

GENERAL PLAN CIRCULATION ELEMENT

April 7, 2015

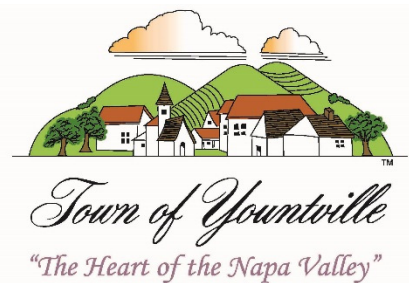


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TRANSPORTATION AND CIRCULATION

This Circulation Element provides the framework for decisions concerning the Town's multi-modal transportation system, which includes roadway, transit, bike, and pedestrian, as well as parking facilities. The Circulation Element provides for coordination with the Napa County Transportation and Planning Agency (NCTPA), which serves as the coordinating agency for transportation funding for Napa County.

State law (California Government Code Section 65302(b)) mandates that the Circulation Element contain the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, military airports and port, and other public utilities and facilities, to the extent these items exist in the planning area. As required by California Government Code Section 65302(b), the Circulation Element is correlated closely with the land use element and is related to the housing, open-space, noise, and safety elements.

The Circulation Element reflects the Town's desire to provide for complete street, bicycle, and pedestrian facilities as well as parking accommodations. This element establishes standards that guide development of the transportation system through goals, policies, and actions.

SETTING

Urban Context

Yountville is a compact town set in a semi-rural atmosphere with a coveted "small town" feel. Yountville's rustic and agricultural roots are present and visible throughout Old Town and the community's other neighborhoods. The Town of Yountville's main attractions are famous restaurants and inns, located along Washington Street, the Town's main commercial corridor. About 30 percent of the population resides in the Veterans Home of California, located at the southwest corner of town.

Being a small town of about 3,000 residents in the heart of the Napa Valley, Yountville is subject to a relatively heavy influx of people and cars related to wine country tourism. Traffic and parking are heaviest during weekend afternoons when visitors and employees avail themselves of the many restaurants and inns of Yountville. Maintaining its rural, small town character while accommodating visitors and employee impacts is a Town goal and challenge. Providing peaceful traffic flow, appropriate parking, and alternative modes of transportation are vital to maintaining Yountville's reputation for being pedestrian friendly.

Yountville is split by State Route (SR) 29, a regional route that provides access to Calistoga, St. Helena and Clearlake to the north and Napa to the south. There is a variety of housing types in Yountville, from single family homes to townhouses to mobile home communities to the State of California's Veterans Home. Yountville's relatively small land area and flat topography create many opportunities for residents to walk, bicycle, or use the Town funded free trolley service to destinations throughout the community.

Travel Characteristics

CENSUS JOURNEY TO WORK

Data from the 2010 US Census and 2008-2012 American Community Survey (ACS) were utilized to illustrate Journey to Work (JTW) statistics for Yountville. According to the 2012 US Census, Yountville's population was about 2,900 people, including nearly 1,100 workers 16 years of age or older. The ACS reports that the majority of employed residents (702 of 1,055 or 67%) drive or motorcycle to work alone, whereas about 15 percent of employed residents use alternative modes of transportation, 4 percent carpool, and 13 percent work from home. Table 1 provides an overview of Yountville's JTW mode split data compared to countywide statistics for Napa County and the State of California.

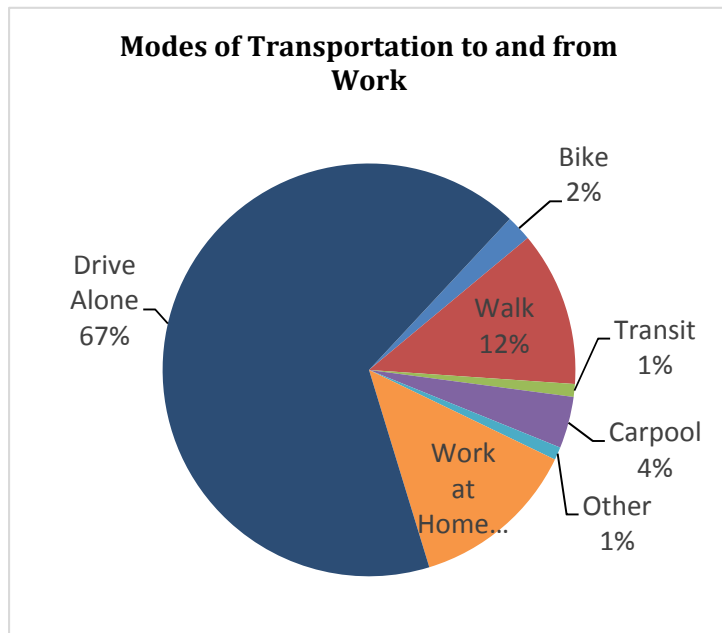


TABLE 1: DEMOGRAPHIC AND JOURNEY TO WORK DATA 2012 US CENSUS						
	Yountville		Countywide		California	
Population	2,933 ¹		136,484 ¹		37,253,956 ¹	
Employed persons	1,055 ²		64,285 ²		16,282,943 ²	
Mode Split	Number	Percentage	Number	Percentage	Number	Percentage
Drove Alone	702	66.5%	48,836	76.0%	11,894,644	73.1%
Bike	16	1.5%	509	0.8%	169,960	1.1%
Walk	130	12.3%	2,656	4.1%	449,779	2.8%
Public Transit	12	1.1%	859	1.3%	837,820	5.1%
Carpool	38	3.6%	7,627	11.9%	1,877,683	11.5%
Motorcycle	7	0.7%	128	0.2%	56,270	0.3%
Other	14	1.3%	319	0.5%	150,828	0.9%
Worked at Home	136	13.0%	3,351	5.2%	839,860	5.2%

¹POPULATION DATA OBTAINED FROM 2010 CENSUS

²YOUNTVILLE, COUNTY, AND STATE MODAL CHOICE DATA OBTAINED FROM 2008-2012 ACS 5-YEAR ESTIMATES

Of the 1,055 workers in Yountville 16 years old or older who work outside the home, 42 percent of workers travel less than 15 minutes to work. Travel time to work for Yountville residents and the rest of the California workforce is shown in Table 2 below.

TABLE 2: 2012 TRAVEL TIME TO WORK			
	Yountville ¹		California ¹
	Number	Percentage	Workforce
Workforce	1055	100%	15,443,783
Travel Time	Number	Percentage	Percentage
Less than 15 minutes	446	42%	24.8%
15 to 29 minutes	396	38%	36.0%
30 to 44 minutes	134	13%	21.3%
45 minutes or more	79	7%	17.9%

¹YOUNTVILLE AND STATE TRAVEL TIME DATA OBTAINED FROM 2008-2012 ACS 5-YEAR ESTIMATES

EXISTING ROADWAY CONDITIONS

Street Network

This section describes the physical characteristics of Yountville's roadway network. Figure 1 shows the major routes in Yountville and the surrounding roadway system.

SR 29 is the primary route connecting the Town of Yountville to the San Francisco Bay Area to the south and Lake County to the north. The highway is the main route for outer-Town travel and provides quick access to the other side of town. SR 29 is a four-lane divided highway with an interchange at California Drive that transitions to a two-lane highway as it approaches a signalized intersection at Madison Street. Existing daily traffic on the highway averages 22,800 vehicles per day and the posted speed limit is 60 miles per hour (mph).

Washington Street runs parallel to SR 29 and is a two-way street that provides parking on both sides south of Yount Street. It is the only street that provides north-south connectivity. North of Yount Street, there are many driveways, and only a few on-street parking spaces. Sidewalks are located on both sides of the street south of Webber Avenue and on the west side from Webber to Madison. The posted speed limit is 25 mph.

Yount Street runs north-south through Yountville to the east of Washington Street which it intersects with a sharp skew in the center of town. It is a two-lane road with parking and sidewalks on both sides from Washington Street to Hopper Creek. North of Hopper Creek sidewalks are located on the east side of the street only. Bike lanes are located along portions of Yount Street north of the intersection of the Hopper Creek path. The posted speed limit is 25 mph.

California Drive is a two-lane street that connects the southeast and southwest (Veterans home, golf course, Domaine Chandon) areas of town, passing under SR 29. It is the only connector for 30 percent of town residents—from the Veterans Home. There are Class II bike lanes from Washington Street to Solano Avenue, sidewalks on the north side of the street, and the posted speed limit is 25 mph. The portion between Washington Street and Solano Avenue is maintained by Caltrans.

Madison Street is a two-lane arterial that runs east-west and connects the northeastern area of the Town to SR 29. Bike lanes are located in both directions and a Class I pedestrian and bicycle path is located on the south side of Madison Street just west of Washington Street. East of Washington there is a lack of sidewalk connectivity per Town Council Policy, and the posted speed limit is 25 mph.



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Town of Yountville General Plan Circulation Element

Figure 1: Circulation Network

Yountville Cross Road runs east-west and connects the eastern part of the Town to the Silverado Trail. It has one lane in each direction with bike lanes on both sides. The posted speed limit is 35 mph within Town limits, increasing to 45 mph and higher for the segment located in unincorporated Napa County.

Solano Avenue is an access point into and out of Town at the southwestern edge of town. It has two lanes, narrow shoulders, and a speed limit of 35 mph. The Vine Trail regional Class I path is currently under design and will be extended from Trancas Street in the City of Napa to California Drive in Yountville. The path would be located on the east side of Solano Avenue between the railroad and the east side of the roadway. It is scheduled to be constructed during the summer of 2015.

Finnell Road is a two-lane local street that extends east from Yount Street then turns north and provides access to Yountville Cross Road. The road borders the Town Hall and adjacent school property on the south side and provides access to residential properties via Vista Drive and Heritage Way.

Traffic Controls

The main type of intersection control throughout the Town of Yountville are two-way (side street stop signs with free flow on main street) and all-way stop controls. There is one signalized intersection located at SR 29/Madison Street at the north end of town which is maintained by Caltrans. There are nine all-way stop controlled intersections throughout town:

- Washington Street/Madison Street
- Washington Street/Yount Street
- Washington Street/Mulberry Street
- Washington Street/Oak Circle
- Washington Street/California Drive
- Yount Street/Madison Street
- Yount Street/Mount Avenue
- Yount Street/Finnell Road
- Finnell Road/Vista Drive
- California Drive/Solano Avenue (proposed)

The intersection of Yount Street/Humboldt Street is a non-standard intersection due to the unbalanced stop control. There are stop sign controls on the southbound and eastbound approaches with free flow conditions on the northbound approach. The intersection of California Drive/Solano Avenue is proposed as an all-way stop controlled intersection in conjunction with the Napa Vine trail project which will cross at this intersection.

Vehicular Traffic Volumes

Traffic volume counts were collected in late September 2014 for four days, Thursday through Sunday at three key street segments in Yountville including Yount Street east of Washington Street, Washington Street south of Madison, and Washington Street north of California Drive.

Daily traffic volumes averaged 9,000 vehicles per day (vpd) on Washington Street near California Drive. The roadway experienced similar volumes throughout the four days of counts with a small range between the most and least traveled day, but Saturday experienced the highest volumes of vehicles and Sunday had the least amount of traffic. The existing daily traffic volumes are shown in Plate 1.

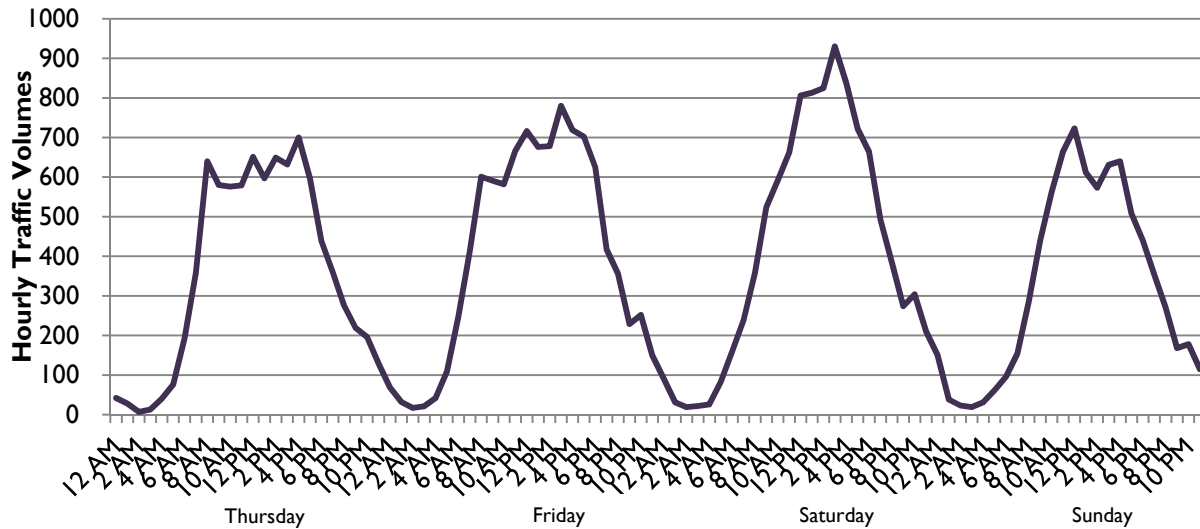


Plate 1 – Four Day Count on Washington Street north of California Drive

Daily traffic volumes averaged 4,900 vpd at the north end of town on Washington Street. Volumes were highest on Saturday. The existing daily traffic volumes are shown in Plate 2. Traffic volumes in general at this location are approximately 60 percent of those on Washington Street, north of California Drive.

