

Modal Assessment



The combined efforts of SRTA, Caltrans and local agency partners over the last five years toward meeting the goals of the 2010 RTP have yielded much success. Many longstanding capital projects have been delivered or are otherwise underway. Since the 2010 RTP update, a total of \$255.4 million in projects have been delivered within the Shasta County region. The following sections provide a modal break down of the regional transportation system in further detail, focusing on the current state of the system.

STREETS AND ROADS



Streets and roads represent the primary means of local and interregional travel in the region. Streets and roads are essential for vehicle travel, truck travel, public transportation, as well as bicyclists and pedestrians. Furthermore, the access provided by streets and roads greatly influences development and land use patterns.

CURRENT SYSTEM

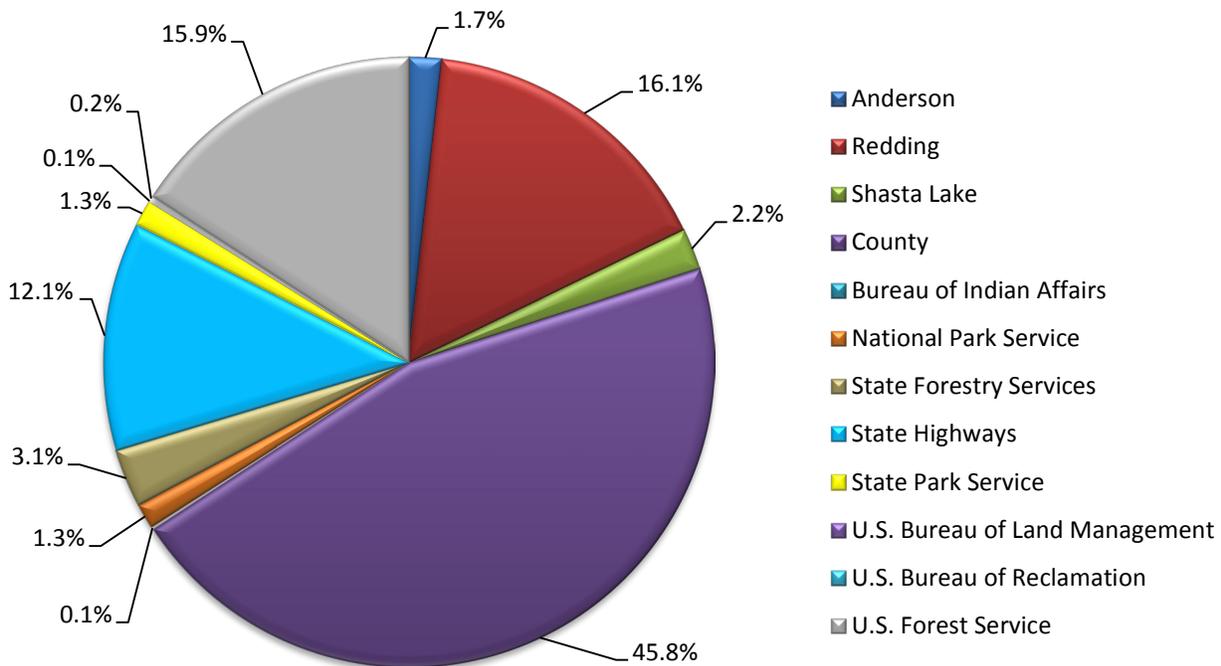
Shasta County has approximately 2,597 centerline road miles. The majority of roads are maintained by

local jurisdictions, including: City of Anderson (1.7%), City of Redding (16.2%), City of Shasta Lake (2.2%) and Shasta County (45.8%). State highways represent 12.1% of the regional network. Native American tribal roads account for 0.1% of the regional network. The remaining 22% of the regional network consists of forestry or other service roads maintained by state and federal agencies.

With the added consideration of lane counts on regional roadways, the total number of lane miles managed is estimated to be over 5,400. Approximately 27% of the managed lane miles exist within the US Census defined Urbanized Area comprising the cities of Anderson, Redding, and Shasta Lake as well as portions of Shasta County between the cities.

Interregional and regionally significant corridors
Interstate 5 is the backbone of the region’s transportation network carrying upwards of 61,000 trips per day. It is also part of a 1,382 mile north-south travel and freight corridor stretching from the Mexican to Canadian border. It is designed by the Federal Highway Administration as a Major Freight Corridor and a “Corridor of the Future”.

Chart 9 - Maintained (Centerline) Road Miles by Jurisdiction (2012)



State Routes 299 and 44 provide primary travel to and from California’s North Coast (Arcata, CA) to the west and to the California-Nevada border to the east. SR 299 is the primary travel and commercial corridor serving Susanville, CA (population 15,546). Both routes are identified as “High Emphasis” and “Focus Routes” by Caltrans.

State Route 36 traverses the south-western tip of the region, providing access to Fortuna (Humboldt County) to the west and to Susanville (Lassen County) to the east via Red Bluff (Tehama County). SR 36 connects to US 395 to Reno, NV. SR 36 is also identified as a “Focus Route” by Caltrans.

State Route 89 provides secondary north-south travel from SR 36 in Tehama County, through Lassen National Volcanic Park, and eventually intersecting with I-5 in Siskiyou County.

State Route 273 provides secondary north-south travel through the South-Central Urban Region from the city of Anderson to just past SR 299 in the city of Redding.

State Route 151 runs 4.7 miles from Interstate 5 through the City of Shasta Lake to Shasta Lake Dam. The western portion of SR 151 is designated a Scenic Route.

Table 9 - Pavement Condition Index Classification

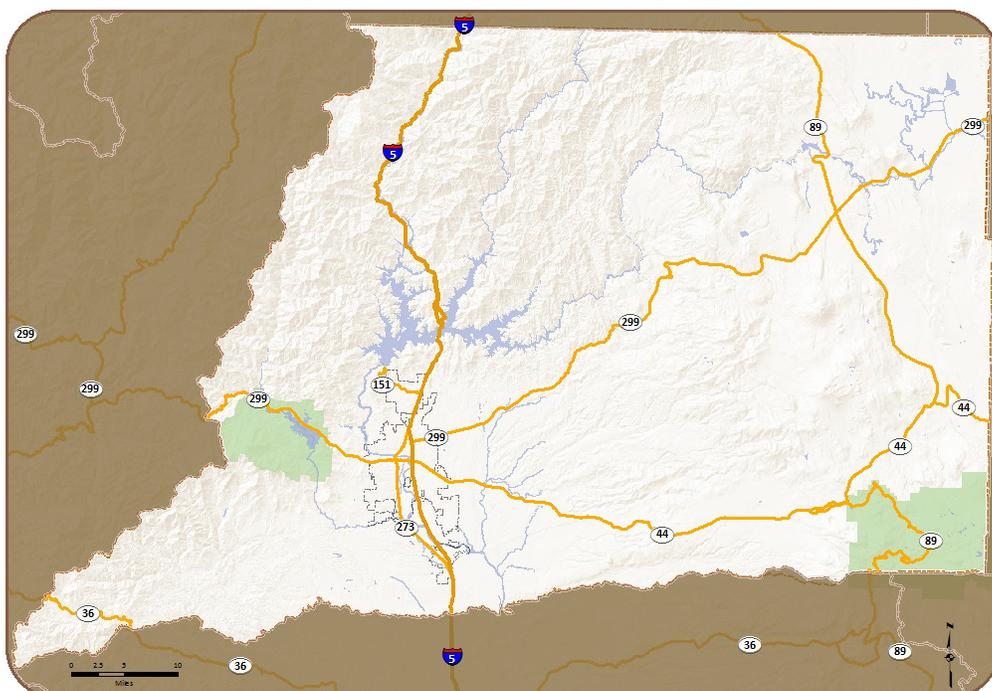
Numerical Rating	Classification
100-85	Good
85-70	Satisfactory
70-55	Fair
55-40	Poor
40-25	Very Poor
25-10	Serious
10-0	Failure

PAVEMENT CONDITIONS

The Pavement Condition Index, or PCI, is a numerical rating system that is used to evaluate the general condition of pavement on a roadway. Roads are rated on a scale of 100 to 0, with 100 being “best” and 0 being “worst” (see Table 9).

