

# Pit River Tribe/Burney Bicycle and Walkway Plan



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With:



# **Pit River Tribe / Burney Bicycle and Walkway Plan**

**Prepared for:  
Pit River Tribe and town of Burney**

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## EXECUTIVE SUMMARY

### PURPOSE

Walking and bicycling are affordable, healthy, sustainable, socially equitable, and fun forms of transportation. Many Burney residents and visitors already enjoy walking and bicycling for transportation and recreational purposes. The Pit River Tribe and community of Burney are developing the Bicycle and Walkway Plan to establish a long-term vision for bicycling and walking infrastructure and to identify next steps for implementation. The ultimate goal of this plan is to improve safe routes to schools and increase the number of people in Burney who bike and walk.

### DEVELOPMENT

The Bicycle and Walkway Plan (BWP) was funded through a Fiscal Year 2010-11 Caltrans Environmental Justice Transportation Planning Grant awarded to the Pit River Tribe. BWP development engaged both the Pit River Tribe and the greater Burney community. Public participation was encouraged through two community charrettes, held in April and September 2012, and consultation with stakeholders. Stakeholders included:

- Pit River Tribe
- Shasta County Public Works
- Fall River Joint Unified School District
- Shasta County Public Health
- Shasta County Regional Transportation Planning Agency (RTPA)
- Caltrans
- Burney Fire Department
- California Highway Patrol
- Shasta County Sheriff's Office
- Great Shasta Rail Trail

### CONTENTS

The Bicycle and Walkway Plan includes the following chapters:

- 1) Introduction – discusses the project purpose, development process, and setting.



- 2) Existing Conditions – examines existing demographic characteristics and transportation infrastructure.
- 3) Public Participation – describes the efforts to involve the opinions of community members and important stakeholders.
- 4) Proposed Bikeway and Walkway Network – shows the proposed network of bikeway and walkway facilities.
- 5) Implementation – includes cost estimates for proposed projects, prioritization, and next steps for high-priority projects.





## INTRODUCTION

### PURPOSE

Throughout the community of Burney, the State of California, and the United States, the number of people walking and bicycling for both utilitarian and recreational purposes continues to grow. To encourage the role of walking and bicycling as viable modes of transportation, the Pit River Tribe and the community of Burney strive to provide well-maintained facilities that promote public use. The Pit River Tribe / Burney Bicycle and Walkway Plan (BWP) establishes a long-term vision for bicycling and walking infrastructure and identifies next steps for implementation. The ultimate goal of this plan is to improve safe routes to schools and increase the number of people in Burney who bike and walk.

Both walking and bicycling are low-cost, non-polluting, sustainable, healthy, and fun forms of transportation that are ideal for many different trip types and members of the Burney community. The ultimate success of the BWP will depend upon the community; both to continue their involvement and interest after the plan's development, and also to foster awareness that pedestrians, bicyclists, and motorists share the transportation system as equally legitimate users.

### DEVELOPMENT

The Bicycle and Walkway Plan (BWP) was funded through a Fiscal Year 2010-11 Caltrans Environmental Justice Transportation Planning Grant awarded to the Pit River Tribe. BWP development engaged both the Pit River Tribe and the greater Burney community. Public participation was encouraged through two community charrettes, held in April and September 2012. Stakeholders were engaged throughout the process via two committees, the Technical Advisory Committee and the Community Advisory Committee. Committee members included:

- Pit River Tribe
- Shasta County Public Works
- Fall River Joint Unified School District
- Shasta County Public Health
- Shasta Regional Transportation Agency (SRTA)
- Caltrans
- Burney Fire Department
- California Highway Patrol
- Shasta County Sheriff's Office
- Great Shasta Rail Trail



Advisory Committee members provided feedback throughout the project on the study area, the technical approach, public outreach strategy, and proposed projects. Additionally, interviews with key stakeholders were performed at the April 2012 charrette. Chapter 3 includes a detailed summary of feedback from the community charrettes and stakeholder interviews.

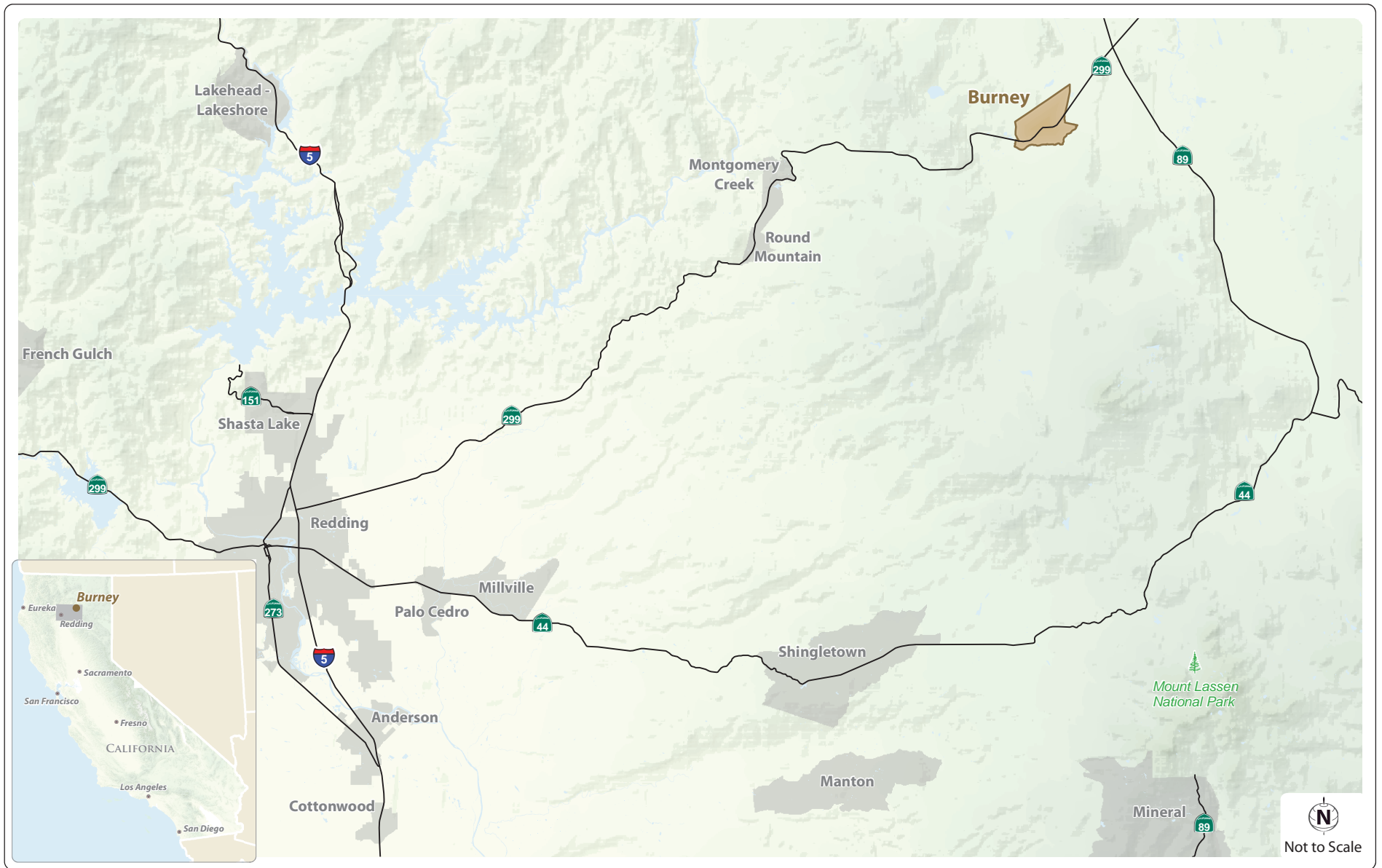
## SETTING

Located about 54 miles northeast of Redding, Burney is an unincorporated community and census-designated-place in Shasta County. Burney is home to a beautiful landscape, a prominent tourist industry, and several members of the Pit River Tribe. Figure 1 shows the town's proximity to Redding and natural landmarks such as Lassen Volcanic National Park and Lake Shasta. Burney Creek runs north and south through the middle of Burney and the Hatchet Ridge Mountain provides a beautiful backdrop for the community. According to the Burney Chamber of Commerce, the community is home to about 4,500 residents, mostly young families and retirees, but the population increases to about 7,500 in the summer months because of tourism. Many of Burney's residents are employed in the natural resources industry, especially logging. Hiking, fly fishing, camping, and other outdoor activities are a major source of tourist activity for the town.

The Pit River Tribe 79 Acres are within Burney and approximately 10 percent of the Tribe's population lives in Burney. The 79 Acres is home to several important Tribal services and businesses, including the Pit River Casino, the Pit River RV Park, the Pit River Environmental Office, the Pit River Health Service Office, a senior housing project, and administrative offices. A convenience store opened on the 79 Acres in March 2012. The Pit River Tribe and community of Burney have similar interests and aspirations for transportation facilities in Burney.