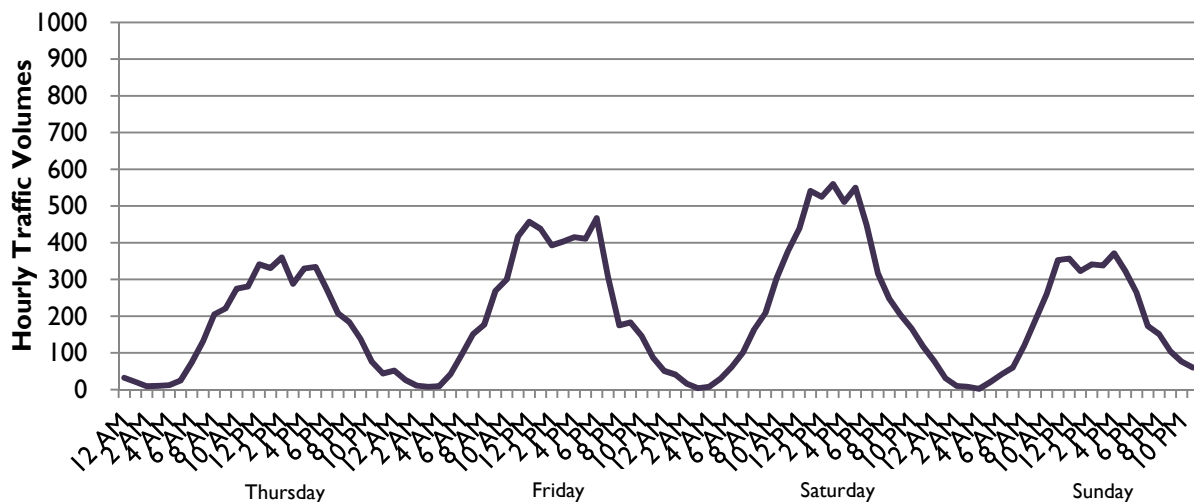


Plate 2 – Four Day Count on Washington Street south of Madison Street

Daily traffic volumes averaged 3,000 vehicles per day (vpd) on Yount Street close to Washington Street, and Thursday and Friday had slightly higher volumes than the weekend. The existing daily traffic volumes are shown in Plate 3. In general, these traffic volumes are approximately one-third of those on Washington Street, north of California Drive.

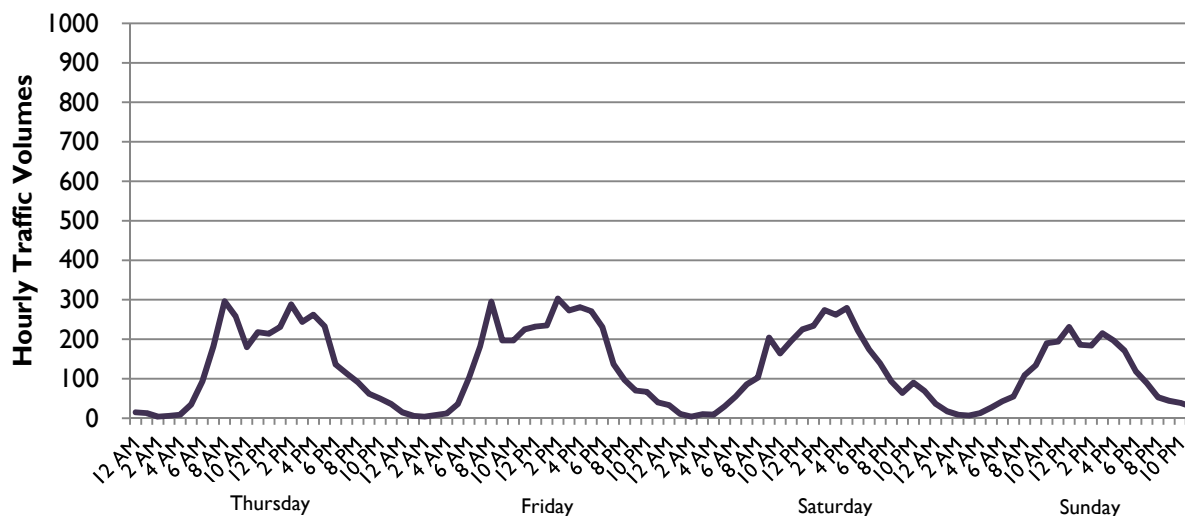


Plate 3 – Four Day Count on Yount Street east of Washington Street

These traffic volume count locations represent the three highest traffic volume locations in the Town of Yountville. With daily traffic volumes of 9,000 vehicles per day and less, the existing two-lane street configurations through the Town are sufficient to service this traffic volume level. Generally, two-lane roadways can accommodate up to 15,000 vehicles per day.

Travel Speeds

Speed surveys were collected on a typical weekday in June 2014. Travel speeds were surveyed on the primary streets in Yountville including Washington Street, Yount Street, Yountville Cross Road, Madison Street, and Finnell Road. Vehicle speed surveys were completed by W-Trans and the Town of Yountville as part of this effort. Based on the data collected, the 85th percentile speeds were determined.

As stated in the California Manual on Uniform Traffic Control Devices (2012), the 85th percentile, or critical, speed is that speed at or below which 85 percent of the observed vehicles were traveling. It is a well-recognized fact among traffic engineers that most drivers are able to drive at reasonable speeds without the benefit of any speed limits, speed signs, or enforcement. The behavior of traffic is a good indication of the appropriate speed zone which should apply on a particular highway section. It is generally felt that at least 85 percent of the drivers operate at speeds which are reasonable and prudent for the conditions pertaining to each situation. Therefore, the 85th percentile speed of a spot speed survey is the primary indicator of a speed limit which might be imposed subject to the secondary factors of collision experience, traffic volumes, road features or other special situations.

The majority of drivers on the streets in Yountville were traveling between 24 and 28 mph. The most critical speeding conditions are on Yountville Cross Road where the 85th percentile speed was 39 mph in a 35 mph zone. Yountville Cross Road connects northeast Yountville with a rural part of Napa County. It should be noted that there already is a radar feedback sign posted at this location. Figure 2 shows the 85th percentile speeds on Yountville streets.



Town of Yountville General Plan Circulation Element
Figure 2: Existing Speed Conditions

Primary Intersections

The following three intersections were identified as those most critical to Yountville's local circulation system and its connectivity to the regional transportation network.

1. Washington Street/Madison Street
2. Washington Street/Yount Street
3. Washington Street/California Drive

A second set of traffic volumes were obtained in September 2014, during fall harvest season. Operating conditions during the p.m. peak period was evaluated to capture the highest volumes on the local transportation network. The weekday p.m. peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion during the homeward bound commute and tourist traffic activities. The intersection of Washington Street/Madison Street carries approximately 600 vehicles during a p.m. peak period, the intersection of Washington Street/Yount Street carries approximately 500 to 600 vehicles during the peak period, and the intersection of Washington Street/California Street carries 720 vehicles during the peak period.

The locations of the study intersections and the existing peak hour traffic volumes are shown in Figure 3.

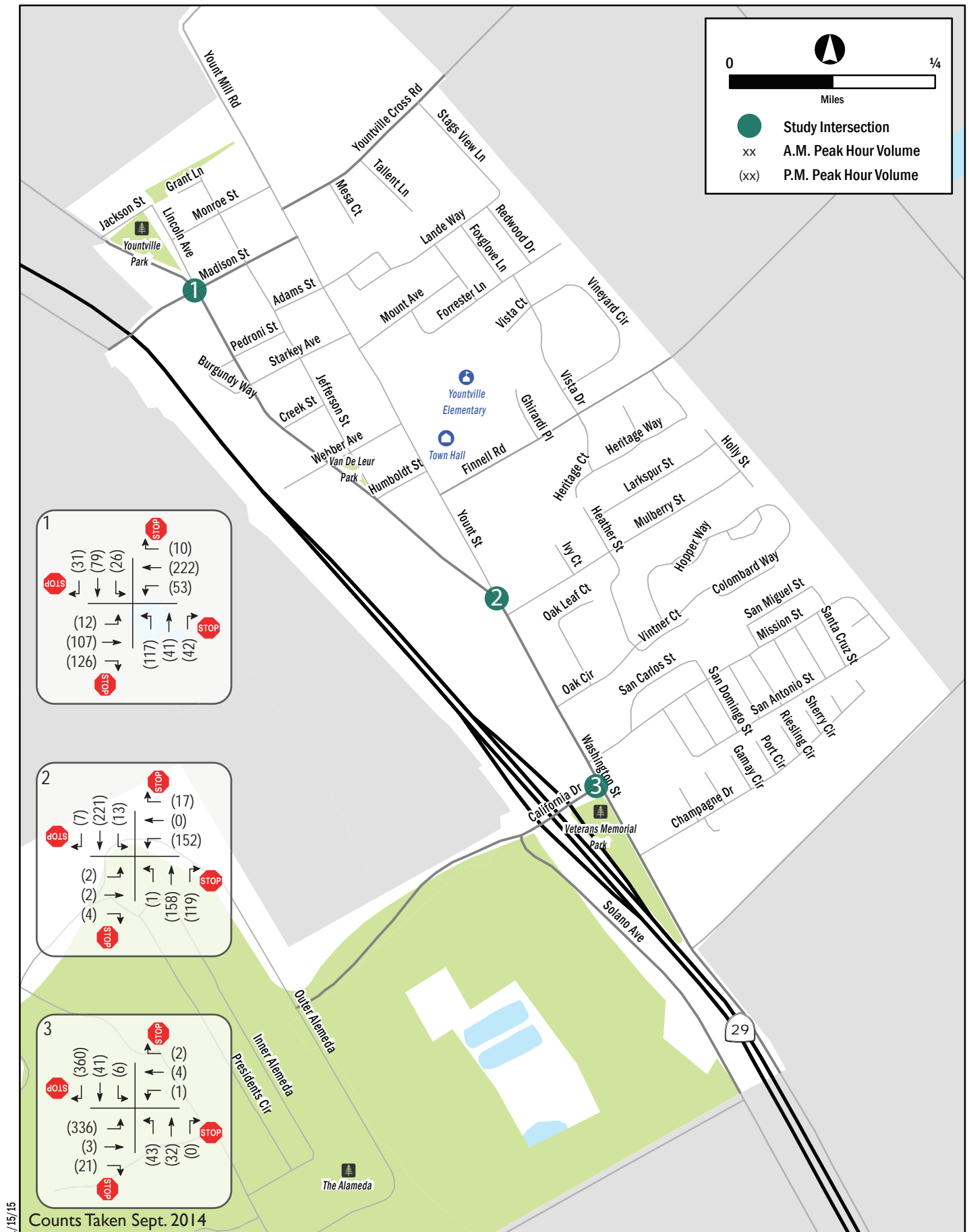
In comparing these traffic volumes to past data collection, volumes at the study intersections have increased by approximately 5 percent at Washington Street/Madison Street and Washington Street/Yount Street and approximately 13 percent at Washington Street/California Street since 2004 which is growth rate of approximately 1.1 percent per year. This is generally a lower rate compared with most streets in the North Bay counties which have experienced a rate of approximately 1.5 percent per year.

Intersection Level of Service

Levels of Service at the study intersections were determined using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The study intersections with stop signs on all approaches were analyzed using the "All-Way Stop-Controlled" Intersection" methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole, and is then related to a Level of Service.

The ranges of delay associated with the various levels of service are indicated in Table 3.



Town of Yountville General Plan Circulation Element

Figure 3: Traffic Volumes

TABLE 3: INTERSECTION LEVEL OF SERVICE CRITERIA	
LOS	All-Way Stop-Controlled
A	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.
B	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.
C	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach, and wait for vehicle to clear from one or more approaches prior to entering the intersection.
D	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.
E	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.
F	Delay of more than 50 seconds. Drivers enter long queues on all approaches.

REFERENCE: HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, 2000

LEVEL OF SERVICE STANDARDS

Objective 1 of the current Yountville General Plan indicates that LOS C shall be the minimum Level of Service maintained at all intersections. Generally, a LOS D threshold is used in most communities so that streets are not overbuilt.

EXISTING CONDITIONS

Currently, the study intersections are operating acceptably at LOS B which indicates that the existing lanes and traffic controls are sufficient to serve the existing traffic demand. A summary of the intersection level of service calculations is contained in Table 4.

TABLE 4: SUMMARY OF EXISTING PEAK HOUR INTERSECTION LEVELS OF SERVICE		
Intersection	PM Peak Hour	
	Delay	LOS
1. Washington Street/Madison Street	11.4	B
2. Washington Street/Yount Street	10.3	B
3. Washington Street/California Drive	14.2	B

NOTES: DELAY IS MEASURED IN AVERAGE SECONDS PER VEHICLE; LOS = LEVEL OF SERVICE

BUILDOUT CONDITIONS

Yountville is near complete development with residential units, retail, restaurant, lodging, and civic land uses. It is anticipated that there will be 17 additional residential units built under the proposed General Plan land use assumptions of the housing cycle ending 2022, as well as the development of three parcels along Washington Street into restaurants, specialty retail, and office buildings. Under these land use conditions, the study intersections are expected to continue operating acceptably at LOS B which indicates that the existing lanes and traffic controls are sufficient to serve the projected traffic demand increase. A summary of the intersection level of service calculations is contained in Table 5.