The overall pavement condition for the region’s cities is deteriorating. According to a February 2012 report by the city of Redding Department of Public Works, Redding’s overall PCI has dropped from a score of 78 in 2005 to 55 in 2012. While a score of 55 is considered “good” on the PCI scale, it is forecast to fall to 36 (considered “very poor”) by 2020. The county of Shasta Public Works department shows

Figure 11 - ShastaCounty Regionally Significant Corridors



similar ratings. In 2012, major county maintained roads had an average score of 71, while residential and local roads average only a score of 56. The status of roads in the city of Anderson and Shasta Lake, and state highways maintained by Caltrans are currently unknown.

In the 2014 California Local Streets & Roads Needs Assessment, it is estimated that the region’s average PCI is 60. This puts the region in a “high risk” category for California. With great local effort and an infusion of federal economic stimulus funds, the region’s PCI has rebounded slightly from a low of 57 in 2012. The study estimated the minimum financial need of \$799 million (in 2014 dollars) to keep the road system maintained for the next ten years. Without additional revenue, recent gains in the condition of regional roadways will soon be lost.

BRIDGES

According to the Caltrans Office of Structure Maintenance and Investigations there are approximately 475 bridges within Shasta County. The number of bridges maintained by each agency and the functional status of these bridges is shown in Table 10.

By FHWA criteria, approximately 32% of local agency bridges are considered “structurally deficient” (i.e. requires weight or speed limitations to ensure it is safe) or “functionally obsolete” (i.e. not designed for

how it presently used). The biggest challenge is in the unincorporated area of Shasta County, where a total of 74 bridges are in need of replacement.

The 2014 California Local Streets & Roads Needs Assessment estimates that 97 bridges are in need of replacement and 22 bridges are in need of repair. This translates into a minimum financial need of \$66 million (in 2014 dollars) over the next 10 years.

32% of all bridges in Shasta County are “structurally deficient” or “functionally obsolete” and are in need of replacement or major repair.

As of June 2014, three bridges on the State highway system are eligible for listing on the National Register of Historic Places (NRHP). One local agency bridge is potentially eligible for listing on the NRHP.

The Pit River Bridge, which allows traffic on Interstate 5 to cross Shasta Lake, is listed on the federal list of ‘Projects of National and Regional Significance.’ The replacement cost of this bridge is estimated at \$500 million and is of great significance for moving people and goods through Shasta County, from the California-Mexico border to Canada.

Major accomplishments since 2010 RTP

Since the 2010 RTP, Shasta County has seen the following major improvements to the interregional transportation system:

- Interstate-5 from Bonnyview Road to Central Redding – add a new travel lane in each direction (expand from four to six lanes).
- Interstate-5 and Deschutes Road – addition of round-a-bout on Deschutes Road, east of I-5.
- Interstate-5 Cottonwood Truck Climbing Lanes – addition of a truck climbing lane in each direction (northbound and southbound) from Gas Point Road to Deschutes Road.
- State Route 299 – Buckhorn Grade: Extensive curve re-alignment and addition of passing lanes at Buckhorn Summit.

Table 10 - Bridge Status by Jurisdiction

Jurisdiction	Bridges	Structurally Deficient	Functionally Obsolete
Shasta County	216	24	50
City of Anderson	4	0	0
City of Redding	55	6	9
City of Shasta Lake	13	1	1
Dept. of Forestry	8	1	2
Tehama County	1	0	0
Caltrans	178	Unknown	Unknown

⁷Caltrans Structure Maintenance & Investigations Report, Local Agency Bridge List. Reviewed September 2013.

SYSTEM UTILIZATION

Volume to capacity (V/C) ratio is a numerical representation of road congestion. “Volume” represents the number of vehicles on the roadway at a given time. “Capacity” refers to the maximum number of vehicles able occupy a road segment. The V/C ratio helps identify which roads segments are being used the most and which segments are being underutilized, based on their design capacity. Roadways with a V/C ratio of 0.75 or higher are considered “congested.”

Level of service (LOS) is an alphabetic scale used to describe roadway congestion; ‘LOS A’ being free of congestion and ‘LOS F’ representing gridlock.

The ShastaSIM regional travel model simulates future travel demands and measures the impact on regional roadways in terms of V/C ratio, LOS, and other performance metrics. This information is used to

identify which segments may need additional capacity or where traffic might be redirected to make better use of underutilized roadways. ShastaSIM also allows planners to evaluation the individual and combined benefit of enhanced traffic operations, travel demand management strategies, land-use strategies, and other potential solutions.

Future LOS on the roadway network is forecast to deteriorate over time. By 2020, over 132 miles of regional streets are expected to fall below the LOS planning threshold of C. By 2035, that number will increase to over 164 miles of streets with LOS D, E, or F. Table 11 summarizes those road segments reaching LOS D, E, or F by 2035.

IMPACT OF SYSTEM PERFORMANCE ON MOBILITY

A variety of performance metrics are calculated to better understand and communicate the directly felt impacts congestion levels. It’s worth noting that