The Hatchet Ridge Wind Farm was recently constructed near Burney along the ridge-line of Hatchet Ridge Mountain. The \$200 million wind farm has a capacity of 100 Megawatts. The project was subject to considerable controversy within the community because some of the 44 turbines can be seen from Main Street in Burney.





## DEFINITIONS AND ACRONYMS

### DEFINITIONS

Where possible, definitions are based on those in the California Streets and Highways Code Section 890.4.

**Class I Bike Path** – provides a paved, completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

**Class II Bike Lane** – provides a restricted right-of-way within a roadway designated for the exclusive or semi exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

**Class II Bike Route** – provides a right-of-way designated by signs or permanent marking and shared with pedestrians and motorists.

**Controlled Crosswalk** – a marked crosswalk across an intersection’s approach or street that is controlled by a stop sign or traffic signal.

**Uncontrolled Crosswalk** – a marked crosswalk across an intersection’s approach or street that is not controlled by a stop sign or traffic signal and relies on driver yield compliances.

**Curb Ramp** – usually provided at an intersection’s corner so that wheelchair users can access the sidewalk

**Dirt Path / Trail** –an unpaved, usually informal, completely separated right-of-way used primarily by pedestrians, bicyclists, and equestrians.

### ACRONYMS

**BWP** – Bicycle and Walkway Plan

**PRT** – Pit River Tribe

**TAC** – Technical Advisory Committee

**CAC** – Community Advisory Committee

**FRJUSD** – Fall River Joint Unified School District



**SRTA**– Shasta Regional Transportation Agency

**CHP** – California Highway Patrol

**SR** – State Route

**RABA** – Redding Area Bus Authority

**GSRT** – Great Shasta Rail Trail



## EXISTING CONDITIONS

### INTRODUCTION

This chapter of the Bicycle and Walkway Plan documents the existing land uses and transportation facilities in the community of Burney. This includes the community demographic characteristics, land uses, street network, bicycle facilities, pedestrian facilities, and any other amenities that affect walking and bicycling. This analysis of the existing conditions reveals gaps in the network and areas with high potential for improvement. Additionally, this documentation helps illustrate how the community changes over time by providing a snapshot of Burney's transportation infrastructure as it is today.

### DEMOGRAPHIC CHARACTERISTICS

According to the United States (US) Census 2010, Burney has a population of 3,154. Of Burney's total population, 233 classify themselves as American Indian.

Information from the Census 2000 Journey to Work describes the travel nature of Burney residents (Journey to Work was not repeated for the Census 2010, so 2000 data is the most recent available). Meaningful statistics include:

- 1.2 percent of Burney residents bicycle to work; 8.5 percent of Burney residents walk to work
- 72.8 percent of Burney residents drive alone to work
- Among workers who do not work at home, 55.6 percent travel less than 10 minutes to work

A sizeable percentage of Burney residents already walk or bicycle to work (almost 10 percent). Most Burney residents drive alone to work. However, many do not travel far, suggesting that many of these trips could be achieved by walking or bicycling.



The Census 2000 Journey to Work data only describes the travel nature of work trips. It does not reveal the nature of trips for other purposes such as trips to school, to the store, or for other errands. Nonetheless, based on the information available in the Census 2000 Journey to Work, many school, store, or errand trips in Burney can be achieved by walking or bicycling.

## LAND USES AND TRIP GENERATORS

Burney consists of mostly residential and commercial parcels, surrounded by and filled in with undeveloped private lots and public open space. Figure 2 shows the land uses and their general location. The residential area is predominantly single family homes and the commercial land uses are primarily restaurants and small businesses. Most of the commercial land uses are along the State Route (SR) 299 corridor. The corridor consists of two distinct segments along Main Street. Between Shasta Street and Michigan Street, businesses front directly onto the sidewalk and parking is provided on-street. Between Marquette Street and Commerce Way, parking lots typically separate businesses from SR 299.

Some of the businesses that generate a high number of trips include Safeway and the Pit River Casino. There are four major employers that generate commute trips. Mayers Memorial Hospital, Fall River Joint Unified School District, Sierra Pacific Industries, and PG&E all employ more than 100 people and likely generate numerous daily commute trips.

The Fall River Joint Unified School District (FRJUSD) includes six schools in Burney, but most students attend school at two main campuses: East Burney Elementary School which serves students preschool through sixth grade and Burney Junior-Senior High School which serves students in seventh through twelfth grade. In the 2010-11 school year, the elementary school enrolled 373 students and had 17 teachers. In the 2011-12 school year, the high school enrolled 220 students and had 15 teachers. Both of these schools are located on the eastern edge of Burney causing potential for congestion because everyone is commuting from the west to the east at roughly the same time. Both schools have drop off/pick up zones in front of their school to lessen congestion impacts. Burney Junior-Senior High School has a parking lot that channelizes most traffic and provides for generally predictable auto circulation patterns around the school property, but the elementary school often has cars parking in dirt amongst trees due to a lack of sufficient parking spaces. Some individuals walk or bike to school, making this location and surrounding neighborhoods ideal for improved bicycle and pedestrian infrastructure.

The FRJUSD Office is located on the west side of Burney near an Alternative Education Center that houses Burney Community Day and Mountain View Continuation High School. Burney also has a two year



community college (Shasta College) and a four year Christian college (Simpson College) for higher education.

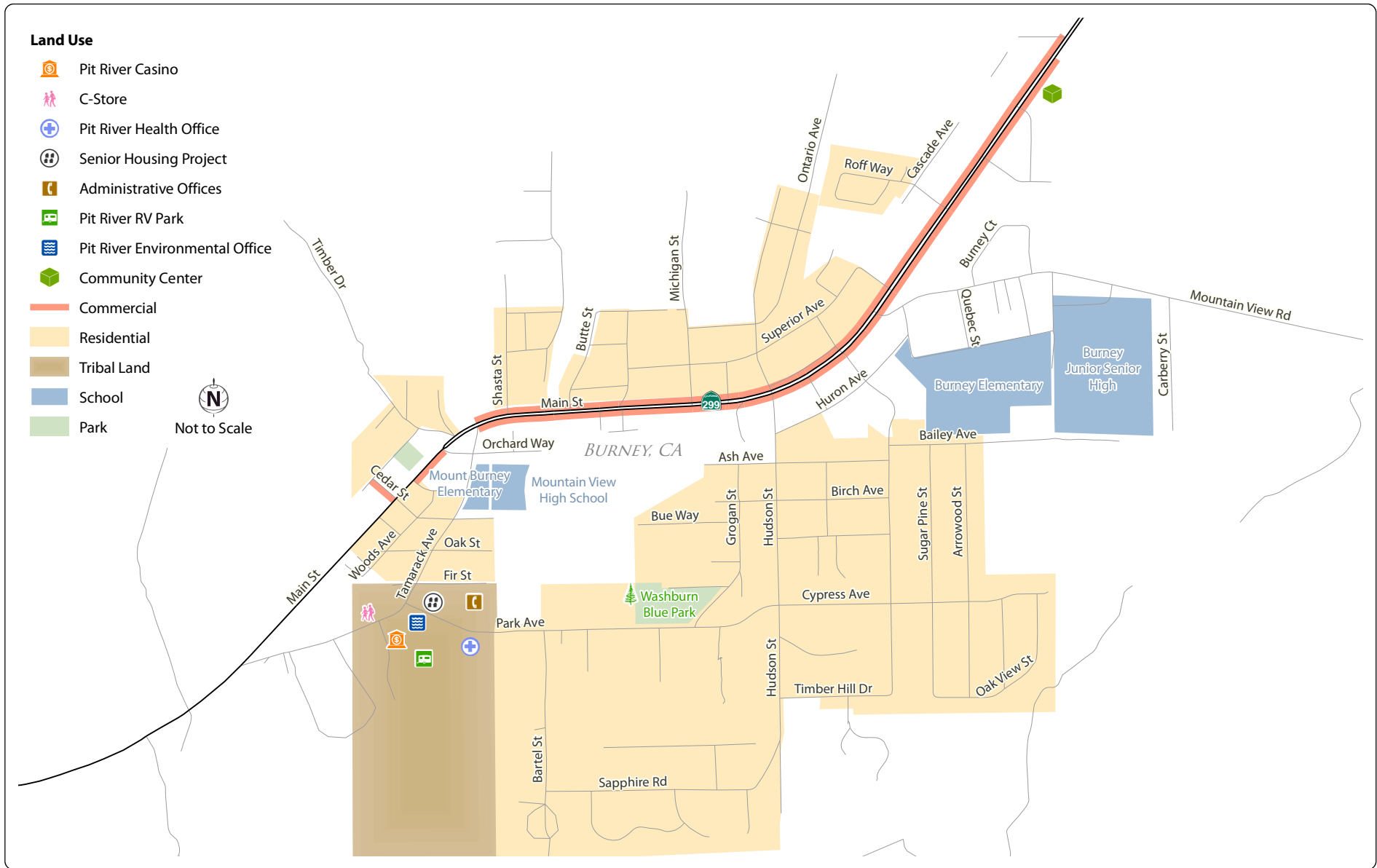
There are two parks in Burney. Burney Civic Park is the smaller of the two and located on the west side of Burney. Washburn Bue Park is on the south side of Burney and features two baseball fields.

