldwin Segment
- Develop bus stops at Pope Beach Road, Jameson Beach Road, and Baldwin Beach Road
- Improve Camp Richardson pier and increase operations budget to accommodate water taxi service
- Evaluate park-n-ride/bike locations at the Y and West Way, construct improvements during Phase II and Phase III
- Improve Fallen Leaf Road for emergency and recreation access
- Increase capacity for cyclist access to Camp Richardson
- Gardner Mountain trail access
- Formalize emergency turnouts
- Operational measures to allow for off-season and winter access to strategic parking lots
- Increase technology infrastructure
- Incorporate wildlife crossing improvements, where appropriate
- Develop parking lots at Spring Creek Road and Fallen Leaf Lake Road
- Analyze Eagle's Nest Campground entry for possible operational improvements to hold a larger queue



LEGEND

- Potential park-n-ride/bike location
- Bus stop (Proposed)
- Parking lot (Existing)
- Parking lot (Expanded or formalized)
- Tahoe Trail (Existing)
- Class I shared use path (Proposed)
- Grade separated crossing for pedestrians and cyclists
- Internal road circulation (Proposed)
- No roadside parking zone
- Emergency/Maintenance turnout (Formalize existing)
- Emergency/Maintenance turnout (Proposed)
- Recreation gateway signage
- Pier Improvements for water taxi and emergency access
- Point source congestion management
- Helipad/emergency helicopter landing area (Existing)

Figure 37: Recommended Projects | Pope to Baldwin Segment

EMERALD BAY SEGMENT | PROJECTS

Projects in the Emerald Bay Segment support efforts to move toward a more car-free experience in Emerald Bay and the construction of the Tahoe Trail in this segment. The conversion of Bayview Campground to a small parking area with transit facilities is recommended. Opportunities to relocate the campsites within the corridor should be evaluated. The additional parking should be limited in scope and is intended to meet the recreation demand for off-season access when transit would not be running. A feasibility study is recommended to identify potential Tahoe Trail routes and a Project Study Report is recommended to evaluate opportunities to keep the highway open year-round through this segment. Winter access to recreation sites is important, as well as providing emergency access facilities.

A list of projects to occur in the Emerald Bay Segment is shown in the box to the right.

PROJECTS SUMMARY FOR EMERALD BAY SEGMENT

- Develop Tahoe Trail segment from D.L. Bliss to and around Emerald Bay and south to Spring Creek Road, with grade-separated crossing(s), if needed; underground powerlines and co-locate technology infrastructure
- Phase I, II, and III transit service and roadside parking relocations with temporary parking improvements
- Transit turnaround improvements near Emerald Bay's north and south gates
- Project Study Report completion for year-round access and road design improvements through Emerald Bay
- Vikingsholm vista parking improvements with northbound bus stop
- Develop bus stops at Eagle Falls, Inspiration Point/Bayview campground, and Eagle Point campground (bundle with Vikingsholm project)
- Improve pier and increase operations budget to accommodate water taxi service
- Bayview campground conversion to small parking for off-season and winter access with summer transit stop; design parking to accommodate a limited number of tour buses; evaluate options to relocate campsites within the corridor
- Northbound viewpoint parking near Eagle Falls
- Helipad site designation west of Bayview campground
- Formalize emergency turnouts
- Operational measures to allow for off-season and winter access to strategic parking lots
- Increase technology infrastructure
- Incorporate wildlife crossing improvements, where appropriate
- Manage visitation to protect cultural and natural resources such as Fannette Island
- Evaluate need for off-season parking area north of Vikingsholm on LTBMU property
- Conceptual route for a north/south multi-use trail connector

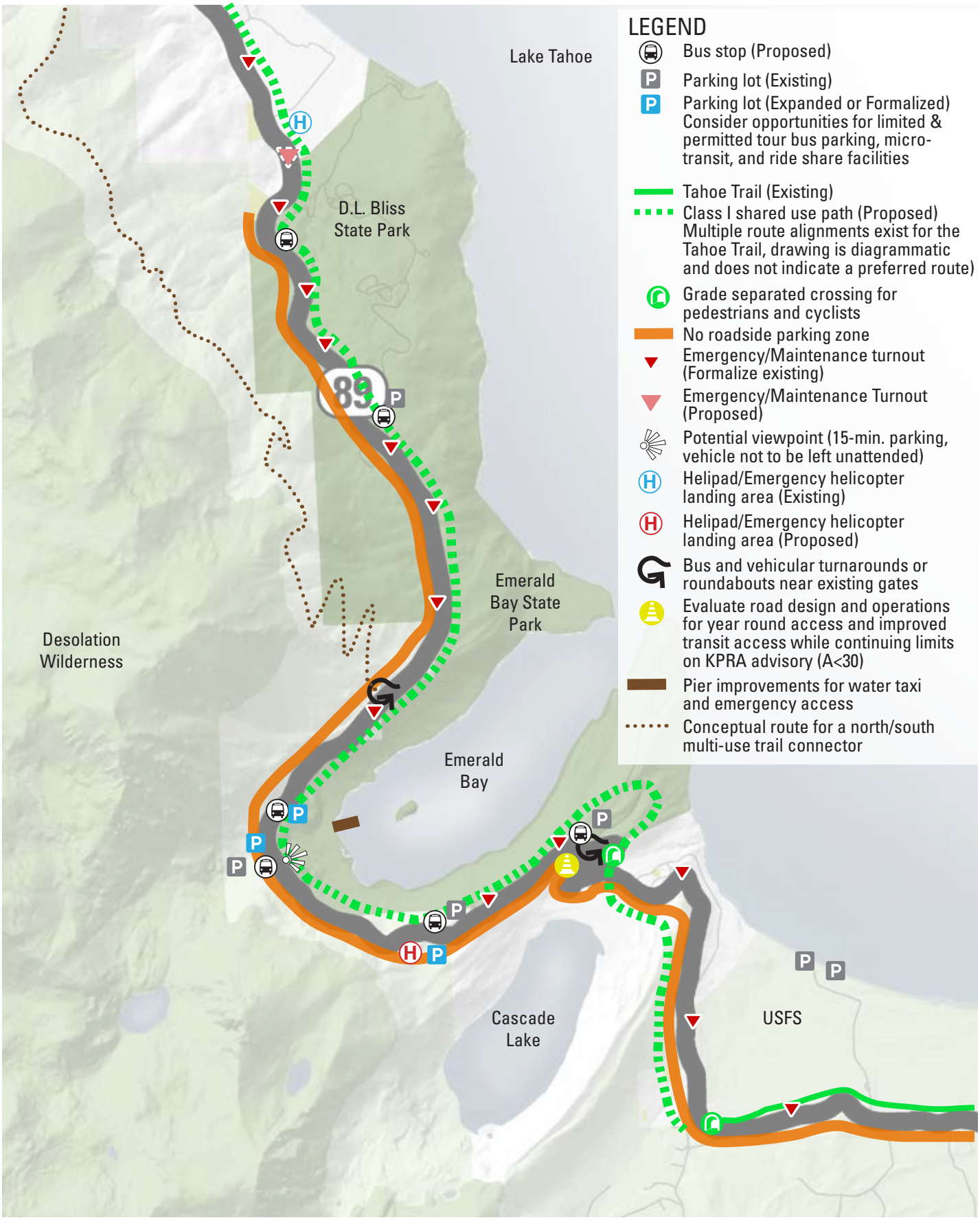


Figure 38: Recommended Projects | Emerald Bay Segment

RUBICON BAY SEGMENT | PROJECTS

Routing and constructing the Tahoe Trail is the primary project for the Rubicon Bay Segment. A list of projects is shown in the box to the right.

West Shore Tahoe Trail Goals

Goal

Design and construct a premiere shared-use path along Lake Tahoe's west shore as part of a separated bikeway network circling Lake Tahoe.

Objectives

- Create a separated, shared-use path to promote active transportation, better manage auto congestion, disperse recreation, and complete the Tahoe Trail.
- Provide a separated, shared-use path that provides a high-quality user experience.
- Serve a broad spectrum of users by meeting American Association of State Highway and Transportation Officials (AASHTO) and American with Disabilities Act and Architectural Barriers Act (ADA/ABA) design standards, and other relevant accessibility standards.
- Provide new high quality, sustainable recreation opportunities that disperse recreation demand while protecting the quality, integrity, and character of existing recreation opportunities; protecting natural resources; and improving water quality.

Design Principles

- Identify and provide buildable and convenient connections to communities, public facilities, public lands, the lakeshore, and open space. Consider connections to other projects identified in the CMP.
- Identify opportunities to restore and enhance water quality and reduce storm water pollution through design and construction of the trail.
- Maximize the percentage of trail segments that are Class 1, identify segments where Class 4 trails can replace Class 2 trails.
- Serve both recreation and commuter needs, with recreation needs receiving first priority where trade-offs must be made.
- Provide for a variety of bicycle and pedestrian users on the trail, while recognizing and managing potential conflicts.

