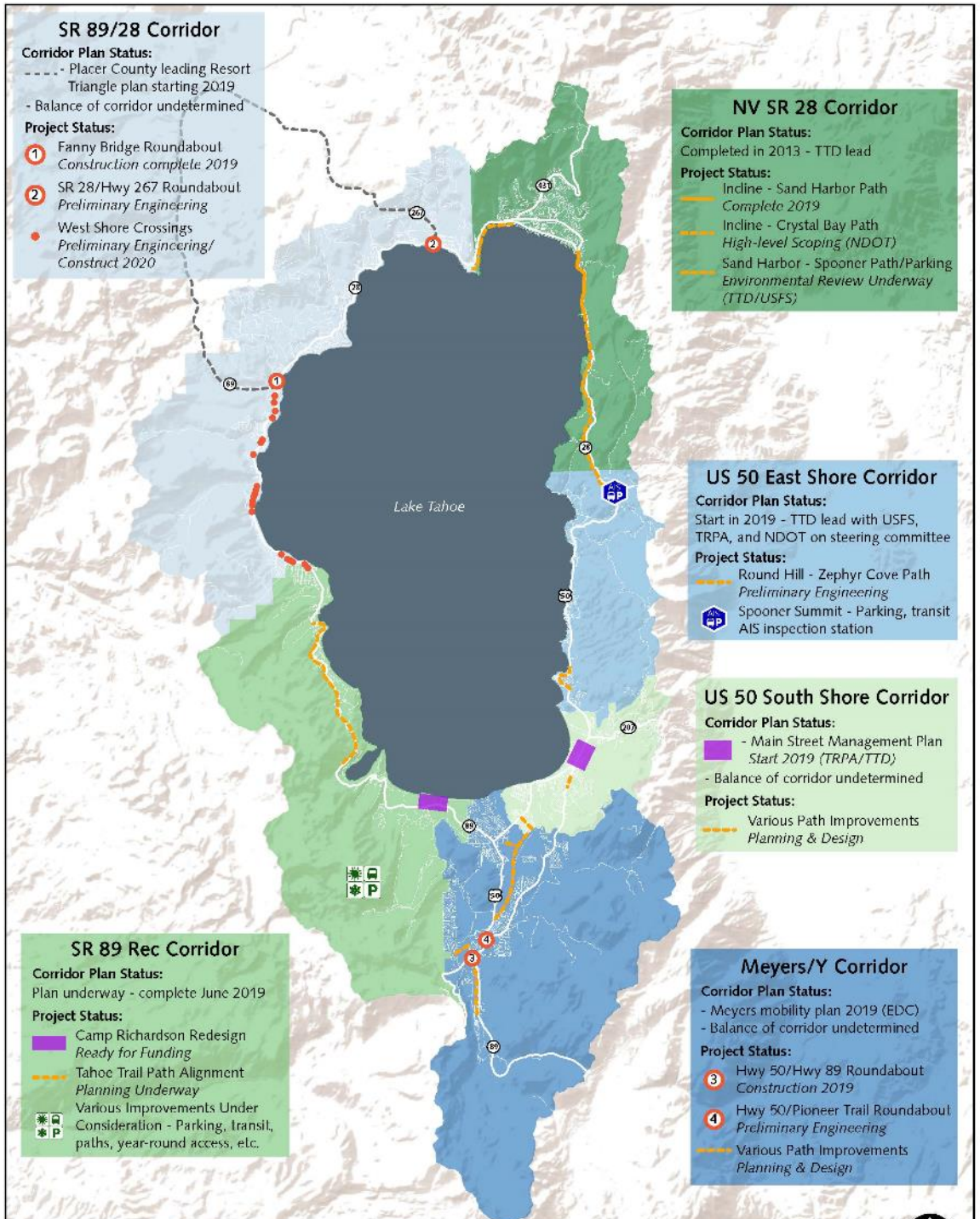
SR 89 Recreation Corridor Management Plan



Corridor Planning Framework

- **2013: SR 28 Corridor Plan**
  - ✓ Provided a Great Model
- **2017: Corridor Connection Plan**
  - ✓ Provided launching pad to accelerate planning
- **2018: Bi-State Consultation**
  - ✓ Corridor Planning MOU
- **2019: SR 89 Corridor Plan**
  - ✓ Enhanced connection between transportation and sustainable recreation


TOW-AWAY
NO
STOPPING
ANY
TIME

The Dilemma

Demand has exceeded infrastructure which impacts transportation and visitor experience

- Impacts to visitor experience can be an economic impact
- Safety Concerns
- Increased Environmental Disturbance and Run-off
- Congestion and Traffic

Involvement Framework

Policy Development

- Bi-State Corridor Planning Group
- TIE Steering Committee

Plan Development

- Project Steering Committee
- Project Development Team
- Sustainable Recreation Working Group

Outreach and Stakeholder Input

- Focus Groups
- Surveys
- Stakeholder Workshops
- Public Outreach

SR 89 Steering Committee

Tahoe Transportation DISTRICT

TAHOE REGIONAL PLANNING AGENCY

SR 89 Consultant Team

DESIGN WORKSHOP | LSC | ORCA | KAREN MULLEN-EHLY | NELSON/NYGAARD

Progress Update

- Four Stakeholder group meetings
- Final Signed Charter
- Data Collection & Draft Analysis
- Tahoe Trail alignment site visits
- Defining desired visitation levels & visitor experience
- One on One PDT member meetings
- Conceptual site testing for visitor facilities
- Lake Tahoe Restoration Act request

Key Takeaways

Opportunities

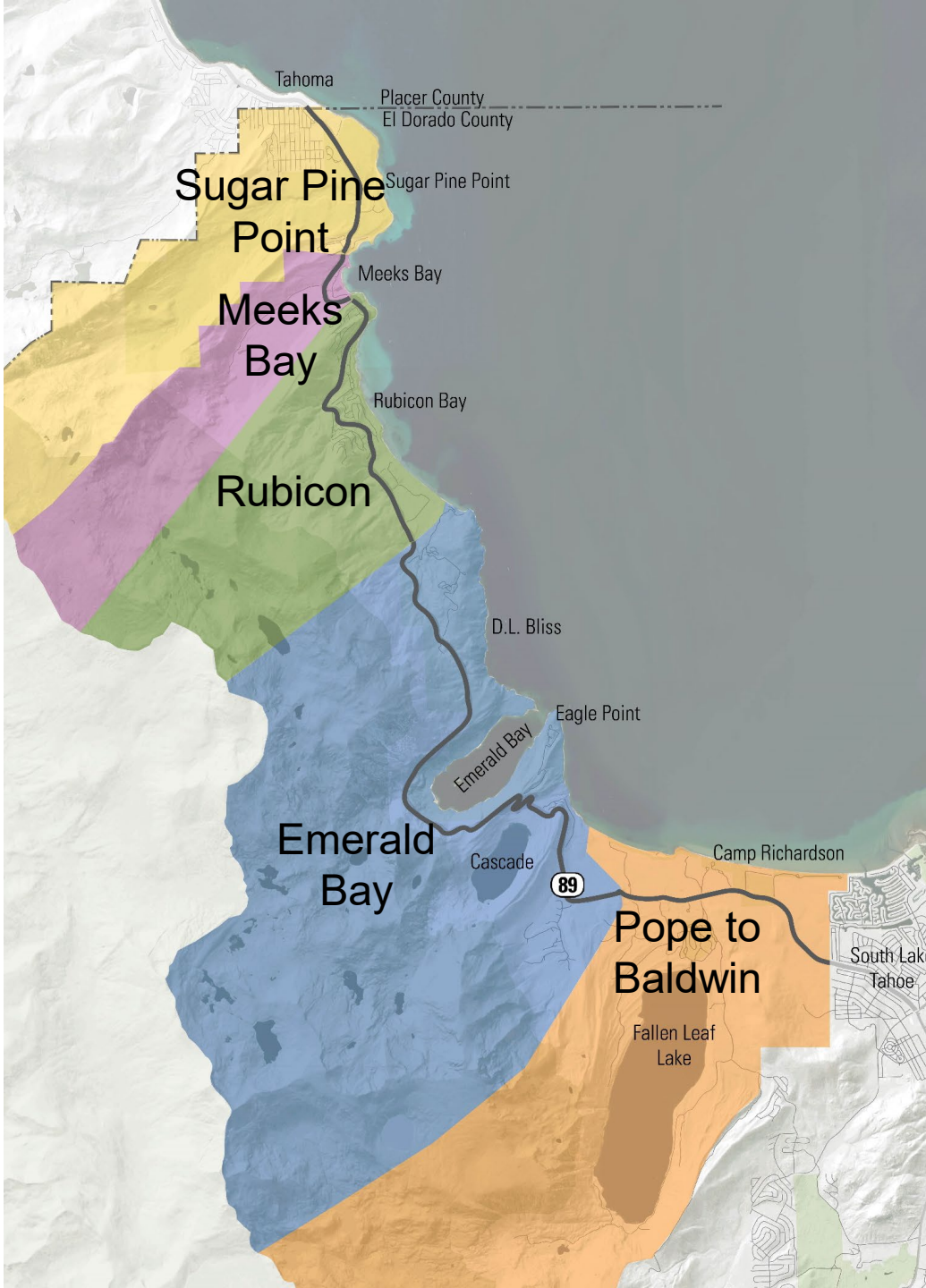
- Protect and enhance science beauty of Emerald Bay
- Desire to “do things differently”
- Better manage visitor use
- Year-round access and safety
- Support for relocating roadside parking
- Support for parking management strategies

Constraints

- Funding
- Road design limitations
- Volume of visitors/congestion
- Enforcement
- Technology
- Terrain/topographic and environmental constraints
- Avalanche control

Data by Corridor Sub - Area

- Parking
- Traffic
- Active Transportation
- Recreation Activities
- Experience
- Who are our Users
- Length of Stay
- Reason for Visit

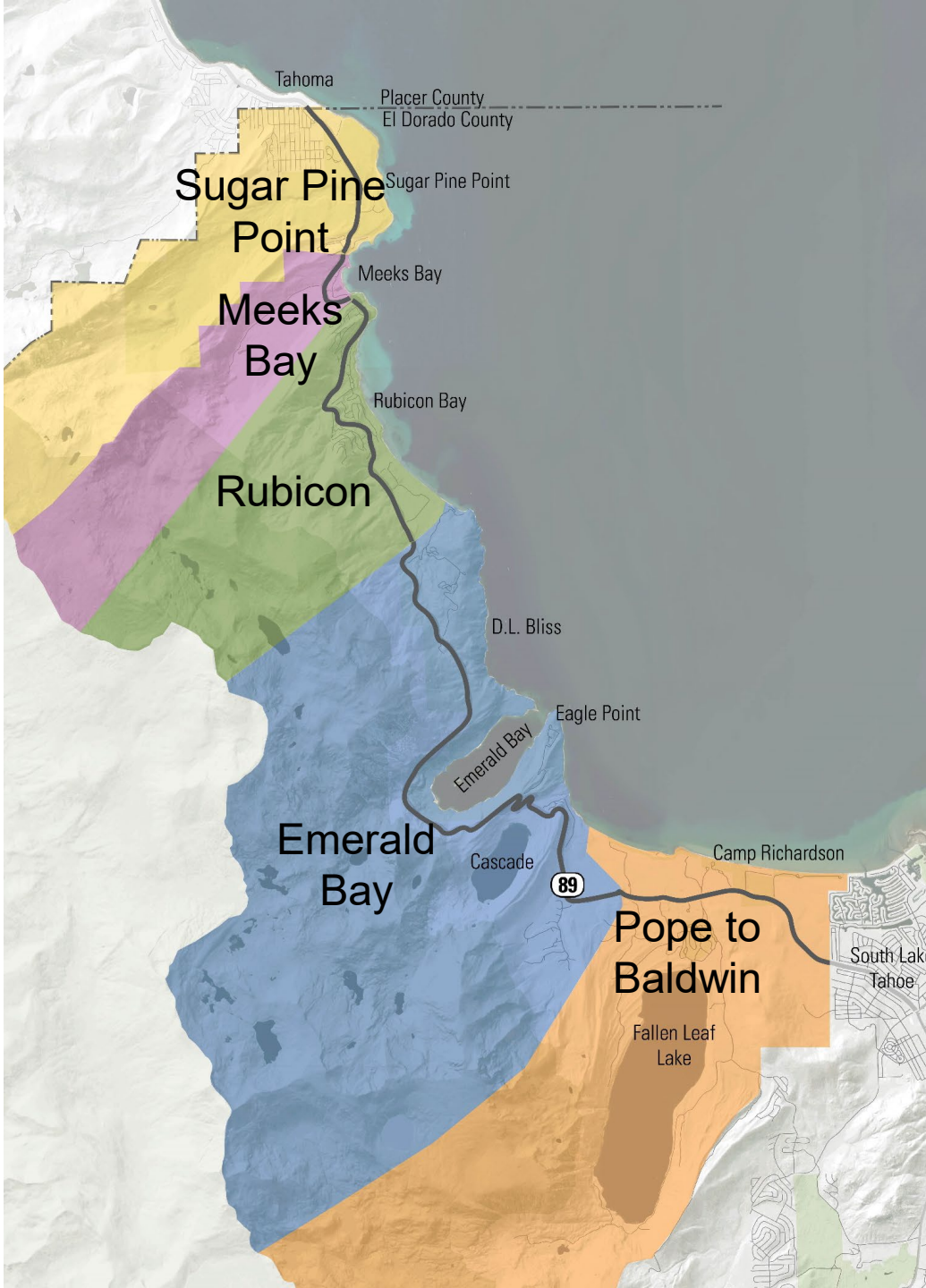


Sustainable Recreation Framework

- Resource Management
- Visitor Experience and Visitation Levels
- Tahoe Trail
- Recreation Access: Transit & Parking Management
- Safety & Year-Round Access
- Highway Operations & Technology