The community of Burney is also home to the Intermountain Community Center. The Intermountain Community Center has meeting space for local organizations and operates a day care facility during business hours.

Most of the houses in Burney rely on clustered mail boxes to retrieve their mail. This creates regular trips to the mailbox that might often be walking trips instead of automobile trips.







## TRANSPORTATION INFRASTRUCTURE

The community of Burney is small, relatively compact, and is thus ideal for walking and bicycling when the weather is conducive to active transportation. The developed area of Burney is approximately 1.5 miles wide and tall, so most trips are less than 1.5 miles in length – an approximately 35 minute walk or 10 minute bike ride. This section provides an inventory of the current roadways, walking facilities, and bicycling facilities that serves as a basis for improvement recommendations so that Burney can reach its bicycling and walking potential.

### BICYCLE FACILITIES

Burney has approximately 1.5 miles of Class II bike lanes that line most of Main Street within Burney. As shown in Figure 3, the bike lanes begin at Elm Street and end northeast of Commerce Way.

### PEDESTRIAN FACILITIES

Sidewalks, crosswalks, and curb ramps are located sporadically around Burney, but most are along the Main Street corridor and near the two large schools. There are also a series of dirt paths that are well-traveled by many in the community. Figure 4 shows the locations of these pedestrian facilities throughout the community. Out of the 21 crosswalks found in Burney, 14 of them are controlled, meaning that there is a signal, stop sign, or other traffic control device to stop automobiles and provide pedestrians a safe opportunity to cross.



### TRANSIT FACILITIES

The Redding Area Bus Authority (RABA) provides regional transit that connects Burney with the City of Redding and other communities in between. The Burney Express is less than \$5 per trip and runs about 6 times each weekday. Figure 5 shows the route and stop location.



## ROADWAY FEATURES

There are a variety of other unique roadway features that will help and hinder efforts to promote walking and bicycling in Burney.

Most of the roads in Burney have approximately 24 feet of paved width and have varying shoulder widths which are used in a variety of ways. In Burney, the average annual rainfall is about 27 inches and average annual snowfall is about 40 inches and requires plowing. On SR 299, the snow is plowed to the center of the roadway, but the majority of roads in Burney are narrower so the snow is plowed to the side of the road. Many of these roads do not have an underground drainage system so drainage ditches and trees on the shoulders are used to convey and infiltrate water and snow. The unpaved shoulders are also used as unregulated car parking spaces by residents and visitors. These current uses of the shoulders need to be considered when looking at any new bicycle and pedestrian facilities. Figure 6 shows the number of lanes on roadways in Burney and the locations of signalized or all-way stop controlled intersections.

State Route 299, also known as Main Street, is the main highway through Burney and provides access to most of the commercial property in the community. The highway is frequently used by logging trucks. Compared to other roadways in Burney, SR 299 has relatively high traffic volumes and speeds. Figure 7 shows the posted speed limits for SR 299. The speed limit on SR 299 varies between 30 miles per hour (mph) and 50 mph; all other roadways in Burney have a speed limit of 25 mph. There are several uncontrolled crosswalks on



SR 299, some of which have limited sight-distance due to curves in the roadway. According to 2010 Caltrans traffic data, the annual average daily traffic on SR 299 in Burney is 9,800 vehicles per day; the average peak hour volume is 1,200 vehicles.

The average width of SR 299 is approximately 75 feet, which is very wide for a three lane roadway. This makes crossing the street less safe for pedestrians because they are exposed to moving vehicles for a longer period of time. There are also few controlled crosswalks on SR 299, further increasing the difficulty of crossing the street. There are only two signalized intersections in Burney and both are on SR 299.



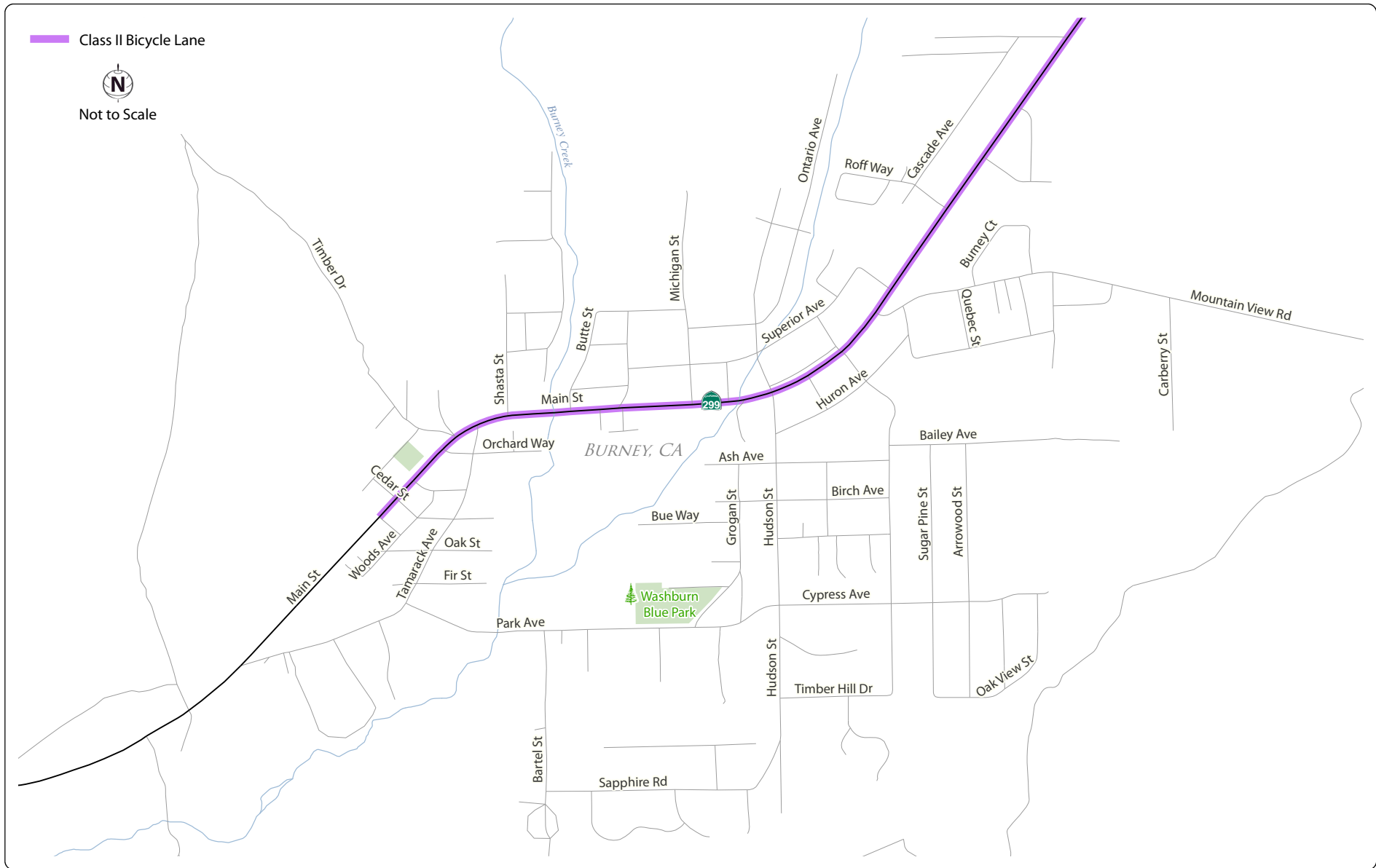
## COLLISION HISTORY

Based on collision data from the California Highway Patrol Statewide Integrated Traffic Records System (SWITRS), one pedestrian/vehicle and one bicyclist/vehicle collision occurred during the five year period from 2006 through 2010.