PROJECTS SUMMARY FOR RUBICON BAY SEGMENT

- Develop Tahoe Trail segment from Meeks Bay to D.L. Bliss with grade-separated crossing(s), if needed; underground powerlines and co-locate technology infrastructure
- Formalize emergency turnouts
- Provide winter recreation access parking
- Increase technology infrastructure
- Incorporate wildlife crossing improvements
- Evaluate trail access needs and options in alignment with local plans
- Evaluate options for a multi-use trail connector

- Provide adequate public and private support facilities, such as restrooms, garbage, and wayfinding.
- Remain sensitive to the cultural resources and natural resources in the corridor.
- Consider social and economic benefits of the trail.
- Provide interpretive opportunities along the trail for natural, cultural, and historic resources.
- Minimize the number of crossings of SR-89, crossings should be over or under the highway when feasible.
- Where appropriate, use and enhance existing disturbed area, such as old logging and fire access roads, and take advantage of joint parking opportunities, such as at school sites.
- Include opportunities for universal accessibility.
- Provide visitor amenities, such as rest areas and vistas, to make the bikeway an enjoyable experience.
- Implement signage and naming consistent with the collaborative work of the Lake Tahoe Pathway Partnership.
- Identify public utilities early in the process and potential for co-location and undergrounding of utility lines.
- Identify opportunities to collocate conduit for communication systems and fiber optic within trail footprint.
- Respect private property rights.
- Reduce noise impacts from trail usage.

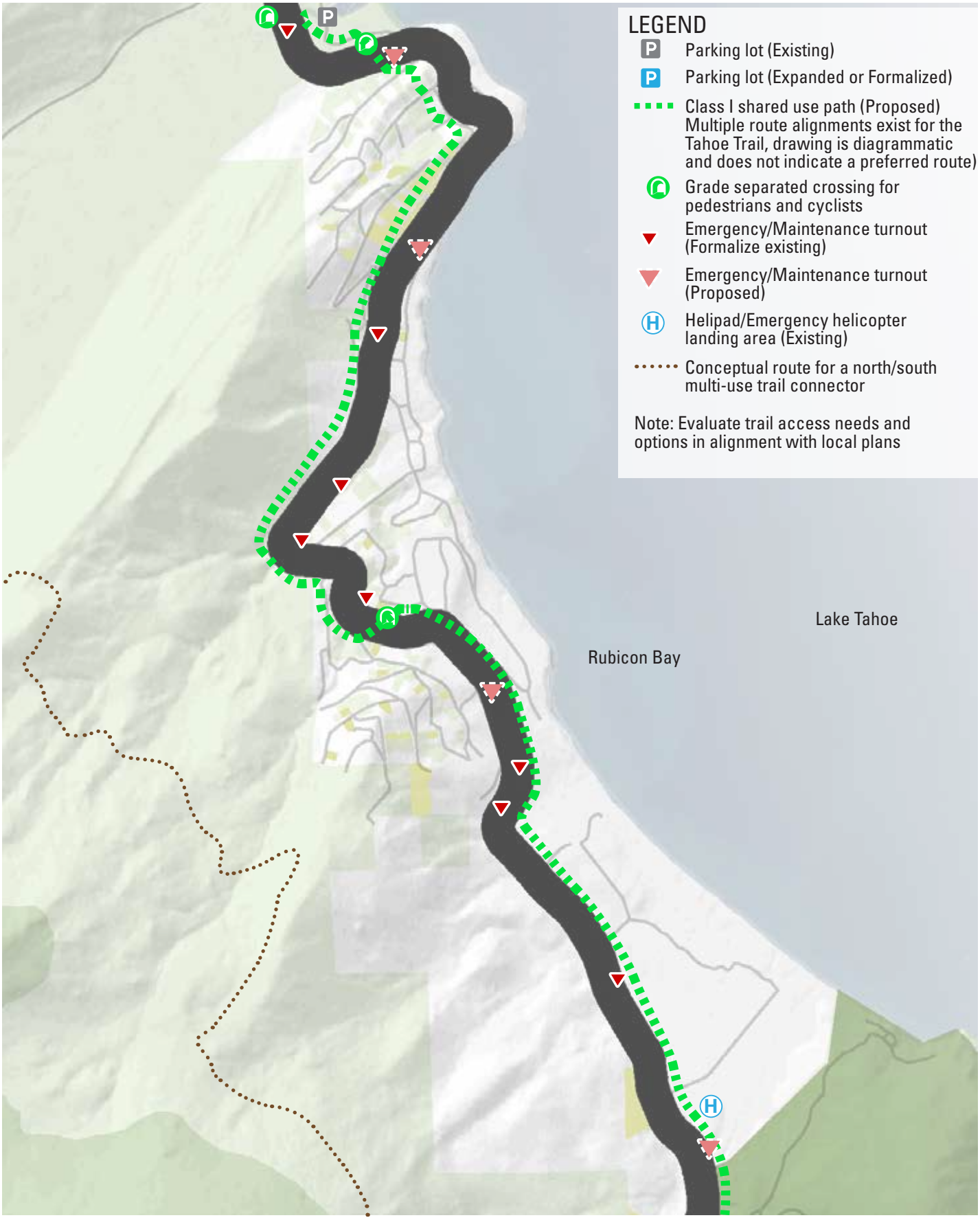


Figure 39: Recommended Projects | Rubicon Bay Segment

MEEKS BAY SEGMENT | PROJECTS

Routing and constructing the Tahoe Trail through Meeks Bay is a key project for this segment. Conceptual alternatives for the trail are shown in the appendix, but these and other alternatives may be studied in more detail during the feasibility study. The roadside parking outside of the resort should be monitored and overtime, the parking may be restricted with preferred access from transit and bike.

The Meeks Bay ecosystem restoration project is currently underway and will include planning and environmental review. The primary purpose of the project is to move the Meeks Creek stream channel and wetland/lagoon below SR 89 to a more natural condition where geomorphic and hydrologic processes support a functioning ecosystem while continuing to support sustainable recreation opportunities. The alignment of the Tahoe Trail through Meeks Bay will be considered as part of the project.

A list of projects to occur in the Meeks Bay Segment is shown in the box to the right.

PROJECTS SUMMARY FOR MEEKS BAY SEGMENT

- Develop Tahoe Trail segment within Meeks Bay with grade-separated crossing, if needed; underground powerlines and co-locate technology infrastructure
- Develop bus stop at Meeks Bay
- Relocate roadside parking when alternative access is provided through transit and bike options
- Replace Caltrans bridge and incorporate capacity for wildlife crossing and pedestrian/bike use
- Formalize emergency turnouts
- Provide winter recreation access parking
- Increase technology infrastructure