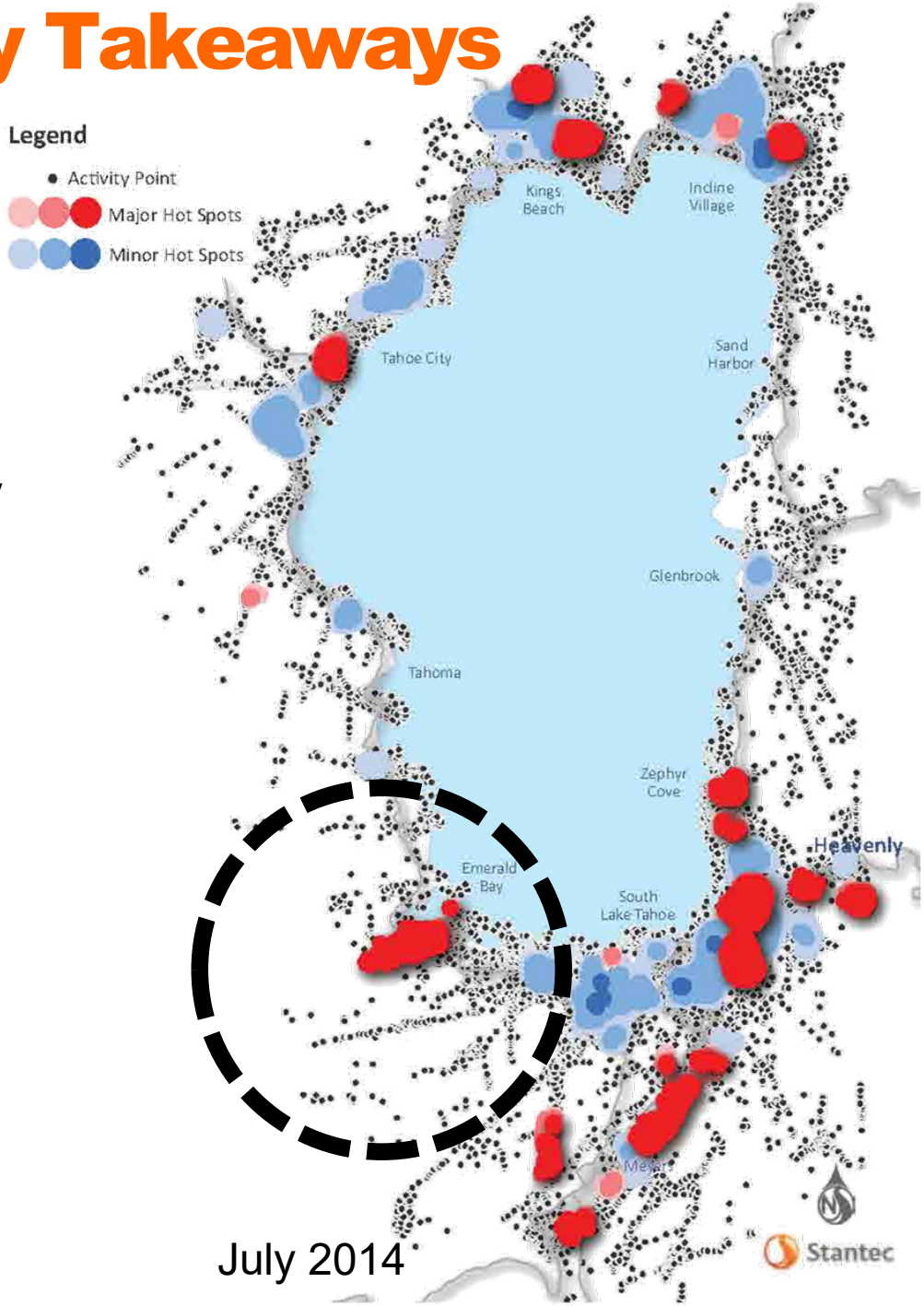
Strategies

- Visitor Use Management
- Parking Management
- Transit
- Path Improvements
- Enforcement and Safety Services
- Technology
- Year Round Access



LT:CCP Corridor Key Takeaways

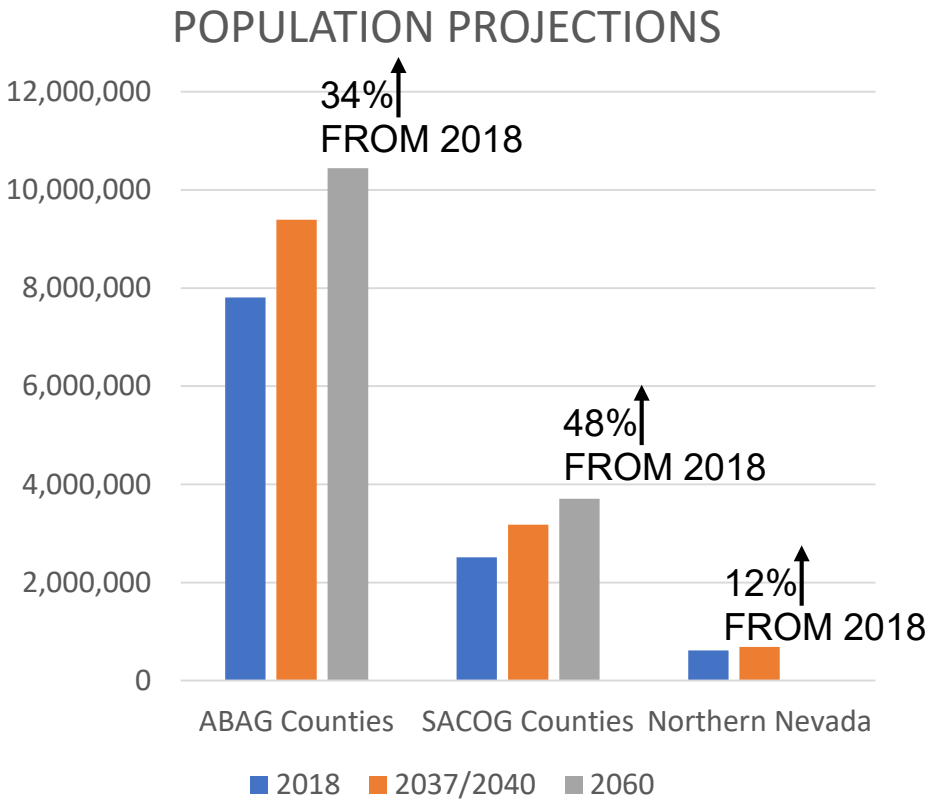
- Popularity of Inspiration Point/Emerald Bay area
- Congestion and parking are biggest transportation issues
- High volumes of vehicles, bikes, & peds create congestion and safety issues
- Narrow roadways and minimal shoulders
- Lack of bike and ped facilities north of Baldwin Beach
- Demand exceeds parking at Emerald Bay/Eagle Falls
- Limited transit service & infrastructure
- Lack of broadband infrastructure



July 2014

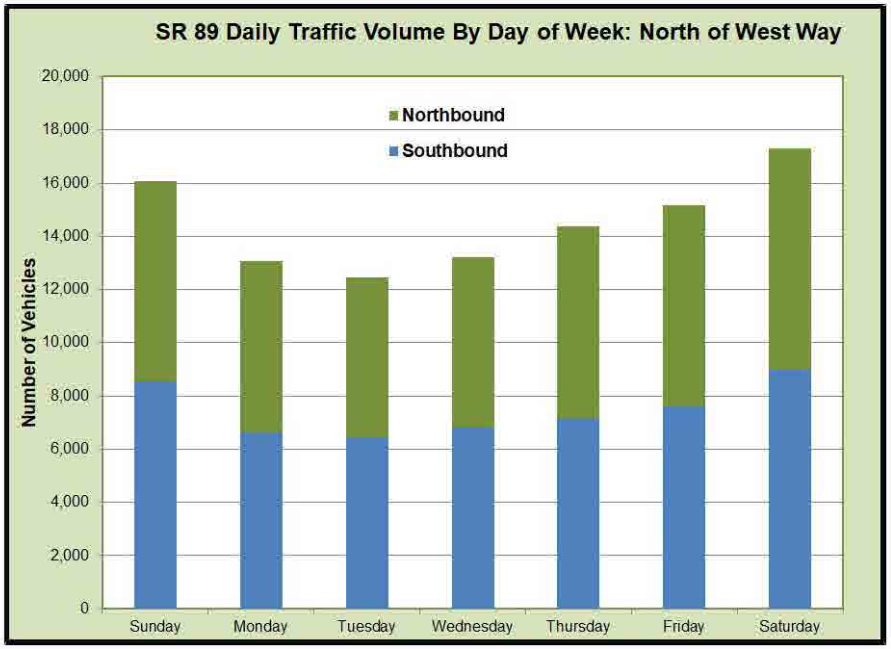
Future Growth Pressures

- Northern California (SACOG & ABAG)
  - 2.25M additional people by 2040
  - 3.8M additional people by 2060
- Northern Nevada
  - 55,000 more people by 2024
  - 71,000 more people by 2037
- LTVA 2015-2016 Visitor Profile
  - 37% of visitors are from Northern California
  - 10% from Nevada

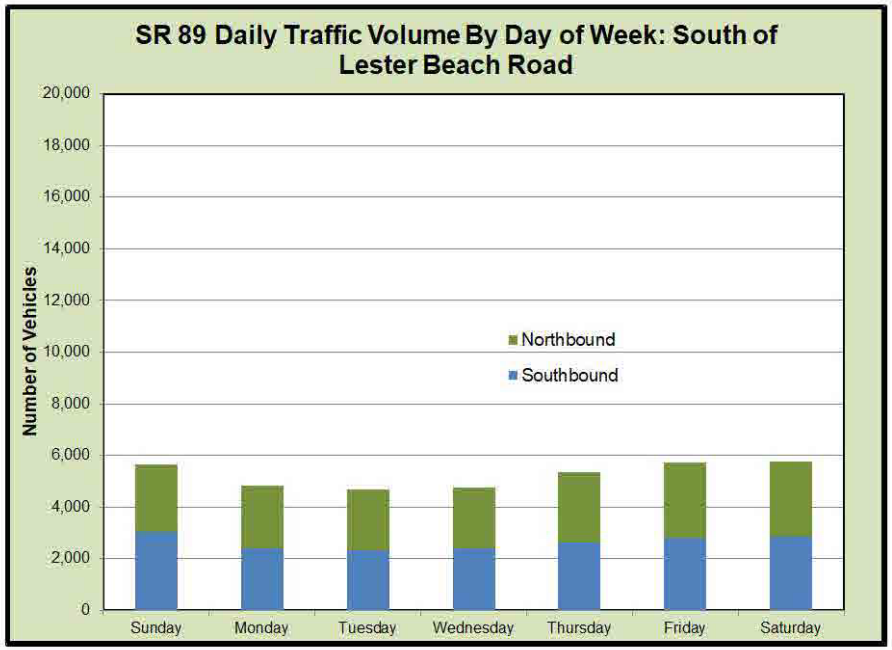


Traffic Patterns

- Highest in the southern portion of the corridor
  - 2016 Peak AADT
    - US 50/SR 89: 26,000
    - West Way: 12,000
    - Lester Beach Rd: 6,300
    - Rubicon Drive: 6,100
    - County Line: 5,900

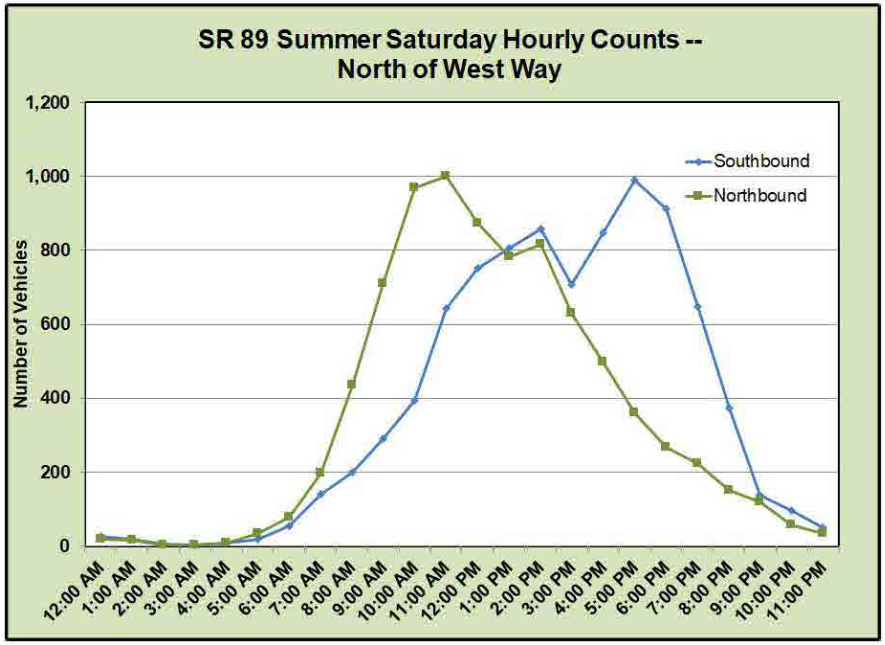


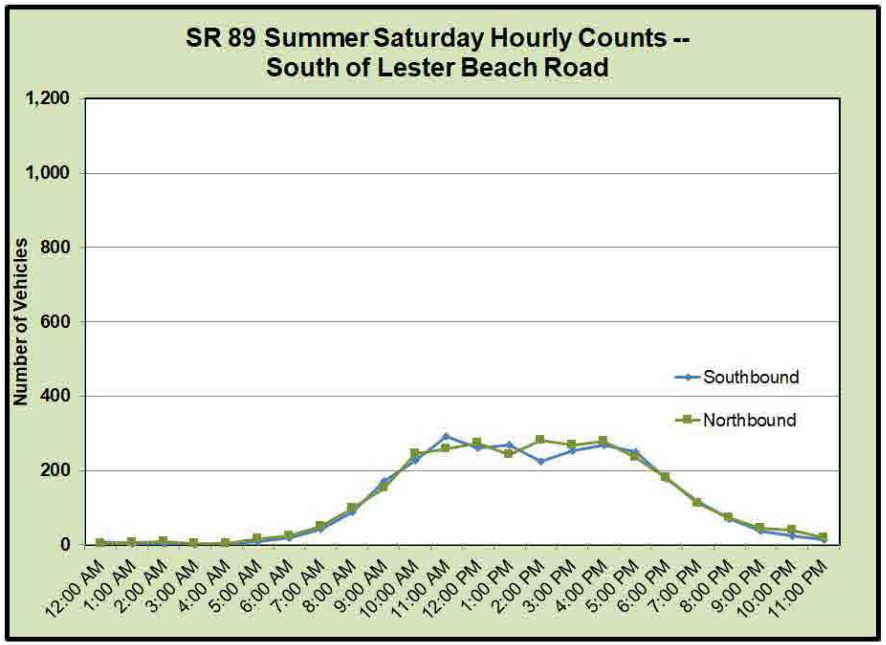
- Traffic volumes highest on Saturdays
  - Takeaway: Weekend shuttles have highest chance of success