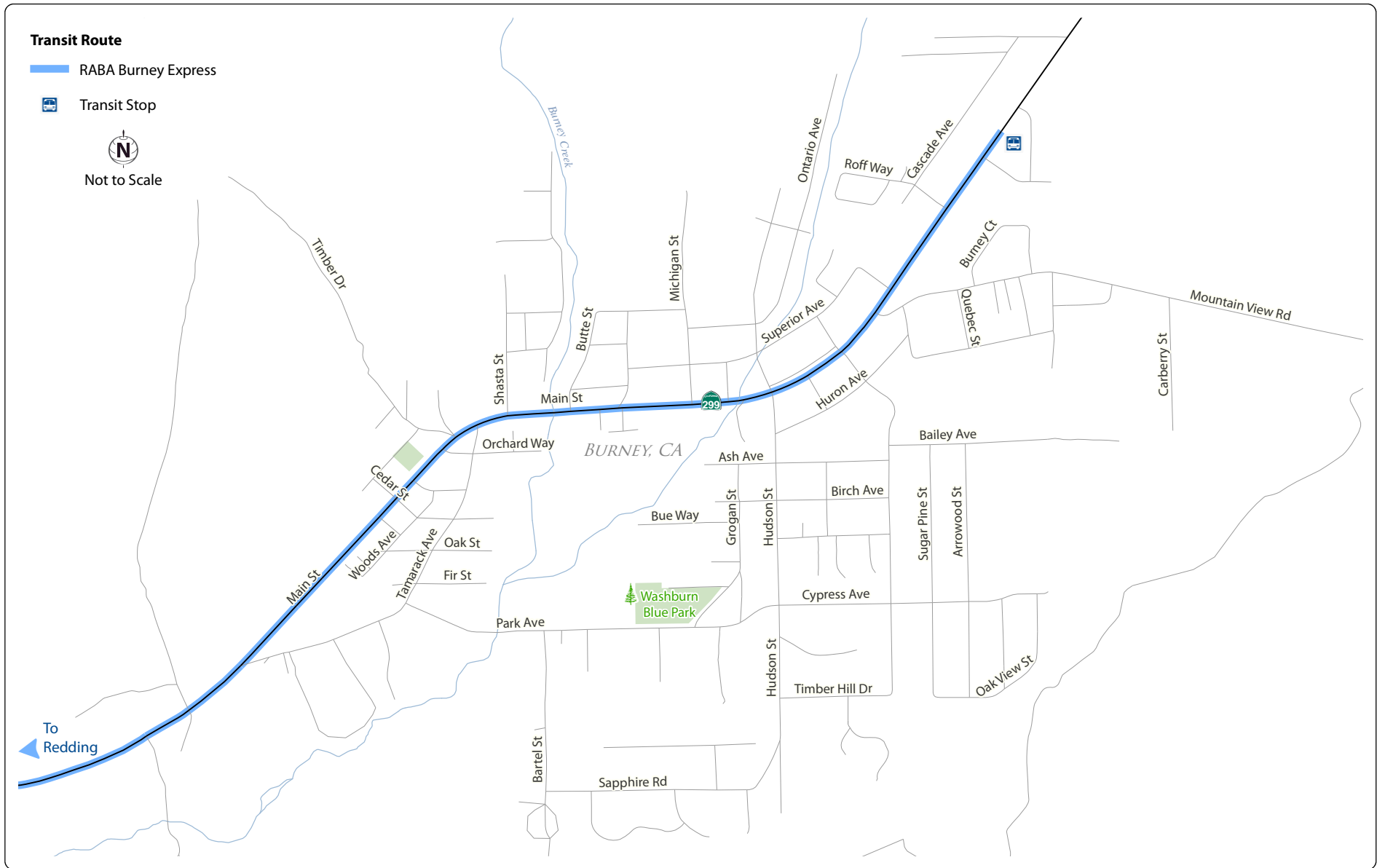
The pedestrian/vehicle collision occurred on Ash Avenue west of Marquette Street at 5:15 PM on Friday, January 26, 2007. The Pedestrian Action, which describes what the pedestrian was doing just before the collision occurred, was "in road, including shoulder". The collision resulted in visible injury. The driver was at-fault for the collision; the collision victim was a 50 year old male.

The bicyclist/vehicle collision occurred at the SR 299 / Hudson Street intersection on Thursday, May 1, 2008 at 2:40 PM. The collision resulted in visible injury to two bicyclists (who were riding on the same bicycle). The two male bicyclists, ages 11 and 13, were at-fault for the collision.















## PUBLIC PARTICIPATION

Public participation played an essential role in the development of this plan. The plan development team solicited public input regarding community values, existing biking and walking facilities, potential biking and walking facilities, and desired safety enhancements. Public input was used to develop and prioritize the recommend network of bikeways and walkways. The planning process included regular meetings of the Technical Advisory Committee and Community Advisory Committee and two charrettes.

### APRIL 2012 CHARRETTE

The plan development team hosted a two-day charrette on April 19 and 20, 2012. The charrette included a public workshop, stakeholder interviews, and a walking audit to solicit input from a broad range of Burney residents and stakeholders. Together, these events defined an image of what Burney residents care about and what they want their streets to look like in the future.

### PUBLIC WORKSHOP

The public workshop was held on April 19 and attracted approximately 100 residents of all ages and backgrounds. There were two activities during the event to gather local opinions on the community and its transportation infrastructure. In the first activity, workshop facilitators asked participants "what do you like most about living in Burney?"; participants wrote their top three choices on post-it notes. A variety of topics emerged from this exercise including nature, sense of community, and the environment. This list details the characteristics of Burney that residents enjoy most.



- 1) Burney Creek, Burney Falls, and other waterways in the area
- 2) The mature trees and natural landscape
- 3) Nearby Burney Mountain



- 4) The small, tight knit community aspects that make it a peaceful place to live
- 5) The unique and pristine beauty of the town
- 6) The feelings of safety, comfort, and security throughout the community
- 7) The friendly atmosphere and community of families
- 8) The seasons and temperature changes throughout the year

The second activity prompted participants to mark-up maps of Burney to identify problematic locations and suggested improvements. A collection of different concerns and suggestions emerged from the map exercise. Appendix A includes photos of each of the maps.



### Concerns

- High and unsafe traffic speeds along the west end of SR 299 entering Burney
- Lack of formal space for pedestrians and bicyclists on roadways throughout Burney, especially near schools
- Intersection safety concerns at several locations, including the Main Street / Marquette Street intersection and the Hudson Street / Park Avenue / Cypress Avenue intersection

### Suggestions

- Enhance existing crosswalks along Main Street
- Add a welcome sign or gateway features on SR 299 at the ends of Burney
- Add curb extensions with landscaping on Main Street
- Add sidewalks and bike lanes on Hudson Street, Park Avenue, Tamarack Avenue, and Mountain View Road
- Add sidewalks and bike lanes around Burney schools
- Add benches along Main Street and in some parks
- Formalize, enhance, and add light fixtures to the trail along Burney creek
- Construct a roundabout or traffic signal to slow traffic at the Hudson Street / Park Avenue / Cypress Avenue intersection



Feedback from workshop participants influenced and helped create the list of proposed projects. These exercises provided specific details about the transportation infrastructure in Burney from those who use it every day.

## STAKEHOLDER INTERVIEWS

Interviews regarding the Bicycle and Walkway Plan were held with three stakeholder groups to acquire local insights and opinions. These interviews identified locations in the community perceived as unsafe and also offered suggestions for improvement. The interviews were conducted with the Pit River Tribal Council, the Fall River Joint Unified School District, and a representative from the Great Shasta Rail Trail.

### Pit River Tribal Council

The plan development team met with the Tribal Council on April 20<sup>th</sup>, 2012 to discuss concerns and suggestions they have in the community relating to the transportation infrastructure. The comments from the council are summarized in the list below.



- A crosswalk on Park Avenue is needed to connect the administrative offices and senior housing project to the Pit River Health Services Office
- Sidewalks are desired to connect the Pit River Tribe 79 Acres to nearby destinations
- There are many individuals who use wheelchairs and scooters on the 79 Acres
- Lighting was cited as an issue on many streets in Burney, such as Park Avenue

### Fall River Joint Unified School District

The plan development team met with the FRJUSD Superintendent and principals from Burney Elementary School and Burney Junior-Senior High School on April 19, 2012. The safety concerns and recommendations expressed in this meeting are listed below.

#### *Issues*

- Students and parents walk through elementary school property to get to school from the south
- There are high automobile speeds on Tamarack Road, Hudson Street, Huron Avenue, and Park Avenue



- The bridge over Burney Creek on Park Avenue is very narrow
- Crossing SR 299 at Shasta Street and Enterprise Drive is problematic

### *Suggestions*

- Burney Elementary and Burney Junior-Senior High often share facilities making a connection between the two highly desirable
- A sidewalk is needed along Mountain View Road from the schools to SR 299
- The crosswalk near the movie theatre needs to be enhanced
- A sidewalk along Tamarack Road is desired
- Lighting is needed at crosswalks along SR 299
- A path is needed north of Mountain View Road connecting to Enterprise Drive and commercial destinations

### **Great Shasta Rail Trail**

On April 19<sup>th</sup>, 2012 a representative from the Great Shasta Rail Trail (GSRT) shared his knowledge of transportation projects in Burney and the surrounding region. He gave a brief history of the GSRT dating back to 2005 and leading up to March 2012, when the right-of-way was purchased for the rail line. The GSRT was awarded a grant from the National Park Service for a trail concept plan which is currently being developed. The representative claimed that Burney is an active community and would greatly benefit from more trails. The GSRT will have a terminus in Burney near the SR 299 / Black Ranch Road intersection; bicycle and pedestrian connections from Burney to the trail terminus will encourage trail use.