TABLE 5: SUMMARY OF BUILDOUT PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	PM Peak Hour	
	Delay	LOS
1. Washington Street/Madison Street	11.4	B
2. Washington Street/Yount Street	10.5	B
3. Washington Street/California Drive	12.8*	B

NOTES: DELAY IS MEASURED IN AVERAGE SECONDS PER VEHICLE; LOS = LEVEL OF SERVICE; * DELAY DECREASES COMPARED TO EXISTING CONDITIONS BECAUSE TRAFFIC VOLUME GROWTH IS ADDED TO MOVEMENTS THAT HAVE DELAY LESS THAN THE AVERAGE.

SENATE BILL 743/LEVEL OF SERVICE CHANGES

In 2013, Senate Bill (SB) 743 (Steinberg, 2013) was adopted, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (New Public Resources Code Section 21099(b)(1).) Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." (Ibid.) OPR also has discretion to develop alternative criteria for areas that are not served by transit, if appropriate. (Id. at subd. (c).)

Once the CEQA Guidelines are amended to include those alternative criteria, auto delay and Level of Service will no longer be considered a significant impact under CEQA. (Id. at subd. (b)(2).) Transportation impacts related to air quality, noise and safety must still be analyzed under CEQA where appropriate. (Id. at subd. (b)(3).)

Street Connectivity

The majority of Town has acceptable street connectivity, especially the Old Town District which has easy access to both the Washington Street and Yount Street corridors. Residential properties east of Yount Street are limited to access to the Yount Street corridor and Yountville Cross Road via other local streets. Exceptions include the Rancho de Napa and Gateway Mobile Home Parks, located at the south end of Town, which are limited with access only to Washington Street. The Oak Circle neighborhood and the Toyon Terrace neighborhood are also limited to only Washington Street.

Wayfinding Signs

The intent of the Wayfinding Sign Program is to inform pedestrians of the location of goods and services as they travel through Town on the public sidewalks. By giving pedestrians information on the location of area businesses, it is anticipated that they will park once and remain on the sidewalk when moving between businesses, rather than returning to and relocating their vehicles, thereby reducing traffic and parking impacts.

Participation in the program is voluntary. Local businesses that elect to buy an annual subscription may have their business name and directional arrows on any of the 12 Wayfinding sign posts along Washington Street.

PUBLIC TRANSIT

Two transit services operate within the Town of Yountville; the regional VINE service connecting Yountville to other towns north and south, and the local Yountville Trolley.

VINE

VINE transit provides fixed bus route system within and around the Town of Yountville and is operated by the Napa County Transportation and Planning Agency (NCTPA). VINE Regional Routes 10 and 29 provide service in the Town of Yountville. Route 10 operates Monday through Friday with approximately half-hour headways from 5 a.m. to 12 noon, and then continues until 11 p.m. with one-hour headways. Saturday service operates from 6 a.m. to 8 p.m. and Sunday service operates from 8:00 a.m. to 7:00 p.m., both with approximately one-hour headways. There are eight stops for VINE Route 10 along Washington Street, with four stops northbound and four stops southbound, as well as an additional stop on California Drive, west of SR-29 near the Yountville's Veteran's Home.

VINE Route 29 is a commuter route that travels between Calistoga and the El Cerrito Del Norte BART station on SR 29 and I-80. In Yountville, Route 29 makes one stop near the intersection of California Drive/Solano Avenue. It operates Monday through Friday between 5 a.m. and 9 p.m., with more frequent headways during the morning and evening commute periods. Figure 4 shows the transit routes in Yountville.

Yountville Trolley

The Yountville Trolley, which is operated by NCTPA, provides rides for residents and visitors of the Town of Yountville, including the Veterans Home. The Yountville Trolley operates a deviated fixed route that provides door to door service when requested by customers. The trolley is free to ride through Town funding and operates Monday through Saturday from 10 a.m. to 11 p.m. and Sunday from 10 a.m. to 7 p.m.

Ridership information about the trolley service has been recorded since the beginning of 2012. Residents have been using the service since January 2012, but visitors did not start using the service until October 2012. Total ridership has been consistently highest in June and July of each year. Plate 4 shows the number of residents and visitors that have used the trolley since 2012.

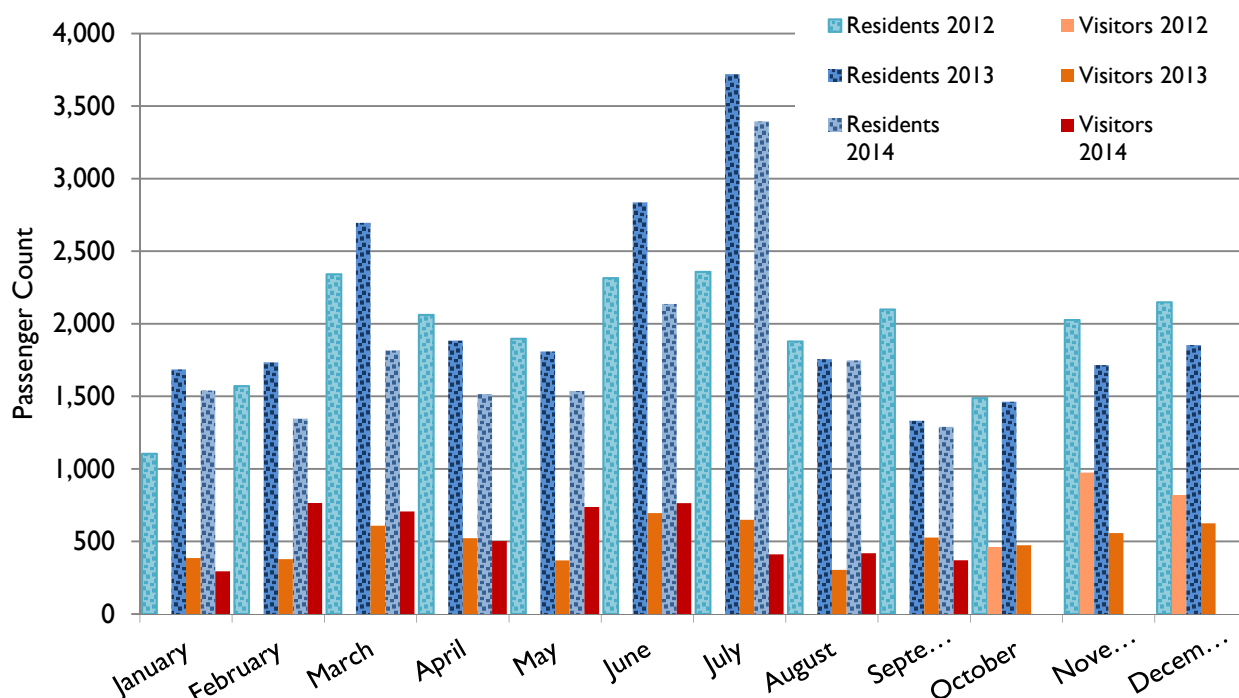
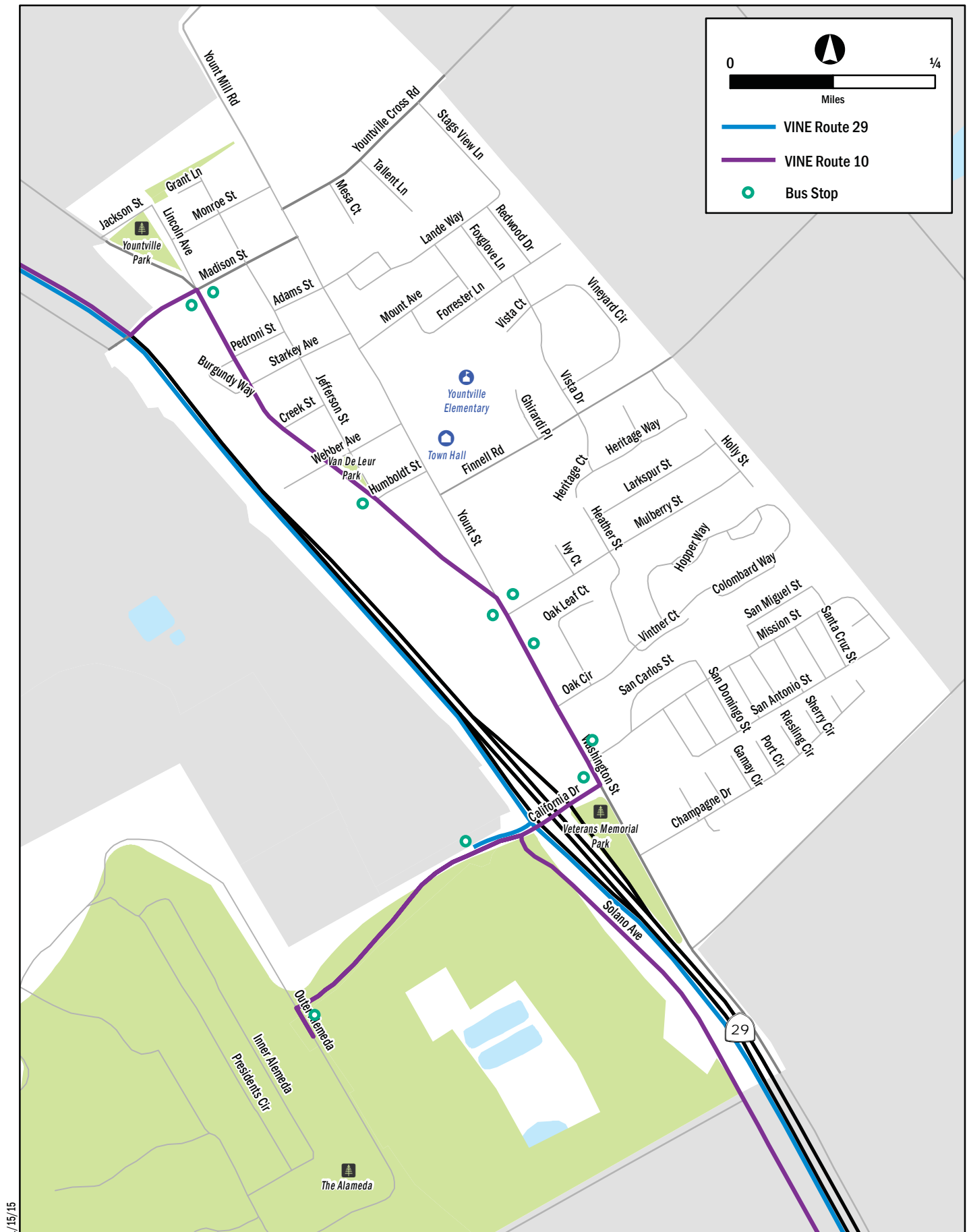


Plate 4 – Yountville Trolley: Comparison of Ridership between Residents and Visitors from 2012-2014



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Town of Yountville General Plan Circulation Element
Figure 4: Transit Service

The Veterans Home in southeast Yountville houses elderly residents many of whom are dependent on wheel chairs and/or walking aids. The Yountville trolley is equipped with a lift, and its usage has been monitored since the beginning of 2013. The lift was used for approximately 5.4 percent of total riders in 2013 and has been used for about 8 percent of total riders so far in 2014. Plate 5 shows the relationship between total number of riders and total number of times the lift has been used each month.

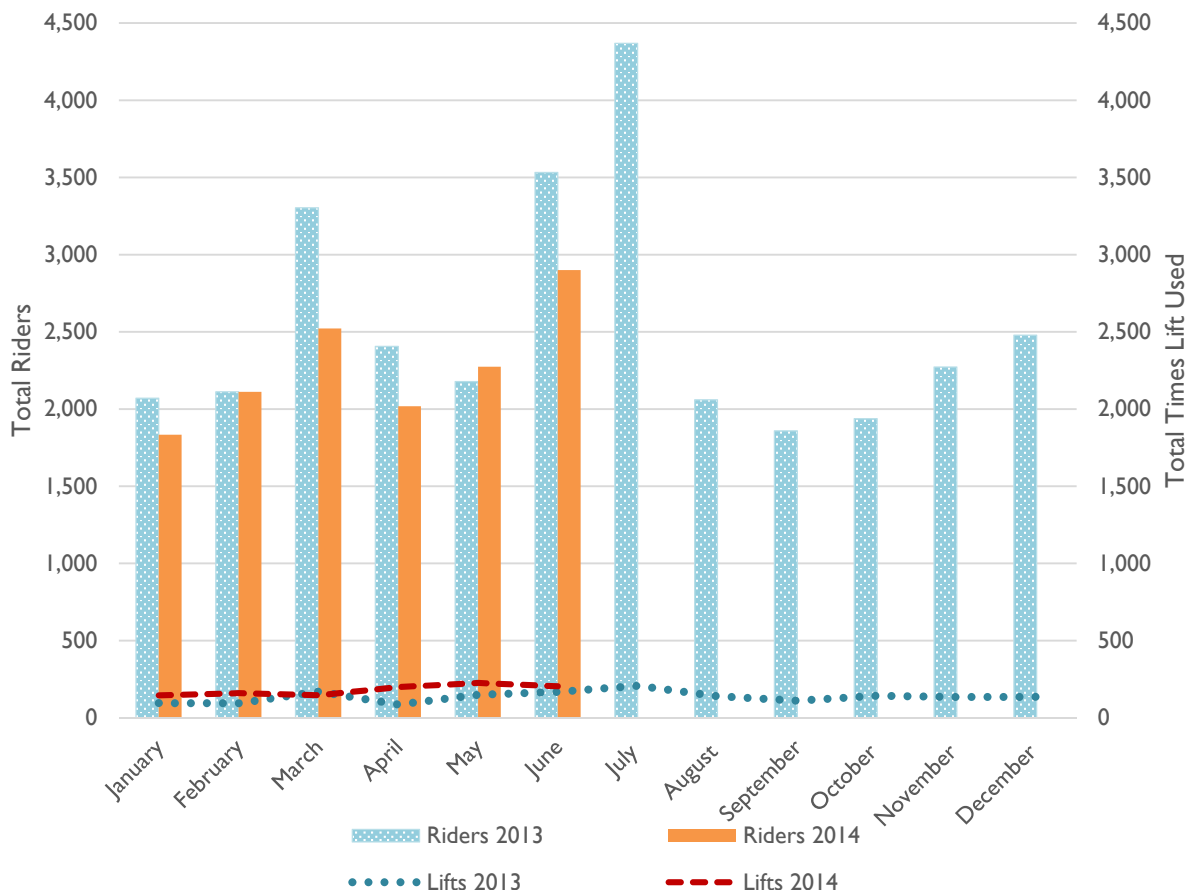


Plate 5 – Comparison of Lift Use versus Total Ridership for 2013 and 2014

Transit Stops

There are currently eight transit stops on Washington Street with three stops on the on the east side of Washington Street within less than 0.20 mile, per Town Council decision.