Traffic Patterns

- Hourly counts
  - By West Way
    - Northbound peak in morning
    - Southbound peak in afternoon
  - By Lester Beach Road
    - Northbound and southbound peak and remain steady from 10AM to 5PM
- Corresponds with parking observations that parking areas fill early in the morning



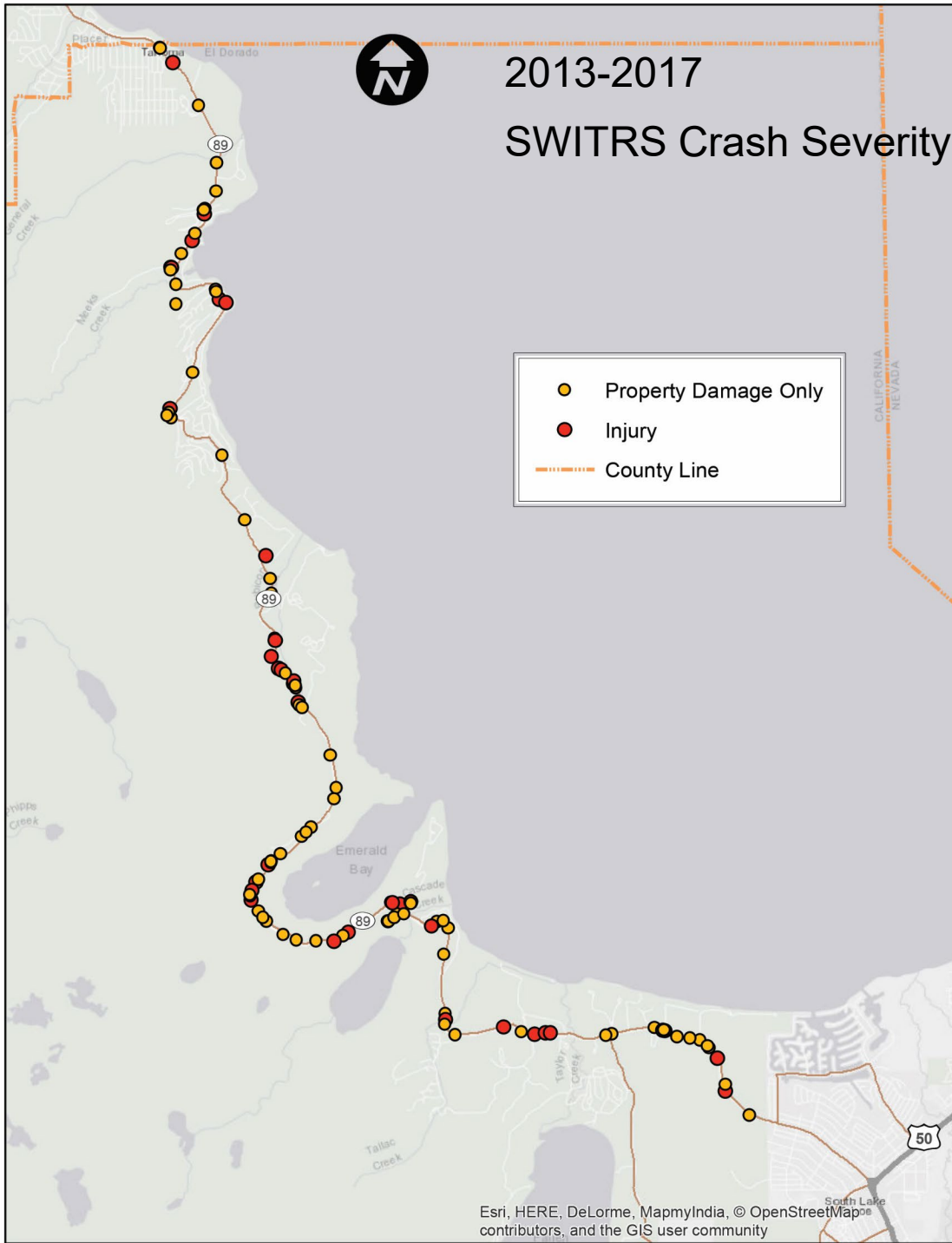


Crashes

- Average of 29 reported crashes per year
- Most common
  - Camp Rich
    - Rear-end
    - Hit object
  - Emerald Bay
    - Hit object
- Factors: stop and go traffic, searching for parking, narrow roadways, icy conditions

NUMBER OF CRASHES BY SEVERITY[1]					
	Camp Richardson	Emerald Bay	Meeks Bay	Total	% of Total
Total	35	72	35	142	
Injury	14	27	16	57	40%
Fatality	0	0	0	0	0%
Property Damage	21	45	19	85	60%

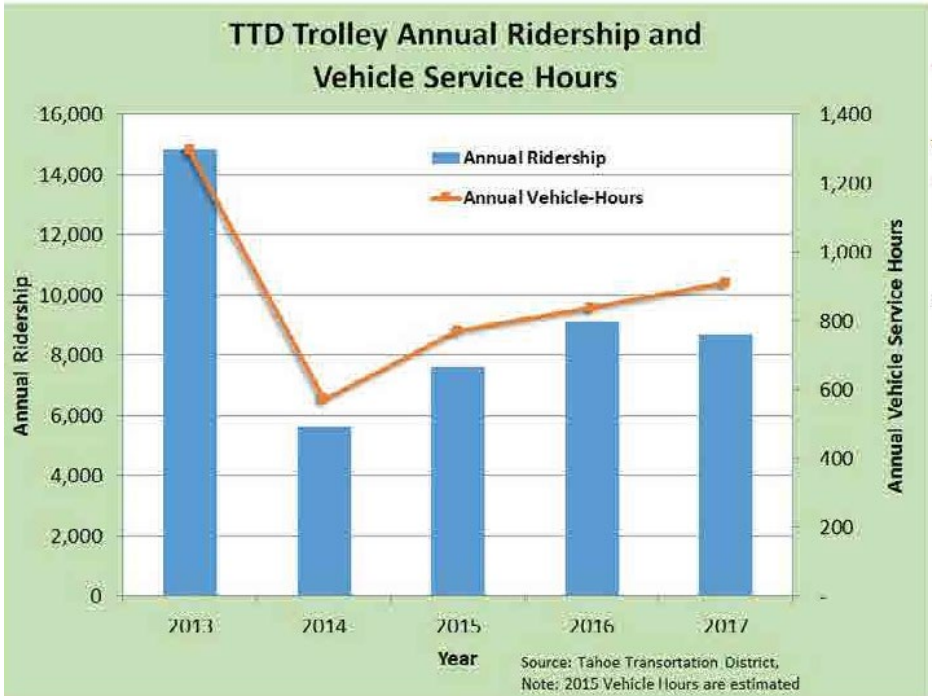
Table 5: Number of Crashes by Severity 1/2013-12/2017

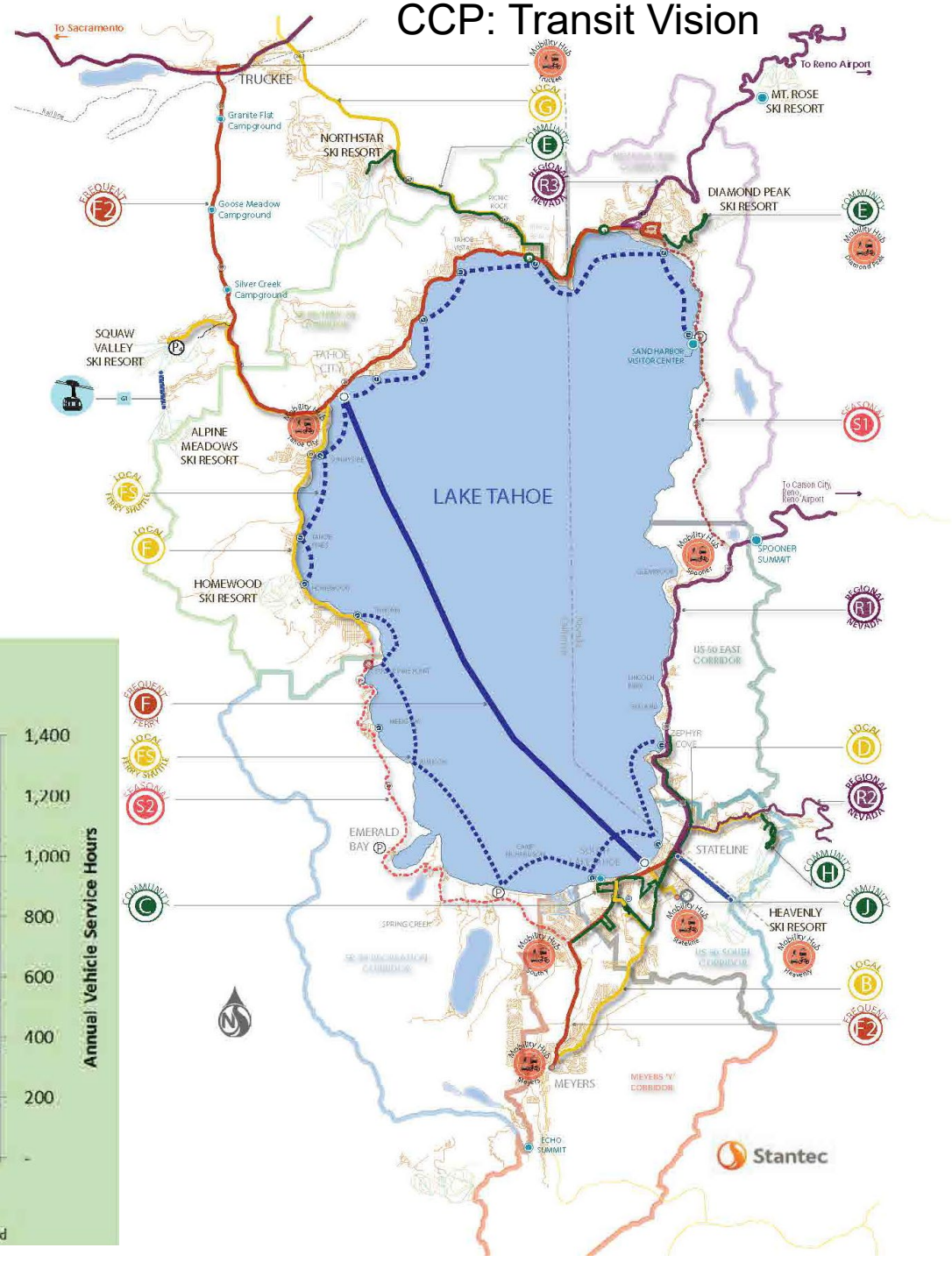


Transit

- Generally, ridership increased with the number of service hours provided

- Transit Vision
  - Corridor Connection Plan
  - Short-Range Transit Plan





Pope to Baldwin Segment

[1]2014&2018 Travel Mode Surveys
[2]Per 2018 Windshield Postcard Surveys

Visitor Type[1]

Pope to Baldwin Segment	Overall Corridor Comparison (LTCCP)
17% resident	13% resident
83% visitor	87% visitor
86% overnight	90% overnight
14% day	10% day

Mode of Travel[1]

Pope to Baldwin Segment	Overall Corridor Comparison
82% car	86% car
9% bike	5% bike
4% walk	5% walk
3% ferry/boat	2% ferry/boat

Activities[2]

Pope to Baldwin Segment	Overall Corridor Comparison
45% visiting a beach	25% visiting a beach
18% day hiking	46% day hiking
18% attend an event	1% attend an event
9% bike ride	1% bike ride

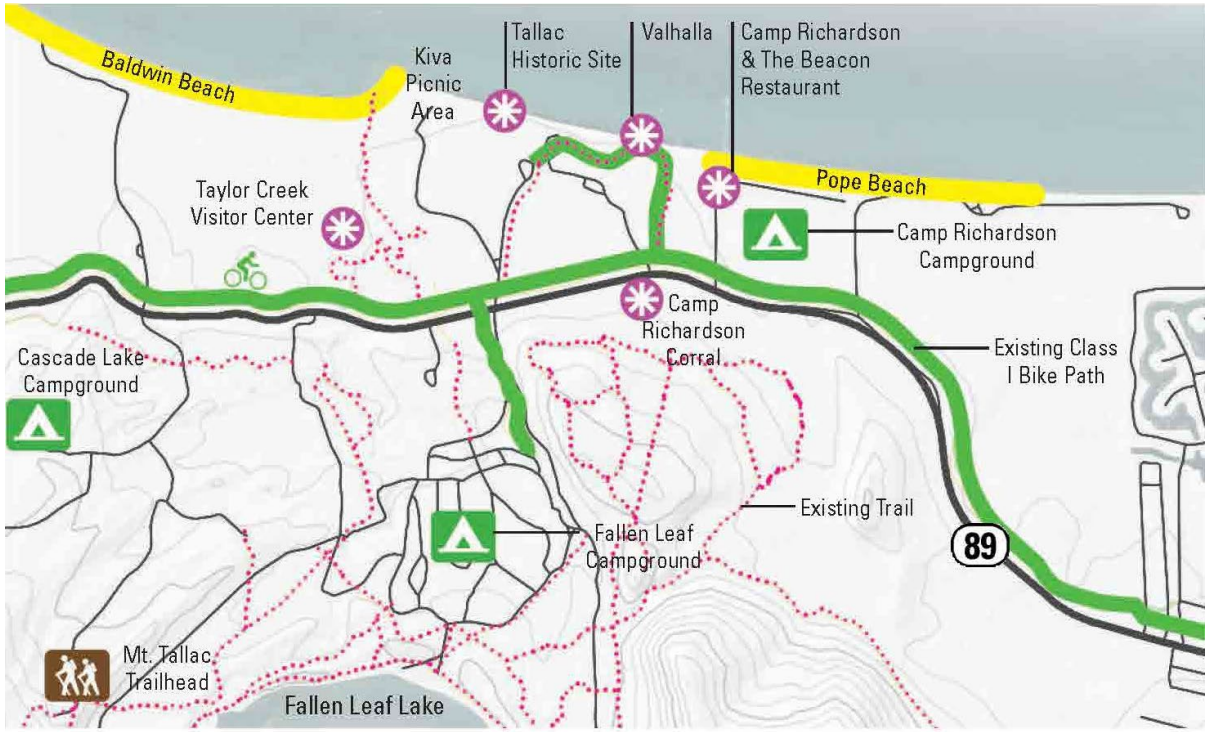


Figure 29: Recreation Areas | Pope to Baldwin Segment

Pope to Baldwin Segment

- Key Issues
  - Traffic congestion
    - Pope Beach Road
    - Jameson Beach Road
  - Shoulder parking: roadway becomes a defacto parking lot
  - Multiple ingresses/egresses
  - Lack of dedicated transit infrastructure
  - Trail connectivity to beach sites
  - Fallen Leaf Road used as a bypass
  - Events impact traffic flow and have parking demands
  - Lack of broadband infrastructure