LEVELS OF SERVICE

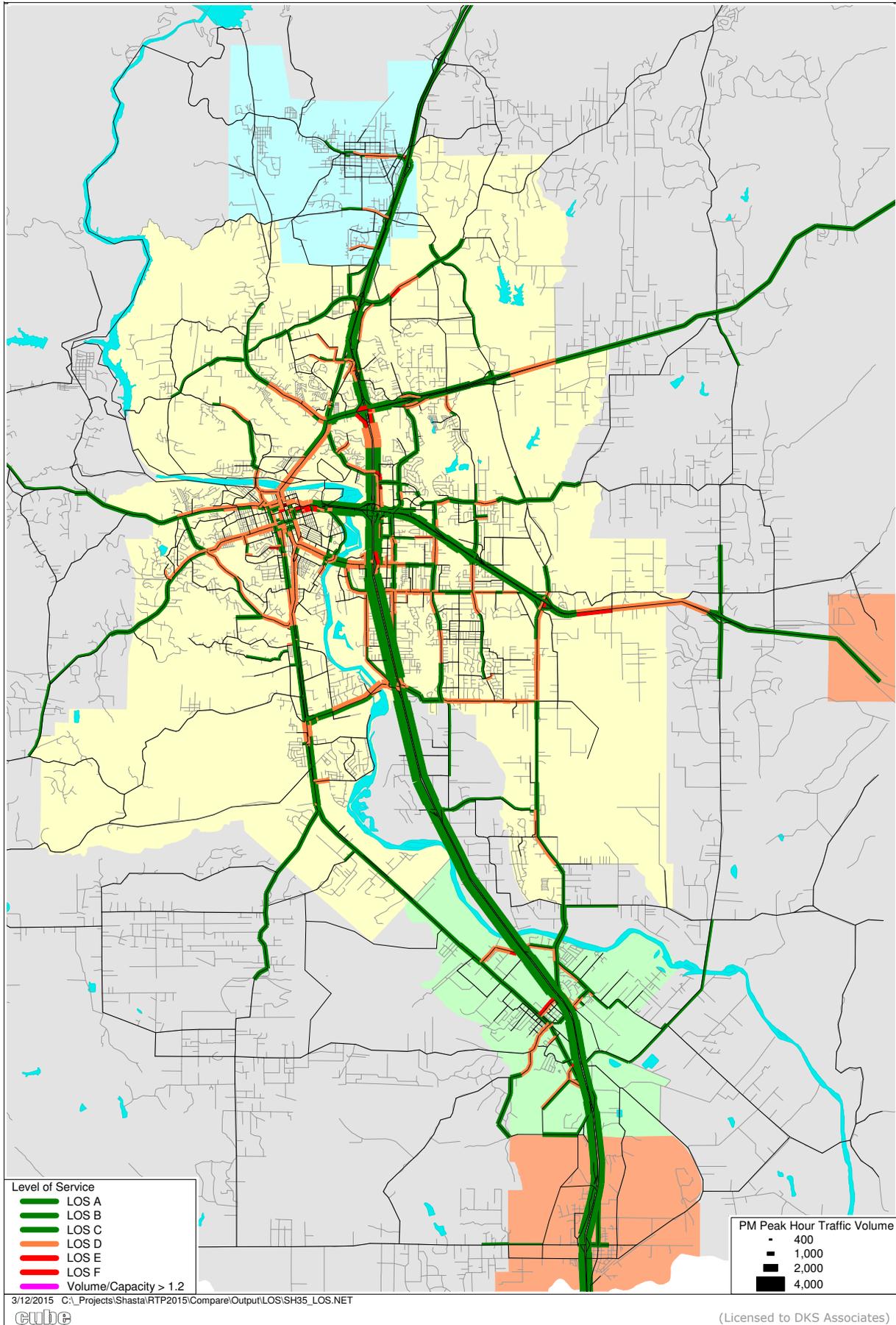
for Multi-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. No delays
B		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. No delays
C		60	Density becomes noticeable with ability to maneuver limited by other vehicles. Minimal delays
D		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. Minimal delays
E		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. Minimal delays
F		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. Significant delays

Chart 10 - Example of Level of Service (LOS) for Multi-Lane Highways

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways

Figure 12 - Shasta County Travel Model - 2035 Base - PM Peak Hour Traffic Volume



congestion – to some degree – is not a bad thing; it is an indicator of economic activity as it is reflective of more people with jobs, more delivery of services, and more freight and goods being transported to market.

Commonly used transportation performance metrics and calculations for Shasta County are as follows:

- **Vehicle Hours of Delay** – An indicator of how much extra time drivers spend on the road traveling to their destination due to congestion. A majority of the delay experienced by travelers is on local arterial or collector roadways. Currently, commuters experience almost 1,400 VHD daily. By 2035, that number is expected to almost double to over 2,600 VHD daily.
- **AM/PM peak travel period** – Commonly known as ‘rush hour’, the peak travel period is typically a one to three hour period during the morning and evening where the region’s roadways carry the greatest number of vehicles, typically due to work commute. Implementing the RTP will improve the average vehicle miles per hour by 4.5% for the PM Peak period, 3% for the AM Peak Period and 3.6% for the Daily average, by 2035 (see Chart 13)

- **Peak hour travel speed or “Congested Speed”** is the reduction in the average speed on a roadway segment during the peak hour period (typically due to work commuting) than would otherwise be experienced during “free flow” traffic conditions.
- **Travel time to work** – Represents the average time it takes to get to work. Approximately 67% of all workers in the region average 20 minutes or less to reach their work destination, with the majority taking between 10-20 minutes. Only 4% of all workers take less than five minutes to get to work. Approximately, 7.4% of workers in the region take 45 minutes or more to reach work. Overall it takes less time on average for travelers to reach work today (19.7 minutes) than in 2000 (20.9 minutes).

Shasta County offers one of the shortest average commute times in California

(Source: U.S. Census Bureau, 2008-2012 American Community Survey)

Chart 11 - Regional Speed Trends - AM/PM Peak Hour (Congested) and Daily Average (Free Flow)