Taxi Service

Taxi service in Yountville is provided by private operators that serve the greater Napa County area and beyond. Taxi service is available 24 hours a day, seven days a week by calling in a service request. The Town is also served by various Uber users.

Park-and-Ride Lots

A Park-and-Ride lot is currently provided along Solano Avenue at California Drive, west of SR-29. The Napa County Transportation and Planning Agency purchased property and opened the lot in April 2012 with 15 vehicle parking spaces. From casual observation, it appears that the lot is utilized more on the weekends by recreational bike riders than weekday commuters.

Park-and-Ride lots provide intermodal access for commuter bicyclists and serve as potential staging areas for recreational riders during non-commute hours. Commuter parking at the NCTPA-operated park-and-ride lots is free of charge, no permits are required. Various amenities are provided at park-and-ride lots including transit access, short and long-term bicycle parking, lighting, information kiosks, etc.

BICYCLE AND PEDESTRIAN FACILITIES

Bicycle Facilities

Bicycle circulation in Yountville is supported by an existing network of multi-use paths, on-street bicycle lanes, and bicycle routes. The Yountville Bicycle Plan was prepared in partnership with NCTPA and adopted by Town Council on June 5, 2012. The Town's existing and proposed bike facilities, shown in Figure 5, expands upon the existing network to create an improved bicycle circulation system in Yountville and better connectivity to towns north and south.

The *Highway Design Manual*, California Department of Transportation (Caltrans), 2012, classifies bikeways into three categories:

- *Class I Multi-Use Path*: a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- *Class II Bike Lane*: a striped and signed lane for one-way bike travel on a street or highway.
- *Class III Bike Route*: signing only for shared use with motor vehicles within the same travel lane on a street or highway.

Class I Multi-Use Paths in Yountville include the path on the south side of Madison Street, west of Washington Street and the path parallel with SR 29 (known as the "Yountville Mile") along the eastern side of the highway running between Madison Street on the north and California Drive on the south. The path which runs through town along Hopper Creek is not considered a Class I path since it is too narrow to accommodate both bicycles and pedestrians. The Vine Trail regional Class I path is currently under design and will be extended from Trancas Street in the City of Napa to California Drive in Yountville. The path would be located on the east side of Solano Avenue between the railroad and the east side of the roadway. It is scheduled to be constructed during the summer of 2015.

Class II Bike Lanes include Yountville Cross Road, Yount Street, Solano Avenue, California Drive, and on Madison Street. There is a planned Class II bike lane on Finnell Road in front of the Elementary School.

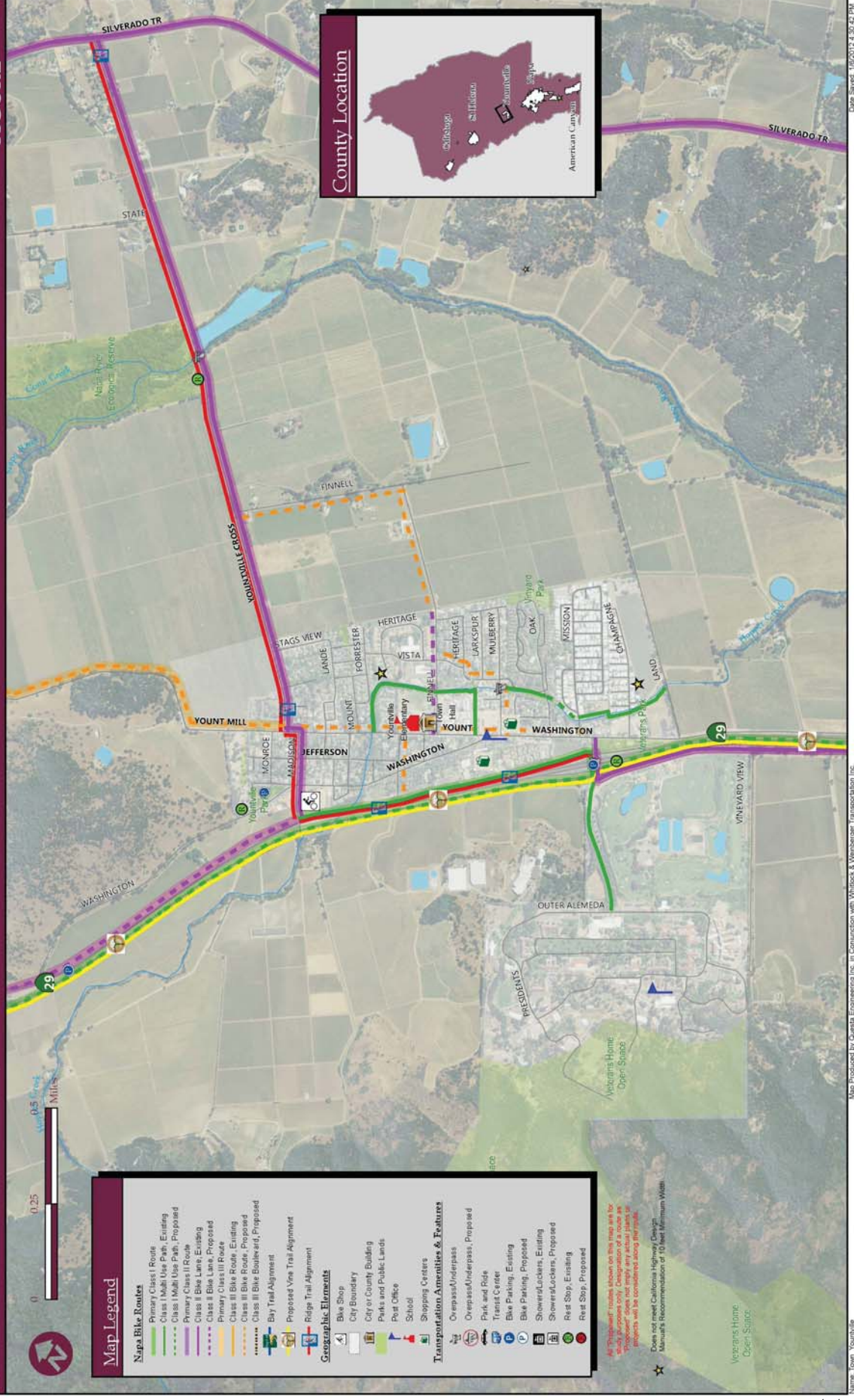
There are no existing **Class III Bike Routes** but there are planned facilities on Finnell Road, Mulberry Street, Washington Street, Webber Avenue, and Yount Mill Road.

Table 6 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the Yountville Bicycle Plan.

Town of Yountville

Napa Countywide Bicycle Plan

FIGURE



Town of Yountville General Plan Circulation Element

Figure 5: Bicycle Facilities

TABLE 6: BICYCLE FACILITY SUMMARY

Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Yountville Mile	1	0.80	Madison Street	California Drive
Madison Street	I	0.06	SR 29	Washington Street
Madison Street	II	0.13	Washington Street	Yount Street
Yountville Cross Road	II	0.50	Yount Street	Town Limits
Yount Street	II	0.25	Yountville Cross Road	Hopper Creek
California Street	II	0.10	Washington Street	Solano Avenue
Solano Avenue	II	0.50	California Drive	Town Limits
Webber Avenue	III	0.07	Yountville Mile Bike Path	Washington Street
Planned				
Vine Trail	I	-	California Drive	City of Napa
Completion and widening of Hopper Creek Path	*	0.40	Yount St @ Hopper Creek	South Town Limits
Finnell Road	II	0.30	Hopper Creek	Town Limits
Webber Avenue	III	0.10	Washington Street	Yount Street
Washington Street-Yount Street	III	1.00	California Drive	Hopper Creek
Vista-Heritage-Heather-Mulberry	III	0.30	Washington Street	Finnell Road

NOTE: * 8' SEPARATED PATH

SOURCE: YOUNTVILLE BICYCLE PLAN

BIKEWAY TRANSITIONS

Madison Street and Yountville Cross Road are popular streets for bicyclists to travel on to get to and from rural Napa Valley, but the two roads are offset with each other when they intersect with Yount Street. There is minimal guidance for the bicyclists, especially in the westbound to southbound direction, to negotiate this transition area. The intersections could benefit from enhanced striping to better guide bicyclists through town as well as improve driver awareness of bicyclists. Another transition point in need of enhancements is the termination of the bike lanes on Yount Street at the entrance to the Hopper Creek path as well as the transition of the proposed Vine Trail at California Drive/Solano Avenue with the exiting bike lanes on California Avenue.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal infrastructure, curb ramps, and streetscape amenities. Nearly complete sidewalk coverage, accessible curb ramps, and marked crosswalks are provided along arterial streets in Yountville. High visibility crosswalk marking and in-roadway pedestrian warning signs, among other treatments, are provided at several uncontrolled mid-block crosswalk locations along Yount Street, Washington Street, and Finnell Road.

SIDEWALKS AND WALKWAYS

Sidewalks in Yountville generally range from four to five feet in width which is generally considered narrow for side by side pedestrian travel, especially in commercial areas. There are street sections with wider sidewalks in some locations and a variety of pedestrian amenities are provided throughout the downtown including accessible pedestrian ramps, decorative paving and crosswalk treatments, curb extensions, pedestrian scale lights, benches, street trees, sidewalk dining, and public art, among others. However, in the historic Old Town area, which is bound by the Cemetery, Washington Street, Yount Street, and

Humboldt Street, the rustic feel of the Napa Valley has been preserved by not developing walkways with concrete sidewalks, curb, and gutter. In the past, residents in Yountville have supported using a more rural type of pedestrian path rather than a typical curb, gutter and sidewalk.

While the pedestrian network is generally well-developed throughout Yountville with the exception of the Old Town, there are some locations where gaps in the sidewalk network can be found. Short gaps exist along undeveloped properties and various frontages on Yountville Cross Road, Finnell Road, and Washington Street. Figure 6 provides an overview of sidewalk coverage in Yountville.

The Washington Park Subdivision is a neighborhood where a more hybrid street section was provided intended to serve both pedestrian travel and parking activity. The street includes 40 feet of width which includes seven feet of raised asphalt on either side separated from the 26 foot travelway by rolled curbs. The street condition has resulted in a number of complaints related to the mixing of the pedestrian way with the parked vehicles.