Pope to Baldwin Segment

- Traffic delays
  - Up to 23 minutes northbound & 14 minutes southbound
  - Traffic backed up almost 2 miles to the south of Pope Beach Road and 1mile to the north in July 2017

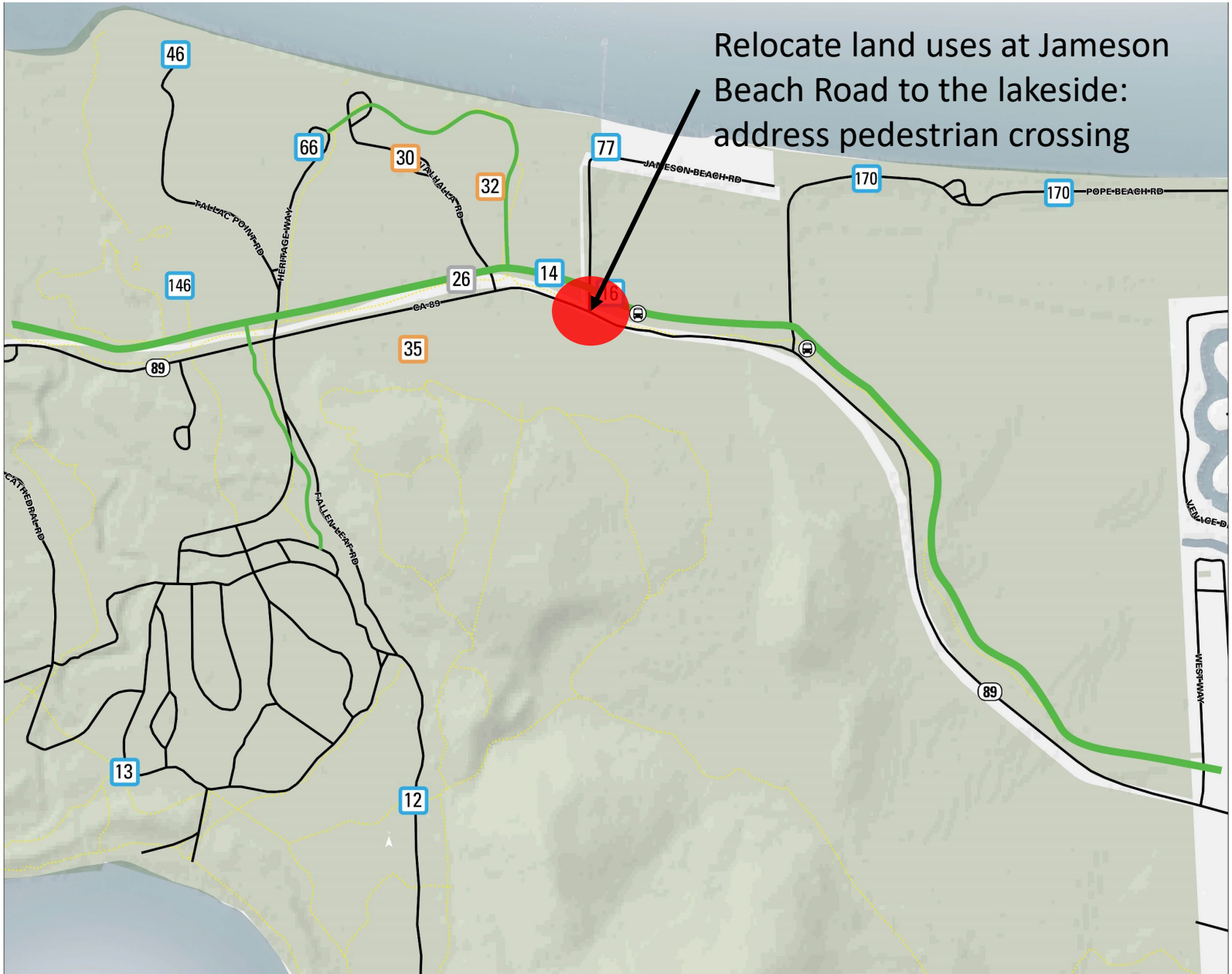
- Causes
  - Queues to Camp Richardson and Pope Beach
  - Vehicles turning around and searching for parking
  - Bike and pedestrian activity

- Parking Fills
  - Pope Beach: queue starts @ 8AM, full by 11:30AM
  - Baldwin Beach: queue starts @ 11:30AM, full by 12:15PM

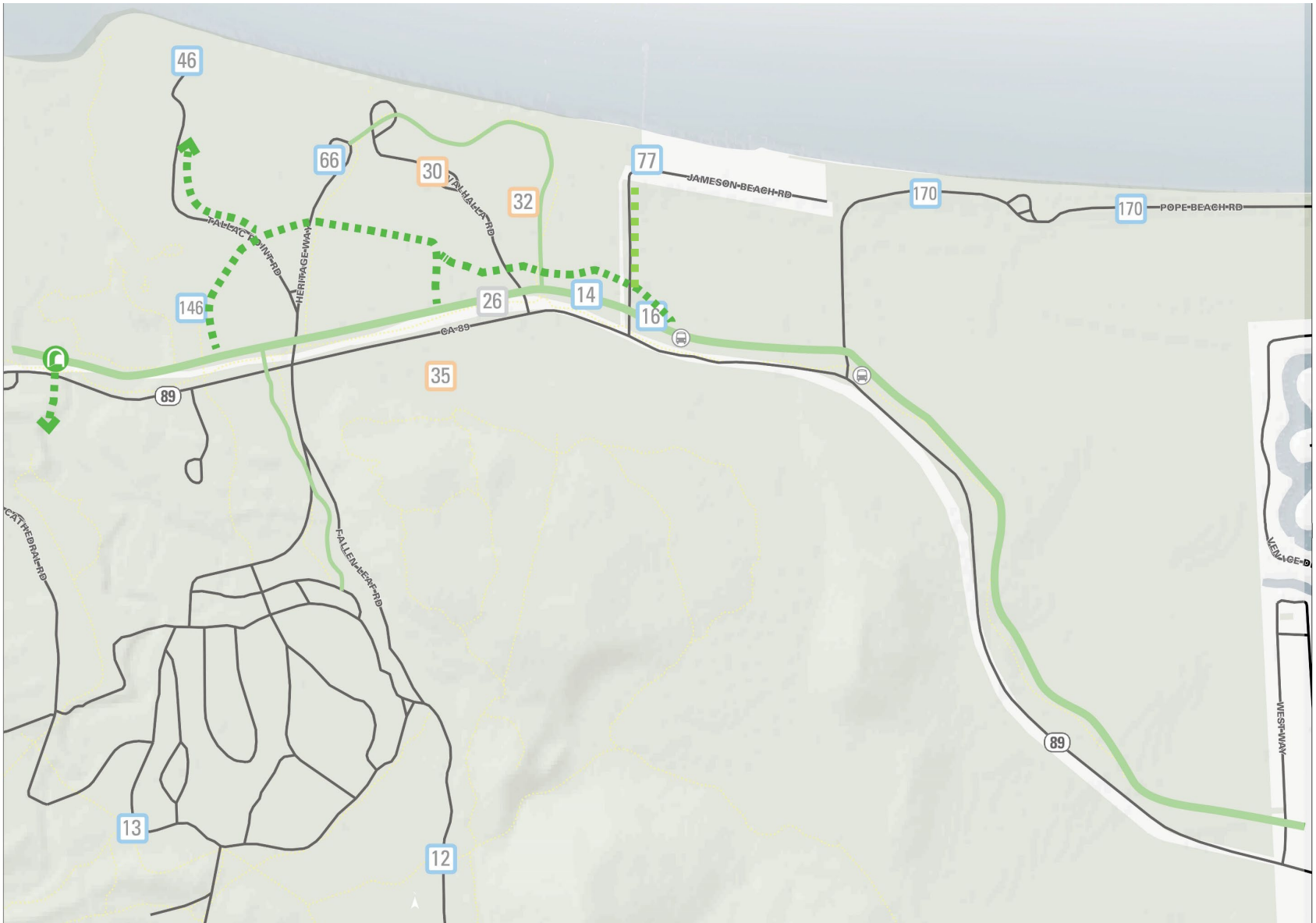
Pope to Baldwin Segment | Jameson Beach Road Intersection

- Study: Holding pedestrians for longer wait intervals
  - 30 second hold: traffic flow capacity decreased by 5%
  - 60 second hold: traffic flow capacity INCREASED by 8%
- Study: Pedestrian/customer destinations
  - Relocating the Ice Cream Shop and mountainside shoulder parking to lakeside: reduce 90% of associated ped crossings
  - Relocate Bike Rental to lakeside: reduce 25% of associated ped crossings
  - Relocate Coffee Shop to lakeside: reduce 45% of associated ped crossings