## **SEPTEMBER 2012 CHARRETTE**

Following the April 2012 charrette, the plan development team incorporated public input into the draft Bicycle and Walkway Plan. The team then presented the plan to the Burney community at a charrette on September 25 and 26, 2012. Events included a plan presentation to the Pit River Tribal Council, a public workshop for the Burney community, and a Safe Routes to School training.



## PIT RIVER TRIBAL COUNCIL

On the morning of Tuesday, September 25, the plan development team met with the Pit River Tribal Council to present the draft recommendations for the Bicycle and Walkway Plan. Plan development team members gave a review of the activities from the April 2012 workshops and the initial community input the team received during those events. After that, the team went over the recommendations that were refined through the Technical Advisory Committee. The Tribal Council was supportive of the draft recommendations. However, a few issues were raised regarding Park Avenue to make sure the plan development team addressed the lighting and speeding issues near the Tribal lands. Other issues brought up by Council Members were related to pursuing funding to implement recommendations, Caltrans involvement, and what would be the phasing of projects.

## PUBLIC WORKSHOP

On the evening of Tuesday, September 25, the plan development team held a public workshop for the community at the Burney Veterans of Foreign Wars Hall. Members from the community had a chance to drop in and look at display maps of the draft recommendations for the Bicycle and Walkway Plan, and to provide additional input directly on the maps and to talk with members of the plan development team. There was also a presentation for community members to highlight some of the different recommendations, get additional comments, and to go over the next steps in the project.



Community reactions to the draft recommendations were positive, and people liked the improvements along State Route 299. The following comments were made during the presentation:

- Be sure to consider the needs of seniors, especially those using motorized wheelchairs
- Consider including Johnson Park issues, such as dealing with high vehicle speeds, a lack of wide shoulders, and pedestrians crossing the highway
- Make uncontrolled crossings more visible, shorten crossing distances, and possibly use beacons
- Teach pedestrians and cyclists safe behavior



## SAFE ROUTES TO SCHOOL TRAINING

Plan development team members from the Local Government Commission conducted a half-day Safe Routes to School Training for parents and teachers at Burney Elementary School on Wednesday, September 26. This was an additional activity to tie in with the Bicycle and Walkway Plan, as well as to encourage parents and teachers to develop a stronger Safe Routes to School program in the community.



## PROPOSED BIKEWAY AND WALKWAY NETWORK

This chapter describes the proposed Burney bikeway and walkway network. Public input received during the two charrettes, as well as the interviews with stakeholders, greatly influenced the development of the proposed network.

### PROPOSED FACILITY TYPES

The recommended facility types include:

**Class I bike path** – paved bike paths for exclusive use of bicyclists and pedestrians are proposed in high-priority locations near schools where suitable right-of-way is available.

**Class II bike lanes** – new on-street bike lanes are proposed in one location: Bailey Avenue between Marquette Street and Tall Timber Lane.

**Sidewalks** – five foot concrete sidewalks with curb and gutter are proposed near schools and in areas with the highest anticipated pedestrian activity. Because the difficulty of snow removal, sidewalks were proposed in only a limited number of locations.

**Wide shoulders** – four to six foot paved shoulders, as right-of-way is available, for use by bicyclists and pedestrians are proposed on Burney's busier residential streets. In general, it is easier to remove snow on wide shoulders than on sidewalks.

**Trail** – unpaved trails for exclusive use of bicyclists and pedestrians are proposed through some of Burney's natural areas where informal trails already exist.

**Crosswalk improvements** – enhancements to existing marked crosswalks are identified, as well as limited recommended new marked crosswalks.

**Other** – other improvements include traffic calming measures and gateway treatments on SR 299.





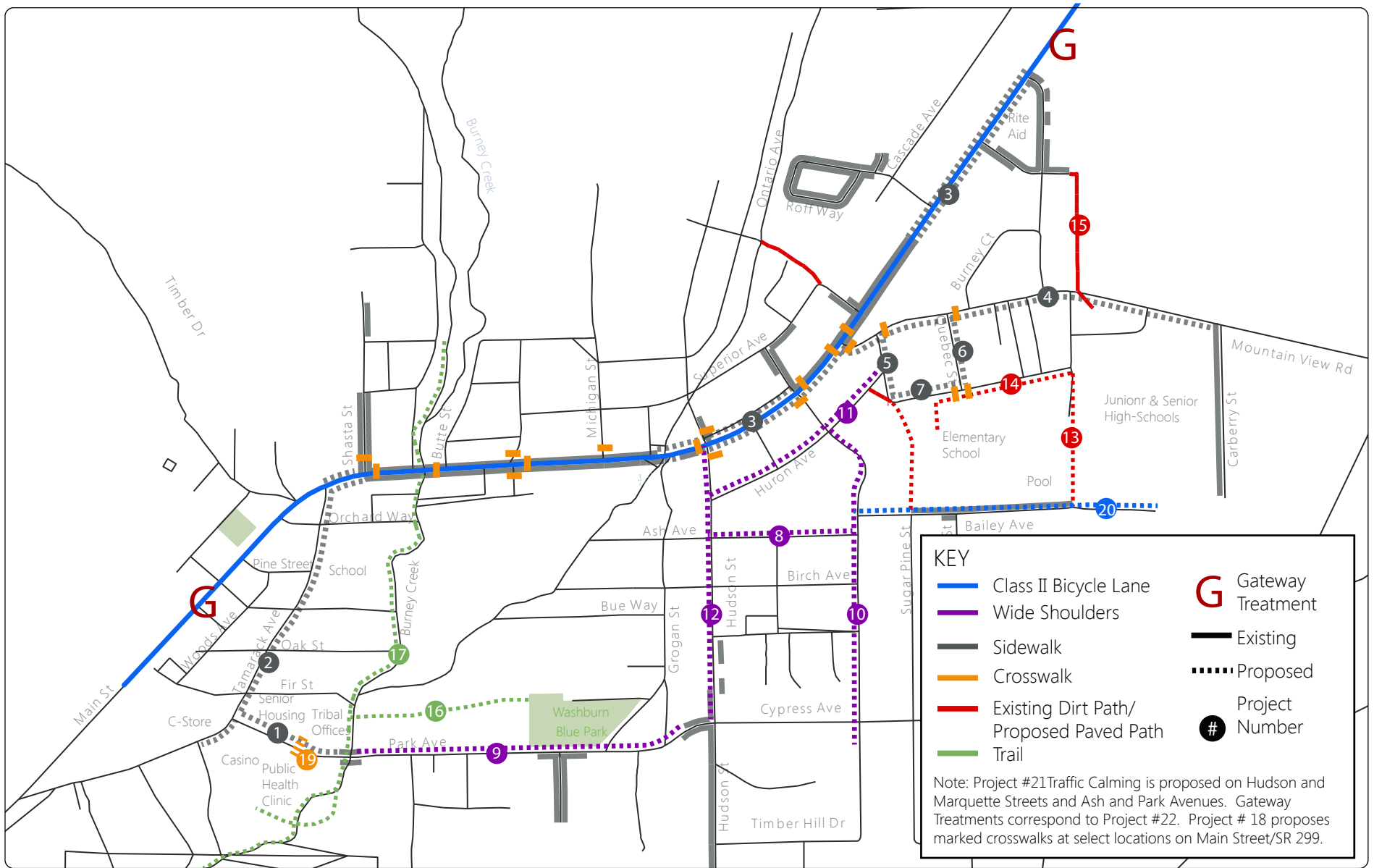
## PROPOSED NETWORK

Figure 8 shows the proposed bikeway and walkway network. To ease implementation, the proposed network is divided into 22 individual projects. Table 1 includes a brief description of each individual project. Appendix B includes fact sheets for each of the individual projects.

TABLE 1: PROJECT LIST			
Number	Type	Limits	Distance (miles)
1	Sidewalk	Park Avenue between Tamarack Avenue and Burney Creek	0.2
2	Sidewalk	Tamarack Avenue between Convenience Store and Main Street	0.2
3	Sidewalk	Main Street gap closures	Varies
4	Sidewalk	Mountain View Road between Main and Carberry Streets	0.6
5	Sidewalk	Erie Street	0.1
6	Sidewalk	Quebec Street	0.1
7	Sidewalk	Toronto Avenue between Erie and Quebec Streets	0.1
8	Wide Shoulders	Ash Avenue between Hudson and Marquette Streets	0.2
9	Wide Shoulders	Park Avenue between Burney Creek and Hudson Street	0.5
10	Wide Shoulders	Hudson Street between Park Avenue and Main Street	0.4
11	Wide Shoulders	Huron Avenue between Hudson and Erie Streets	0.3
12	Wide Shoulders	Marquette Street between Cypress Avenue and Main Street	0.5
13	Class I Bike Path	Extension of Tall Timber Lane between Schools	0.2
14	Class I Bike Path	Elementary to Junior/Senior High Schools	0.2
15	Class I Bike Path	Formalize Path from Junior/Senior High-Schools to Main Street	0.2
16	Trail	Washburn Bue Park to Burney Creek Trail	0.2
17	Trail	Burney Creek	0.7
18	Crosswalks	Along Main Street/SR 299	N/A
19	Crosswalk	Park Avenue at Tribal Administration Building	N/A
20	Class II Bike Lanes	Bailey Avenue between Marquette Street and Tall Timber Lane	0.3
21	Other	Traffic Calming: Hudson Street, Marquette Street, Ash Avenue, Park Avenue	N/A
22	Other	Gateway Treatments: Main Street/City Limits	N/A

Source: Fehr & Peers, 2012





## FURTHER CONSIDERATION FOR PROPOSED IMPROVEMENTS

### CROSSWALKS

Charrette participants identified safety concerns at several crosswalks in Burney, particularly on SR 299. Crosswalk improvements are proposed in this plan. However, further engineering study is necessary to determine exactly what improvements, if any, are appropriate.