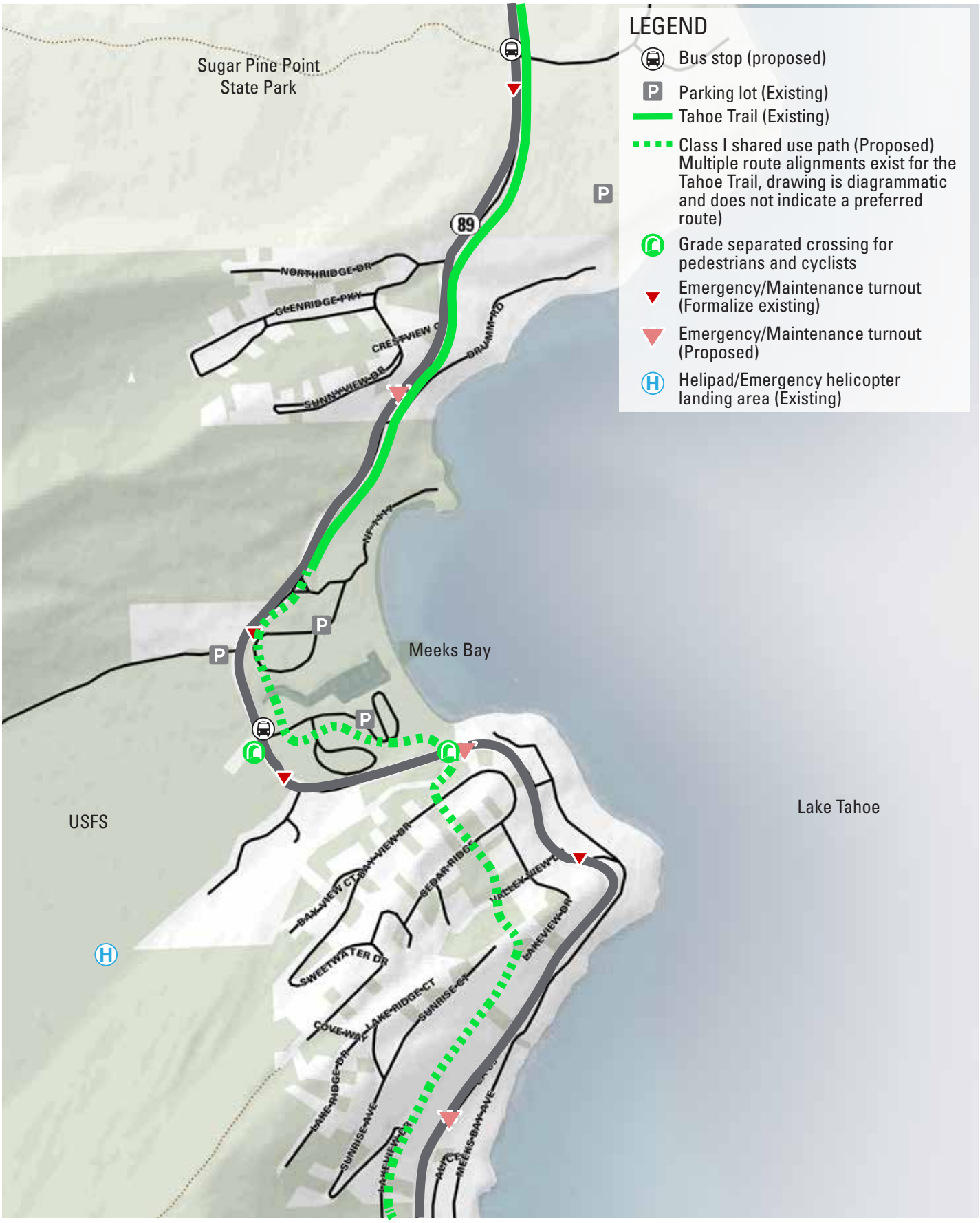


Figure 40: Recommended Projects | Meeks Bay Segment

SUGAR PINE POINT SEGMENT | PROJECTS

The Sugar Pine Point Segment has an opportunity to serve as a gateway to the recreation corridor from the north. In addition to a visual entry, its role as a park-n-ride/bike location offers a central location for visitors to leave their car and explore the rest of the corridor via transit or bike. The roadside parking outside of the state park should be relocated/restricted when alternative access is provided through transit and bike options.

A list of projects to occur in the Sugar Pine Point Segment is shown in the box to the right.

PROJECTS SUMMARY FOR SUGAR PINE POINT SEGMENT

- Enhance existing parking to serve as northern park-n-ride/bike location
- Develop bus stop at Sugar Pine Point State Park
- Improve pier and increase operations budget to accommodate water taxi service, with the ability to carry some bicycles
- Formalize emergency turnouts
- Provide winter recreation access parking
- Develop a recreation gateway
- Increase technology infrastructure
- Incorporate wildlife crossing improvements, where appropriate
- Relocate roadside parking when alternative access is provided through transit and bike options

Figure 41: Recommended Projects | Sugar Pine Point Segment

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CHAPTER 7
VISITOR TRAVEL EXPERIENCE

VISITOR EXPERIENCE CYCLE

In June 2018, a "Guestology" workshop was facilitated with the stakeholder group. "Guestology" represents the technical factors affecting a particular destination's visitor/guest experience, such as the width of a pathway, the size of a parking area, and the number of visitors a facility can accommodate at one time. In the design process, these calculations greatly influence visitor satisfaction levels and return intent, as they impact the quality of the overall visit. Well-designed facilities provide efficiencies for visitors and allow them to remain focused on their experience. Poorly-designed infrastructure and amenities can lead to crowding, wait lines, time losses, and other negative factors which distract from the experience, and can lead to poor satisfaction levels, negative word-of-mouth, and low return intent.

During the workshop, the concept of the Visitor Experience Cycle (VEC) was introduced. The VEC defines the visitor experience in five phases, which are cyclical in nature. The five phases within the cycle are as follows:

Anticipation Phase: This is the period in which the visitor's very spark of an intent to visit comes to mind, and all the pre-arrival efforts take place: choosing their destination, evaluating options, formulating itineraries, and making reservations. During this phase, destination operators are also reaching out to prospective visitors with marketing information and incentives.

Arrival Phase: This phase represents all elements in the visitors' transit from their home, hotel, etc. to their destination; including roadways and pathways, wayfinding signage, parking, ticket purchasing, etc. This also include services and amenities provided at the venue to aid in their arrival, such as trams or shuttles from a parking lot to the venue entrance, first-stop shopping, and restrooms.

Experience Phase: This period represents everything associated with the visitors' on site, "in-experience" activities – such as recreating, following tours, dining, using restrooms, etc.

Departure Phase: The Departure Phase represents all elements along the visitors' transit from the exit of the venue to their end destination – their home or hotel, in most cases. Similar to the Arrival Phase, this often includes pedestrian transit to their car, wayfinding, roadway utilization, and services and amenities to support the visitor from the venue entrance back to their cars, or shuttles from the venue entrance, last-chance shopping, and restrooms.

Savor Phase: This final phase represents the period in which the visitors reflect on their experience, perhaps responds to a survey request from the venue, posts on social media, and, ideally, considers their next return trip. It is at this point that the cycle repeats itself.

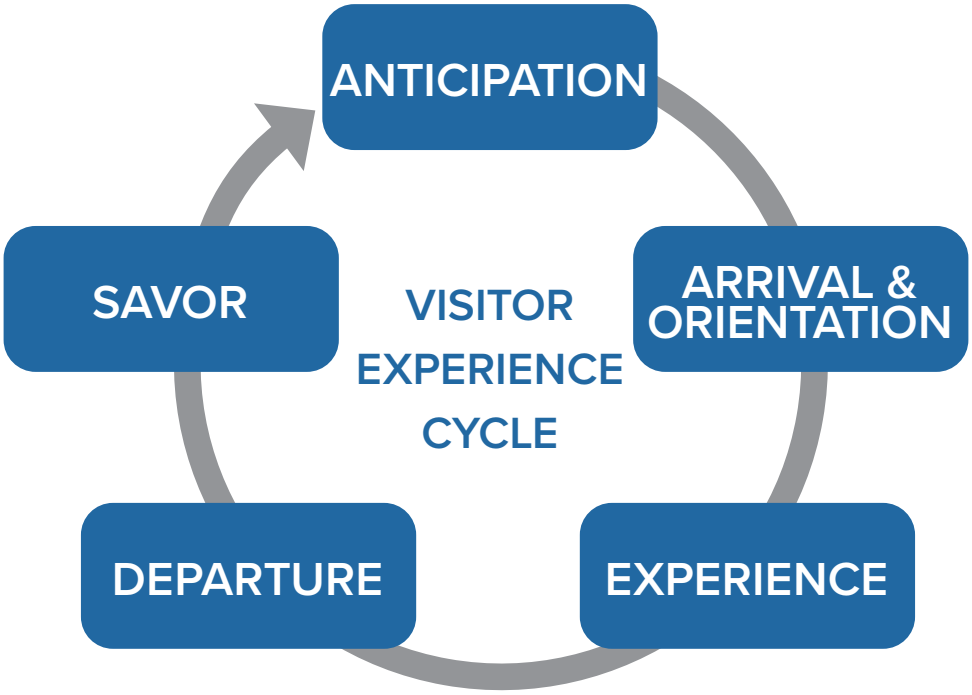


Figure 42: Stages of the Visitor Experience Cycle

The VEC on its own serves as an important reminder that how visitors define, connect with, and evaluate their experiences is much more than just the sum of the on-site elements. It includes everything they engage with from the moment they consider their visit to their post-visit reflection and reconnection. Understanding this concept means that businesses must always be mindful of the quality of the visitors' journey through all five phases, striving for consistency in execution along the way. This applies to day-to-day operations, and in how plans are defined and prioritized, such as the case with the SR 89 corridor.

Applying the Visitor Experience Model to the CMP

With the multi-phase framework of the CMP in place, the VEC can serve as a valuable model for gauging the impact of the Plan across the full spectrum of the visitor journey, for the purposes of ensuring overall balance and in identifying gaps. To begin with, initial assumptions were made regarding the correlation of each of the scope items within the three implementation phases to the five phases of the VEC. The results for each of the phases are shown in Tables 3 through 5. Note that in Phases II and III, several initiatives were not scored as they were not intended to support the day-to-day visitor experience, such as formalizing emergency turnouts.

Phase I					
	Anticipation	Arrival	Experience	Departure	Savor
Reservation, parking management, and fee system	X	X	X	X	
Real-time transit and parking app	X	X	X	X	
Phase I transit service and roadside parking relocations with temporary parking improvements		X		X	
Phase I point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas		X		X	
Transit stops at Eagle Point Campground, Inspiration Point, Eagle Falls Viewpoint, Vikingsholm		X		X	
Transit turnaround improvements near Emerald Bay's north gate		X	X	X	
SnoPark parking and transit stop improvements		X	X	X	
Jameson Beach Road shared use path		X	X	X	
Baldwin Beach Road shared use path		X	X	X	
ITS and shuttle marketing	X				X
Evaluate park-n-ride/bike locations at the Y and West Way		X	X	X	
Improve Fallen Leaf Road for emergency and recreation access			X		
Helipad site designation west of Bayview campground			X		
Recreation corridor gateway signage and consistent wayfinding		X	X		
Improved technology infrastructure		X	X	X	
Incorporate wildlife crossings with Caltrans bridge replacement near Meeks Bay		X	X	X	
Improved wayfinding and marketing and communication strategies	X	X	X	X	
Incorporate wildlife crossings where possible		X	X	X	
	4	15	14	14	1

Table 3: Phase I Project Correlations with the Visitor Experience Cycle

Phase II					
	Anticipation	Arrival	Experience	Departure	Savor
Tahoe Trail segments implemented: Spring Creek Road to Eagle			X		
Point Campground and Boat-in-Campground Road to Meeks Bay		X		X	
Water taxi partnership for service from the north shore		X	X	X	
Phase II transit service and roadside parking relocations with temporary parking improvements		X	X	X	
Phase II transit stops throughout corridor		X	X	X	
Phase II reservation and parking management and fee system	X	X	X	X	
Park-n-ride/bike improvements at Sugar Pine Point State Park and development of park-n-ride/bike facilities near the Y or West Way		X	X	X	
Phase II point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas		X	X	X	
Bayview campground conversion to small parking for off-season and winter access with summer transit stop		X		X	
Improve piers and increase operations budget to accommodate water taxi service		X	X	X	
Northbound viewpoint parking near Eagle Falls		X			
Implement LTBMU planned parking and circulation projects in Pope to Baldwin Segment		X	X	X	
Increase capacity for cyclist access to Camp Richardson		X	X	X	
Operational measures to allow for off-season and winter access to corridor parking lots		X			
Formalize emergency turnouts					
Gardner Mountain trail access			X		
Improved technology infrastructure		X	X	X	
Incorporate wildlife crossings where possible		X	X	X	
Formalize emergency turnouts					
	1	15	13	13	0

Table 4: Phase II Project Correlations with the Visitor Experience Cycle

From here, a baseline analysis was performed by tabulating the number of scope items planned for each phase of the VEC: the higher the number of initiatives, the greater the potential to raise visitor satisfaction levels for each impacted cycle phase. Using the assumptions previously described, comparisons for each of the three project phases were captured in Figures 44 through 46.