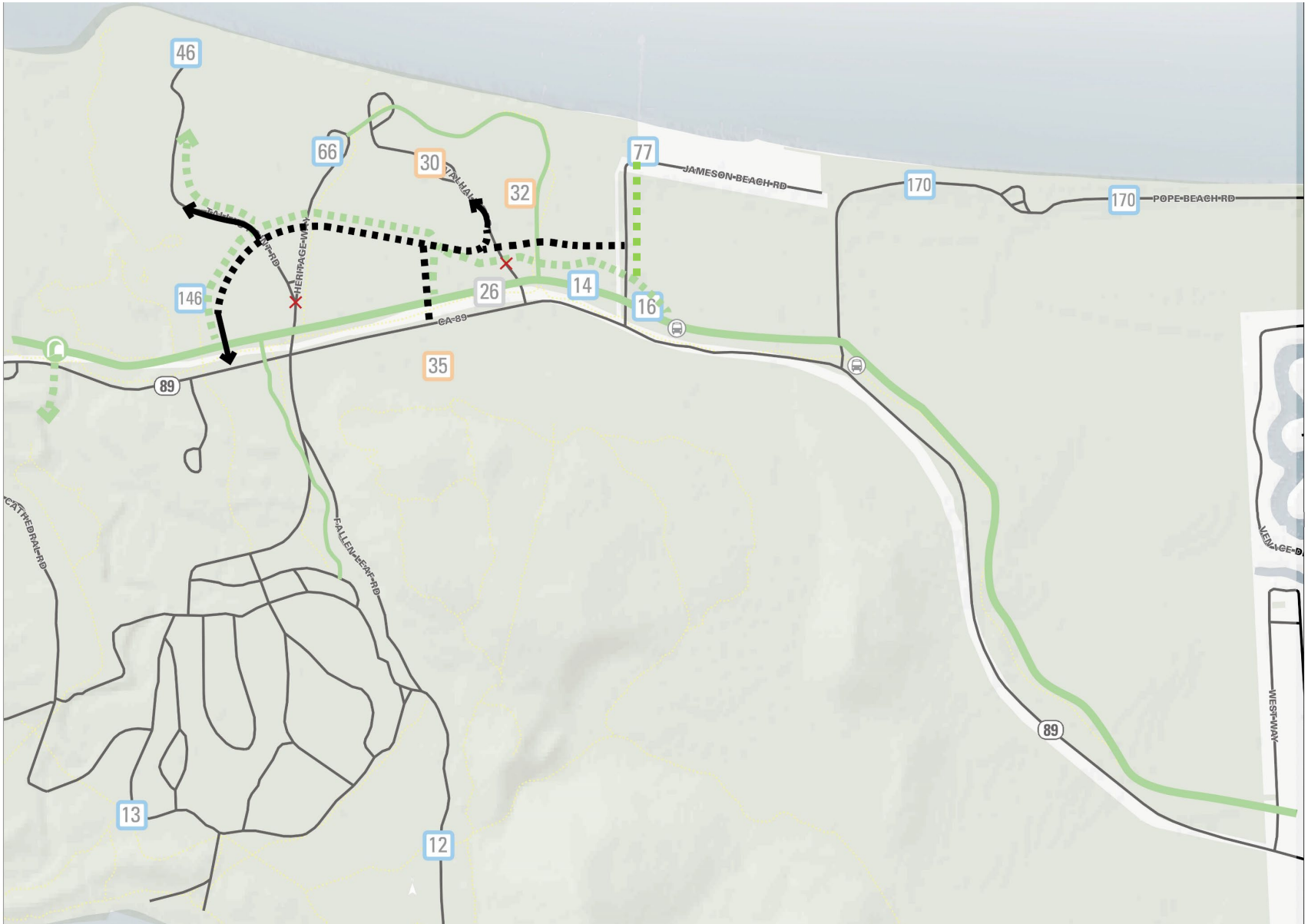
Pope to Baldwin Segment | Opportunities



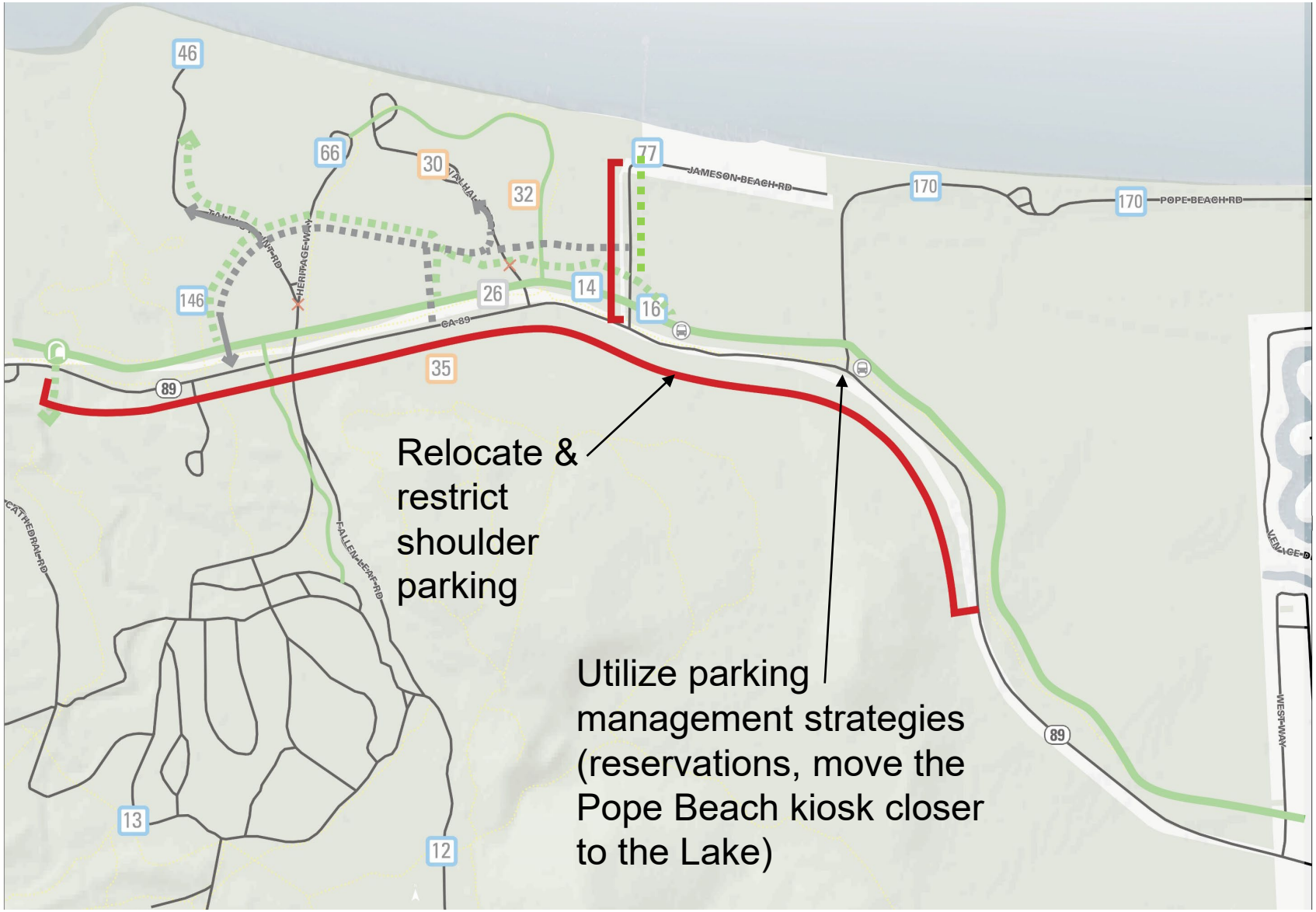
Pope to Baldwin Segment | Promote Walking & Biking



Pope to Baldwin Segment | Connect Parking Areas & Provide Wayfinding



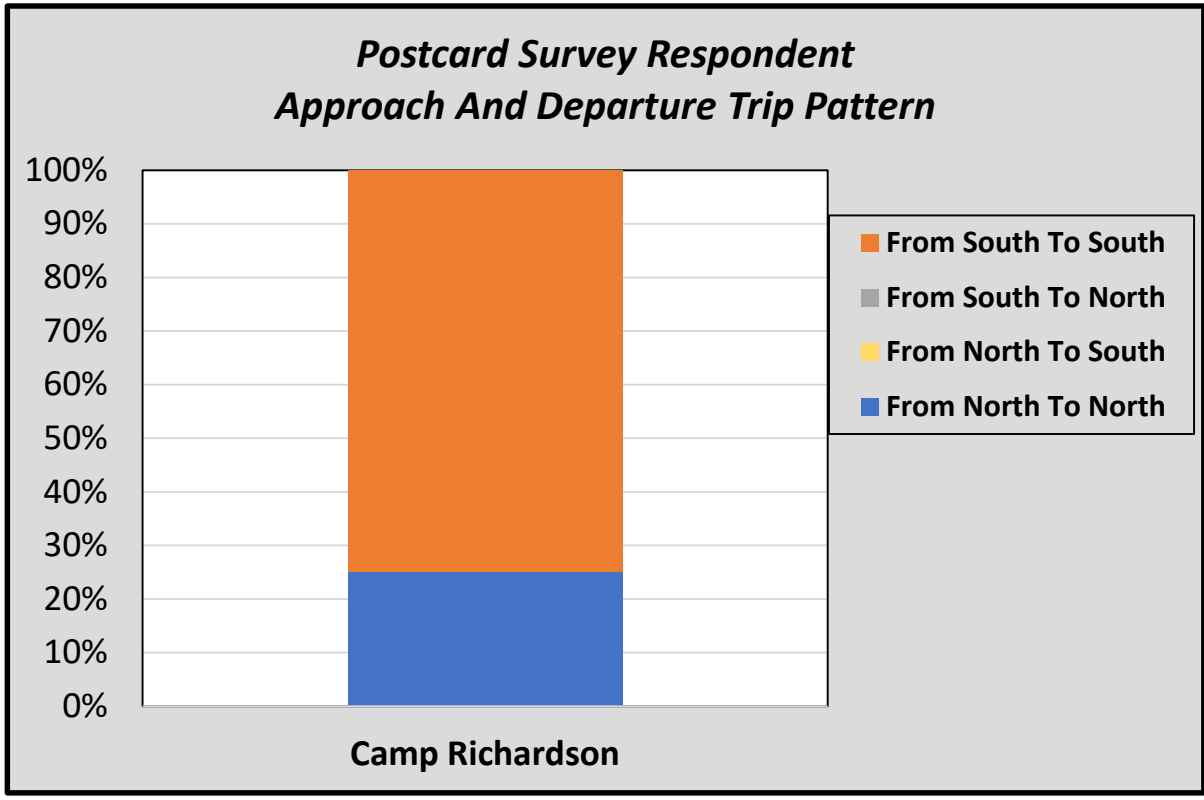
Pope to Baldwin Segment | Manage Congestion



Pope to Baldwin Segment | Trip Patterns

Arrival/Departure

- 75% arrive from the south and return to the south
- 25% arrive from the north and return to the north
- 0% were stopping while traveling through



Pope to Baldwin Segment | Mobility Hubs & Parking

Emerald Bay Segment

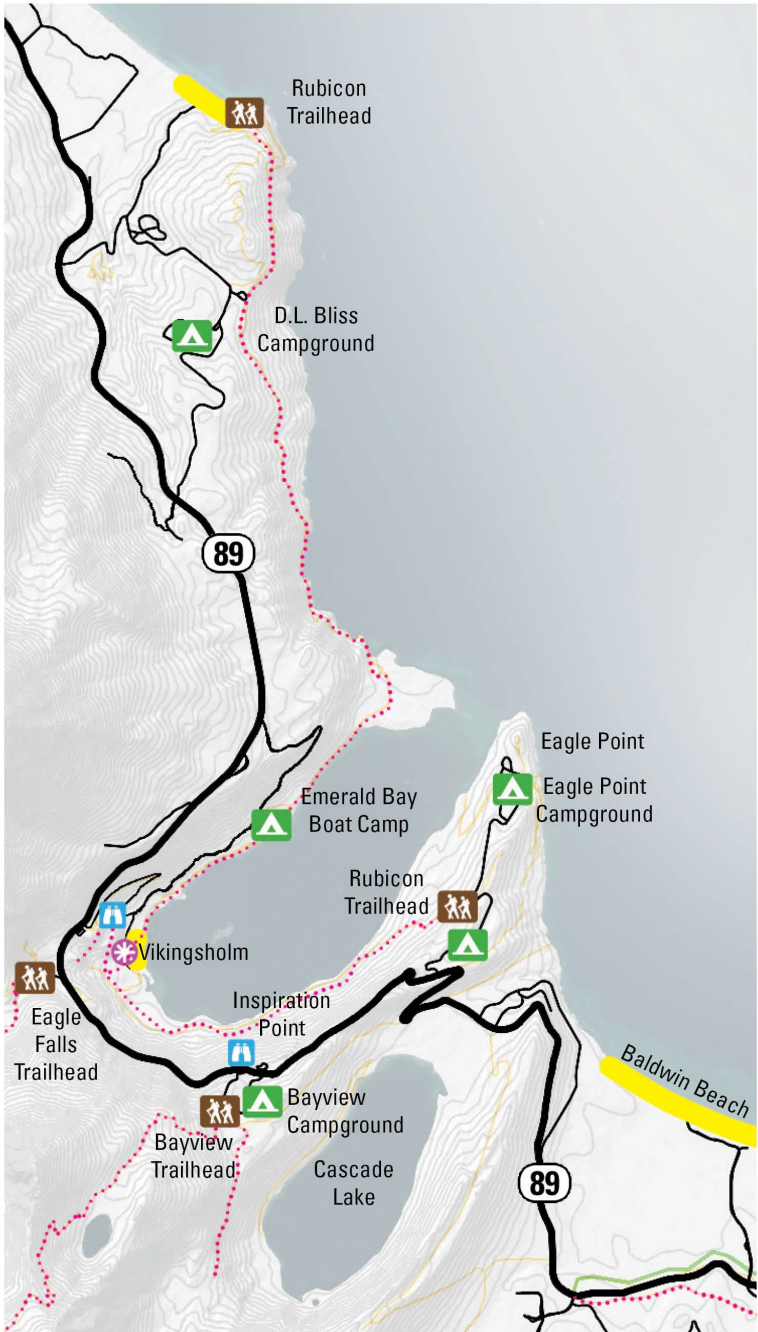
[1]2014&2018 Travel Mode Surveys
[2]Per 2018 Windshield Postcard Surveys

Visitor Type[1]

Emerald Bay Segment	Overall Corridor Comparison (LTCCP)
20% resident	13% resident
80% visitor	87% visitor
93% overnight	90% overnight
7% day	10% day

Mode of Travel[1]

Emerald Bay Segment	Overall Corridor Comparison
89% car	86% car
2% bike	5% bike
5% walk	5% walk
2% transit	1% transit



Emerald Bay Segment

[2]Per 2018 Windshield Postcard Surveys

Activities[2]

Activity	Emerald Bay Segment Overall	Survey Location Area in Emerald Bay	Overall Corridor Comparison
Visiting a beach	16%	Viaduct: 50%	25%
Day hiking	58%	Inspiration Point Area: 47% Viaduct: 38% Eagle Falls: 69% Vikingsholm: 58%	46%
Quick stop to see the view	7%	Inspiration Point Area: 18%	5%
Drive around the Lake	1%	Vikingsholm: 4%	4%
Overnight backpack trip	8%	Inspiration Point Area: 18%	9%

Figure 1: Trail Access | Emerald Bay Segment

Emerald Bay Segment

- Key Issues
  - High visitation and limited facilities, funding, and staff resources
  - Traffic congestion
    - Caused by:
      - Cars along the highway and drivers searching for parking
      - Pedestrians walking along the highway
  - Narrow roadway design with steep shoulders
  - Lack of year-round access
  - Lack of designated transit pull-ffs
  - Lack of shared-use path
  - Enforcement challenges
  - Lack of technology infrastructure
  - Parking closed during winter and part of the off-season & lots not plowed

Emerald Bay Segment

- Traffic delays (July 21, 2018)
  - 29 minutes of NB traffic delay (Eagle Point Camp Road to Inspiration Point)
  - 41 minutes of SB traffic delay (Vikingsholm to Baldwin Beach Road)

- Causes
  - Pedestrian/bike crossing activity at Inspiration Point and Eagle Falls
  - Vehicles parked in travel lane
  - Drivers stopping to take pictures

- Parking Fills
  - Vikingsholm: queue starts @ 9:24AM, full by 9:36AM
  - DL Bliss : queue starts @ 9:48AM, full by 10:13AM
  - 500 shoulder parked cars by noon

Emerald Bay Segment

- Parking Accumulation
  - By 11AM the number of cars parked on the shoulder is 157% greater than those in the parking lots
  - By 1PM, there are 207% more cars on the shoulder than in the parking lots

Parking Accumulation Times (Saturday, July 28, 2018)[3]								
	10:00AM	11:00AM	12:00PM	1:00PM	2:00PM	3:00PM	4:00PM	5:00PM
Total Number of Cars	451	607	677	687	646	576	544	466
Cars in Parking Lots	168	170	175	169	166	165	160	158
Cars Parked on Highway Shoulder	283	437	502	518	480	411	384	308

"Legal" Shoulder Parking Accumulation Times on Saturday July 29, 2017[1]		
	Time "Legal" Parking is 100% Full	Time "Legal" Parking Returns to <80% Capacity
Inspiration Point Shoulder Parking Zone	Filled to 71% capacity by noon	Was 60% full on average throughout the day
Inspiration Point to "The Slide"	Before 10:00AM	4:00PM
"The Slide" to Eagle Falls	Before 10:00AM	5:00PM
Eagle Falls to Viaduct	Before 10:00AM	Did not dip below 161% utilization

Emerald Bay Segment

- Length of Stay
  - 21% of parkers stay for 5 minutes or less
  - 25% stay longer than 90 minutes
  - 54% stay between 6 to 90 minutes (varies from average of 9% to 16% for the intermediate time intervals)

Observed Parking Duration (August 2018)[2]						
	0-5 min	5-15 min	15-30 min	30-60 min	60-90 min	+90 min
Inspiration Point Shoulder Parking Zone	4%	38%	32%	20%	4%	4%
Inspiration Point Parking Lot	30%	23%	18%	27%	0%	2%
Eagle Falls Pull-off on Northbound Lane	24%	10%	2%	29%	29%	7%
Eagle Falls Parking Lots	25%	5%	18%	15%	12%	26%
Vikingsholm Shoulder Parking	22%	17%	8%	17%	14%	22%
Vikingsholm Parking Lot	21%	15%	7%	9%	7%	41%