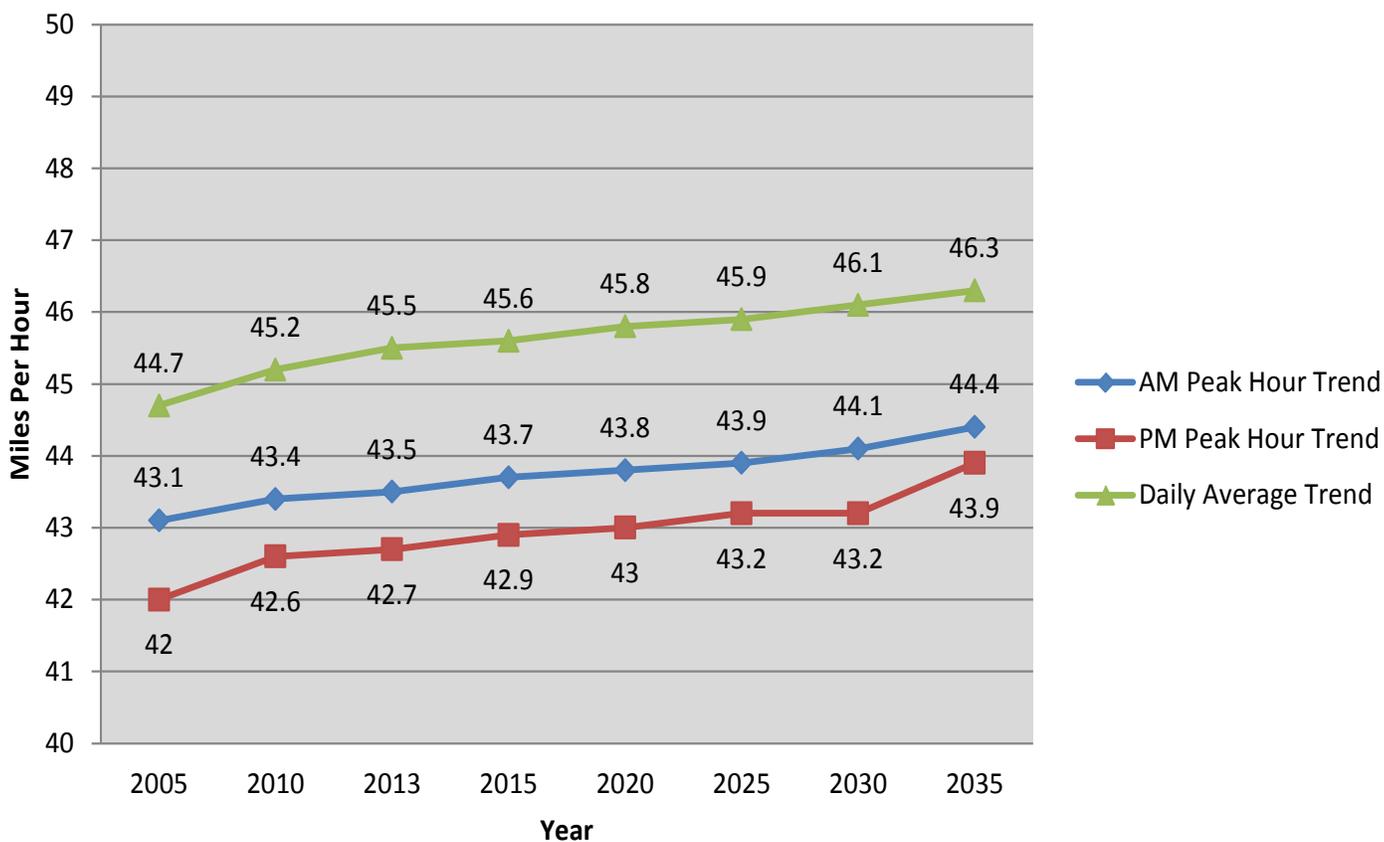


Table 11 - Miles of Roads at LOS 'D', 'E', or 'F' in 2035

MILES OF CONGESTED ROAD		LOS D	LOS E	LOS F	TOTAL
Freeway					
	Freeway	6.5	1.3	0.0	7.7
Highway					
	Multi-Lane Rural Highway	0.0	0.0	0.0	0.0
	2-Lane Rural Highway	41.0	3.1	0.0	44.1
	Total	41.0	3.1	0.0	44.1
Expressway					
	Urban Expressway	5.2	0.2	0.1	5.5
Arterial					
	Multi-Lane Rural Arterial	0.0	0.0	0.0	0.0
	2-Lane Rural Arterial	0.6	0.0	0.0	0.6
	Urban Arterial	81.6	4.0	0.4	85.9
	Total	82.1	4.0	0.4	86.5
Collector					
	Rural Collector	0.0	0.0	0.0	0.0
	Urban Collector	9.4	0.3	0.1	9.8
	Total	9.4	0.3	0.1	9.8
Local					
	Rural Local	0.0	0.0	0.0	0.0
	Urban Local	5.7	0.4	0.0	6.1
	Total	5.7	0.4	0.0	6.1
Ramp					
	Ramp	2.6	1.5	0.4	4.5
Connector					
	Zone Connector	0.0	0.0	0.0	0.0
TOTAL:		152.4	10.9	1.0	164.3

STREETS AND ROADS SWOT ANALYSIS

The following observations are not intended to be comprehensive, but rather to highlight salient issues and opportunities related to regional mobility.

STRENGTHS:

- Current network is relatively free of traffic congestion.
- Most major bottlenecks – current and impending – have been addressed by way of recent capacity increasing projects and operational improvements on Interstate 5, State Route 299, and associated interchanges.
- Safety issues and limited truck access to the North Coast on State Route 299 in western Shasta County have largely been addressed as result of the Buckhorn Grade realignment.
- Intelligent Transportation Systems (ITS) infrastructure is in state of good repair.
- The sixteen-county North State Super Region is actively involved in elevating North State transportation needs to the state and federal level.

OPPORTUNITIES:

- Shasta County's location at the geographic and transportation crossroads of the sixteen-county North State as well as the center of the I-5 international trade corridor provides market accessibility, including one-day market access to several major urban markets (Sacramento, San Francisco Bay Area) and sea ports (Oakland, Stockton, Eureka).
- Strategies known to reduce travel demand, including complete streets, transit, rideshare, parking strategies, and other strategies are largely untapped.
- Recent and planned travel data collection efforts and statewide interregional travel demand modeling provide more granular data useful in transportation planning.

WEAKNESSES:

- Percentage of distressed lane miles.
- Number of functionally obsolete bridges.
- Safety issues on rural roads and highways.
- Lack of data on interregional travel patterns.
- Lack of ITS infrastructure for real-time information to assist transportation demand management efforts.
- Complete Streets that accommodate all travel modes are not consistent.

THREATS:

- State and federal policy, performance metrics, and project evaluation criteria are often detrimental to smaller urban and rural areas when competing for limited discretionary transportation funds.
- Regions representing the bulk of California's population are in what are known as 'self-help' counties that have local sales tax or other local revenue streams. Self-help regions are better able to leverage limited shares of state and federal discretionary transportation funds.
- Recent development trends and land use patterns are projected to increase vehicle miles traveled and limit the potential use of alternative transportation modes.
- Underdeveloped alternative transportation options and vehicle-dependent land use patterns limit individual and community adaptability and resilience to fluctuations in fuel and auto operating costs.

PUBLIC TRANSPORTATION



Public transportation includes a range of services for the general public as well as specialized services for the disabled, elderly, and those individuals unable to use traditional services. Public transit provides a widely accessible and affordable mobility option and is one of the primary strategies used to provide congestion relief and reduce vehicle miles traveled and associated greenhouse gas emissions.

Current Services

Interregional

- **Amtrak** – See Rail Section.
- **Greyhound** - Greyhound Lines is the largest provider of intercity bus transportation, serving more than 3,800 destinations across North America. Greyhound serves the Downtown Redding Transit Center.
- **Trinity Transit** – Trinity Transit offers Monday through Friday fixed route service within Trinity County and between Weaverville and the Downtown Redding Transit Center.
- **Sage Stage** - Sage Stage provides public transportation in Modoc County and intercity transit service between Alturas and the Downtown Redding Transit Center.

Tribal Transportation Services

- **Pit River Health Services** – Provides transportation to tribal members.
- **Redding Rancheria** – Provides transportation to and from Redding Rancheria Tribal Health Center tribal for tribal members.
- **Susanville Rancheria** – Provides offers Monday through Saturday fixed route service between Susanville and Redding via Red Bluff.

Intraregional – Fixed Route Service

- **Redding Area Bus Authority (RABA)** - Provides fixed route and demand response transit services. Fixed route service consists of ten local routes and three express routes. Local routes operate Monday through Friday, mostly on one-hour headways. Saturday begins three hours later than weekday service. No service is provided on Sundays. Routes depart from one of three RABA transit centers: the Downtown Redding Transit Center, the Masonic Transfer Center, and the Canby Transfer Center.
- **Burney Express** - Shasta County contracts with RABA to provide express service to the community of Burney. Burney Express operates Monday through Friday with two round-trips each day, starting in Burney.

Demand Response and Paratransit services

- **RABA Demand Response** - Provides curb-to-curb transportation for individuals who, because of disability, are not able to utilize fixed route service. The service area is limited to within $\frac{3}{4}$ mile of fixed route service. Service is provided during the same operating hours as fixed route service.
- **Shasta Senior Nutrition Programs (SSNP)** – Provides demand response services to individuals 60 and older, mobility-impaired person, and those with disabilities over 18 years of age, who live outside of the RABA service area. In 2013, SSNP started a “44 Express” route that provides service from Shingletown to Redding.



Figure 13 - Shasta Senior Nutrition Program Bus



Figure 14 - RABA Demand Response Bus

Medical Transportation Services

Various organizations provide non-emergency and assisted living transportation needs within Shasta County. A current list of organizations providing service is published in the “Need-a-Ride?” brochure and also available on the SRTA website.

Airport Shuttle Service

- **RABA** – RABA offers an Airport Express route between The Downtown Redding Transit Center and the Redding Municipal Airport.
- **First Class Shuttle** – First Class Shuttle offers shuttle service for airline passengers arriving and departing out of Redding Municipal Airport and Sacramento International Airport.