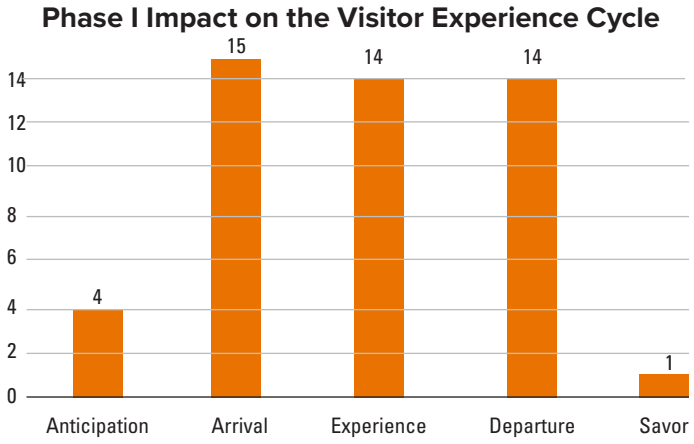


Figure 43: Phase I Projects Impacting VEC Stages

Phase III					
	Anticipation	Arrival	Experience	Departure	Savor
Tahoe Trail completed around Emerald Bay			X		
Water taxi partnership for increased service from the south shore		X	X	X	
Phase III transit service and roadside parking relocations with temporary parking improvements		X	X	X	
Phase III reservation and parking management and fee system	X	X	X	X	
Park-n-ride/bike improvements at facility near the Y or West Way			X		
Phase III point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections/recreation areas		X	X	X	
Evaluate need for off-season parking area north of Vikingsholm on LTBMU property		X	X		
Formalize emergency turnouts					
Improved technology infrastructure		X	X	X	
Incorporate wildlife crossings where possible		X	X	X	
Consider bike lanes or widened shoulders throughout corridor		X	X	X	
Monitor roadside parking impacts and consider relocating/ restricting roadside parking near Meeks Bay Resort and Sugar Pine Point State Park		X	X	X	
	1	9	11	8	0

Table 5: Phase III Project Correlations with the Visitor Experience Cycle

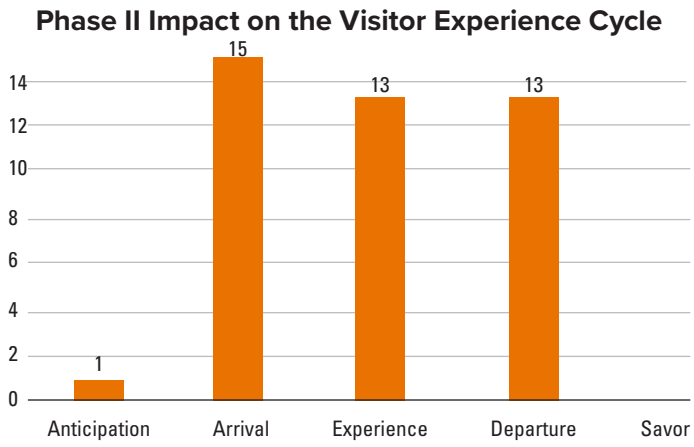


Figure 44: Phase II Projects Impacting VEC Stages

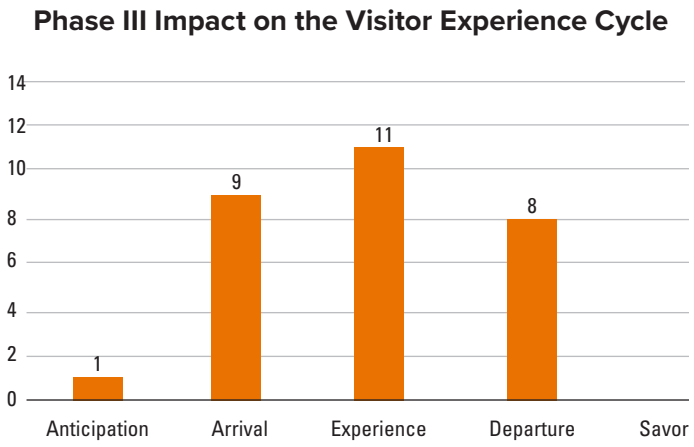


Figure 45: Phase III Projects Impacting VEC Stages

Based on the figures, Phases I and II of the CMP will have the greatest impact on the Arrival Phase, with Phase III focusing most heavily on the Experience Phase. This is a sound approach, as the visitors' arrival experience and first impressions – be it at an attraction, a hotel, or an event – significantly influence overall satisfaction levels and return intent. This phenomena is why leisure operators put so much stock on arrival experience ratings in satisfaction surveys. And in terms of the phasing of the overall project, applying early enhancements which will be of greatest benefit the Arrival Phase will help get a jump on improving overall satisfaction levels, until the additional scope is installed.

Based on this analysis, only minor impact will be felt within the Anticipation and Savor Phases of the VEC. This is not surprising, as the core concerns leading to the development of the CMP revolve around the corridor's roadways, mass transportation and parking provisions – elements represented in any destination's VEC within primarily Arrival and Departure Phases. The region's business and visitor authorities have a role for increasing the impact for the Anticipation and Savor Phases. Marketing efforts should reinforce and incentivize visitor behavior that aligns with corridor transportation and recreation access approaches.

However, the charts above are a reminder that a balanced approach to improving the overall experience is still important. During the June 2018 workshop, stakeholders raised concerns and ideas regarding all five phases of the VEC in the context of the SR 89 corridor experience. It is assuring to see two specific measures which will in combination encourage off-season visitation – the new fee system (assuming fees vary based on demand) and making parking available along the corridor during the off-season and winter. These measures have the potential to positively affect the Arrival, Experience, and Departure Phases by lowering peak attendance levels, reducing congestion, and making parking, camping, and other recreation activities more accessible and comfortable. To optimally address the entirety of the VEC, it is assumed that additional initiatives are underway, separate from the Plan itself.

Refining the Analysis – Weighting

To further refine the analysis, a separate exercise should be conducted in which each scope item should be scrutinized for its impact on each phase of the VEC, such as by attributing a point value. In a simple scale from 1 to 5, in which 1 represents minimal impact and 5 represents significant impact, the resulting point tallies will give a truer picture of the Plan's impact on each phase. As before, the results of this exercise can be used to validate project priorities and ensure proper balance between the various VEC phases.

It is recommended that this exercise be conducted using input from multiple representatives on the project, and averaging the weighting values provided by all of the participants.

Alternative Assessment Method – Breadth of Impact

An alternative approach to assessing the impact of each of the Plan's scope items is to rank them in terms of the number of phases of the VEC that are impacted by the work. The higher the number of phases of the VEC benefiting from the work, the more likely the visitors' overall satisfaction level will increase, as they will sense a higher quality experience across multiple points of their journey.

Taking Phase I of the Plan as an example, the implementation of a reservation, parking ,and fee system will benefit the visitor as they consider the timing of their visit in advance, and streamline their experience on site. Therefore, four of the five VEC phases are impacted by this initiative: Anticipation, Arrival, Experience, and Departure. This can be contrasted with another initiative within Phase I, the installation of recreation corridor gateway signs and wayfinding, which will positively impact the Arrival and Experience phases, but is not relevant to three other VEC phases.

As with the baseline analysis, this approach can be refined by using a similar weighting system as referenced earlier. The net results will give a truer picture of how breadth of impact can be balanced with the level of impact on a per-phase basis.

IMPACT OF EACH PLAN PHASE ON THE VISITOR EXPERIENCE NARRATIVE

Phase I

Visitors will first take note of a more appealing experience during the **Anticipation Phase** when they discover a new transit and parking app and respond to ITS and shuttle marketing strategies. Reflecting back on the difficulties, safety concerns, and time lost searching for parking during from their previous visit(s), visitors will appreciate that these new tools will give them greater confidence and peace of mind that the hardships of making their way to their corridor destination will be rectified. As the implementation of the reserved parking system occurs, plans for Phase I will also include marketing and communication strategies to build awareness of the new system. This will mitigate issues in which visitors return during Phase II without a reservation made in advance.