CROSSWALKS

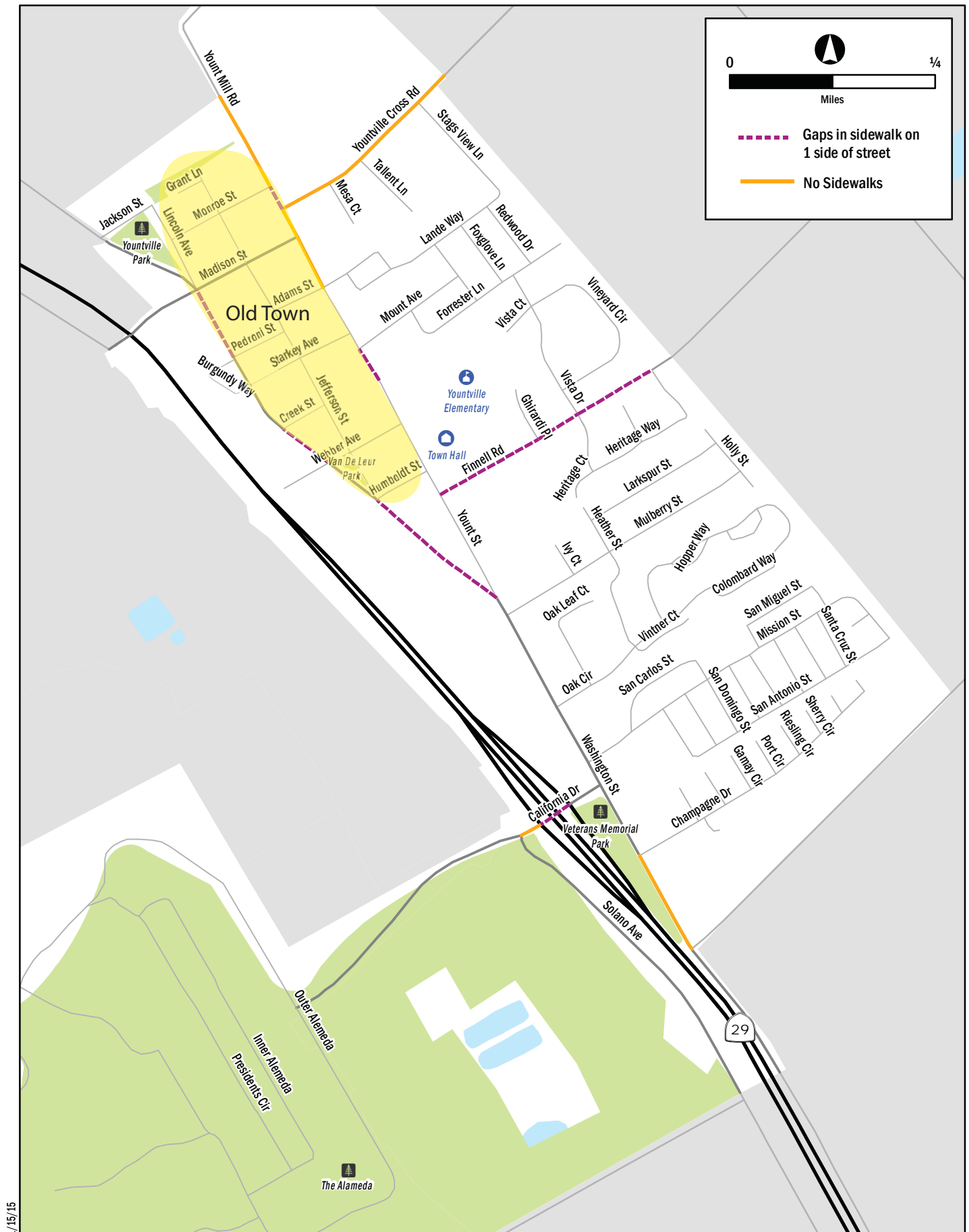
Just as important as developed sidewalks in a small town like Yountville that has heavy pedestrian traffic on the weekends, are well-marked and enhanced crosswalks. Enhancements such as signage, median refuge, curb bulb-outs, etc., can provide for a safer pedestrian crossing condition as well as create a vehicle traffic calming feature. Below is a list of the “uncontrolled” crosswalks in the Town and the facilities which accompany them. Uncontrolled crosswalks are marked crosswalks where no traffic controls (i.e. stop sign or signal) exist. They are often midblock crossings, like many of the crossings on Washington Street and Yount Street.

List of uncontrolled crosswalks with enhancements:

1. Washington Street north of Lincoln Avenue – brick, marked crosswalk, pedestrian crossing sign on southbound approach
2. Washington Street at Humboldt Street – brick, marked crosswalk
3. Washington Street at Bouchon Bakery – brick, marked crosswalk, centerline warning paddles sign, pedestrian crossing sign and PED XING striping on southbound approach
4. Washington Street at V Marketplace – brick, marked crosswalk, PED XING striping on northbound approach
5. Yount Street just north of Washington Street – brick, marked crosswalk, centerline warning paddles sign
6. East leg of California Drive at SR 29 northbound ramps – pedestrian crossing sign at crosswalk in westbound direction
7. West leg of California Drive at Solano Avenue – brick, marked crosswalk
8. California Drive west of Solano Avenue – ladder crosswalk, and includes a centerline warning paddle sign
9. Oak Circle east of Colombard Way – pedestrian crossing sign at crosswalks on both approaches
10. Oak Circle east of Carignan Way – pedestrian crossing sign at crosswalks on both approaches

List of uncontrolled crosswalks without enhancements:

1. Washington Street at Champagne Drive – marked crosswalk
2. West leg of Mulberry Street at Heather Street – ladder crosswalk
3. West leg of Madison Street at Jefferson Street – marked crosswalk
4. California Drive at SR 29 Northbound on-ramp – marked crosswalk



Town of Yountville General Plan Circulation Element
Figure 6: Pedestrian Facilities

5. California Drive at Domaine Chandon Driveway – center island on north leg between northbound and southbound approaches
6. Finnell Road at Yountville Town Hall Driveway – ladder crosswalk
7. Finnell Road at Hopper Creek Path – ladder crosswalk

List of uncontrolled school crosswalks:

1. Yount Street north of Webber Avenue – Crosswalk signs on both approaches, centerline warning paddle sign
2. Finnell Road 250' east of Yount Street – Yellow ladder crosswalk, crosswalk signs on either approach
3. Finnell Road about 580' west of Yount Street – Yellow ladder crosswalk, crosswalk signs on either approach

HOPPER CREEK PATH

The Hopper Creek Pathway System serves alternative modes parallel to most of Hopper Creek that runs through Yountville. There are places to extend the path both north and south to create a complete Hopper Creek Path. This completed path would start at the intersection of Yount Street with Hopper Creek, run parallel to Hopper Creek, and continue until reaching the southern limit of Town. The largest gaps that need to be completed are from Heritage Court to Heather Street and Oak Circle to Mission Street.

TRAFFIC SAFETY

Intersection Collisions

The collision histories for the three primary intersections in Yountville were reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is January 1, 2008, through December 31, 2012.

As presented in Table 7, the calculated collision rates for the study intersections, measured in collisions per million vehicles entering the intersection (c/mve), were compared to average collision rates for similar intersection types statewide, as indicated in *2010 Collision Data on California State Highways*, California Department of Transportation. Intersection types are defined by the type of traffic control, location (urban, suburban, or rural), and number of legs. This data only includes collisions which are reported to a law enforcement agency and may not include minor collisions that the parties involved chose not to report. Collision rate calculations for the study intersections are provided in Appendix A.

TABLE 7: INTERSECTION COLLISION RATES AND STATEWIDE COMPARISON			
Intersection	Number of Collisions 2008-2012	Calculated Collision Rate (c/mve)	Statewide Collision Rate (c/mve)
1. Washington Street/Madison Street	2	0.19	0.60
2. Washington Street/Yount Street	2	0.19	0.16
3. Washington Street/California Drive	2	0.14	0.16

*c/mve = COLLISIONS PER MILLION VEHICLES ENTERING; **BOLD** TEXT REPRESENTS COLLISION RATES HIGHER THAN STATEWIDE AVERAGE*

Two of the study intersections had collision rates lower than the statewide average. The intersection of Washington Street/Yount Street had a collision rate slightly, but not significantly, higher than the statewide average. Washington Street/Yount Street is a tee-intersection with the fourth leg being a driveway with very low traffic volumes. Because of this, the statewide collision rate most likely represents a lower value than an average collision rate for a tee-intersection with a driveway as the fourth leg. It should be noted that the driveway at the Washington Street/Yount Street intersection was realigned within the last several years specifically to address safety concerns with the previous offset configuration.

In general, this examination of the collision history at the highest volume intersections indicate that there is not a safety concern with vehicle collisions that needs to be addressed.

Bicycle and Pedestrian Collisions

Because Yountville has a significant amount of pedestrian and bicycle traffic, the collision history for the Town was further reviewed for the most recent ten years to determine any trends or patterns with bicycle or pedestrian-related collisions. The most current ten-year period available is January 1, 2003, through December 31, 2012. The collision data was analyzed using the Transportation Injury Mapping System (TIMS), published by the University of California, Berkeley. It is important to note that TIMS only maps injury and fatal collisions.

BICYCLISTS

Town wide, there was one reported collision involving a bicyclist within the last 10 years. This collision resulted in injuries, but no fatalities. This collision occurred at Washington Street/Madison Street, which is a critical intersection for traffic coming into and leaving out of town.

PEDESTRIANS

There were five reported collisions resulting in an injured pedestrian. Three of the five collisions occurred along Washington Street at different intersections. Two of these pedestrian collisions occurred at intersections that have complete sidewalks and marked crosswalks. The other two collisions occurred in the vicinity of the Veterans Home in the southwest area of Yountville.

A summary of bicycle and pedestrian collisions by location is provided in Table 8, and an exhibit showing the locations is provided in Appendix B.

TABLE 8: BICYCLE AND PEDESTRIAN COLLISIONS			
Location	Pedestrian Collisions	Bicycle Collisions	Total Collisions
Washington Street/Madison Street	0	1	1
Washington Street/Mulberry Street	1	0	1
Washington Street/Oak Circle	1	0	1
Washington Street/Land Lane	1	0	1
Veteran's Home	2	0	2

In general, one collision involving a bicycle or pedestrian at any one location within a ten year period is not unexpected. Multiple collisions at any one location should be a cause for further study.

COMPLETE STREETS

STATE OF CALIFORNIA COMPLETE STREETS ACT

On September 30, 2008, Governor Schwarzenegger signed AB 1358, the California Complete Streets Act of 2008, into law. As of January 2011, AB 1358 requires any substantive revision of the circulation element of a Town or county's general plan to identify how they will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

This section is intended to 1) fulfill this requirement, 2) identify existing features in Yountville which fall into the Complete Street category and 3) identify potential future Complete Street enhancements.

The National Complete Streets Coalition defines complete streets as follows: Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Creating complete streets means transportation agencies must change their orientation toward building primarily for cars. Instituting a complete streets policy ensures that transportation agencies routinely design and operate the entire right of way to enable safe access for all users.

An ideal Complete Streets policy:

- Includes a vision for how and why the community wants to complete its streets
- Specifies that 'all users' includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles.
- Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.
- Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
- Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
- Is adoptable by all agencies to cover all roads.
- Directs the use of the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs.
- Directs that Complete Streets solutions will complement the context of the community.
- Establishes performance standards with measurable outcomes.
- Includes specific next steps for implementation of the policy

OTHER GUIDANCE

CALTRANS DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM
In 2001, Caltrans adopted Deputy Directive 64; a policy directive related to non-motorized travel throughout the state. In October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. DD 64-R1 states:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."

Successful long-term implementation of this policy is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

Economically, complete streets can help revitalize communities, and they can give families the option to lower transportation costs by using transit, walking or bicycling rather than driving to reach their destinations. The Department is actively engaged in implementing its complete streets policy in all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System.

DIRECTOR'S POLICY 22 (DP-22), "DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS"

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all state highways, was adopted by Caltrans in November of 2001. The policy reads:

The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street," that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods," and that "communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality." The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

METROPOLITAN PLANNING COMMISSION

The current Regional Transportation Plan (RTP) produced by MTC, *Transportation 2035 Plan*, was finalized in February 2009 and updates the previous 2005 RTP. The 2035 Plan sets forth regional transportation policy and provides capital program planning for all regional, state and federally funded projects. In addition, the 2035 Plan provides strategic investment recommendations to improve regional transportation system performance over the next 25 years. Investments in regional highway, transit, local roadway, bicycle, and pedestrian projects are set forth in the 2035 Plan. These projects have been identified through regional and local transportation planning processes. Project recommendations are premised upon factors related to existing infrastructure maintenance, increased transportation system efficiencies, improved traffic and transit operations, and strategic expansions of the regional transportation system.

RECENT ACCOMPLISHMENTS BY THE TOWN OF YOUNTVILLE

In general, the Town supports a road system that provides for pedestrian, bicycle and transit travel modes with a street infrastructure that encourages low speed travel. A number of projects have been completed within the last 5-10 years which support this goal:

- Bike lanes on the Madison Street to Yountville Cross Road corridor
- Class I path on Madison Street, west of Washington Street
- Redesigned intersection of Washington Street/Yount Street
- High visibility crosswalks with added in-street paddle signage town wide.
- Class I “Yountville Mile” parallel to SR 29 and the Webber Street connection to Yountville Mile
- Bike Lanes on Lincoln Avenue to Yountville Park
- Redesign of the Washington Street/Lincoln Avenue intersection

PARKING FACILITIES AND UTILIZATION

The Parking Facility Analysis focuses on the primary streets serving non-residential traffic, including Washington Street, Yount Street, Mulberry Street, Finnell Road, Humboldt Street, Webber Avenue and Madison Street.

Existing Parking Utilization

In order to assess parking occupancy during typical summer conditions, parking surveys were completed on Wednesday, July 9, Friday, August 22, and Saturday, August 23, 2014 between 11:00 a.m. and 2:00 p.m. to capture peak daytime summer conditions. All of the on- and off-street parking spaces were surveyed in the parking “study area” as shown in Figures 7A and 7B.

The study area was arranged into 13 smaller, more manageable zones designated “A” through “M.” In total, there are nearly 1,600 on-street and off-street parking spaces located within the study area. Following is a summary of each zone.

Zone “A” is located on the north side of Madison Street and includes on-street parking on Lincoln Avenue and Washington Street and off-street parking on the hotel site west of Washington Street. Zone “A” has a total supply of 102 parking spaces.