The Federal Highway Administration (FHWA) study *Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations* (Campbell, Feaganes, Huang, Lagerwey, Stewart, and Zegeer, 2005), also known as the "Zegeer Study", is widely recognized as one of the most relevant resources for determining appropriate marked crosswalk locations and enhancement measures. The most commonly referenced component of the FHWA study is Table 11, which makes recommendations for installing marked crosswalks based on roadway characteristics.

**Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.\***

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT < 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000–15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

\* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

\*\* Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

\*\*\* The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

**C = Candidate sites for marked crosswalks.** Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

**P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements.** These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

**N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone.** Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

Source: *Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations* (Campbell, Feaganes, Huang, Lagerwey, Stewart, and Zegeer, 2005)

Although detailed crosswalk review is beyond the scope of this plan, some initial conclusions can be drawn. According to 2010 and 2011 Caltrans traffic data, the average daily traffic on SR 299 is 9,200. All



existing marked crosswalks on SR 299 are within a 30 miles per hour speed limit zone. Table 11 of the FHWA study shows that based on this basic traffic data, existing marked crosswalks in SR 299 are candidate sites for a marked crosswalk. However, the FHWA study states:

*Table 11 provides initial guidance on whether an uncontrolled location might be a candidate for a marked crosswalk alone and/or whether additional geometric and/or traffic control improvements are needed. As a part of the review process for pedestrian crossings, an engineering study should be used to analyze other factors, including (but not limited to) gaps in traffic, approach speed, sight distances, illumination, the needs of special populations, and the distance to the nearest traffic signal.*

Due to the wide cross-section of SR 299 (75 feet) and high truck percentages, which vary between eight percent and 12.6 percent, additional enhancements at these crosswalks may be appropriate. Candidate improvement options include a pedestrian refuge island and warning light mechanisms such as overhead flashing beacons and Rapid Rectangular Flashing Beacons (RRFBs).

Pedestrian demand is an important consideration when deciding to install a new marked crosswalk and/or to enhance an existing marked crosswalk. The FHWA study states:

*While overuse of marked crossings at uncontrolled locations should be avoided, higher priority should be placed on providing crosswalk markings where pedestrian volume exceeds about 20 per peak hour (or 15 or more elderly pedestrians and/or children per peak hour).*

An engineering study should analyze whether existing demand warrants marked crosswalks at existing locations and whether or not further improvements are necessary. At minimum, appropriate crosswalk locations on SR 299 in Burney should feature high-visibility markings and appropriate signage.

## TRAFFIC CALMING

Charrette participants identified safety concerns due to vehicle speed on several streets in Burney, including Hudson Street, Marquette Street, Ash Avenue, and Park Avenue. Traffic calming on these streets is proposed by this plan; however, the implementation of any traffic calming measures should take into account both public comment and traffic data analysis. As proposed under the BWP, the proposed traffic calming treatments would consist of speed feedback signs to alert drivers to their rate of speed. Although traffic data analysis is beyond the scope of this plan, traffic data to collect and analyze includes daily traffic volumes (both directions), speed (85<sup>th</sup> percentile), and collision history.



## IMPLEMENTATION

### COST ESTIMATES

Cost estimates were developed individually for each of the proposed projects. Average unit costs were derived from the individual project cost estimates. Right-of-way acquisition is not included in the cost estimates. Table 2 shows the unit costs for various proposed projects.

<b>TABLE 2: AVERAGE UNIT COSTS</b>	
<b>Improvement Type</b>	<b>Average Unit Cost (per linear foot)</b>
Sidewalk	\$109
Wide Shoulders	\$41
Class I Bike Path	\$39
Trail	\$23
Source: Sharrah Dunlap Sawyer, Inc., 2012	

Appendix C includes detailed cost information for each individual project.

### PRIORITIZATION

#### PRIORITIZATION CRITERIA

Each proposed project was scored according to prioritization criteria. The prioritization criteria were based on input received at meetings of the Technical and Community Advisory Committees, the charrettes, and the stakeholder interviews. The criteria include:

- Improvement to safety
- Competitiveness for Caltrans SR2S funding
- Competitiveness for other funding sources
- Connects Tribal lands to community
- Maintains rural character
- Project cost
- Right-of-way availability
- Ease of maintenance



Each of the eight prioritization criteria was given an equal 1/8 weight; projects were ranked into three tiers of priority based on these criteria: short-, mid-, and long-term. Appendix B provides a detailed description of how each prioritization criteria was applied. Table 3 shows the prioritized list of short-, mid-, and long-term projects. Appendix D includes a detailed breakdown of the prioritization scores.

**TABLE 3: PRIORITIZED PROJECT LIST**

<b>ID Number</b>	<b>Type</b>	<b>Limits</b>	<b>Distance (miles)</b>	<b>Priority</b>
9	Wide Shoulders	Park Avenue between Burney Creek and Hudson Street	0.5	High
1	Sidewalk	Park Avenue between Tamarack Avenue and Burney Creek	0.2	High
19	Crosswalk	Park Avenue at Tribal Administration Building	N/A	High
2	Sidewalk	Tamarack Avenue between Convenience Store and Main Street	0.2	High
8	Wide Shoulders	Ash Avenue between Hudson and Marquette Streets	0.2	High
14	Class I Bike Path	Elementary to Junior/Senior High Schools	0.2	High
20	Class II Bike Lanes	Bailey Avenue between Marquette Street and Tall Timber Lane	0.3	High
4	Sidewalk	Mountain View Road between Main and Carberry Streets	0.6	Medium
7	Sidewalk	Toronto Avenue between Erie and Quebec Streets	0.1	Medium
10	Wide Shoulders	Hudson Street between Park Avenue and Main Street	0.4	Medium
11	Wide Shoulders	Huron Avenue between Hudson and Erie Streets	0.3	Medium
12	Wide Shoulders	Marquette Street between Cypress Avenue and Main Street	0.5	Medium
13	Class I Bike Path	Extension of Tall Timber Lane between Schools	0.2	Medium
21	Other	Traffic Calming: Hudson Street, Marquette Street, Ash Avenue, Park Avenue	N/A	Medium
3	Sidewalk	Main Street gap closures	Varies	Medium
5	Sidewalk	Erie Street	0.1	Medium
6	Sidewalk	Quebec Street	0.1	Medium
17	Trail	Burney Creek	0.7	Medium
15	Class I Bike Path	Formalize Path from Junior/Senior High-Schools to Main Street	0.2	Low
16	Trail	Washburn Bue Park to Burney Creek Trail	0.2	Low
18	Crosswalks	Along Main Street/SR 299	N/A	Low
22	Other	Gateway Treatments: Main Street/City Limits	N/A	Low

Source: Fehr & Peers, 2012



## HIGH-PRIORITY PROJECTS

Using these prioritization criteria, the following five projects received the highest scores:

- # 1, 9, & 19: Wide Shoulders, Sidewalk, Crosswalk - Park Avenue between Tamarack Avenue and Hudson Street
- #2 Sidewalk - Tamarack Avenue between C-Store and Main Street
- #14 Class I Path - between Elementary and Junior/Senior High Schools
- #20 Class II Bicycle Lanes - Bailey Avenue between Marquette Street and Carberry Street
- #8 Wide Shoulders - Ash Avenue between Hudson and Marquette Streets

### **Park Avenue between Tamarack Avenue and Hudson Street**

#### *Wide Shoulders, Sidewalk, Crosswalk (#1, 9, 19)*

Park Avenue is an important roadway that connects many tribal buildings with the convenience store, Burney Creek area, and the town of Burney. A five-foot sidewalk is proposed on the north side of Park Avenue between Tamarack Avenue and Burney Creek. East of Burney Creek, four- to six-foot wide shoulders are proposed to accommodate both walking and biking traffic. A crosswalk is proposed across Park Avenue in front of the Tribal Administration Building to facilitate pedestrian travel to destinations to the south.

### **Tamarack Avenue between C-Store and Main Street**

#### *Sidewalk (#2)*

Tamarack Avenue provides the only direct north-south connection west of Hudson Street. A five-foot sidewalk on the east side of Tamarack Avenue would connect the tribal lands to Main Street and the commercial areas of Burney. In addition to the adjacent tribal buildings, adjacent land uses include Mountain View High School to the north and the C-Store to the south.