For those diving into the features of the transit and parking app prior to their visit, they will appreciate the new transit stops installed at Eagle Point Campground, Inspiration Point, Eagle Falls Viewpoint, and Vikingsholm, and that improvements have been made to the transit stop at SnoPark and at the Emerald Bay north gate turnaround. Realizing that the new transit system will offer a hassle-free means of seeing these many favorite destinations, many will plan on using the service and will take advantage of the opportunity to extend their overall visit, as they understand that this will eliminate the difficulties of traveling and attempting to re-park at each of these respective stops.

Within the **Arrival Phase**, visitors will take note of the new recreation corridor gateway signs and wayfinding, which will provide a formal welcome statement for the corridor and build visitor excitement. Note that gateway signs may become popular photo spots (which should be encouraged in our word-of-mouth/Instagram consumer environment), so parking turnoffs at each gateway sign should be provided to allow for safe photo moments.

Those arriving from the south during peak periods will appreciate that their initial sightseeing along the corridor and overall safety has been enhanced through the implementation of point source congestion management strategies for Pope Beach Road and Jameson Beach Road intersections and recreation areas.

The improved technology infrastructure will facilitate the arriving visitors' use of the transit and parking app and a coordinated system of wayfinding and travel information will reduce confusion and improve decision-making, as they make their way to their respective stopping points.

Those arriving by car will take note of the parking improvements being made at SnoPark. Though some may be disappointed by the relocation of roadside parking away from high-demand, high-traffic areas such as Emerald Bay, in the long run they will appreciate that their and their family's safety is safeguarded by not having to park along the shoulder.

As the visitors begin the **Experience Phase,** those coming to the corridor for a scenic drive will appreciate improved traffic flow throughout, thanks to the above-mentioned parking and transit system improvements. Though not directly noticeable to most drivers, the new wildlife crossing incorporated with the Caltrans bridge replacement will provide a safer environment for both drivers and animals, and reduce hazardous incidences such as sudden stops for these crossings.

For those spending their day at Jameson Beach and Pope Beach areas, shared use paths will encourage visitors to experience these areas both by foot and by bike, with ample width for both types of users, enabling them to focus less on those within the lanes and more on the incredible vistas enjoyed lakeside. Increased operational funds that stay within the corridor helps land managers address litter management, enhancing the visitor experience.

As visitors enter the **Departure Phase**, the same elements added to support the Arrival Phase come into play for maximum visitor satisfaction: enhanced parking opportunities, convenient transit pick-up points, and traffic levels managed for improved vehicle circulation on their exit.

Phase II

Visitors planning their trip during the **Anticipation Phase** following Phase II's implementation will be amazed by the new and exciting methods for traveling through the corridor, and the additional transit and experience options made available to them within this phase of the project. With continued implementation of the reservation and parking management system, visitors for the first time will have the assurance of a parking spot upon their arrival. It is assumed that the system will use a dynamic pricing model as a demand management tool. Those with flexible travel plans and/or those making value-based decisions will appreciate opportunities for lower parking fees and lower crowd levels during periods of lower attendance. With respect to delivering equity to the community, providing lower-price, off-peak options on a per-day basis (non-peak hours of the day) is encouraged. This will also be useful to those with fixed travel plans and specific user types, such as beach-goers, who are limited to summer visitation.

Within the **Arrival Phase**, in partnership with a third party operator, the use of water taxis will expose visitors to this additional mode of travel around the corridor, for transit from north shore to Emerald Bay. To support the implementation of the water taxi service, pier improvements will be made at Emerald Bay and at Sugar Pine Point State Park.

To optimize parking capacity throughout the corridor, Phase II includes parking additions to Bayview Campground and Eagle Falls. Phase II will also open opportunities for parking along the corridor during the off-season and winter, which will help shift even more demand away from the peak summer season (in conjunction with the new fee system).

And to further reduce traffic levels along the corridor beyond Phase I, park-n-ride/bike improvements will be implemented at Sugar Pine Point State Park, and also near the Y or West Way.

The above efforts will lend to an even more dramatic reduction in traffic along the corridor than in Phase I, which

will streamline visitors' arrival to their desired destination. Additional point source congestion management strategies for the Pope Beach and Jameson Beach intersections and areas will further improve visitor arrivals.

Several new enhancements improve the **Experience Phase**, including new segments to the Tahoe Trail and new Gardner Mountain trail access; additional cyclist access to Camp Richardson; additional transit stops to improve convenience and encourage multi-point visitation; and the new sightseeing opportunities afforded by the water taxi. Note that the water taxi onboard experience can further be enhanced through the use of live or recorded interpretation, as the taxis pass noteworthy locations along the route.

Due to the volume of enhancements made during Phase II, this is an important time to analyze visitor response to these installations and modifications. Usage studies, on-site and post-visit surveys, and social media feedback analysis are ideal methods for gauging the impact of each individual initiative. It is assumed that some funding within the increased operation budgets can be allocated toward this important research, as the results will help refine remaining efforts during Phase II.

Phase III

Prior to Phase III's implementation, it is assumed that the combined impact of favorable word-of-mouth and social media, along with effective marketing efforts, will deliver the expected results from the implementation of the first two project phases: reduced traffic levels through the corridor, shifting of demand from peak to non-peak hours, days, and seasons; increased visitation levels at previously underutilized public areas along the corridor; improved visitor and driver safety levels; and higher overall satisfaction levels as measured by the respective operators within the area.

Visitor travel along SR 89 will become more leisurely, less congested, and less stressful, due to the elimination of roadside parking, as the designated parking areas will eliminate the uncertainty of finding a parking space and traffic conditions will be improved by the elimination of maneuvering for roadside parking access and a reduction in the volume of vehicle turning movements. The enjoyment of the driving experience for motorists will improve as they will be able to spend more time enjoying the spectacular scenery and less time searching for a roadside parking space and avoiding others looking for a space.

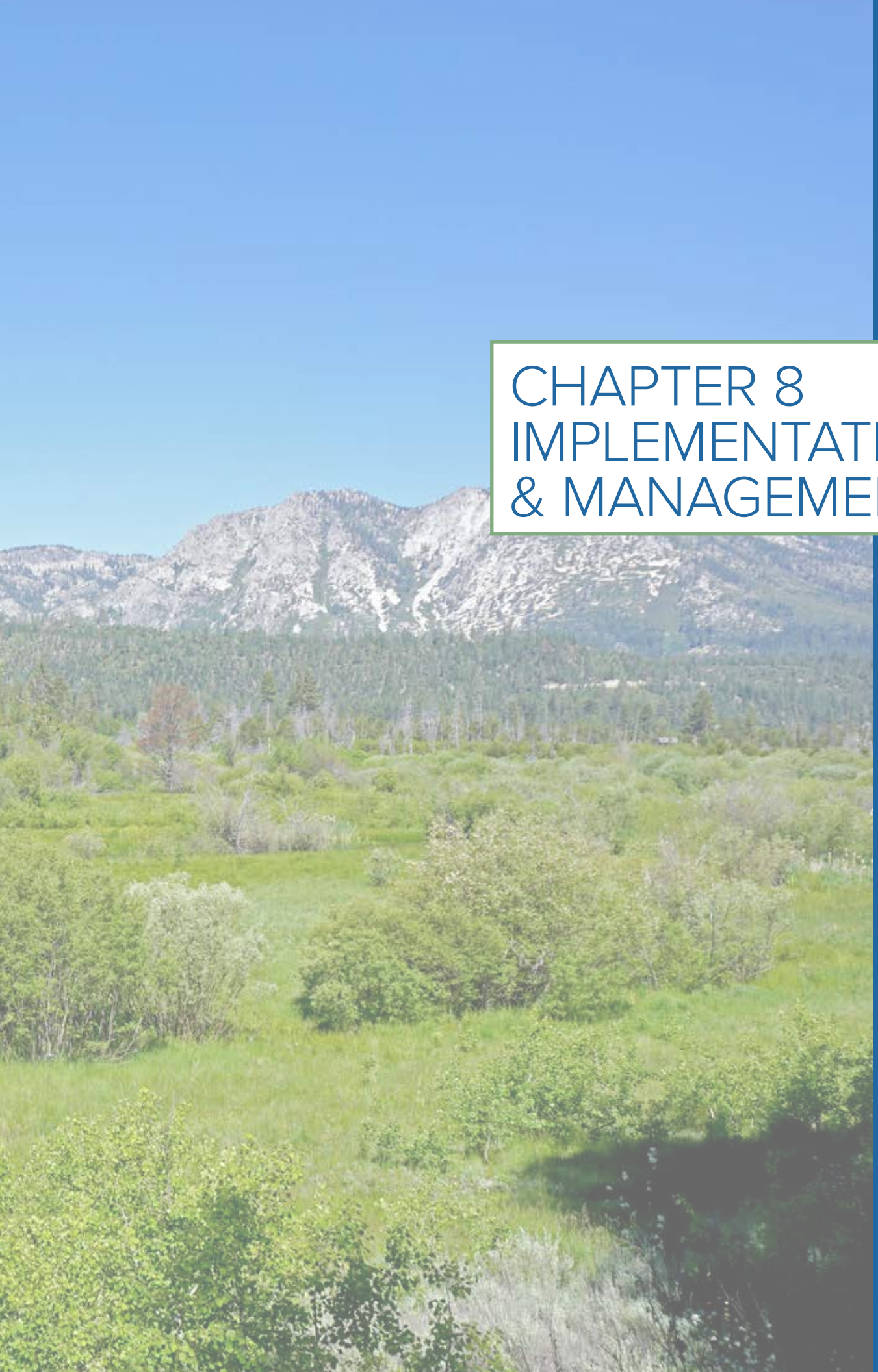
This is the period in which visitors' satisfaction in the **Savor Phase** feeds their interest in returning, and the visitors move into the **Anticipation Phase** with less of a time delay than previously, and for some, if they had previously considered returning at all.