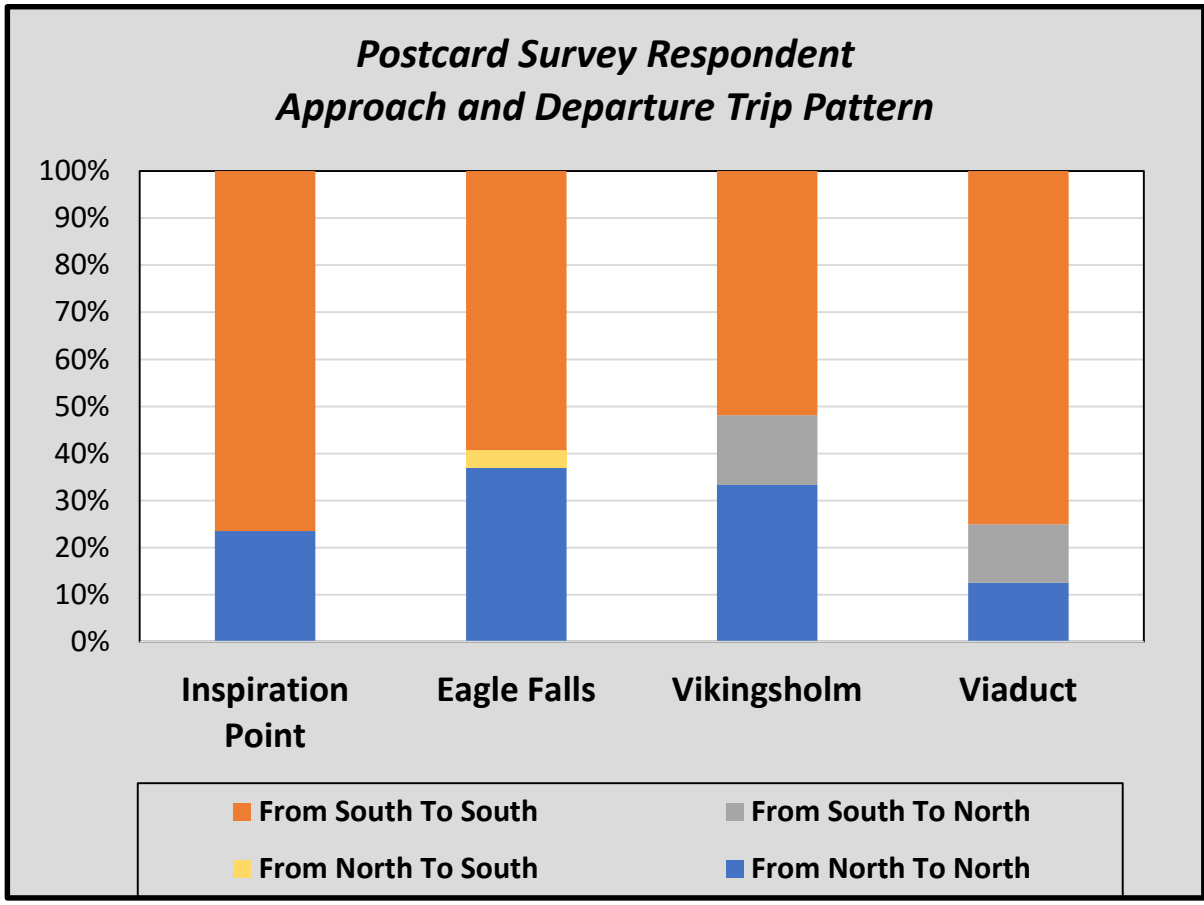
Emerald Bay Segment

Arrival/Departure

- 61% arrive from the south and return to the south
- 32% arrive from the north and return to the north
- 7% are stopping while traveling through

Other

- Survey respondents: Real-time travel information would have been beneficial
- Crash rate is higher than other areas in corridor, but lower than statewide average



Emerald Bay Segment | Tahoe Trail

- Feasibility and engineering studies of shared-use path alignments
- Utilize public lands and/or highway right-of-way
- Look for opportunities to underground utilities and co-locate trail and fiber conduit

Emerald Bay Segment | Tahoe Trail

- Feasibility and engineering studies of shared-use path alignments
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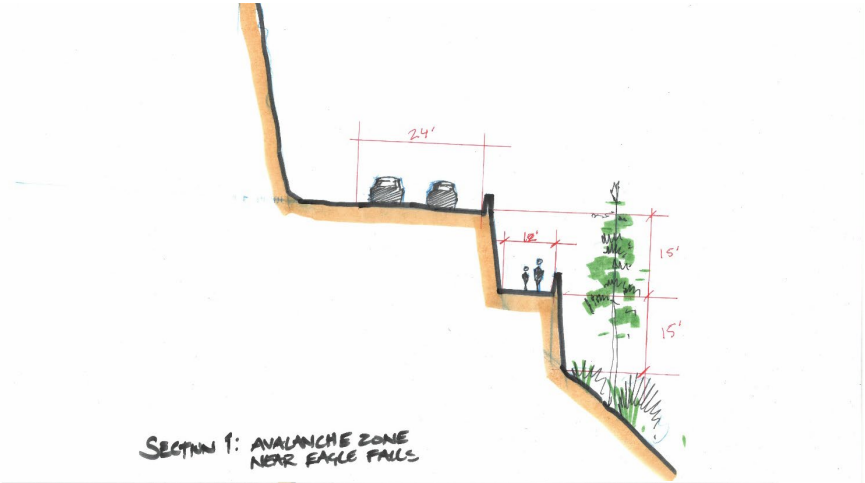
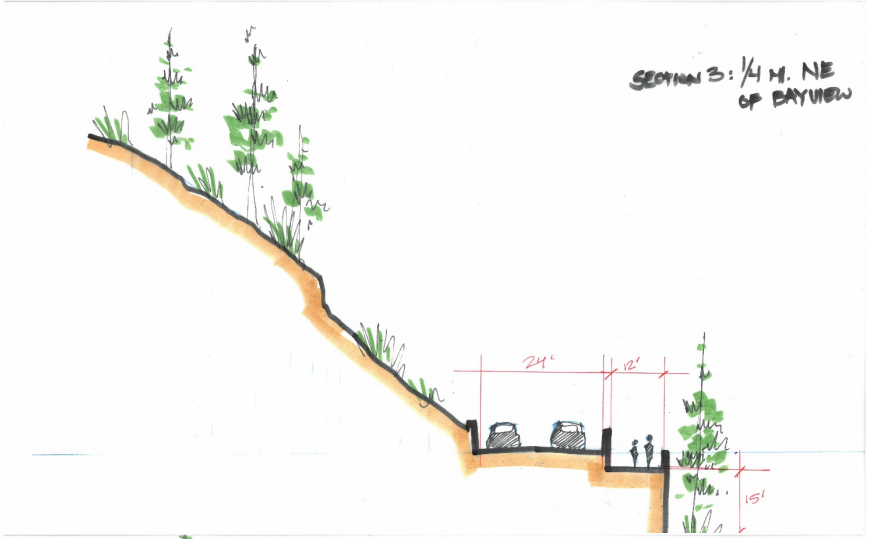
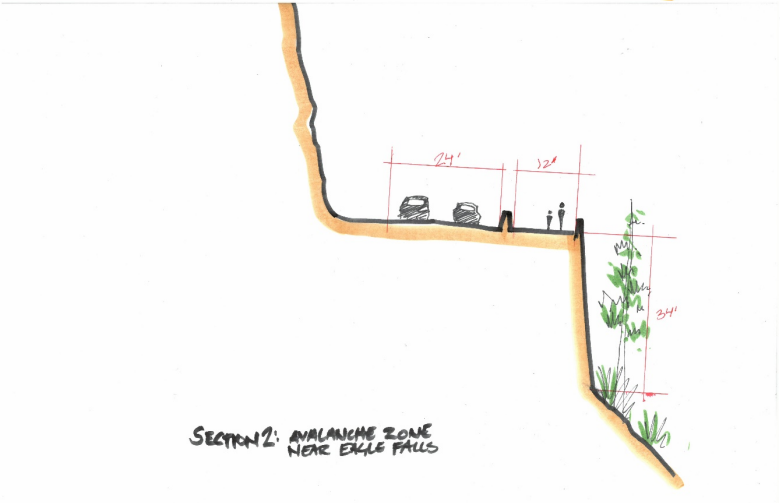
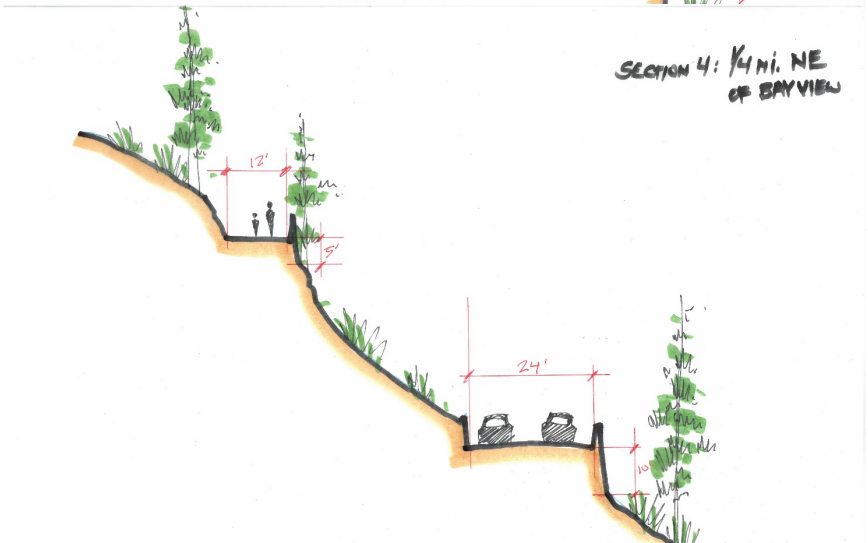
Emerald Bay Segment | Tahoe Trail

DRAFT: FOR DISCUSSION ONLY, WILL VARY THROUGH DETAILED DESIGN









Emerald Bay Segment | Tahoe Trail

DRAFT: FOR DISCUSSION ONLY, WILL VARY THROUGH DETAILED DESIGN

Emerald Bay Segment | Parking & Transit

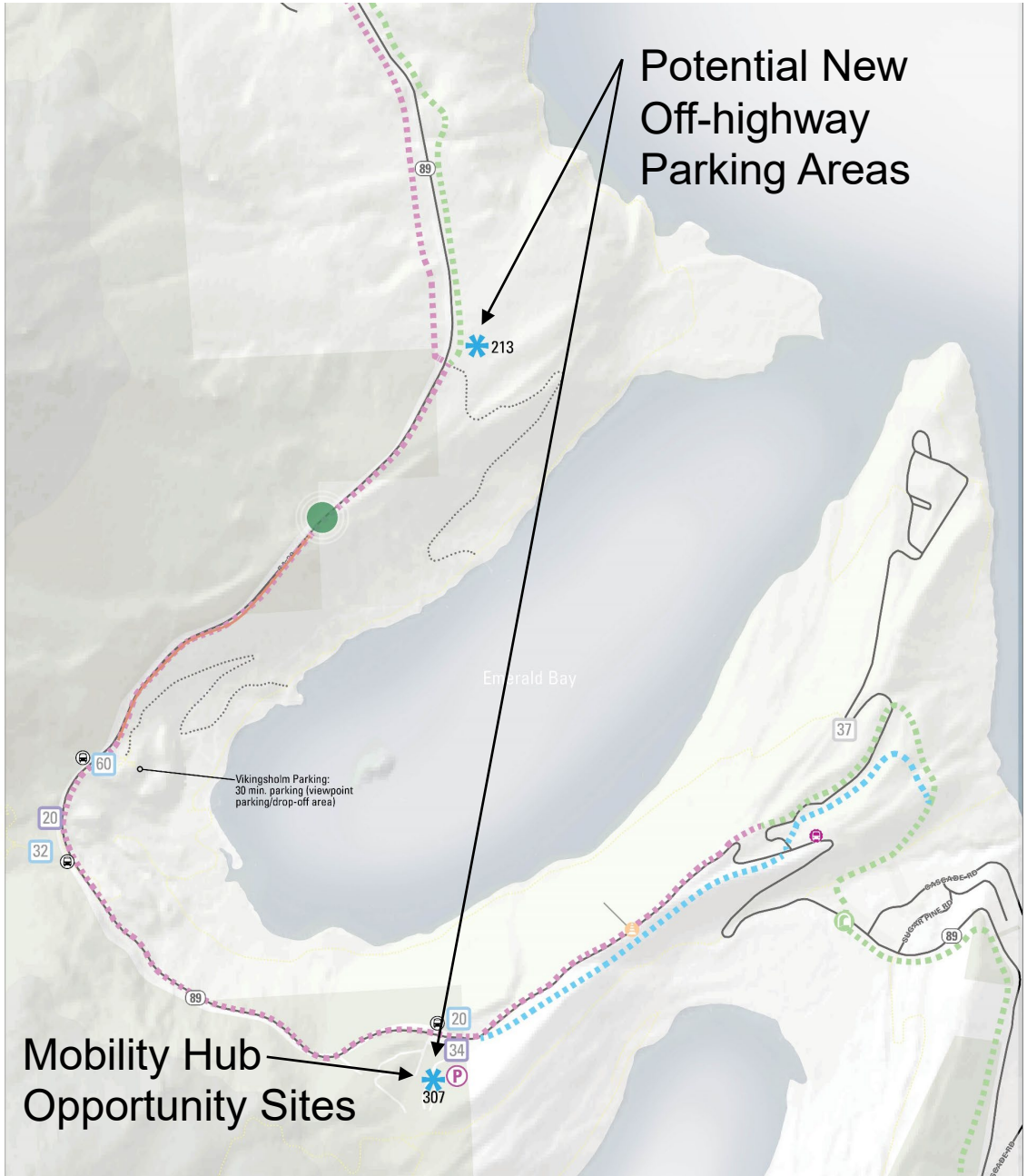
- Relocate shoulder parking & provide transit
- Utilize parking management strategies
  - Reservation parking
  - First-come/First-served Parking (Metered), with Congestion-based pricing
- Consistent application to make it easy to understand

Emerald Bay Segment | Parking & Transit

- Transit Alternatives to be Evaluated
  - Thru traffic allowed in ALL alternatives
  - Alternatives apply from Memorial Day to Labor Day for Recreation Access
    - Alt. 1: Transit Only Access from Mobility Hubs
    - Alt. 2: Transit Access with Reservation Parking in Existing Parking Lots
    - Alt. 3: Transit Access with First-Come First Serve, Metered Parking in Existing Parking Lots
    - Alt. 4: No Transit with Reservation Parking in Existing and New Parking Lots
    - Alt. 5: No Transit with First-Come First Serve, Metered Parking in Existing and New Parking Lots
    - Alt. 6: No Project