### **Path between Elementary and Junior/Senior High Schools**

#### *Class I Path (#14)*

The proposed Class I path would be located on the south side of Toronto Avenue between Quebec Street and the High School. Activities and programs between the two school sites are often interconnected, with students traveling back and forth between the two locations. A path would allow students to walk and



biking between the two schools removed from auto traffic. The design would retain the informal parking area on the south side of Toronto Avenue in front of the Elementary School.

### **Bailey Avenue between Hudson Street and Junior/Senior High School**

#### *Class II Bicycle Lanes (#20)*

Bailey Avenue provides an east-west connection on the south side of the Elementary and Junior/Senior High Schools and currently has a wide curb-to-curb cross-section. The swimming pool is also on Bailey Avenue, which is another popular destination on the route. The project would stripe six-foot bicycle lanes within the existing curb-to-curb section to connect with the schools and pool facility.

### **Ash Avenue between Hudson and Marquette Streets**

#### *Wide Shoulders (#8)*

Ash Avenue provides an east-west connection between residential areas and the Elementary and Junior/Senior High Schools. Taken together with the proposed Bailey Avenue bicycle lanes, the proposed four- to six-foot wide shoulders on Ash Avenue would provide a continuous east-west bikeway on the east side of Burney. This facility would connect to other proposed projects on Hudson and Marquette Streets.

## **RECOMMENDED WALKING ROUTES TO SCHOOL**

Engineered solutions, such as the construction of sidewalks and paths, are important aspects in the creation of safe walking and biking environments. In the context of safe routes to school, engineered solutions are conceived as a package of solutions known as the “Three E’s,” which prioritize Education and Encouragement for walking and biking to school in addition to Engineered solutions. For some families, a lack of information about the best routes for walking or biking to school or how long a walking or biking trip might take can be barriers to walking and biking. Figure 9 presents recommended routes to Burney Elementary and Burney Junior and Senior High Schools with approximate travel times. This map is intended to encourage parents to walk and bike with students to school and to use this map to explore the safest way to and from school. It also may form the basis of a walking school bus or bike train, so that groups of students can safely walk or bike to school. The map is an initial guide to walk and biking from residential areas to local schools and should be updated to reflect parents and students’ experiences.





**Legend**

Recommended Walking Route

Approximate Walk Time  
(Based on 3.5 ft. per second walk speed)

Standard White Crosswalk

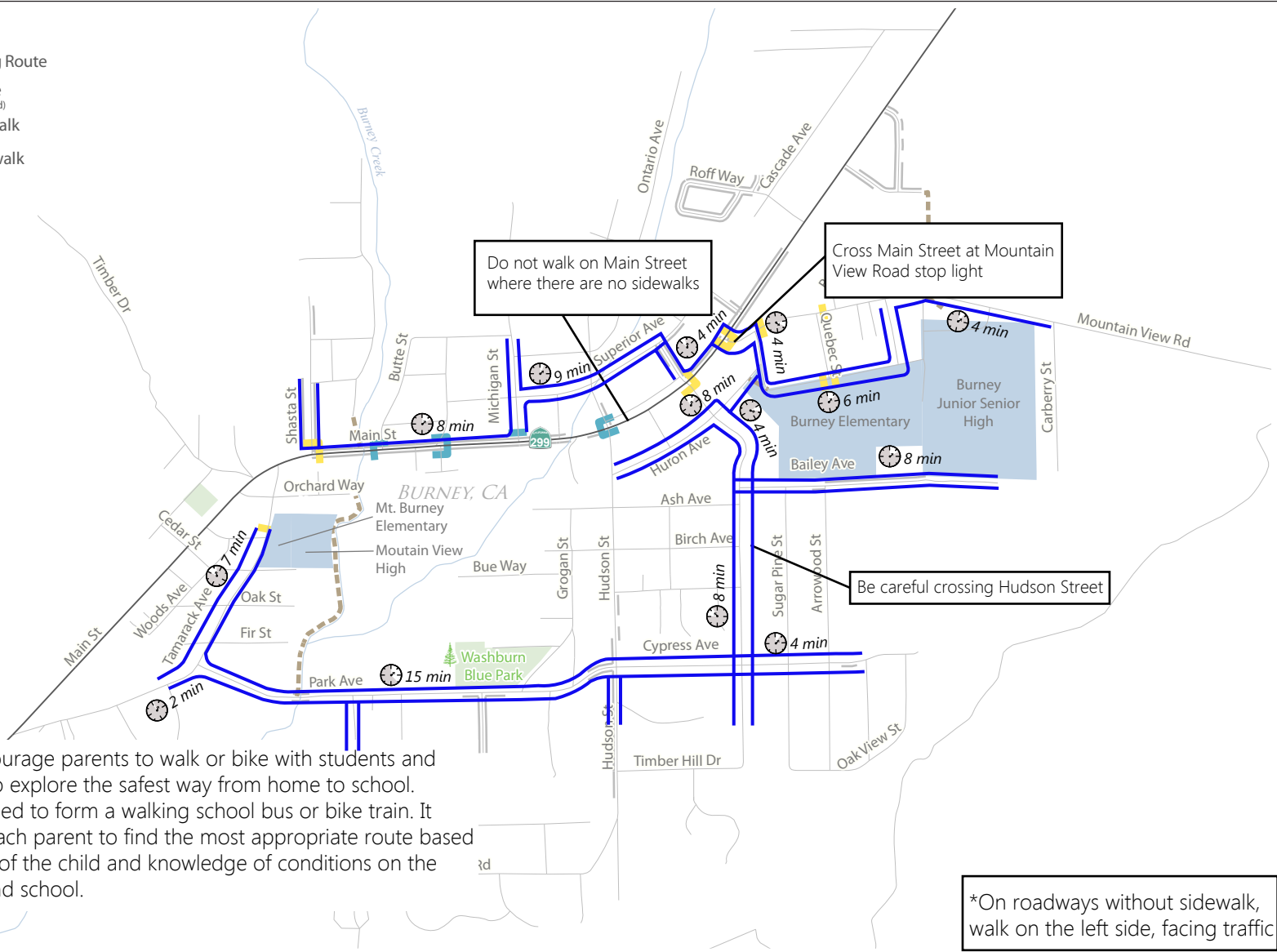
Standard Yellow Crosswalk

Dirt Path

Sidewalk



Not to Scale



This map serves to encourage parents to walk or bike with students and use this mapping tool to explore the safest way from home to school. This tool may also be used to form a walking school bus or bike train. It is the responsibility of each parent to find the most appropriate route based on the experience level of the child and knowledge of conditions on the route between home and school.

## GATEWAY MONUMENT PROGRAM

The Caltrans' Gateway Monument Program outlines procedures for communities who wish to construct gateway monuments (signs or structures that communicate Burney to passing roadway users) in or near Caltrans' right-of-way. Procedures differ for gateway monuments inside and outside of Caltrans' right-of-way. Caltrans' Web site [www.dot.ca.gov/hq/LandArch/gateway/](http://www.dot.ca.gov/hq/LandArch/gateway/) provides more information on the Gateway Monument Program.

## FUNDING

This section includes an overview of available federal, state, and local funding sources and provides strategies for funding the prioritized projects discussed in this Plan.

### FEDERAL AND STATE PROGRAMS

The majority of public funds for pedestrian and bicycle projects are derived through a core group of federal and state programs. Federal funds from the Surface Transportation Program (STP), Transportation Enhancements (TE), and Congestion Mitigation Air Quality (CMAQ) programs are allocated to SRTA and distributed regionally; distribution is allocated either competitively or proportionally according to jurisdiction population.

Limited amounts from the Local Transportation Fund (LTF), which is derived from a ¼ cent of the general sales tax collected statewide, can be used for pedestrian and bicycle facilities.

The State-Legislated Safe Routes to School (**SR2S**) program is a key funding source for pedestrian and bicycle infrastructure projects. \$24.25 million is available annually for eligible projects; grant awards require a 10% local match. The Federal Safe Routes to School (**SRTS**) was previously authorized under SAFETEA-LU; when MAP-21 superseded SAFETEA-LU, the SRTS program was discontinued.

Bicycle facilities can also be funded through the California Bicycle Transportation Account (BTA). Annually, \$7.2 million is available for projects through the BTA. To be eligible for BTA funds, the jurisdiction must have an adopted bicycle master plan no more than five years old.

The California State Parks Recreational Trails Program provides funds annually for recreational trails and trails-related projects. Counties are eligible applicants for the approximately \$2.3 million available annually. The program requires an applicant match of 12 percent of the total project cost.



In 2010, the California Strategic Growth Council (SGC) awarded \$20 million through the Proposition 84 Sustainable Communities Planning Grant and Incentives Program. Sustainable Community Planning Grant awards totaled \$24.6 million in 2012; the SGC plans to award another cycle of grants in 2013. Eligible projects include plans that support greenhouse gas emission reduction and sustainable communities. Twenty percent of the grant funds are set aside for Economically Disadvantaged Communities (EDC).