To support visitors during the **Anticipation Phase** with these enhancements in place, some additional measures will be required. The recommended parking management strategy will restrict the amount of available parking in the SR 89 corridor, thus impacting the ability of visitors to stop at many of the key corridor destinations on busy days. As a resource to visitors during their trip planning process, all websites related to the SR 89 corridor should include alerts regarding the parking restrictions and include links to specially-developed websites that enable visitors to make reservations for parking, shuttles, and/or water taxi at all available parking locations. Reservation resources should be developed to be as seamless as possible and coordinated throughout the Tahoe basin – e.g., reservations for parking, shuttle, and attraction destination should be combined into a single online transaction.

As Phase III is implemented, visitors during the **Anticipation Phase** will be further drawn toward the use of water taxis for both transportation and for sightseeing, as marketed and facilitated through the reservation system, and the additional appeal of expanded service to the south shore.

To enhance the **Arrival Phase**, final improvements will be made to the expanded water taxi system, the transit system (even higher capacity, number of stops and frequency), park-n-ride/bike facilities near the Y or West Way, and possible additional parking during the off-season at Vikingsholm.

For visitor enhancements during the **Experience Phase**, the Tahoe Trail will be completed, bike lanes or wider shoulders will be considered along the corridor, and new sightseeing opportunities will be revealed as a result of the new south shore extension of the water taxi.



CHAPTER 8 IMPLEMENTATION & MANAGEMENT

ADAPTIVE MANAGEMENT

Recreation and transportation corridors require a framework of adaptive management to address issues. There are no silver bullets or single strategies that can achieve the desired outcomes shown in Table 6. Often many of the strategies are interconnected. Implementing multiple approaches increases the likelihood of success.

For example, transit ridership may be higher for those programs that are designed as part of a recreation experience and have supporting marketing campaigns and other incentives to encourage use. Infrastructure enhancements make transit operations more functional, improving reliability and making transit a more attractive alternative for potential riders.

The Interagency Visitor Use Management Council has prepared a framework and guidebooks to assist land managers as they work to meet agency and site goals. The resources support the use of adaptive management for recreation areas. David Cole's 2019 contributing paper is included in the set of resources. It summarizes the relationship between levels of visitor use and environmental impacts. It states that literature research shows visitor management techniques are more effective than strictly limiting use in order to limit impact on resources. The connection between use levels and the impacts to both the size and/or intensity of disturbance may not be a one to one relationship. The use of adaptive management as part of a visitor management approach gives agencies the ability to evaluate and modify strategies in response to actual findings for specific sites and resources.

As the strategies and projects presented in the CMP are formalized and implemented, land managers and enforcement agencies must regularly evaluate their effectiveness to meet management objectives. Evaluating and adjusting approaches should occur on a regular basis as user behaviors shift, new opportunities are made available, and other issues arise.

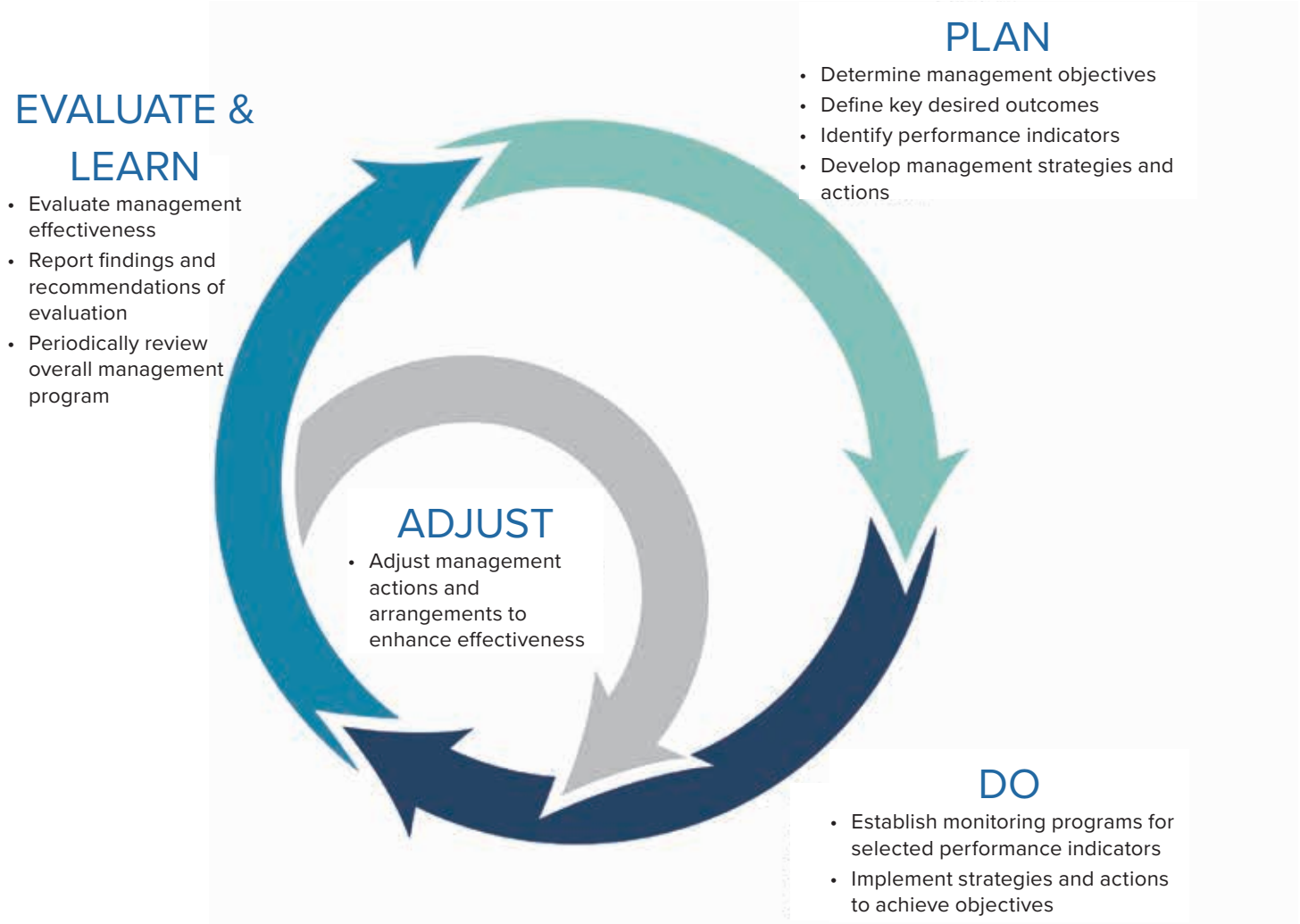


Figure 46: Adaptive Management Cycle

DESIRED OUTCOMES AND PERFORMANCE INDICATORS	
Desired Outcomes	Performance Indicators
A premier shared-use path provides an alternative for recreation access and a high-quality recreation experience in and of itself	• Completion of the Tahoe Trail
More than 50 percent of visitors use transit or active transportation to reach destinations	• Increased transit ridership and bicycle counts in proportion to overall corridor visitation • Reduced vehicle miles traveled and improved air quality
Reduced impacts of peak visitor use	• Managed congestion at high demand visitor locations • Organized parking areas and experience • Increased percentage of visitors reporting that they planned ahead
Coordination/co-location of projects and leveraging of funding	• Number of projects achieving goals of multiple agencies and reduced instances of missed opportunities
Sustainable corridor funding for operations and maintenance	• Continued operation of transit and parking management system • Reduction of deferred maintenance costs
Adaptive and responsive corridor management	• Establishment of a Corridor Management Team • Data collection and evaluation of corridor health and corridor capacity • Reduced wayside trail and user impacts on natural and cultural resources

Table 6: Desired outcomes and Performance Indicators

IMPLEMENTATION AND FUNDING

Partnering agencies must continue to work together to create attractive grant funding applications, leverage resources, and create an operating plan that works corridorwide. Managing change for SR 89 requires partnering agencies to continue engaging the community and working together to implement projects, to resolve issues as they arise, and to further develop funding sources. The CMP promotes long term agency collaboration through a SR 89 Recreation Corridor Management Team made up of partnering agency representatives and an Executive Level Team.