System Utilization and Performance

RABA riders are largely dependent upon public transit due to lack of vehicle, no driver’s license, and/or disability. Over 85% of transit riders surveyed have an annual household income of less than \$20,000.

Transit ridership – Overall ridership increased by 20.1% from FY 2009/10 to FY 2012/13. System-wide productivity increased from 10.8 passengers per hour to 14.6 passengers per hour.

Transit productivity – In FY 2012/13 RABA provided 40,798 vehicle service hours of fixed route service with an annual ridership of 807,894. RABA serves nearly 20 passengers per service hour, a commonly used metric of transit productivity.

Farebox recovery - Overall fare revenue increased by 16.4% while costs remained relatively flat over the past two fiscal years. The system-wide farebox recovery ratio increased from 15.1% to 17.3%. The cost per trip decreased by 15.8% since FY 2009/10.

Demand response – RABA provided 17,327 demand response service hours in FY 2012/13 with an annual ridership 55,699.

Accomplishments since last RTP

- RABA Short Range Transit Plan (June 2014)
- System wide RABA service enhancements in 2014.
- RABA Airport Express route was added in 2012.
- Revisions to Transit Needs Assessment process.
- Transit Technology and CTSA Assessment completed in 2014.
- CTSA-SSNP “44 Express” service from Shingletown to Redding in 2013

Figure 15 - RABA Bus with Bike Rack



PUBLIC TRANSPORTATION SWOT ANALYSIS

The following observations are not intended to be comprehensive, but rather to highlight salient issues and opportunities related to regional mobility.

STRENGTHS:

- Fleet condition
- Dispatch capabilities
- Multi-modal transfer facilities and other assets
- The Transportation Development Act provides a consistent, ongoing fund source for public transportation.

WEAKNESSES:

- On-time performance
- Infrequent headways – All fixed-routes are designed to be one-hour headways. Only Route 2 has the equivalent of 30-minute headway because it has a clockwise and counter-clockwise route utilizing many of the same stops.
- No late evening service – Currently all routes end service by 8:00pm. Riders have asked for certain routes to be extended until at least 8:30pm to coincide with shift work common retail, food service, and other such industries.
- No Sunday service
- Missed opportunities to coordinate between transit service providers.
- Regional land use patterns are not conducive to providing or utilizing transit service.

OPPORTUNITIES:

- RABA-administered transit ridership data collection effort to be available to support system planning.
- Technology is available for improved data collection and real time service information for both planning and customer service applications.
- Coordination with Sustainable Communities Strategy implementation activities has potential to increase ridership.

THREATS:

- Limited political and general public support expanded transit services.
- Transit funds not used on transit are available for local streets and roads maintenance, which has an extensive backlog of project needs.
- Shasta County does not have the typical incentives or disincentives to appeal to choice riders. For example, parking is free and abundant, traffic congestion is isolated and short in duration, and travel time by transit is not competitive.
- Fuel costs for transit may increase as much as 4% per year, increasing operating costs.

ACTIVE TRANSPORTATION



Active transportation is a means of getting around by human energy, including bicycling and walking. Often referred to as non-motorized transportation, the updated term is consistent with recent changes in federal funding programs and better distinguishes the role of individual choice and local and regional policies, programs, and investments in supporting active and healthy communities.

Active transportation plays an essential role in connectivity between modes. Virtually all public transportation trips begin and end with active transportation. In more urban environments, automobile trips often include some measure of active transportation to complete the trip.

As part of coordinated multi-modal strategy, active transportation helps alleviate traffic congestion, delay or obviate the need for costly infrastructure improvements, and reduce vehicle miles traveled with associated environmental and climate impacts.

Active transportation facilities are generally divided into four classes:

- **Class I** - A dedicated non-motorized facility, paved or unpaved, physically separated from motorized vehicular traffic by an open space or barrier.
- **Class II** - A bike lane on a roadway, delineated by pavement striping, markings, and signing for the preferential or exclusive use of bicyclists.
- **Class III** - A bike route designated by the jurisdiction having authority, with appropriate directional and informational markers, but without striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

- **Class IV (new)** - A roadway not designated by directional and informational markers, striping, signing or pavement markings for the preferential or exclusive use of bicyclists, but that provides appropriate bicycle-friendly design standards such as wide-curb lanes and bicycle safe drain grates.

In addition to basic facility type, a growing number of communities include non-motorized level-of-service factors in their planning processes. Whereas roadway level of service traditionally measures the degree of vehicle congestion and delay experienced by travelers, non-motorized level of service focuses on a wider range of factors indicative of users' overall convenience, safety, and qualitative experience.

Specific factors may include but are not limited to:

- Network continuity
- Network quality
- Road crossings
- Traffic protection
- Safety and user conflicts
- Topography
- Actual and perceived safety and security
- Wayfinding
- Weather protection
- Facility maintenance
- Amenities
- Bicycle parking
- Design and aesthetics of facilities and surroundings

Current facilities and services

Shasta County has a growing system of multi-use trails, bicycle lanes, and other facilities. A description of bicycle and pedestrian infrastructure is found in the Shasta County 2010 Bicycle Transportation Plan. The plan is available on the county of Shasta's website: www.co.shasta.ca.us/docs/Public_Works/docs/2010-sc-bike-plan.pdf?sfvrsn=2.

Since adoption of this plan, several significant projects have been added to the network. In addition, SRTA completed an extensive documentation of sidewalks, trails, and bikeways in urban areas using geographic information systems (GIS) technology. The latter expands SRTA's analysis capabilities and permits the non-motorized network to be integrated into the ShastaSIM travel demand model. Data on miles of active transportation facilities by facility type is provided in Table 12.

In general, bicycle and pedestrian facilities are more complete and more frequently utilized in urban areas such as the City of Redding. The city has a growing

Table 12 - Miles of Bikeways and Trails

Class	Miles (GIS)
1 - Dedicated multi-use pathway	2.1
2 - Striped bike lane	52.0
3 - Signed bike route	71.3
4 - Cycle Tracks or Separated Bikeways	0.0
Paved Trails	44.2

network of Class I facilities, a formal complete streets policy, and an active bicycling advocacy community.

The League of American Bicyclists has recognized the city as a ‘bronze’ level bicycle friendly community. An award means that the community is addressing the Five E’s consistently found in great bicycling communities: Engineering, Education, Encouragement, Enforcement, and Evaluation & Planning. By strengthening or expanding efforts in these areas, the City of Redding and other Shasta County communities may become friendlier to bicyclists and earn the status of a silver, gold, platinum, or diamond level community.

SRTA’s greatest ability to influence bicycle and pedestrian safety is through planning and capital funding of infrastructure. In addition, SRTA provides administrative support and technical assistance when pursuing and managing grant funds utilized for capital improvements, education and promotional activities. For example, SRTA leads a Healthy Shasta work group to enhance active transportation options, assists in the annual promotion of bike week, and is developing an online bicycle parking application that can be used with mobile devices to find or update information on bike parking locations in the region.