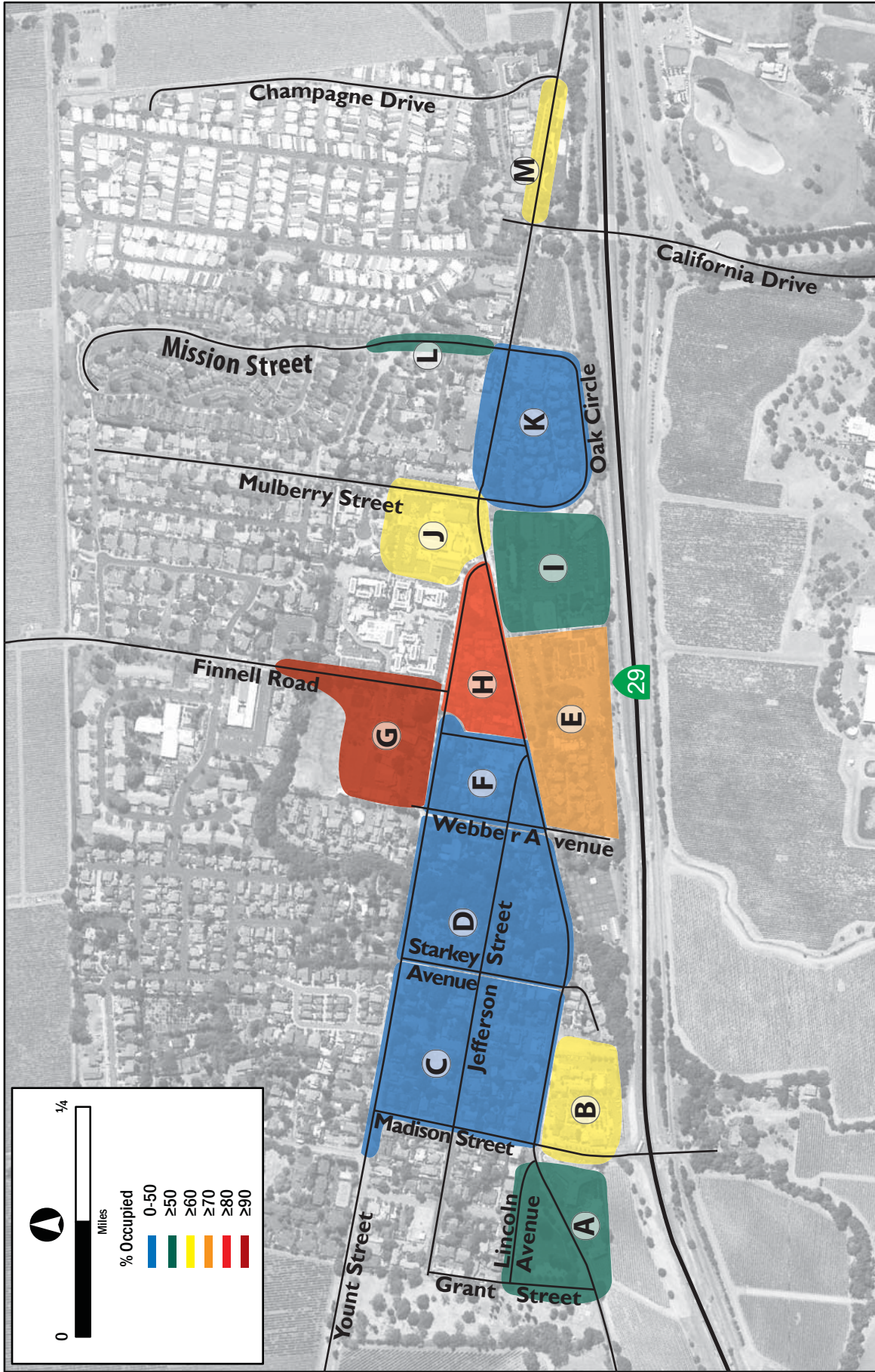
Zone “B” is located on the west side of Washington Street between Madison Street and Pedroni Street. Zone “B” has a total supply of 137 parking spaces.

Zone “C” encompasses a large portion of the Old Town Historic residential district and includes Washington Street from Madison Street to Starkey Avenue, Yount Street from Yountville Crossroad to Starkey Avenue, Madison Street from Washington Street to Yount Street, Adams Street from Jefferson Street to Yount Street, and Pedroni Street from Washington Street to Jefferson Street. Zone “C” has a total supply of 160 parking spaces.

Zone “D” also encompasses a large portion of the Old Town Historic residential district and includes Washington Street, Jefferson Street, and Yount Street from Starkey Avenue to Webber Avenue, Creek Street, and Starkey Avenue from Washington Street to Yount Street. Zone “D” has a total supply of 129 parking spaces.

Zone “E” is located on the west side of Washington Street and includes all the parking for the Vintage Inn and the parking lot directly south of the Inn. Zone “E” has a total supply of 187 parking spaces.

Zone “F” encompasses a small portion of the Old Town Historic residential district and includes all the available on-street parking on Webber Avenue and Humboldt Street from Washington Street to Yount Street, Washington Street and Jefferson Street from Webber Avenue to Humboldt Street, and Yount Street from Webber Avenue to Finnell Road. Zone “F” has a total supply of 60 parking spaces.



1/15/15

Town of Yountville General Plan Circulation Element

Figure 7A: Weekday Parking Occupancy



1/15/15

Town of Yountville General Plan Circulation Element

Figure 7B: Weekend Parking Occupancy

Zone “G” covers parking spaces on Finnell Road from Yount Street to Ghirardi Place and all of the parking spaces at Yountville Town Hall and Yountville Elementary School. Zone “G” has a total supply of 95 parking spaces.

Zone “H” includes on-street parking on Washington Street between Humboldt Street and Yount Street and on Yount Street between Finnell Road and Washington Street as well as all the off-street parking within those boundaries. Zone “H” has a total supply of 90 parking spaces.

Zone “I” is the large parking lot for the V-Marketplace and Whistlestop Center complexes located on the west side of Washington Street, directly across from the skewed Washington Street/Yount Street intersection. Zone “I” has a total off-street supply of 248 parking spaces.

Zone “J” is located on the east side of Washington Street and includes the off-street parking spaces for the Yountville Community Center, post office, and police department. The on-street parking spaces include those on Mulberry Street from Washington Street to the east end of the parking lot. Zone “J” has a total supply of 128 parking spaces.

Zone “K” includes all of Oak Circle as well as Washington Street from Mulberry Street to Oak Circle. Zone “K” has a total supply of 184 parking spaces.

Zone “L” includes the on-street parking spaces on Oak Circle from Washington Street to Heather Street. Zone “L” has a total supply of 24 parking spaces.

Zone “M” spans Washington Street from California Drive to Champagne Drive. Zone “M” has a total supply of 51 parking spaces.

The results of the survey are shown in Figures 7A and 7B. Table 9, below, provides a parking supply and occupancy for each zone on a typical summer weekday and Saturday.

TABLE 9: PARKING SURVEY RESULTS									
Zone	Parking Spaces			Weekday Parking Occupancy			Weekend Parking Occupancy		
	On-street	Off-street	Total	On-Street	Off-Street	%	On-Street	Off-Street	%
A	52	50	102	32	23	54	65	23	86
B	0	137	137	9	78	64	0	82	60
C	160	0	160	30	0	19	61	0	38
D	129	0	129	43	0	33	73	0	57
E	8	179	187	2	130	71	5	167	92
F	60	0	60	8	0	13	44	0	73
G	30	65	95	68	27	100	28	30	61
H	27	63	90	21	57	87	34	50	93
I	0	248	248	0	133	54	0	166	67
J	24	104	128	23	56	62	13	32	35
K	39	145	184	27	52	43	36	37	40
L	24	0	24	13	0	54	8	0	33
M	51	0	51	35	0	69	44	0	86
Total	604	991	1595	311	556	56	411	587	63

Weekday parking occupancy across Yountville is about 54 percent (52% on-street and 56% off-street), compared to 63 percent for a typical weekend day (68% on-street and 59% off-street). Parking occupancy for both a weekday and weekend day is greatest in the zones closest to the highest concentration of restaurants and shops around the intersection of Washington Street/Yount Street. Parking occupancy decreases in the school and Town Hall zone “G” and Community Center, post office, police department zone “J” and increases in the retail/restaurant zones “E” and “I” on the weekends. On-street parking in the Old Town Historic zoning district (Zones C, D, and F) is 43 percent occupied on average, well below the town-wide parking occupancy average.

Generally, a parking occupancy of less than 85 percent is considered to be manageable for someone trying to find a parking space, as long as parking spaces are “shared” and not exclusive to one business or another. During a typical weekday, only the zone with Yountville Elementary School and Town Hall is more than 85 percent occupied. On a typical weekend day, some of the zones closest to restaurants, shopping, and recreational activities have parking occupancies greater than 85 percent, but zones “H” and “I”, adjacent to Washington Street/Yount Street, are approximately 65 percent occupied.

Therefore, in general, there appears to be a sufficient supply of parking town-wide to serve the current demand.

The Town does have plans to increase parking spaces in the following areas:

- Plans are underway to stripe the space around Yountville Park as angled parking spaces. The north side of Yountville Park is already striped for angled parking. Adding angled parking on Washington Street and the east side of Yountville Park could increase parking from 32 parallel spaces to approximately 62 diagonal spaces.
- Expanded parking spaces south of the Veterans Memorial park at California and Washington.
- Diagonal parking on Humboldt Street.
- New parking planned on Oak Circle.

SUMMARY OF ISSUES AND RECOMMENDATIONS

The State of California has mandated that all municipalities include a complete streets element in its General Plan. Therefore, any substantive revisions of the circulation element of the general plan should identify how the Town will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street.

In order to comply with this requirement, the Town of Yountville will review and evaluate current policies and consider several projects which will improve the Town's circulation. These recommendations are outlined below.

Vehicle Circulation

Yount Street/Humboldt Street – The intersection is a non-standard configuration due to the “unbalanced” stop control with stop signs on the southbound and eastbound approaches with free flow conditions on the northbound approach.

Recommendation: The intersection should either be controlled with an all-way stop or free flow both northbound and southbound. Pedestrian safety should be considered in the evaluation to determine the ultimate controls.

Yountville Cross Road Speeds – Speed surveys indicate that traffic on Yountville Cross Road is traveling with an 85th percentile speed of 39 mph in a 35 mph zone with the presence of a radar feedback sign.

Recommendation: Consider designing and installing road treatments, such as narrowing and/or speed tables to bring speeds to a lower and more desirable range at this gateway location.

Local Street Connectivity – Several neighborhoods south of Finnell Road are limited with access only to Washington Street.

Recommendation – Consider providing a one-lane emergency access connection at Heather Street and Heritage Court while maintaining the integrity of the pocket park.

Operating Standards

Intersection Level of Service – Senate Bill 743 will soon be implemented which will no longer require auto delay and Level of Service analysis as part of CEQA. The highest volume intersections in Yountville currently operate with LOS B conditions and are projected to remain within the LOS B range with buildout of anticipated land use.

Recommendation – Once Senate Bill 743 is implemented, consider replacement of vehicle Level of Service standards for traffic conditions in Yountville with Vehicle Miles Traveled (VMT) or other recommended metrics.

Bicycle Facilities

Madison Street and Yountville Cross Road Bike Lane Transitions – The two corridors are offset with each other when they intersect with Yount Street. There is minimal guidance for the bicyclists, especially in the westbound to southbound direction, to negotiate this transition area.

Recommendation – Provide enhanced bike lane striping at the intersections of Yount Street with Madison Street and Yountville Cross Road to better guide bicyclists through town as well as improve driver awareness of bicyclists.

Yount Street at the entrance to the Hopper Creek Path – Bike lanes currently extend south from Madison Street and end at the Hopper Creek path.

Recommendation – Install complete street features such as signing and striping on Yount Street between the terminus of the bike lanes and Washington Street.

Hopper Creek Path – The existing path has gaps and is generally not wide enough to serve pedestrians and bicyclists side by side.

Recommendation – Complete the path system in the areas with gaps and, where possible, explore the potential for widening the path to improve multi-modal opportunities.

Bike Plan Planned Projects – There are several uncompleted bicycle facility projects included in the Bike Plan.

Recommendation – Seek funding, complete designs and implement the following bike facility projects:

- Class III bike route including signage and sharrow markings on Webber Avenue between Washington Street and Yount Street and on the Vista-Heritage-Heather-Mulberry route between Washington Street and Finnell Road.
- Modify the Bike Plan to designate a preference for sharrows on Finnell Road between the Hopper Creek path and the eastern Town limit.

Pedestrian Safety and Connectivity

Commercial Width Sidewalks – Sidewalks in Yountville generally range from four to five feet in width which is generally considered narrow for side by side pedestrian travel, especially in commercial areas with tourist activity.

Recommendation – The Town should consider preparing a Sidewalk Master Plan for the Washington Street corridor from Yountville Community Park, north of Madison Street, to Veteran's Memorial Park, south of California Drive. The Master Plan should weigh the competing interests of providing wider sidewalks on both sides of Washington Street while maintaining and enhancing opportunities for landscaping and retaining Yountville's rural charm. Consider potential wider sidewalk plazas in the downtown core near key intersections.

Sidewalk/Walkway Gaps – There are a number of sidewalk gaps throughout the Town.

Recommendation – With the exception of the Old Town district, gaps in sidewalks and walkways should be identified and a plan to fill these gaps completed. The plan should consider the appropriateness of providing either raised curb or asphalt walkways on the following sections:

- Yountville Cross Road (South side)
- Finnell Road (South side)
- Washington Street (East Side, South of California)
- Washington Street (East Side, South of Madison)

Washington Park Subdivision – The hybrid street section which mixes the pedestrian way with the parking lane has resulted in a number of complaints about safety.