The primary agencies managing existing facilities along the Corridor – LTBMU, State Parks, Caltrans, and El Dorado County – have budgetary challenges for existing operations and maintenance. This condition is unlikely to change in the near future. Therefore projects implemented as part of the CMP should explore alternative funding sources. Agencies recognize it will not only take a collaborative effort to accomplish many of the projects, but that future infrastructure and maintenance and operation costs also need to be covered. The CMP recognizes that implementing funding strategies will at a minimum require approval of the operating agencies and may include legal agreements and legislative changes.

Executive Level Team

Implementation of CMP takes persistence and rigor. Many of the challenges must be addressed at executive levels. In 2018, the Bi-State Working Group on Transportation illustrated how a cross-section of the region's partners can come together to tackle long-standing barriers. As part of the CMP's planning process, the Steering Committee's Executive Team also came together to give critical direction and advance decision-making. These continued collaborations are essential for the CMP to be implemented.

Kiva Beach in the winter.

Therefore, it is recommended that the Bi-State Working Group on Transportation continue convening, an Agreement be established, and Executive Level meetings continue with participation by lead agencies. The focus of the Executive Team is to work through procedural, legislative, enforcement, capacity, funding, environmental review, and other high priority issues. The Executive Team would develop potential resolutions for items and elevate discussions that need to be addressed by the Bi-State Working Group.

Future Executive Team Considerations

The following items represent anticipated topics for the Executive Team. The list is not intended to be all-inclusive, but provides a starting point for future discussions. Additional items initially discussed at the staff/Corridor Management Team level may also be elevated for resolution by the Executive Team.

Procedural Hurdles

- Decision-making framework
- Legislative and code changes
- Increasing fine for illegal roadside parking
- Recreation zone speed limit reductions or traffic calming around high use areas, turnouts, and viewpoints
- Corridor Management Team Agreement
- Shared funding for corridor parking management and transit operations
- Mechanism for LTBMU and CDPR revenue retention for Tahoe
- LTBMU parking lot closures and openings
- Cross jurisdictional resolution

Capacity

- Review and direction on corridor and regional visitation capacity

Highway Design and Operations

- Technology infrastructure in the right-of-way
- Year-round access and avalanche control in Emerald Bay

Corridor Management Team

The SR 89 Recreation Corridor crosses through state and federal lands and has multiple organizations operating within it, which makes management challenging. No single agency can address the many issues that are a by-product of roadside parking. As experienced with the SR 28 corridor, a corridor champion and a management structure is needed to bring parties together to resolve shared issues. The CMP recommends a staff level Corridor Management Team work together to continue the partnership established during the plan development.

An agreement or other legal document, modeled from the SR 28 CMP Inter-local Agreement, should be developed amongst the agencies to establish the team's structure. The Corridor Management Team should:

- Meet at least four times per year to review progress in implementing the CMP
- Provide a coordinated approach in seeking grants
- Identify emerging issues that need to be addressed in the corridor
- Develop a revenue stream for maintenance and operation of the corridor
- Continue stakeholder and public engagement

At times the Corridor Management Team should set up Technical Advisory Committees to address various issues. It is not the intent to have this Corridor Management Team direct individual agency goals or their budgets but to establish a partnership that collaboratively works toward addressing their shared issues. In the future, partnering agencies may find efficiencies that could be gained by sharing resources.

Partnering agencies should annually confirm priority projects and which grants will be sought for those projects. This collaborative process and support by partnering agencies is often part of the ranking criteria of grants and creates a higher potential for grant success. Noting the corridor's large partnership that crosses several jurisdictional boundaries and having a management structure in place helps improve grant success.

Future Corridor Management Team Considerations

As the Corridor Management Team works together to implement the CMP, they will also address new issues that emerge. A few items are listed here for future consideration. The list is not intended to be all-inclusive, but provides a starting point for future discussions.

View from Fannette Island's "Tea House" at Emerald Bay.

Procedural Hurdles

- Meeting format, schedule, roles, and responsibilities
- Operations and maintenance agreements
- Concessionaire responsibilities

Capacity

- Individual site capacity studies and State Park Management Plans
- Regional capacity study
- Implications of water transit service at Emerald Bay
- Implementation of management strategies
- Shifting peak period use to off-peak times
- Adjusting transit service, such as frequency or the number of buses
- Trash/litter management

Project Priorities and Funding

- Bundled projects to be submitted for grant funding
- Assessment and update of project priorities
- Bundling projects for grant and construction/ constructibility opportunities with annual corridor budgeting for shared resources
- Strive to provide the visitor consistency across jurisdictional lines when visiting the corridor, with signage, regulations, and parking information
- Public outreach and messaging
- Resolving corridor challenges/hot spots as they arise

Parking Management

- Closure times for LTBMU lots
- LTBMU lots (or portions of a lot) that should stay open year-round
- Implementation and fine-tuning of management systems (reservations, parking, and transit)
- Integrated technology into parking management
- Visual impacts of advertising on buses or meters
- Winter and off-season parking access areas
- Enforcement of no parking zones

Bears at Taylor Creek.

Highway Design and Operations

- Year-round access and avalanche control in Emerald Bay
- Emergency access sites along the corridor
- Roadway design improvements for enhanced transit and emergency access
- Truck traffic limitations
- Tour bus limitations and permits
- Approvals for designating no roadside parking zones

Snow Removal

- Snow removal of Tahoe Trail
- Which parking areas might have snow removal

The following can enable the partnership to be effective:

- Decision-making rules should be established, i.e., deciding whether consensus is required to move forward on a given action. It should be recognized that land managers have final authority for decisions on their lands while having a goal for consistency in the overall approach for the corridor. Projects and implementation actions should be made in consideration to how they help the overall corridor achieve its goals.
- Staff from a lead agency should be identified to set agendas, send meeting invites, secure meeting venues, and record meeting minutes and outcomes. The lead agency can rotate every year to two years.
- A partnership chair should be determined to help set agendas and run meetings.
- Establish a regular meeting schedule (at least quarterly) and for enough time to have a rich and productive discussion where outcomes and roles and responsibilities are reviewed.
- Accountability is essential. Each meeting should result in specific actions assigned to individuals or agencies and a timeline for their completion.
- Conflict resolution should occur quickly. Engage decision-makers early to get buy-in and clear direction.

The beach at Meeks Bay.

Operations and Maintenance Responsibilities

The CMP suggests establishing a management structure as a critical component to future success. The proposed operations and maintenance responsibilities are derived from discussions with partnering agencies and identifying "who does what best". These are not a commitment to do the activities, but these agencies should be involved in future maintenance and operations discussions in the areas listed.

Management may be focused around lands each agency operates, but collaboration for increased mutual benefit should be established whenever possible and where funding allows. Currently the impacts of the corridor are not being managed. Therefore, as the CMP moves forward, it is recognized that these roles will require operational increases for land management agencies.

TRPA's primary role is permitting and monitoring the management/maintenance activities and are therefore not specifically listed in the table. In particular, they are the regulatory agency for best management practices by all other agencies. Items of review may include sweeping, signage, and snow removal.

Note: This list is not a commitment to operations, but a starting point for future discussions as projects are implemented.

POTENTIAL OPERATIONS & MAINTENANCE RESPONSIBILITIES									
Task	Caltrans		State Parks	LTBMU	El Dorado County	TTD	CHP	EDC Sheriff	Vendor
	North	South							
Enforcement									
Temporary roadside parking barrier maintenance	X	X							
Permanent roadside parking barrier maintenance	X	X							
Ticketing			X	X			X	X	X
Towing							X	X	X
Regulatory Sign Replacement	X	X							
Parking Lots									
Parking Meter Maintenance	To be discussed by the Corridor Management Team as CMP implementation moves forward.								
Meter Collection/Administration									
Sweeping	X	X	Staff only		X				
Garbage Pickup			X	X					X
Litter Patrol	X	X	X	X	X				
Regulatory Sign Replacement	X	X	X (in park)	X					
Visitor Signage	X	X	X	X	X				
Transit Stops, Vistas, & Emergency Turnouts									
Sweeping	X	X	Staff only	Vistas	X				
Garbage Pickup			X	Vistas					X
Litter Patrol	X	X	X	Vistas	X				
Restroom Cleaning			X	Vistas					X
Graffiti Removal	X	X	X	Vistas	X				
Regulatory Sign Replacement	X	X	X (in park)						

POTENTIAL OPERATIONS & MAINTENANCE RESPONSIBILITIES									
Task	Caltrans		State Parks	LTBMU	El Dorado County	TTD	CHP	EDC Sheriff	Vendor
	North	South							
Visitor/Wayfinding/Interpretive Signage	X	X	X	X	X				
Snow Removal	X	X			X				
Scenic Byway Brochures	Funding Only	Funding Only			X	X			
Tahoe Trail									
Sweeping			Staff only		X				
Litter Patrol			X		X				
Regulatory Sign Replacement	X	X	X (in park)		X				
Vista Point Interpretive Signs			X	X	X				
Public Information	X	X	X	X	X	X			
Capital Infrastructure Maintenance									
Bus Replacement						X			
Parking Lot Striping	X	X		X	X				
Parking Lot Resealing	X	X		X	X				
Parking Lot Overlay	X	X		X	X				
Parking Lot Concrete – Curbs	X	X		X	X				
Parking Lot Stormwater Treatment Systems	X	X		X	X				
Bike Lane Striping/Resealing	X	X							
Bikeway Striping/Resealing				X	X				
Bikeway Overlay	X	X		X	X				
Bikeway Co-location Projects					X + Utilities				
Viewpoint/Highway Transit Stop/ Emergency Turnout Striping/ Resealing	X	X							
Viewpoint/Highway Transit Stop/ Emergency Turnout Overlay	X	X							
Bridge Inspections	X	X			X				
Interpretive Sign Replacement			X	X	X				
Bench Replacement			X	X	X				
Bear Proof Can Replacement			X	X	X				
Scenic Byway Entry Signage	X	X				X			

Table 7: Potential Operations and Maintenance Responsibilities

Funding

The CMP describes how strategies and recommendations can move forward through a set of projects defined by corridor segment. It clarifies how one project may be coordinated with another (see Appendix B's "Consider Coordination with Other Projects" column) and how agencies might collaborate on multiple projects.