Information on biking and walking throughout Shasta County can be found online by a variety of resources, including:

- SRTA’s Bike and Pedestrian Planning web page
- Healthy Shasta’s ‘Be Active’ web page
- City of Redding’s Community Services website

- City of Anderson’s Community Services website
- City of Shasta Lake’s Parks & Recreation website

Accomplishments since last RTP

- 2010 Shasta County Bicycle Transportation Plan (adopted June 2010)
- SRTA Board of Directors adopted a 2% Transportation Development Act (TDA) set aside for bike and pedestrian infrastructure.
- Creation of GIS-based network of active transportation facilities suitable for use by within the ShastaSIM regional travel model.
- Creation of bicycle parking data and crowd-sourcing map viewer available through the FarNorCalGIS website.
- Pit River Tribe/Burney Bicycle and Walkway Plan and provides a plan for building more bicycle and walking infrastructure in and around the town of Burney.
- Shasta View improvements around the Redding School of the Arts.
- Old 99 Class I trail and signage program in the City of Anderson
- Beginning of the Great Shasta Rail Trail - An 80-mile scenic multi-use Class I trail located in eastern Shasta County between the communities of Burney and Mt Shasta.

System Utilization

Unlike streets and roads, there is limited information regarding the usage patterns of active transportation infrastructure. The Shasta County Health and Human Services Agency, in partnership with members of the Healthy Shasta collaborative, administers annual bicycle and pedestrian counts at key locations in the region.



Bike Rack Near SRTA’s Office on East Street in Redding

Class I facilities are predominately used for recreational trips. Utilization for transportation trips are limited due in part to the lack of connectivity to the street and road network and ability of users to access key destinations such as Downtown Redding

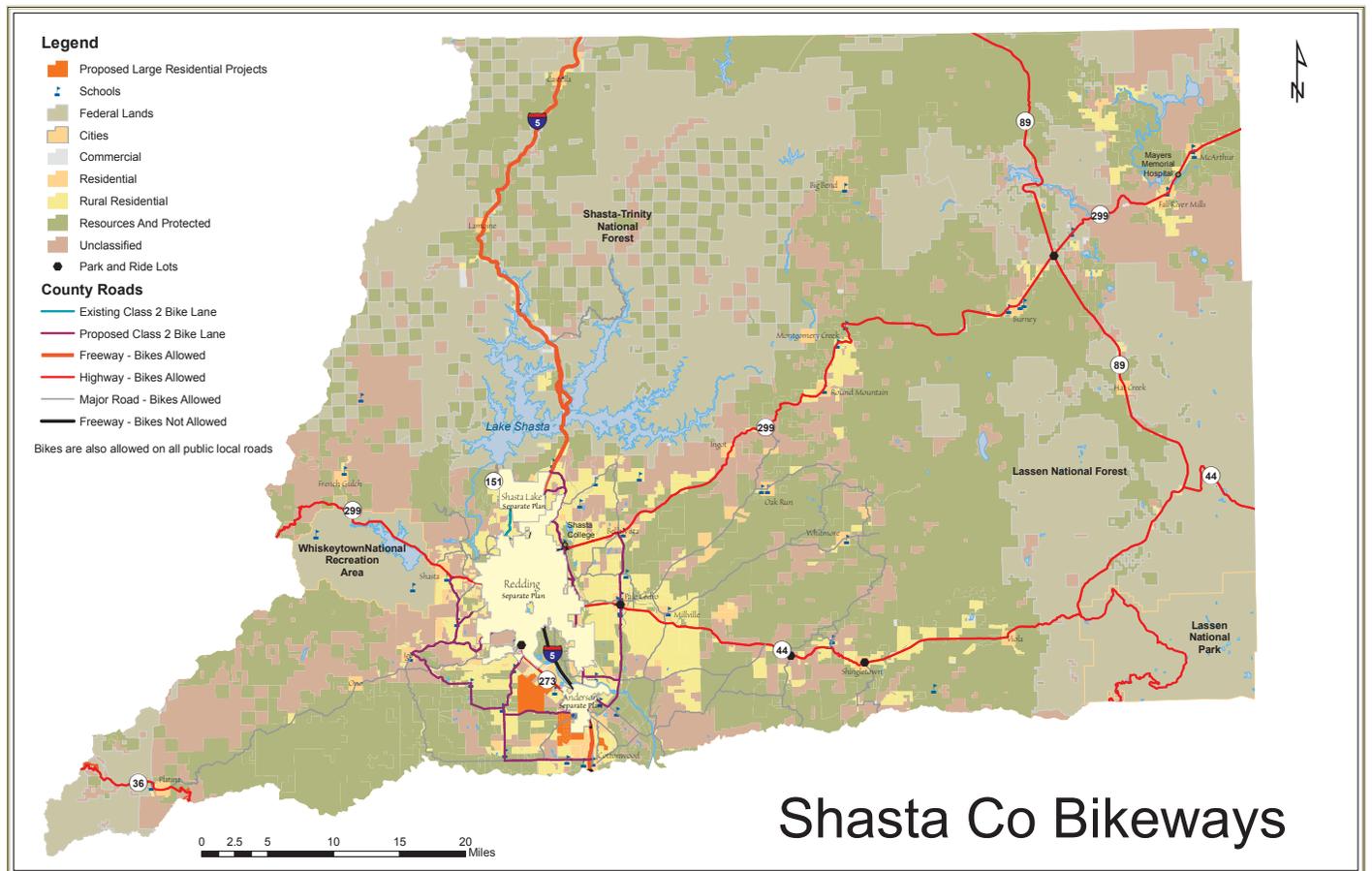
and major employment centers directly from the trail network.



Class I bikeway and bike signage in Anderson

Class II bikeway on Buenaventura Boulevard in Redding

Figure 16 - Shasta County Bikeways (2010 Shasta County Bicycle Transportation Plan)