Emerald Bay Segment | Parking & Transit

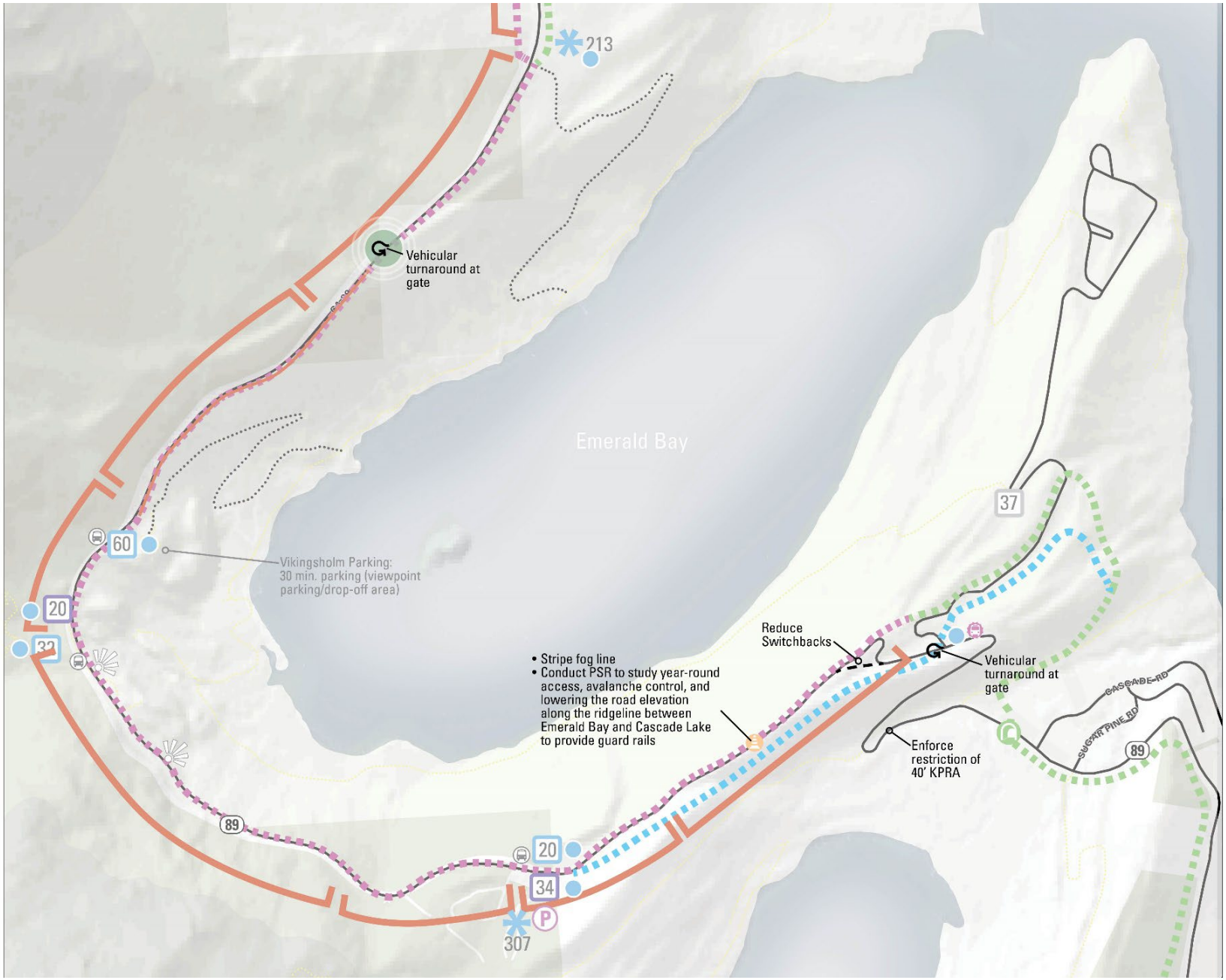
- Mobility hubs
  - Locations south and north of Emerald Bay could serve the area
- Coordinate with transit from Stateline and from Tahoe City



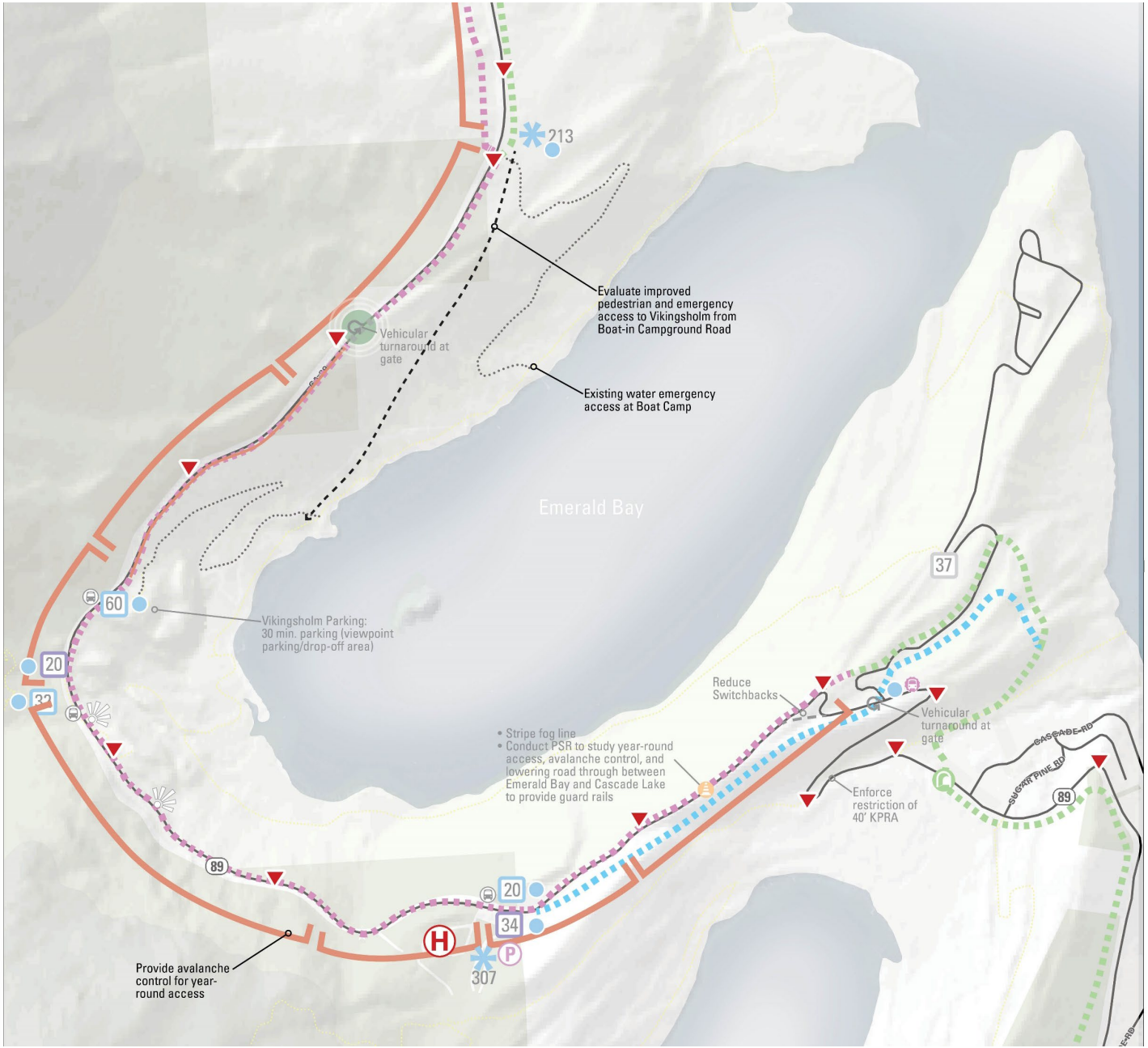
Emerald Bay Segment | Winter Parking

- Winter Recreation Access
  - USFS addressing parking lot closures through Access and Travel Management Plan
  - Snow removal to be evaluated

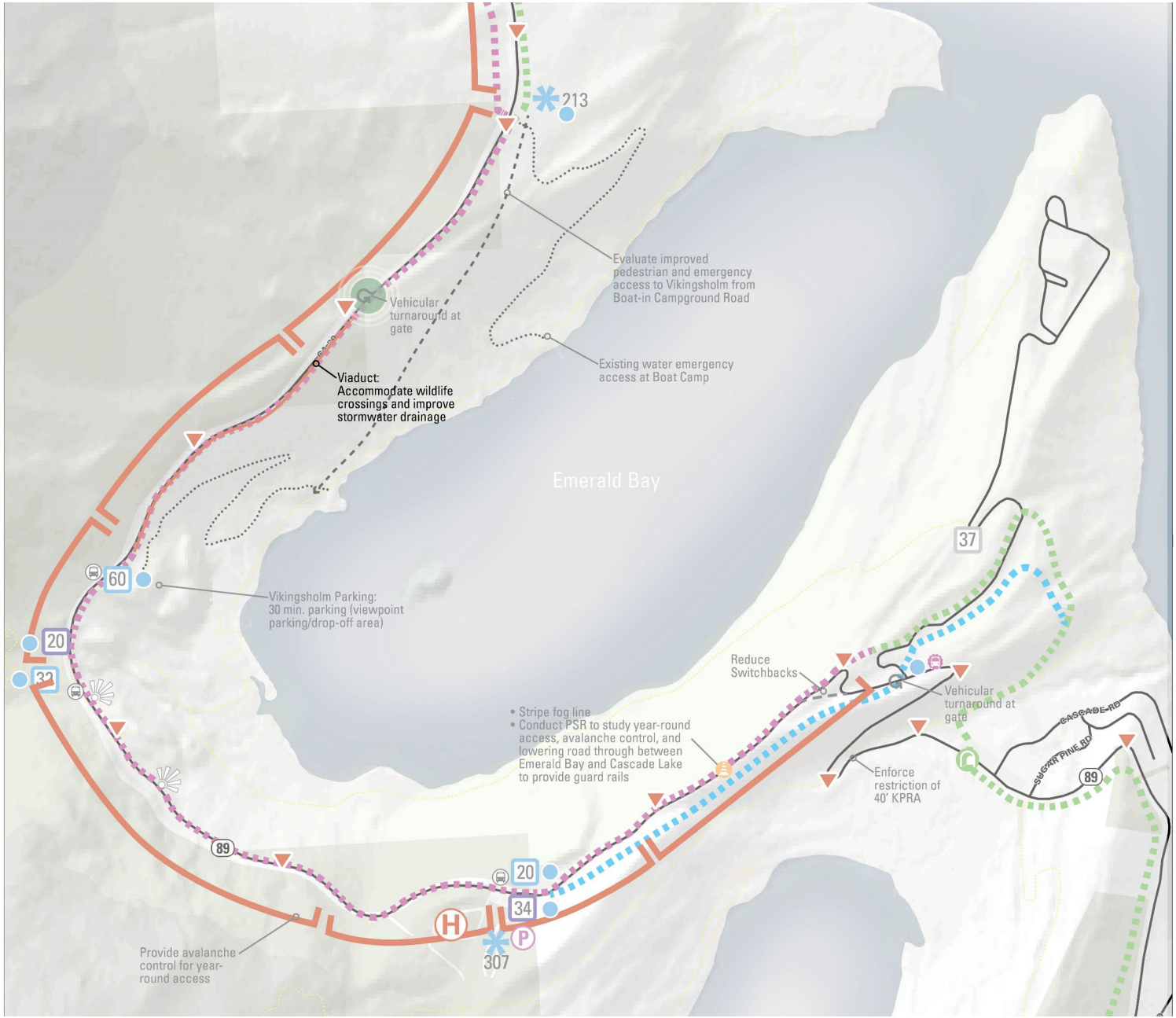
Emerald Bay Segment | Roadway Design



Emerald Bay Segment | Emergency Access



Emerald Bay Segment | Resources



Rubicon Bay Segment

Land Use & Ownership

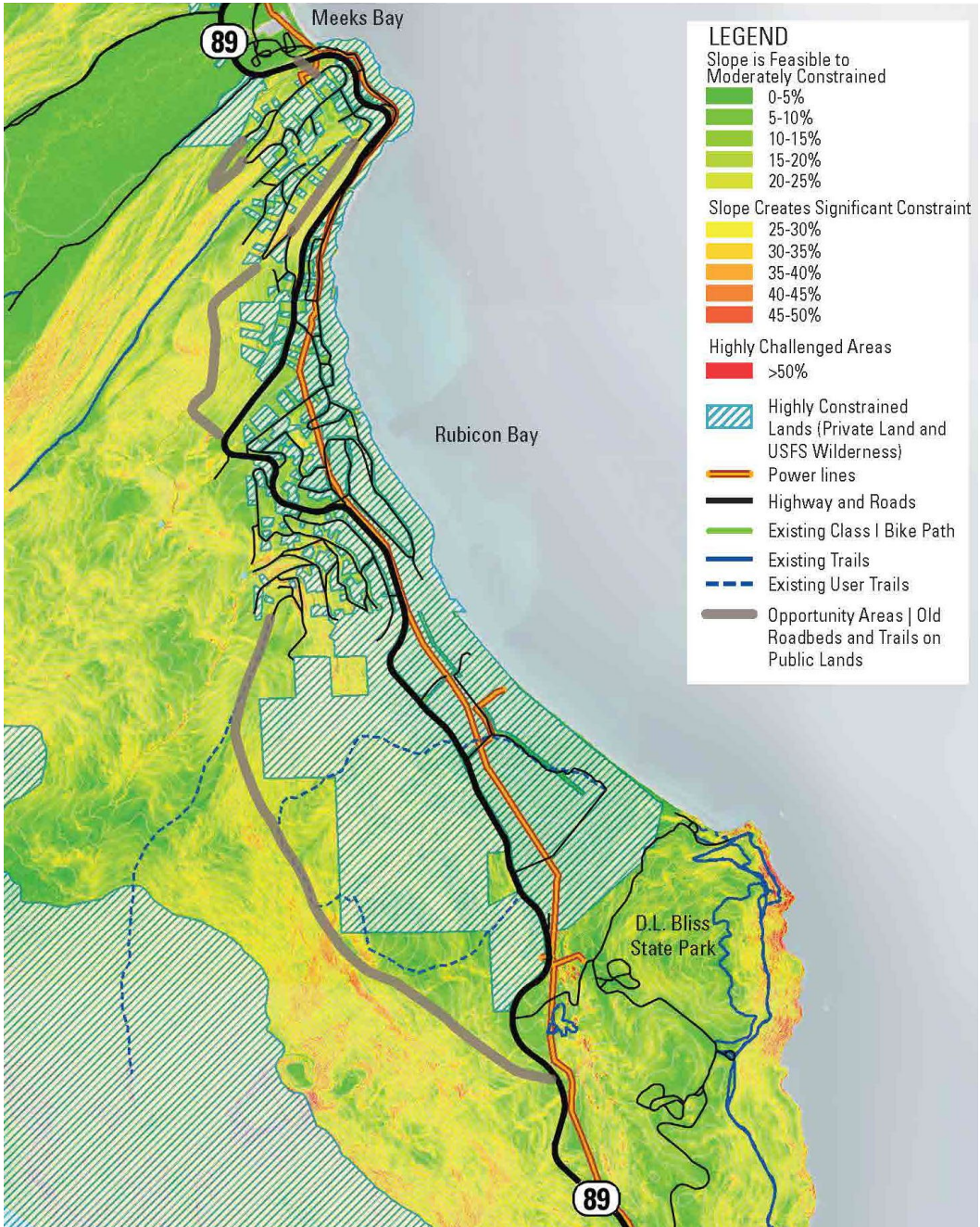
- Zoned residential
- Privately owned with some interspersed public lands