Funding Needs

Examples of major corridor projects include:

- Tahoe Trail
- Congestion management projects in the Pope to Baldwin Segment
- Transit pullouts
- Park-n-rides
- Off-highway parking
- Emergency pullouts
- EIP projects
- Trail connections

All of these projects need both capital construction funding and long term operations and maintenance funding. Funding can be leveraged by correlating multiple projects. Additional projects, such as the South Shore transit maintenance facility is a critical project, which although not directly located in the corridor, has significant impact on the ability to implement corridor recommendations. Funding for the facility and other projects with similar influence are crucial for public transit to succeed.

Potential Funding Sources

Parking Management

Opportunities for parking management; including a coordinated, basinwide paid parking system with season passes that consider discounts for locals and disadvantaged communities; should be a high priority for the Corridor Management Team. This includes options for potential revenue generation through paid parking and reservations. Parking management provides an effective tool for managing the corridor. Its ability to connect with technology and provide real-time information may be beneficial above and beyond potential revenue generation.

It is recommended that a more detailed parking management strategy be developed in coordination with the proposed travel framework. Because it is more difficult to add fees years after new improvements are made, paid parking should be considered as new and expanded parking areas are developed. Additionally, the impacts of only charging for some parking areas and not all should be evaluated as people will typically park at unpaid beaches first.

Because there are several variables to consider, further analysis is needed to explore the topic. The exploration of revenue options should consider how implementation of these options on the SR 89 corridor could impact other areas around Lake Tahoe. Agencies should consider that fee structures can encourage or reward those who take alternative transportation to recreation sites, thereby reducing the vehicle miles traveled (VMT) and improving the environment. Equitable access should also be a critical component of the proposed program. Free or low cost transit access is another way to offer equitable access when parking at the site or areas closest to the recreation site may be priced higher than transit.

Conversations regarding revenue streams are never easy but are necessary to the success of implementing the CMP and providing a safe quality visitor experience. The SR 89 corridor is a special part of the region, includes one of California's 36 National Natural Landmark sites, and is one of the most photographed areas of Lake Tahoe. It can offer economic benefits for the local communities and to the region. Both the indirect and direct values created by visitors enjoying this corridor must be considered.

ONE TAHOE

For more than forty years, the transportation needs in the Tahoe basin have been a response to annual visitation, what has been termed in Tahoe as recreation travel. Yet this form of travel is not recognized in either federal or state transportation policy and little funding is dedicated to addressing it. Most transportation policy is oriented around urban commute and freight travel, not recreation commute. Tahoe's resident population is too small to pay for the types of improvements needed to address the millions of visitors whom arrive by mostly personal vehicles. Compounding this problem is Tahoe's political jurisdictional situation where the bi-state compact carved out a bi-state area comprised of portions of five counties with one municipality.

TTD is one of two bi-state transportation agencies and has an implementation role with a Board of Directors comprised of the two state departments of transportation, all local governments, both state's governor's and TRPA's appointee, and private sector transportation interests. Like other

regions who have developed a "self-help" transportation funding source, TTD is addressing the same need through the ONE TAHOE revenue initiative in order to develop a regional revenue source that can leverage existing federal, state, local, and private sources. Establishing an adequate regional revenue source that proportionately addresses all users will enable the realization of the region's transportation goals and solve a major funding problem. The SR 89 CMP recommendations requires regional partners to come forward with a funding solution and finance plan in order to achieve the outcomes outlined in this plan.

Pay for Success

The Pay for Success (PFS) model is a new way of financing public services to help agencies target limited dollars to achieve a positive, measurable outcome. Under the Pay for Success model, a government agency commits funds to pay for a specific outcome that is achieved within a given timeframe. The financial capital to cover the operating costs of achieving the outcome is provided by independent investors. In return for accepting the risks of funding the project, the investors may expect a return on their investment if the project is successful. Payment of the committed funds by the government agency is contingent on the validated achievement of results. In this way, the PFS model shifts the burden of investment risk from the government to private investors, effectively creating a social investment market where the government only pays for results.

LTBMU is working with a consultant to evaluate opportunities to apply the Pay for Success model in the Tahoe basin. Many of the recommended corridor projects, including the completion of the Tahoe Trail, are candidates for this type of financing model.

Lake Tahoe Restoration Act

The Lake Tahoe Restoration Act of 2016 authorized up to $415 million over 7 years for the Environmental Improvement Program (EIP). The Act requires that the EIP maintain a priority list of projects for the program areas of Forest Health, Aquatic Invasive Species, Watershed Restoration, Lahontan Cutthroat Trout, and Accountability. The SR 89 Corridor Management Plan was identified as a priority for the Lake Tahoe Restoration Act. Recommendations outlined in the CMP will reduce erosion and stormwater runoff reaching Lake Tahoe by restricting on-highway parking, and will reduce traffic congestion ultimately improving air quality.

Fee Collection Modifications – Revenue from Recreation, Permits, Events, Etc.

User fees, or revenue from recreation facilities, often does not stay in the Basin and goes back to the general fund or to the agency. Further, agencies rarely operate cross jurisdictions to share resources in management of recreational facilities. To break the barriers and work collaboratively to address challenges of shared facilities like parking, path systems, and transit, agencies need to shift to a partnership approach. This arrangement should foster collaborative operations and maintenance budgeting, sharing of revenue and expenses, sharing resources, and monitoring of capacity and operating challenges.

Partners must explore opportunities to keep revenue within the corridor for infrastructure preservation and annual operating. This requires agencies jointly seeking/committing to equitable rate structures for all visitors, understanding how a specific facility's fees impact the system and moves demand, and developing a corridorwide approach to fees for shared resources and facilities. It is recognized that using funds across jurisdictions will at a minimum require legal agreements and may require legislative changes.

Although it is not a simple process, it is attainable within a partnership program. For example, California State Parks has examples of entering joint agreements where a portion of a fee goes to State Parks and a portion goes to transit operations. As an example, Yuba County has a right of entry permit for their transit service to enter the state park and because the joint agreement recognizes the value the transit service brings the park, Yuba County receives a portion of the entry fee to operate the transit service.

The agreement should require the partnering agencies to study all current and proposed fee structures to determine the best corridorwide funding approach for providing an excellent visitor travel experience, maintaining capacity at individual facilities, protecting natural and cultural resources, and covering the operating and maintenance costs of a shared corridor transportation system (i.e., parking, path, transit, water taxi). This may include new fees and structural changes, such as congestion pricing or reservation pricing, within the corridor and must consider an equitable approach for all visitors. As part of a fee analysis, the system should evaluate Emerald's Bay capacity for boat access and ability to establish a revenue system for boat access.

For reference, in Nevada the SR 28 Corridor Management Team developed a budget agreement between TTD, Nevada Division of State Parks (NDSP), and Washoe County (WC) that appropriates operations and maintenance resources to those best equipped to provide the services,

which in some instances may be a vendor. In this example, NDSP's ranger budget was increased to cover costs of increased patrol and maintenance and WC received funds to sweep NDSP facilities.

A Note on COVID-19

The SR 89 Recreation Corridor Management Plan was developed over the course of a two-year planning process that was initiated in 2018. In March of 2020, COVID-19 was declared a pandemic by the World Health Organization. Shortly after, many states across the nation enacted stay-at-home orders and only essential businesses were open to the public. During this time the priorities of agencies and organizations shifted to focus on addressing the immediate and critical needs associated with the pandemic.

In addition to severe social and health impacts, COVID-19 has also created dramatic impacts to local and state budgets. Regions such as Lake Tahoe where the economy is driven by tourism have incurred substantial economic hits and are projecting significant budget shortfalls. Because of these unprecedented times, the CMP recognizes that implementation of recommended projects and planning efforts may be delayed as jurisdictions, agencies, and organizations recover and as funding dollars may be prioritized on health and safety efforts prior to being earmarked for the corridor.

Although the pandemic may delay implementation, the long term vision, goals, and recommendations presented in the CMP hold true. Agencies and organizations should move forward with tracking and monitoring visitation patterns, evaluating opportunities to adjust and refine plan recommendations, work to position projects for implementation, and pursue long-term funding sources. The partnering agreement should be developed, work progressed on legislative and executive level issues, and more detailed design of transit operations and the corresponding parking and reservation management system should be created so that the desired outcomes for plan recommendations may be realized as soon as possible.