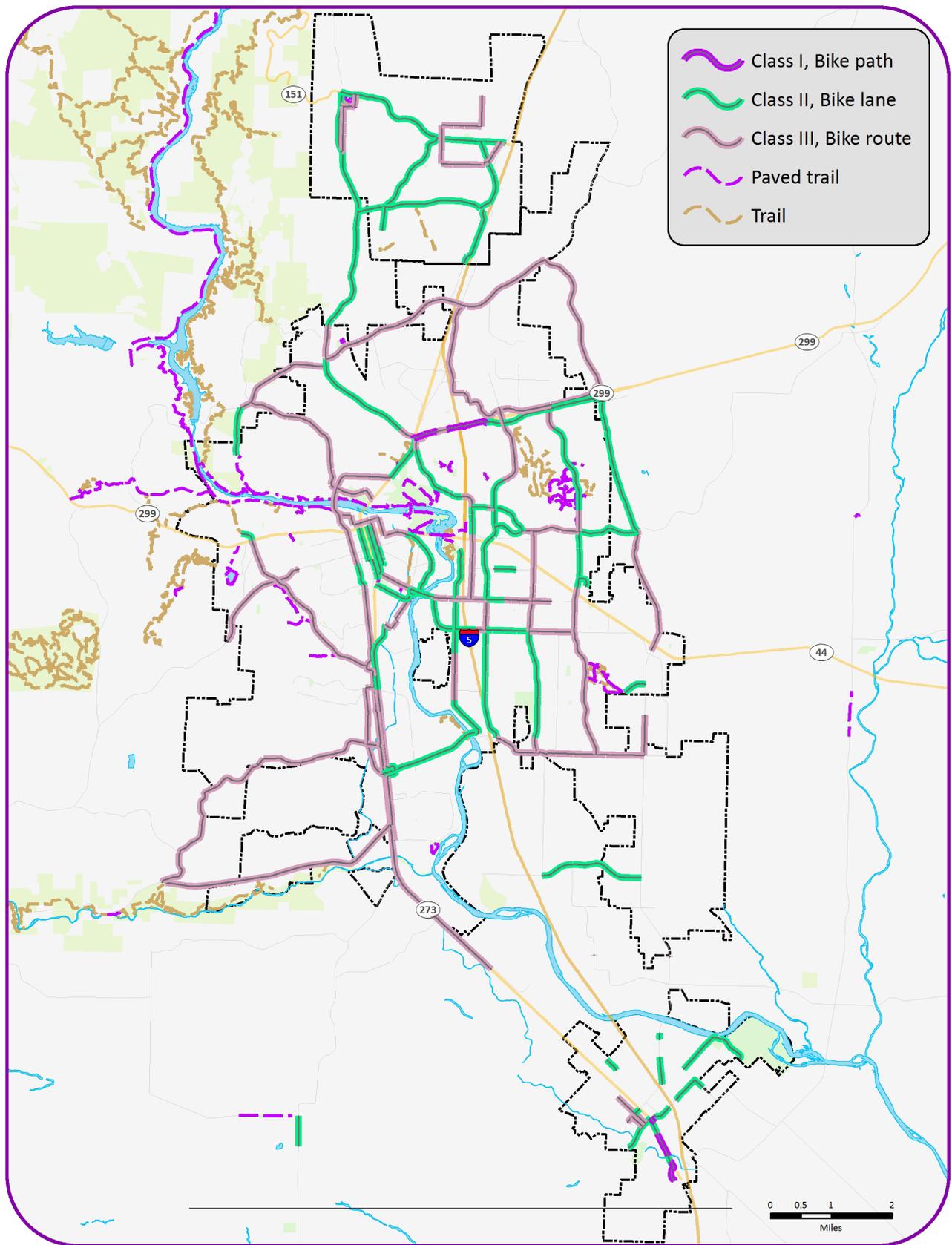


Figure 17 - Non-motorized Facilities

ACTIVE TRANSPORTATION SWOT ANALYSIS

The following observations are not intended to be comprehensive, but rather to highlight salient issues and opportunities related to regional mobility.

STRENGTHS:

- Strong community advocacy groups have emerged or become more actively engaged.
- Regional trails investments (Sacramento River Trail, Diestelhorst Bridge, Sundial Bridge, etc), including major contributions from the McConnell Foundation.
- Public support and usage of trails
- Adopted complete street policies in the City of Redding.

WEAKNESSES:

- Class I trails are incomplete and segmented.
- Regional trails not well connected to transportation network.
- Limited dedicated and consistent funding for active transportation infrastructure.
- Lack of a regional active transportation plan limits access to grant funding assumed in the 20-year revenue forecast.

OPPORTUNITIES:

- Waterways and railroad lines offer linear corridors well-suited to right-of-way for the continued expansion of the paved trails to function as an 'active transportation freeway'.
- Availability of Active Transportation Program and other funding.
- Potential to convert the large number of trail users from recreational users to transportation users.
- Potential use of GPS-enabled smart phones to track non-motorized travel characteristics for enhanced planning and project prioritization.

THREATS:

- Active transportation investments viewed by some as subtracting funds for projects serving motor vehicle operators who pay gas taxes.
- Actual and perceived threats to safety affect mode choice.
- Retrofitting bike and pedestrian infrastructure into urbanized areas designed to maximize vehicle circulation can be problematic.
- Physical barriers, including the Sacramento River, railroad, and Interstate 5 sometimes require less than direct routes.

AVIATION



Public use airports make it possible for the region’s business community to participate in state, national, and international markets. The presence of an airport and passenger air services is often considered a requirement for attracting new business and industries to the region. Other key functions and benefits include emergency preparedness and response, aviation-related business development, and tourism.

Aviation planning occurs primarily at the state level and by individual airports. The California Aviation System Plan (CASP) is prepared by the Caltrans, Division of Aeronautics and updated every five years. Per California Public Utilities Code Section 21701, the CASP is to be developed in consultation with regional transportation planning agencies.

The primary purpose of the plan is to identify and prioritize needed airport capacity and safety related infrastructure enhancements that impact the safety and effectiveness of the California Aviation Transportation System. The plan is available online at Caltrans website:

<http://www.dot.ca.gov/hq/planning/aeronaut/documents2/2007cip082107.pdf>.

Current Facilities and Services

Redding Municipal Airport, the only airport in the county served by scheduled airline service, encompasses 1,659 acres, 500 of which are zoned for commercial use. It is a regional airport serving Shasta County and the seven surrounding counties. It was originally built by the U.S. Army as a military airfield in 1942. It was dedicated to the City of Redding in 1947.

Today, it is the largest civilian facility in California, north of Sacramento.

Airline deregulation has resulted in some turnover among airlines serving Redding Municipal Airport with fluctuation in levels of service available to air travelers. The City of Redding continues to make efforts to expand air service frequencies and destinations through existing air carriers or the addition of new entrants. In May 2009, the City updated their air service study that reviewed the travel habits of the area’s traveling public. The City received Federal assistance through the Small Community Air Service Grant program in 2004 to subsidize new twice-daily service to Los Angeles by Horizon Air in 2004. A second 2008 grant was awarded to assist in the recruitment of a third airline to a destination east of Redding.

Table 13 - Redding Passenger Air Service

Scheduled Airlines	Direct Flights to
SkyWest (doing business as United Express)	San Francisco
Charter Air Service Companies	
Redding Aero Enterprises	
Redding Air Service Helicopters	
Redding Jet Center	
Western Air Charter	
Air Shasta Rotor & Wing	
Jim & I Aviators	

Despite the City of Redding’s efforts to improve air service, only two incumbent airlines have served this region in recent years. Horizon Air pulled out of Redding in 2011, leaving SkyWest as the sole provider of regularly scheduled passenger air service. As providers switch from turboprop to higher cost jet-engined planes, smaller markets such as Chico and Modesto have lost air services. The City of Redding received a \$450,000 federal Small Community Air Service Development Program grant to help SkyWest Airlines bring regional jets to the North State. Daily jet service to and from San Francisco International Airport began in March of 2015. Fares were also dropped by over one-half, making air travel competitive with other travel modes.

Charter air service is provided by several companies. These fixed-base operators also provide aircraft sales, maintenance service, aircraft fuels, and accessories. Federal Express, United Parcel Service, and United States Postal Service provide package service.

Ground access to the Redding Municipal Airport was enhanced in 2003 through the extension of Knighton Road, from Interstate 5 east to the airport. This project enhanced the economic viability of the airport and its surrounding industrially zoned lands. A project is planned to expand Airport Road near the Redding Municipal Airport from two to four lanes with dedicated turn lanes, bike paths, and signals. In addition, RABA began operating the Airport Express Route in July, 2011. The Redding Municipal Airport paid parking lot contains 329 vehicle spaces and is located directly across from the main entrance to the terminal building

Fall River Mills – Fall River Mills Airport is located at an elevation of 3,323 feet in the extreme northeast corner of the county, 70 miles from Redding. It was originally built in the 1940's as a graveled runway. Hangars, runway lights, tie-downs and security fencing have been added since 1965. This is a designated Remote Access airport.



Figure 19 - Fall River Mills Airport

Fall River Mills Airport is currently a General Aviation facility with a 5,000-foot runway, 14 based aircraft, and serving both piston-powered and turbine-powered general aviation transient aircraft. Services are limited to card-lock Aviation Fuel sales. There are currently no other services and no Fixed Base Operators on-site.