Recommendation – In order to more fully serve and separate pedestrian and parking activity, review and evaluate modifications to the street cross section. Options to be considered include installing selected concrete sidewalks, separating the parking from the pedestrian walkways, narrowing the travelway, restricting parking in selected areas, etc. Pedestrian improvements should connect the neighborhood with adjoining paths and parks. Plan alternatives should be presented to the neighborhood for their input. Based on the residents input a preferred plan should be developed and implemented.

Crossing Needs at Uncontrolled Crosswalks – There are a number of uncontrolled crosswalks in Yountville that do not include any safety enhancements other than a marked crosswalk.

Recommendation – Review and evaluate existing policy and determine whether additional measures, such as 1) raised crosswalks, 2) lighted crosswalks, 3) enhanced signage or other measures are appropriate at these locations:

- Washington Street at Champagne Drive
- West leg of Mulberry Street at Heather Street
- West leg of Madison Street at Jefferson Street
- California Drive at SR 29 Northbound on-ramp
- California Drive at Domaine Chandon Driveway
- Finnell Road at Yountville Town Hall Driveway
- Finnell Road at Hopper Creek Path

Crossing Needs at School Crosswalks – There are three uncontrolled school crosswalks which could benefit from additional safety measures.

Recommendation – Review and evaluate existing policy and evaluate these locations to determine if additional physical modifications such as a raised crosswalk, bulbouts, medians, etc., are appropriate as well as warning enhancements such as 1) lighted crosswalks, 2) enhanced signage or other measures.

- Yount Street north of Webber Avenue
- Finnell Road 250' east of Yount Street
- Finnell Road about 580' west of Yount Street

Traffic Safety

Veterans Home Pedestrian Safety – Based on a review of pedestrian collisions over a ten year period, there were two collisions involving pedestrians near the Veterans Home which resulted in injuries.

Recommendation – The pedestrian route between the Veterans Home and downtown Yountville should be reviewed to determine if any enhancements such as sidewalks/walkways, higher

visibility crosswalks, pedestrian warning signs at crosswalks and traffic calming elements are needed to increase the safety for pedestrians.

Parking

Parking in Old Town District – There is a perception that on-street parking in the Old Town Historic zoning district (Zones C, D, and F) is overburdened, but the parking study revealed that it is 43 percent occupied on average, well below the town-wide parking occupancy average.

Recommendation – Since there does not appear to be significant parking impacts in the Old Town District, parking restrictions, such as limiting parking to residents only or implementing time period restrictions, are not recommended under present conditions.

Evaluate Parking Demand for all New Commercial Development – The Town's parking standards provide the minimum number of onsite parking spaces that are required by use type. In some cases, the Town's minimum standards are not sufficient to meet customer and employee parking demand. When this is the case, commercial parking impacts spill over into adjacent residential neighborhoods.

Recommendation – Evaluate parking demand for all new commercial development and require onsite parking that meets or exceeds the Town's minimum parking standards as determined by the Town during project review. In making this determination, the Town may require the following:

- Maximize onsite parking.
- Submittal of Parking Management Plans to addresses customer and employee parking, both on- and offsite.
- Preparation of Parking Impact Studies to evaluate parking impacts associated with a proposed use.

Opportunities of Additional Parking – The Town has plans to increase the number of parking spaces in the following areas:

- Plans are underway to stripe the space around Yountville Park as angled parking spaces. The north side of Yountville Park is already striped for angled parking. Adding angled parking on Washington Street and the east side of Yountville Park could increase parking from 32 parallel spaces to approximately 62 diagonal spaces.
- Expanded parking spaces south of the Veterans Memorial Park
- Evaluate diagonal parking on Humboldt Street.
- Additional parking on Oak Circle.

Recommendation – Implement these planned parking expansions.

Tourist Parking – Tour buses, limousines, and other tourist service vehicles generally frequent the downtown core visitor areas during the tourist season with parking occurring in a variety of areas which can disrupt vehicle parking conditions.

Recommendation – The Town should consider designating a satellite parking lot for tour buses and work with tour companies to ensure that parking occurs in these lots. Enforce Town parking restrictions for illegally parked vehicles.

REGULATORY FRAMEWORK/ISSUES, OBJECTIVES AND POLICIES

The Town of Yountville General Plan along with a variety of regional, state and federal plans, legislation, and policy directives provide guidelines for the safe operation of streets and transportation facilities in the Town of Yountville. While the Town of Yountville has primary responsibility for the maintenance and operation of transportation facilities within the Town, Yountville staff works on a continual basis with responsible regional, state, and federal agencies including the Napa County Transportation and Planning Agency (NCTPA), the County of Napa, the Metropolitan Transportation Commission (MTC), California Department of Transportation (Caltrans), and Federal Highway Administration, as well as others, to maintain, improve, and balance the competing transportation needs of the community and the region.

The following circulation and transportation topics reflect the intentions of the Town to continue its goal to maintain most streets as two-way, two-lane streets, non-signalized intersections (except for Madison Street at State Highway 29) and preserve the rural character of existing and new streets.

GOAL C1 Create a Circulation Network That Reinforces the Desired Land Use Pattern for Yountville, and Provides for the Safe and Efficient Movement of People and Goods to All Parts of the Town

Objective C1A Maintain Safe and Efficient Operating Conditions on the Townwide Circulation Network

Policy C 1.1 Ensure that the Town's circulation network is maintained and improved over time to support buildout of the General Plan in a manner that is consistent with the Town's Circulation Network (Figure 1).

Policy C 1.2 Ensure that the Town's circulation network is a well-connected system of streets, roads, highways, sidewalks, and bicycle/pedestrian paths that effectively accommodates vehicular and non-vehicular traffic in a manner that considers the context of surrounding land uses and the needs of all roadway users.

Action C 1: Consider providing a one-lane emergency access connection at Heather Street and Heritage Court while maintaining the integrity of the pocket park.

Policy C 1.3 The Town's current operating standards call to maintain all street intersections at a level of service "C" or better. Consider replacement of vehicle Level of Service standards for traffic conditions in Yountville with Vehicle Miles Traveled (VMT) or other recommended metrics once Senate Bill 743 is implemented.

Policy C 1.4 When analyzing impacts to the circulation network created by new development or roadway improvements, consider the needs of all users including those with disabilities, ensuring that pedestrians, bicyclists, and transit riders are considered at an equal level to the needs of automobile drivers.

Policy C 1.5 Maximize the use of federal and other matching funding sources and Measure T funds in 2018 to provide ongoing maintenance, operation, and management of the Town's circulation network.

Policy C 1.6 Maintain safe travel conditions for all modes of travel.

Action C 2: Modify the intersection of Yount Street/Humboldt Street which should either be controlled with an all-way stop or free flow both northbound and southbound. Pedestrian safety should be considered in the evaluation to determine the ultimate controls.

Action C 3: Consider designing and installing road treatments on Yountville Cross Road, such as narrowing and/or speed tables to bring speeds to a lower and more desirable range at this gateway location.

Objective C1B *Consider Complete Street improvements including enhancements for pedestrians and bicycles on all future road projects.*

Policy C 1.7 Consider all transportation improvements as opportunities to improve safety, access, and mobility for all roadway users.

Action C 4: Seek opportunities to fund maintenance of and improvements to the circulation network, including through active pursuit of a wide range of grant sources.

Action C 5: Ensure that future development provides roadway improvements consistent with the recommendations for Bicycle and Pedestrian facility improvements included in related policies and actions.

Action C 6: Work collaboratively with Caltrans and the NCTPA to identify funding sources and complete the following improvements, or improvements of comparable effectiveness, on roadways owned by these agencies within and near the Town of Yountville.

Action C 7: As part of the development review and planning process, review general plan amendments, zone change requests, specific plans, and development projects to ensure that adequate circulation improvements are included, that the project addresses its proportional-share of impacts to the Town's circulation network, and that the project provides for complete streets to the extent feasible.

Action C 8: Continue to update the Town's Capital Improvement Program (CIP) to include, as appropriate, the roadway improvements necessary to support buildout of the General Plan.

Action C 9: Through the use of available Town funds or grants, apply techniques such as implementation of traffic calming, geometric modifications, increased enforcement, etc., to improve safety.

Action C 10: Coordinate with the NCTPA to provide a coordinated effort to improving the transportation network and reducing automobile use.

Action C 11: Coordinate with the NCTPA on the implementation of Measures T funds which will become available in 2018.

Action C 12: In an effort to further the practice of modifying streets to serve all modes of transportation in a “Complete Streets” manner, the Town should consider modifications at the following locations:

- Washington Street Corridor – See policy to complete a Sidewalk Master Plan.
- Yount Street from Washington Street to Hopper Creek – Consider the installation of signing and striping, sharrows, lane narrowing or other complete street features.

Policy C 1.8 Retain the viewpoint of pedestrians and bicyclists as the primary perspective when identifying any traffic improvements.

Policy C 1.9 Any intersections to be modified should be designed to provide adequate and safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities as well as ADA considerations.

Objective C1B Preserve the quiet, rural character of residential streets.

Policy C 1.10 Ensure that the Town’s circulation network maintains a rural ambiance and character particular to the Town of Yountville. Any traffic measures will be non-intrusive and will not use electrical devices unless it is needed for safety reasons or no other solution is possible.

Policy C 1.11 Maintain the Old Town Historic residential neighborhood with minimal traffic improvements and no sidewalks.

Policy C 1.12 Use landscaping and urban design elements to slow traffic and discourage traffic flow away from residential neighborhoods.

Policy C 1.13 Design all street improvements to preserve and enhance the rural character of Yountville.

Objective C1C Locate new streets to enhance circulation and connect to existing street network.

Policy C 1.14 Provide new streets and connections in new developments or subdivisions as indicated on the Circulation Network (Figure 1).

Policy C 1.15 Road access to any new development should be designed to disperse traffic, minimize traffic impact on existing residential areas, and not require significant improvements to existing streets.

Objective C1E Minimize visitor and employee traffic and parking from impacting residential neighborhoods.

Policy C 1.16 Continue to route visitor and commercial serving traffic along Washington Street. Evaluate alternatives that keep visitor traffic from impacting residential neighborhoods.

Policy C 1.17 Change the classification of Yount Street to be a residential street. Continue to prohibit trucks on Yount Street with the exception of agricultural vehicles.

Policy C 1.18 Continue with California Drive and Madison Street as the primary ingress and egress points from State Highway 29 to the town.

Policy C 1.19 Retain Heather Street right-of-way north of the Toyon Terrace subdivision and connect with Heritage Court at a future date.

Policy C 1.20 Improve traffic circulation along Washington Street by minimizing the number of driveways serving planned commercial and residential development.

GOAL C2 Maintain and Expand a Safe and Efficient Pedestrian, Bicycle, and Transit Network That Connects Neighborhoods With Key Destinations to Encourage Travel by Non-Automobile Modes While Also Improving Public Health

Objective C2A *Maintain and Develop a Network of Sidewalks and Pathways to Provide for Safe and Convenient Pedestrian Travel*

Policy C 2.1 Establish and maintain a system of pedestrian facilities and crossing enhancements that are consistent with the Town's Bicycle Master Plan.

Policy C 2.2 Strive to maintain continuous pedestrian facilities along the Washington Street corridor.

Action C 13: The Town should consider preparing a Sidewalk Master Plan for the Washington Street corridor from Yountville Community Park, north of Madison Street, to Veteran's Memorial Park, south of California Drive. The Master Plan should weigh the competing interests of providing wider sidewalks on both sides of Washington Street while maintaining and enhancing opportunities for landscaping and retaining Yountville's rural charm. Consider potential wider sidewalk plazas in the downtown core near key intersections.

Policy C 2.3 Require development projects to construct sidewalks and walkways on and off-site in order to maintain consistency with the Town's Bicycle Master Plan, and as dictated by the location of transit stops and common pedestrian destinations.

Policy C 2.4 When it can be shown that construction of a sidewalk would be at odds with an existing neighborhood's aesthetic and the historic nature of the area, alternatives such as an off-street path or wider paved shoulders may be considered.

Policy C 2.5 The Old Town Historic residential neighborhood will be maintained rural in nature without curb, gutter and sidewalks.

Policy C 2.6 With the exception of the Old Town district, gaps in sidewalks and walkways should be identified and a plan to fill these gaps completed.

Action C 14: Consider the appropriateness of providing either raised curb or asphalt walkways on the following sections:

- Yountville Cross Road (South side)
- Finnell Road (South side)
- Washington Street (East Side, South of California)
- Washington Street (East Side, South of Madison)

Action C 15: In order to more fully separate pedestrian and parking activity, a new ADA compliant street cross-section should be investigated and implemented in the Washington Park Subdivision. Options to be considered include installing selected concrete sidewalks, separating the parking from the pedestrian walkways, narrowing the travelway, restricting parking in selected areas, etc. Pedestrian improvements should connect the neighborhood with adjoining paths and parks. Plan alternatives should be presented to the neighborhood for their input. Based on the residents input a preferred plan should be developed and implemented.

Policy C 2.7 Create an accessible circulation network that is consistent with guidelines established by the Americans with Disabilities Act (ADA), allowing mobility-impaired users such as the disabled and elderly to safely and effectively travel within the Town.

Policy C 2.8 Work with Napa County and the NCTPA to create active transportation links to the surrounding public open space.

Policy C 2.9 Enhance the safety of any pedestrian crossings in the Town.