The Highway Safety Improvement Program (HSIP) is a core federal-aid program that aims to reduce traffic fatalities and serious injuries on public roads. Caltrans administers the program in California and expects to receive \$100 million for the 2012/13 Federal Fiscal Year. HSIP funds can be used for projects such as pedestrian projects, bike lane projects on local roadways, or for traffic calming measures. Applications that identify a history of incidents and demonstrate their project's improvement to safety are most competitive for funding.

The Land and Water Conservation Program offer funds to states and through states to local governments for trails acquisition and development.

## REGIONAL AND LOCAL FUNDING

Private/local funding for pedestrian projects comes primarily from development projects, either in the form of improvements constructed directly by developers or through development fee programs.

A mitigation fund was established as a part of the Hatchet Ridge Wind Farm project. Some of the funds are available per the discretion of the Shasta County Board of Supervisors for projects that benefit Burney. These funding sources should be actively pursued to help fund high-priority projects not eligible under the Safe Routes to School grant program.

Table 4 shows the applicability of these various funding sources to projects, planning efforts, and programs proposed in this plan.



**TABLE 4: FUNDING SOURCE APPLICABILITY MATRIX**

Funding Source	Class I Bike Path	Class II Bike Lane	Sidewalks	Wide Shoulders	Trails	Crosswalk Projects	Planning Projects
California Safe Routes to School (SR2S)	●	◐	●	◐	○	●	○
California Bicycle Transportation Account (BTA)	●	●	○	◐	○	○	●
California State Parks Recreational Trails Program	●	○	○	○	●	○	○
Proposition 84 Sustainable Communities Planning Grant and Incentives Program	○	○	○	○	○	○	●
Highway Safety Improvement Program (HSIP) Grants	○	●	●	●	○	●	○
Land and Water Conservation Program	●	○	○	○	●	○	○
Hatchet Ridge Wind Farm Mitigation Fund	◐	◐	◐	◐	◐	◐	○

Notes:  
 ● Funding source is applicable  
 ◐ Funding source is potentially applicable  
 ○ Funding source is not applicable  
 Source: Fehr & Peers, 2012

## FUNDING STRATEGY

Although every community is unique, in our experience, the following elements are important factors in successfully obtaining grant funding for projects:

- Develop a community vision
- Involve multiple stakeholders in the process
- Identify projects that:
  - Connect communities
  - Address safety issues
  - Support economic development
  - Improve access to schools
- Prioritize projects
- Identify projects that are most likely to successfully compete for grants
- Identify project champions
- Identify multiple parties to be co-applicants
- Identify local match opportunities



## NEXT STEPS FOR GRANT PROCUREMENT

The most applicable funding sources for the improvements recommended by this plan are the State-Legislated Safe Routes to School program. Outlined below are next steps for the acquisition of these funds.

### SAFE ROUTES TO SCHOOL

In its past two grant cycles (Cycle 9 and Cycle 10), the State-Legislated Safe Routes to School (SR2S) program has awarded several projects to rural, unincorporated communities. The average grant award to communities with a population of less than 15,000 is approximately \$360,000. Some grant awards were for over \$500,000. Grants are available for infrastructure projects "located in the vicinity of a school".

The Pit River Tribe and community of Burney should work with Shasta County to submit a SR2S application for Cycle 11. The next call for projects should occur in either late 2013 or early 2014. To create competitive, focused grant applications, the SR2S-eligible projects are organized into two application packages. SR2S Package #1 would serve the most number of students and focuses on the roadways in the vicinity of Burney Elementary School and Burney Junior/Senior High School. SR2S Package #2 focuses on the proposed projects near Mt. Burney Elementary and Mountain View High Schools on Tamarack Avenue. The two SR2S packaged projects are presented on Figure 10.

The following high- and medium-priority projects are recommended for the SR2S grant applications:

#### *Package #1- Burney Elementary and Burney Junior/Senior High Schools*

- # 14 Class I Path - Toronto Avenue between Burney Elementary and Burney Junior/Senior High Schools
- #4 Sidewalk – south side of Mountain View Road between Main Street/SR 299 and Carberry Street
- #5 Sidewalk- east side of Erie Street between Mountain View Road and Toronto Avenue
- #6 Sidewalk – Quebec Street between Mountain View Road and Toronto Avenue
- #7 Sidewalk– north side of Toronto Avenue between Erie and Quebec Streets

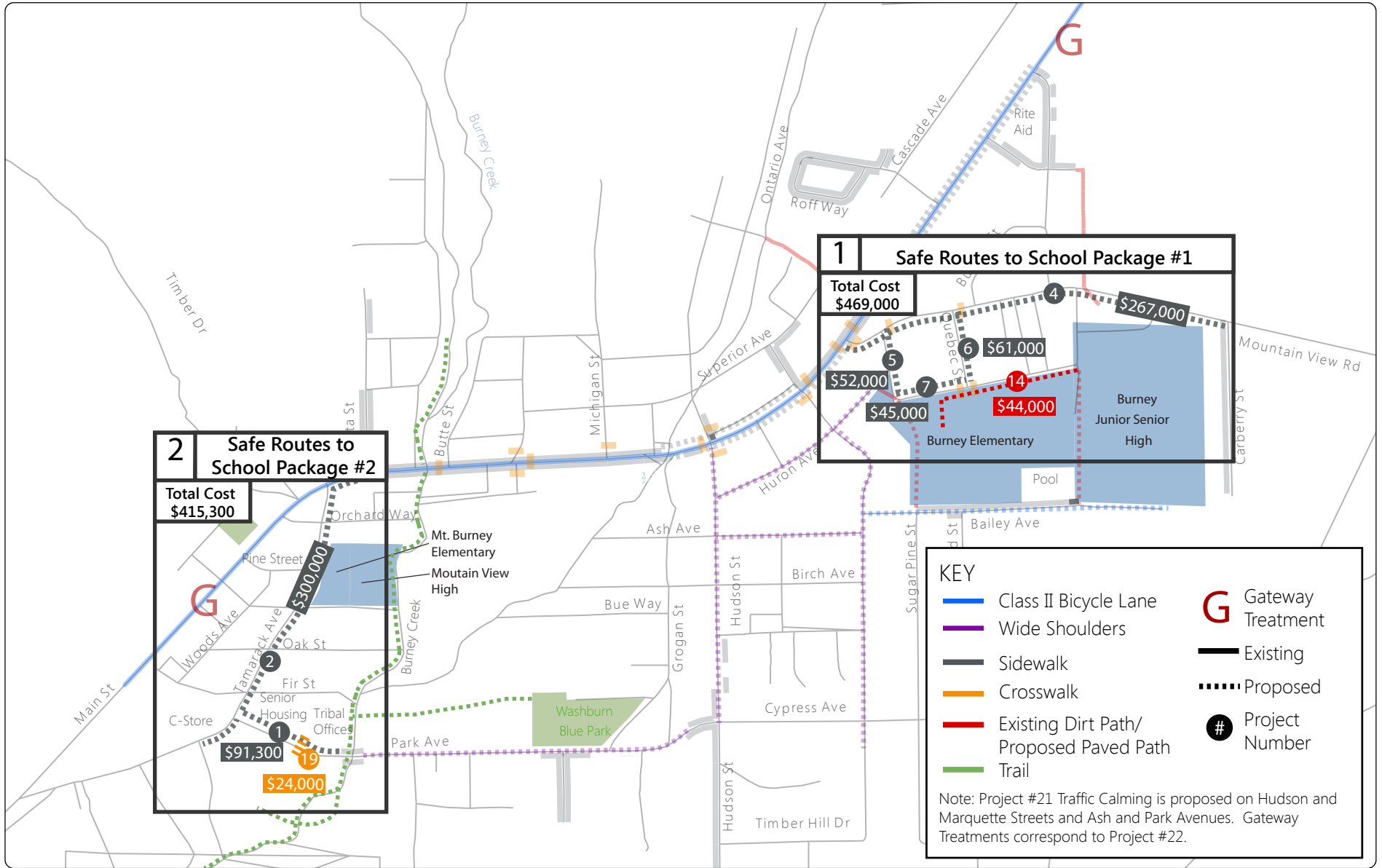
#### *Package #2 – Mt. Burney Elementary and Mountain View High Schools*

- #1 Sidewalk - Park Avenue between Burney Creek and Hudson Street



- #2 Sidewalk - Tamarack Avenue
- #19 Crosswalk with Median Refuge – Park Avenue in front of Tribal offices and housing





**APPENDIX A:  
APRIL 2012 CHARRETTE MAPPING EXERCISE**





**APPENDIX B:  
INDIVIDUAL PROJECT SHEETS**



**APPENDIX C:  
COST ESTIMATES**



**APPENDIX D:  
PRIORITIZATION SCORES**



**APPENDIX E:  
PARCEL OWNERSHIP INFORMATION**