Recent improvements including runway and taxiway were extended to 5,000 feet, apron expansion, and construction of a nine unit T-hangar with pilots lounge and ADA bathrooms. The entire airfield is now protected by chain link security fencing.

Aviation growth in eastern Shasta County will be moderate, yet significant for the area. Arguably the most critical function the Fall River Mills airport plays is that of an operations base in the event of wildfires that often plaque the North State.

Benton Airport is situated within the city limits approximately one mile from Downtown Redding. Benton is a small, single runway, Visual Flight Rules (VFR) airport for single and small twin-engine general aviation aircraft. It is classified as a General Aviation Facility within the US DOT/FAA National Plan of Integrated Airport Systems. It contains 416 acres for aviation and commercial development, but its growth potential is constrained both by topography and residential encroachment. There are approximately 130 private aircraft based at Benton, in addition to the California Highway Patrol air operations. Hillside Aviation provides charter air service, sales, fuel, and maintenance.



Figure 18 - Benton Airpark

Seaplane Facility – Located on Lake Shasta near Bridge Bay Resort, the primary role of these facilities is to provide access to aircraft used in wildfire suppression.

Accomplishments since last RTP

- Redding Municipal Airport Terminal expansion project was completed in 2014.
- RABA added express transit service between Downtown Redding and Redding Municipal Airport began in 2012.

AVIATION SWOT ANALYSIS

The following observations are not intended to be comprehensive, but rather to highlight salient issues and opportunities related to regional mobility.

STRENGTHS:

- Redding Municipal Airport was recently upgraded, including expansion of terminal.
- Community financial support to attract service providers.
- Redding Municipal Airport utilizes all three types of aviation communication technology - a competitive advantage over surrounding regions.
- Addition of passenger jet service to Redding Municipal Airport
- Recently reduced airfares make direct travel to/from Redding more competitive with other travel options.
- Privately owned airport shuttle services provides connection to Sacramento International Airport.

OPPORTUNITIES:

- Loss of passenger air service in nearby Chico, CA provides potential to capture additional passengers.

WEAKNESSES:

- Ability to attract and retain service providers.
- Limited population within market radius.
- Limited number of departures/arrivals
- Service is limited to flights to and from San Francisco International Airport.

THREATS:

- Competition from Sacramento International Airport (SMF) and Rogue Valley International-Medford Airport (MED).
- Weather and fog can impact reliability.

RAIL



Rail's arrival in Shasta County in 1872 expanded economic development by connecting people and freight to Sacramento and the San Francisco Bay Area and beyond.

Rail service is largely privately funded; SRTA does not fund rail operations. Current facilities include two rail corridors owed respectively by the Union Pacific Railroad (UPRR) and Burlington Northern (BSNF).

At the state level, the California State Rail Plan was adopted in May 2013 (see http://californiastaterailplan.dot.ca.gov/docs/Final_Copy_2013_CSRP.pdf). Although a growing North State market and need for enhanced passenger service to Redding is noted in the plan, further studies have been deferred as a result of lack of interest from Union Pacific Railroad.

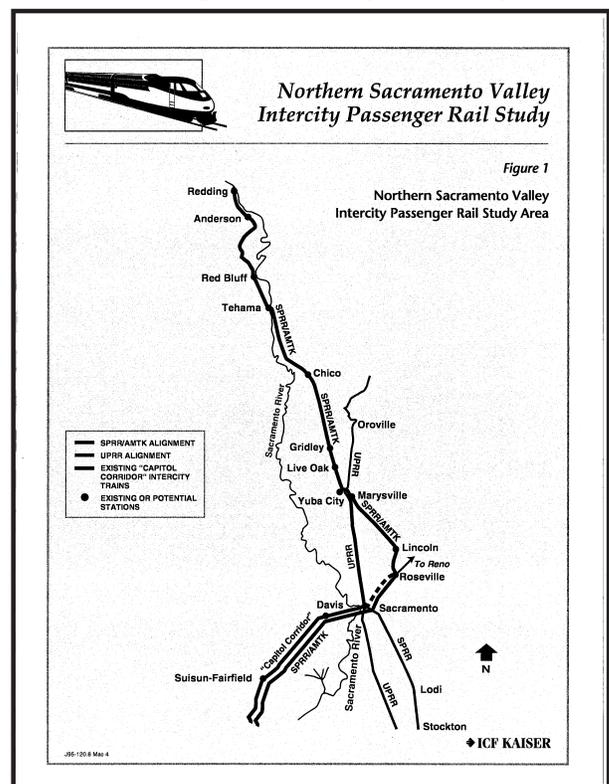
The most recent regional plan, completed in 1995, is the Northern Sacramento Valley Intercity Passenger Rail Study. This feasibility study investigated the viability of intercity rail service between Sacramento, Chico, and Redding. Two options were studied.

- Option A includes intercity rail between Sacramento and Chico, with more frequent service between Marysville/Yuba City.
- Option B is the same as Option A with the addition of an intercity rail extension to serve Red Bluff and Redding. Option B of the study estimated that by the year 2020, 147 passengers in Redding would be using the service each day. The farebox recovery for the proposed service would range between 19 and 22 percent.

Current system

Amtrak Coast Starlight passenger service runs on UPRR-controlled tracks in Shasta County with stops in Redding at 3:14 a.m. northbound and 2:21 a.m. southbound with service to Los Angeles, Oakland, Sacramento, Portland, and Seattle. Additional connections can be made at these locations. Starlight's daily round trip is the second most popular long-distance train in the Amtrak system. For many years, demand has often outstripped capacity during summer and holiday travel periods.

Figure 20 - Northern Sacramento Valley Intercity Passenger Rail Study Area Map



In addition to passenger rail service, Amtrak operates state-supported feeder bus connections to the state-supported Capitol Corridor Route in Sacramento and San Joaquin Route in Sacramento/Stockton.

At the state level, high speed rail continues to inch toward reality. Although there are no expectations for high speed rail north of Sacramento, it will be important for the region to plan for interregional connections in the future.

RAIL SWOT ANALYSIS

The following observations are not intended to be comprehensive, but rather to highlight salient issues and opportunities related to regional mobility.

STRENGTHS:

- Redding train station facility is located at the Downtown Redding Transit Center with connections to intercity bus, local public transit, and other modal opportunities.

WEAKNESSES:

- Early morning service schedule makes it difficult to attract ridership.
- Passenger service schedule is not reliable due to priority given to freight trains.
- Station facilities, including ticket window, lounge, and restrooms are not open for service.
- Lack of grade separation between rail tracks and local roadways is the cause of vehicle delay, most notably in Downtown Redding due to rail car switching.

OPPORTUNITIES:

- Renewed state interest in passenger rail planning and funding as a result of California High Speed Rail.
- Potential to work with Union Pacific Railroad to relocate rail switching operations from Downtown Redding to industrial property recently annexed by the city of Anderson. Located adjacent to the new Deschutes Road-Interstate 5 interchange project, the site is also well-suited for an intermodal freight hub.

THREATS:

- Union Pacific Railroad has been reticent to consider the operation of additional passenger service.
- North State passenger rail service continues to be a low funding priority for the state.
- Safety concerns, especially where rail intersects with regional roadways, waterways, bridges and populated areas.
- The Interstate 5 corridor is at risk due to non-standard vertical and horizontal clearances at the Interstate 5 bridge just north of Deschutes Road in the city of Anderson.
- History of freight car derailments in recent decades threaten to shut down rail corridors and adjacent roadways, including a number of critical interregional routes.