Action C 16: Review and evaluate existing policy and determine whether additional measures, such as 1) raised crosswalks, 2) lighted crosswalks, 3) enhanced signage or other measures are appropriate at these locations:

- Washington Street at Champagne Drive
- West leg of Mulberry Street at Heather Street
- West leg of Madison Street at Jefferson Street
- California Drive at SR 29 Northbound on-ramp
- California Drive at Domaine Chandon Driveway

Action C 17: Review and evaluate existing policy and evaluate these locations to determine if additional physical modifications such as a raised crosswalk, bulbouts, medians, etc., are appropriate as well as warning enhancements such as 1) lighted crosswalks, 2) enhanced signage or other measures.

- Yount Street north of Webber Avenue
- Finnell Road 250' east of Yount Street
- Finnell Road about 580' west of Yount Street

Action C 18: Review the pedestrian route between the Veterans Home and downtown Yountville to determine if any enhancements such as sidewalks/walkways, higher visibility crosswalks, pedestrian warning signs at crosswalks and traffic calming elements are needed to increase the safety for pedestrians.

Objective C2B *Provide a Townwide Network of Bicycle Routes, Multi-Use Paths, and Facilities to Accommodate Travel by Bicycle*

Policy C 2.10 Establish and maintain bicycle facilities that are consistent with the network depicted in the Town's Bicycle Master Plan.

Action C 19: Seek funding, complete designs and implement the following bike facility projects:

- Class III bike route including signage and sharrow markings on Webber Avenue between Washington Street and Yount Street and on the Vista-Heritage-Heather-Mulberry route between Washington Street and Finnell Road.
- Modify the Bike Plan to designate a preference for sharrows on Finnell Road between the Hopper Creek path and the eastern Town limit.

Policy C 2.11 Public road construction projects shall incorporate facilities identified in the Bicycle Master Plan to the greatest extent feasible.

Policy C 2.12 Bicycle parking facilities such as bike racks, bike lockers, and secure bike corrals shall be provided at locations where there is a concentration of residents, visitors, students, or employees.

Policy C 2.13 Provide pedestrian and bike connections which link residential areas with local-serving businesses and recreational facilities, including parks, schools, the Post Office, Town Hall, Community Hall and the commercial core.

Policy C 2.14 Work with the NCTPA to acquire funding to complete the planned bicycle facilities.

Policy C 2.15 Encourage pedestrian/bike connections where none currently exist including alleys.

Action C 20: Enhance bicycle guidance signage and striping in transitional areas such as at the intersections of Yount Street with Madison Street and Yountville Cross Road to better guide bicyclists through town as well as improve driver awareness of bicyclists.

Action C 21: Install complete street features such as signing and striping on Yount Street between the terminus of the bike lanes and Washington Street.

Action C 22: Complete the Hopper Creek path system in the areas with gaps and, where possible, explore the potential for widening the path to improve multi-modal opportunities.

Objective C2C *Make Transit a Convenient Travel Option for Residents, Employees and Visitors throughout Yountville*

Policy C 2.16 The Town shall maintain the trolley system to serve local transit needs.

Action C 23: Discuss the need to consolidate bus stops on Washington Street with NCTPA and consider the potential impact to users, especially residents of the Veterans Home.

Policy C 2.17 Work with the Vine Transit to create an effective Rider Awareness Program that will educate the public on the existing transit systems.

Policy C 2.18 Continue to provide local public transportation, if financially feasible, to the entire town including the Veterans Home of California.

Policy C 2.19 Continue to support efforts to maintain all regional and town bus service.

Policy C 2.20 Continue to cooperate with the Veterans Home of California to provide public transportation to residential neighborhoods and the business district.

Objective C2D *Prioritize Circulation Improvements that Strengthen Pedestrian and Bicycle Safety for Students Traveling to and from Schools*

Policy C 2.21 Prioritize bicycle and pedestrian safety for students travelling to and from school.

Policy C 2.22 Continue to work with the Yountville Police Department

Policy C 2.23 Develop a Safe Routes to School Program and strive to improve infrastructure for parents and students choosing to walk and bike to school by promoting school faculty and parent participation, applying for Safe Routes to School grants, identifying the issues associated with unsafe bicycle and pedestrian facilities between neighborhoods and schools, and executing plans to improve those facilities.

GOAL C3 *Create a Balanced Parking Supply That Accommodates Demand While Maximizing Efficiency*

Objective C3A *Create an Efficient and User-Friendly Parking Environment*

Policy C 3.1 Maximize the use of existing parking areas, emphasizing the use of shared parking wherever possible, including provision of multi-purpose parking lots that serve both employee and visitor uses.

Policy C 3.2 Continue to review and update parking ratios in the Zoning Ordinance, and design standards in the Design Ordinance to reflect trends in vehicular size and use.

Action C 24: Evaluate parking demand for all new commercial development and require onsite parking that meets or exceeds the Town's minimum parking standards as determined by the Town during project review. In making this determination, the Town may require the following:

- Maximize onsite parking.
- Submittal of Parking Management Plans to addresses customer and employee parking, both on- and offsite.
- Preparation of Parking Impact Studies to evaluate parking impacts associated with a proposed use.

Policy C 3.3 Encourage adjacent property owners to share access to parking lots and provide connectivity between commercial properties to allow for shared parking activity. When the times that the parking spaces are used differs, allow the shared use of spaces. Each development must provide and maintain, at some location within the commercial area, the parking spaces required by the Zoning Ordinance. The realization of this policy relies on the collaboration of businesses and landowners.

Policy C 3.4 Discourage permit parking restrictions which can push parking impacts to other neighborhoods and residences.

Policy C 3.5 Seek to expand parking to expand on-street parking through re-striping.

Action C 25: Seek to implement potential parking expansion areas such as

- Plans are underway to stripe the space around Yountville Park as angled parking spaces. The north side of Yountville Park is already striped for angled parking. Adding angled parking on Washington Street and the east side of Yountville Park could increase parking from 32 parallel spaces to approximately 62 diagonal spaces.
- Expanded parking spaces south of the Veterans Memorial Park.
- Evaluate diagonal parking on Humboldt Street.
- Additional parking on Oak Circle.

Objective C3B *Reduce traffic congestion on Washington Street resulting from on-street bus parking.*

Policy C 3.6 The Town should consider designating a satellite parking lot for tour buses and work with tour companies to ensure that parking occurs in these lots. Enforce Town parking restrictions for illegally parked vehicles.

Policy C 3.7 Visitor buses and oversized limos should be discouraged and may be prohibited from parking on the street, in order to keep space open for tourists, workers, and residents.

Policy C 3.8 Bus parking areas should not eliminate any existing off-street parking stalls.

Objective C3C *Screen off-street parking from public view.*

Policy C 3.9 Require new parking lots to be set back from the street, screened with buildings, walls and/or landscape elements as set forth in the Design Ordinance, Chapter 1.

Policy C 3.10 Accommodate parking behind buildings, where feasible.

Policy C 3.11 Plant trees in parking lots, which provide shade and diminish the visual impact of the lot, but do not obstruct view corridors as established in Chapter I of the Design Ordinance.

Policy C 3.12 Minimize the size of and impact of parking lots. For example, two separate well-landscaped parking lots connected by a driveway are preferable to one larger parking lot.

Collision Rate Calculations

Intersection Collision Rate Calculations

Yountville Circulation Element

Intersection # 1: Washington St. & Madison St.

Date of Count: Thursday, September 25, 2014

Number of Collisions: 2

Number of Injuries: 1

Number of Fatalities: 0

ADT: 5900

Start Date: January 1, 2008

End Date: December 31, 2012

Number of Years: 5

Intersection Type: Four-Legged

Control Type: 4 Way Stop

Area: Rural

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{2}{5,900} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.19 c/mve	0.0%	50.0%
Statewide Average*	0.60 c/mve	0.8%	32.9%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2010 Collision Data on California State Highways, Caltrans

Intersection # 2: Washington St. & Yount St.

Date of Count: Thursday, September 25, 2014

Number of Collisions: 2

Number of Injuries: 0

Number of Fatalities: 0

ADT: 5900

Start Date: January 1, 2008

End Date: December 31, 2012

Number of Years: 5

Intersection Type: Tee

Control Type: Stop & Yield Controls

Area: Rural

$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{2}{5,900} \times \frac{1,000,000}{365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.19 c/mve	0.0%	0.0%
Statewide Average*	0.16 c/mve	1.7%	39.2%

ADT = average daily total vehicles entering intersection

c/mve = collisions per million vehicles entering intersection

* 2010 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculations

Yountville Circulation Element

Intersection # 3: Washington St & California St
Date of Count: Thursday, September 25, 2014

Number of Collisions: 2
Number of Injuries: 0
Number of Fatalities: 0
ADT: 7600
Start Date: January 1, 2008
End Date: December 31, 2012
Number of Years: 5

Intersection Type: Tee
Control Type: Stop & Yield Controls
Area: Rural

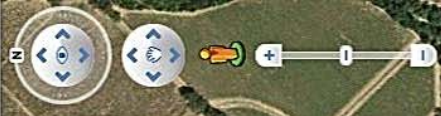
$$\text{collision rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times 365 \text{ Days per Year} \times \text{Number of Years}}$$

$$\text{collision rate} = \frac{2}{7,600} \times \frac{1,000,000}{365 \times 5}$$

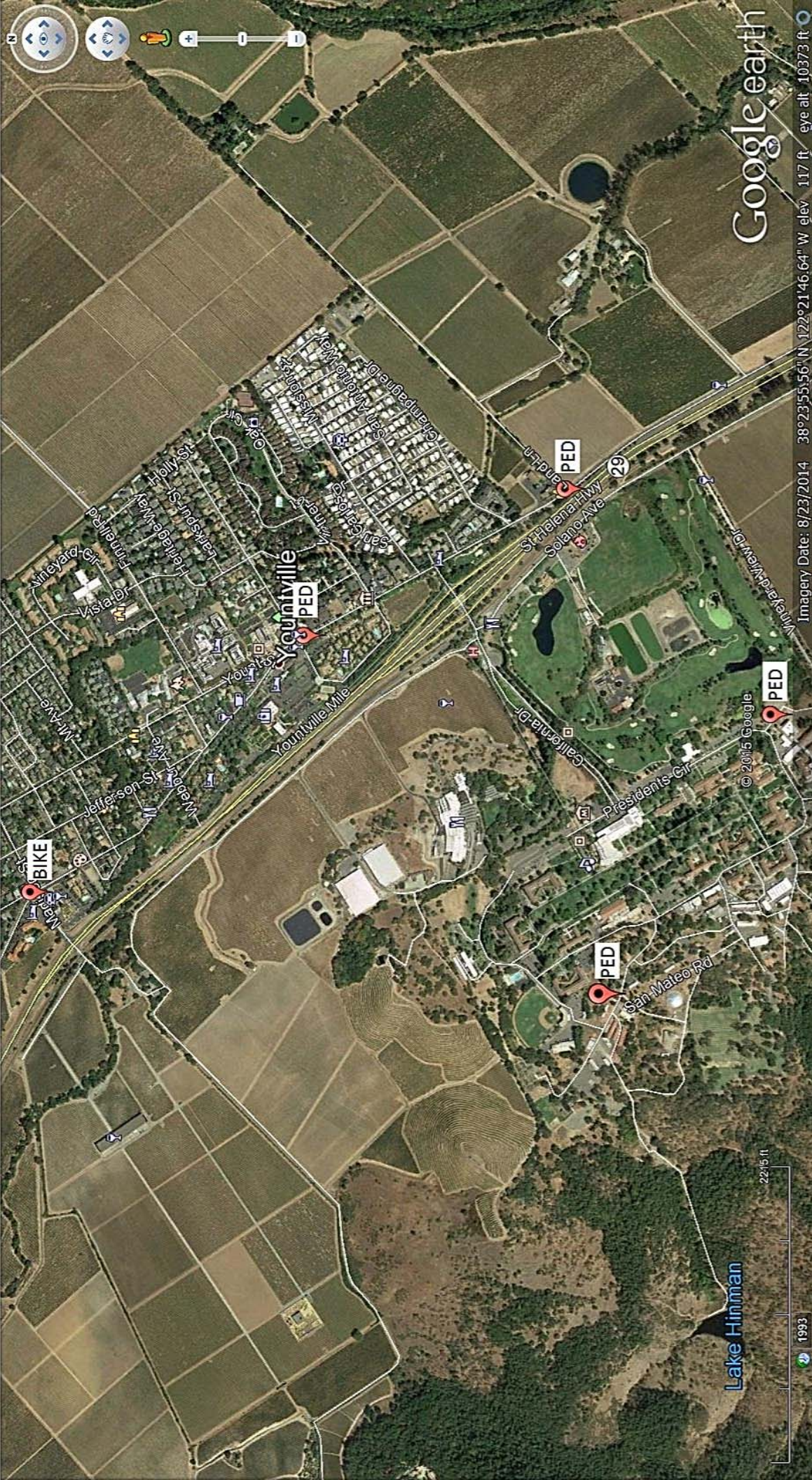
	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	0.14 c/mve	0.0%	0.0%
Statewide Average*	0.16 c/mve	1.7%	39.2%

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Bicycle and Pedestrian Collision Locations



Google earth



Imagery Date: 8/23/2014 38°23'55.56"N 122°21'46.64"W elev 117 ft eye alt 10373 ft

BIKE

Yountville

PED

St Helena Hwy

PED

California Dr

PED

San Mateo Rd

Lake Hinman

22°5'11"

1993