Key Issues

- Lack of shared use path to connect to recreation areas
- Lack of broadband

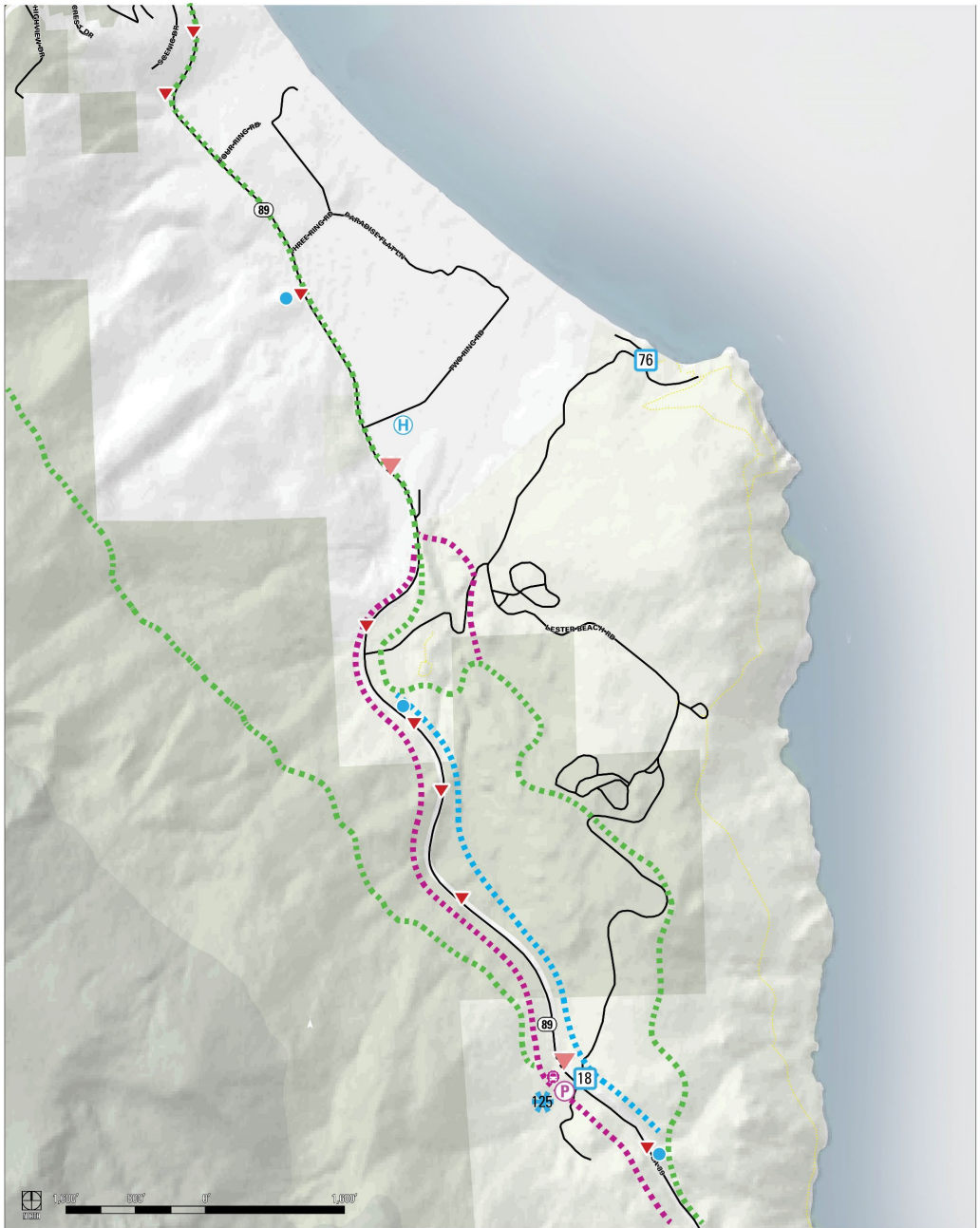
Figure 50: Land Use | Rubicon Bay Segment

Rubicon Bay Segment | Implications



Rubicon Bay Segment | Recommendations

- Feasibility and engineering studies of shared-use path alignments
- Utilize public lands and/or highway right-of-way
- Look for opportunities to underground utilities and co-locate trail and fiber conduit



Rubicon Bay Segment | Recommendations

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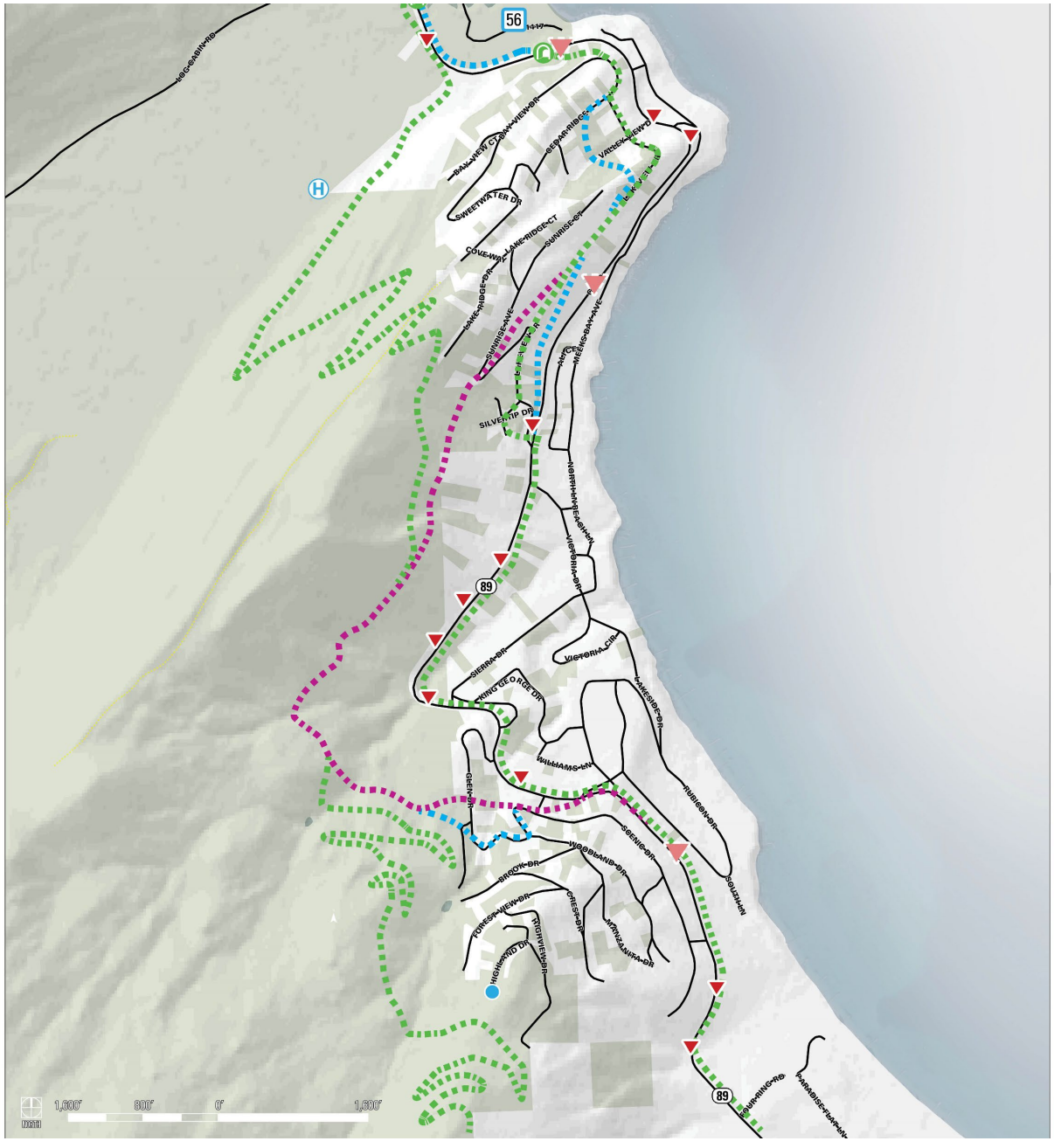

Meeks Bay Segment

[1]2014&2018 Travel Mode Surveys
[2]Per 2018 Windshield Postcard Surveys

Visitor Type[1]

Meeks Bay Segment	Overall Corridor Comparison (LTCCP)
34% resident	13% resident
66% visitor	87% visitor
86% overnight	90% overnight
14% day	10% day

Mode of Travel[1]

Meeks Bay Segment	Overall Corridor Comparison
86% car	86% car
2% bike	5% bike
8% walk	5% walk

Activities[2]

Meeks Bay Segment	Overall Corridor Comparison
44% visiting a beach	25% visiting a beach
39% day hiking	46% day hiking
17% overnight backpack trip	9% overnight backpack trip

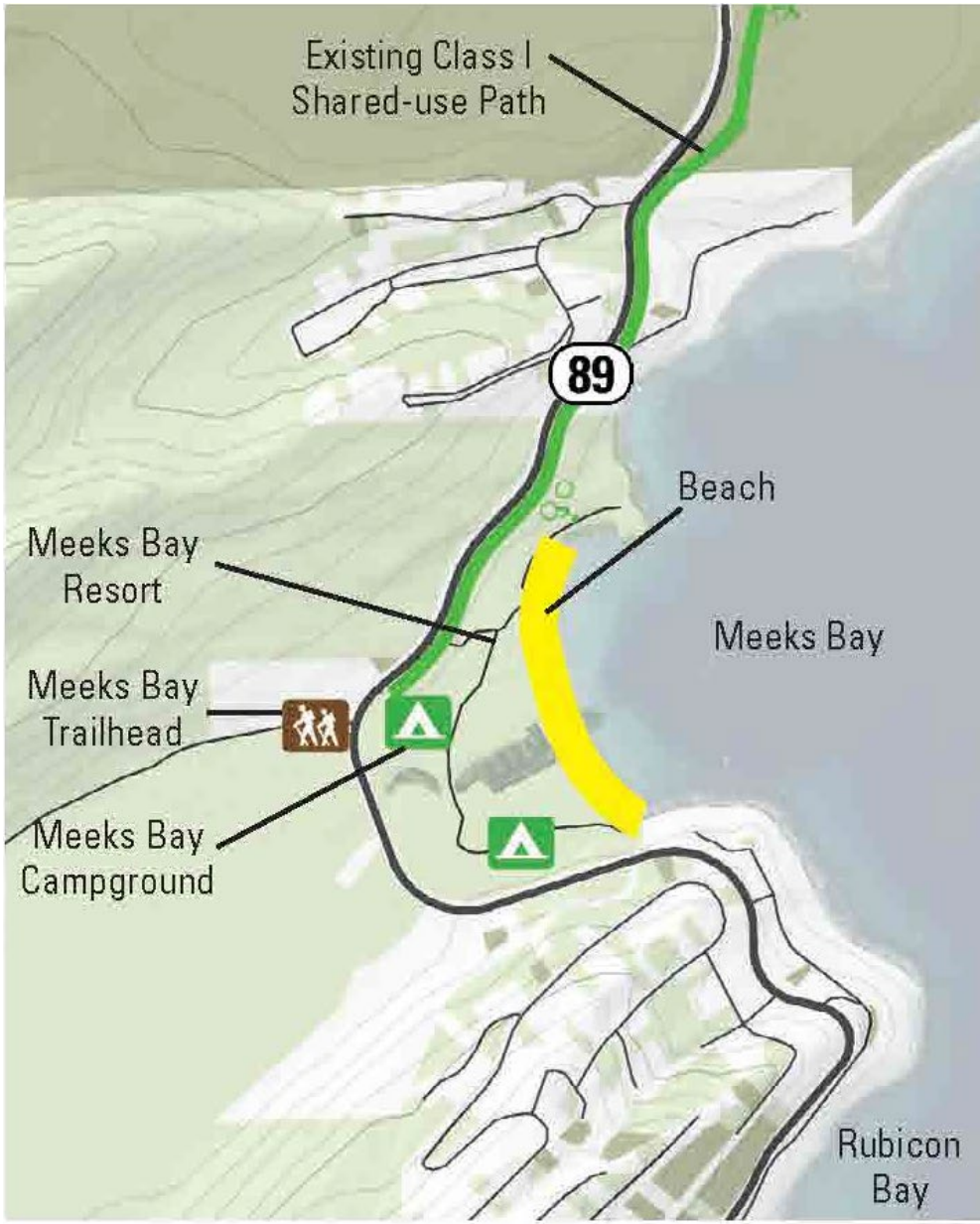

Figure 63: Recreation Areas | Meeks Bay Segment

Meeks Bay Segment

- Key Issues
  - Lack of shared-use path connection through Meeks Bay
  - Lack of pedestrian crossing facilities with limited sight distance for crossing locations
  - Vehicles travel at high speeds
  - Unmanaged roadside parking and trailhead parking
  - Need for winter trail access
  - Issues not as extensive as elsewhere in corridor
  - Lack of broadband

Meeks Bay Segment | Recommendations

- Parking management strategies
- Adaptive management of roadside parking
  - Monitor and consider relocating to off-highway in the future
- Pedestrian and bike facilities
  - Continue shared-use path through Meeks Bay
  - Utilize grade separated crossings
- Establish “recreation speed limit” (example of Tahoe Meadows on Mt. Rose)

Sugar Pine Point Segment

- Key Issues
  - Roadside parking in Tahoma creates congestion north of the corridor
  - Roadside parking at the State Park
  - Issues not as extensive as elsewhere in corridor

Figure 70: Recreation Areas | Sugar Pine Point Segment

Sugar Pine Point Segment | Recommendations

- Adaptive management
  - Monitor use to identify if strategies should change due to increased use
- Evaluate opportunities to use Sugar Pine Point as a mobility hub or for trailhead parking

Work Session Groups