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Westwood

TRAFFIC STUDY

Fountain Wind Power

Shasta County, California

June 10, 2023

Prepared For:

ConnectGEN

Traffic Study

Fountain Wind Project

Shasta County, California
Project Number: 0023714.00
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Prepared for:

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1.0 INTRODUCTION

The Fountain Wind project is proposed as a 205 MW wind project consisting of 48 wind turbines with associated access roads, collection system, meteorological (MET) towers, operations and maintenance facility (O&M), staging yards, substation, and interconnection. The construction of the Fountain Wind project will generally require conventional construction worker personal vehicles, logging trucks, aggregate dump trucks, concrete ready-mix trucks, single unit and semi-tractor trailer trucks, crawler cranes, and a limited number of specialized transportation vehicles for the oversize/overweight vehicles associated with the delivery of wind turbine components and substation main power transformers (MPTs).

The scope of this report is to determine the total number of vehicles entering the project site from public roads and to calculate the approximate peak hourly traffic entering the site from public roads.

This report also contains responses to comments made by the California Energy Commission (CEC). A spreadsheet containing point-by-point responses to CEC comments is contained in **Appendix H**.

2.0 PROJECT ACCESS

Traffic entering the project site is composed of commuter trips for construction workers and delivery trips for materials and equipment. Materials and equipment deliveries include aggregate, concrete, and water, as well as turbines, electrical equipment and cables, and items such as reinforcing steel and forms for concrete foundations.

All traffic will reach the site using State Route (SR) 299 (see **Exhibit 1**). Deliveries of manufactured components (e.g., turbine components and turbine blades) will likely originate from the east and travel from Reno, Nevada to the site via US 395 and SR 299. These deliveries would be scheduled to avoid the peak hours of traffic on SR 299 and the scheduled first trip of the westbound Burney Express bus departing Burney at 5:50 am and arriving in Redding at 7:15 am (see **Appendix A**).

Locally sourced materials such as aggregate and water will likely come from Burney, located approximately 6 miles to the east of the project site, or from pits and quarries east of Burney. If the concrete is not batched on-site, there are several concrete plants in Redding about 35 miles to the west of the project site that can provide concrete during project construction.

Project workers will most likely commute from towns located both to the east and to the west of the project. The Burney Express does not appear to be a convenient option for commuters (see **Appendix A**). Redding is the largest town in the region. Other towns west of the project are very small and not likely to be able to accommodate many project

workers. Several small towns including Burney, Fall River Mills, and McArthur are located east of the project and may also accommodate project workers. Based on the relative size of towns located to the east and west of the project site, this study assumes that 60 percent of the commuting traffic travels to the site from the west and that 40 percent travels to the site from the east on SR 299. **Exhibits 2 and 3** illustrate the assumed regional and local delivery routes for manufactured components, turbine blades, and building materials and the anticipated commuter routes. SR 299 is a Terminal Access (STAA) truck route (see **Appendix A**).

Two access roads are proposed to coincide with existing logging roads at the intersections with SR 299 (see **Exhibit 1**). The West Access is proposed along a road called G Line, which intersects with SR 299 approximately 37 miles east of the interchange with I-5 in Redding. There is a widened shoulder at this intersection, but no turn lanes.

The East Access is approximately eight miles west of Burney. This access is proposed along an existing and unnamed logging road that provides access to the area south of SR 299. As with the other access points, there is a widened shoulder at this access, but no turn lanes.

As points of reference, the Shasta Green plant lies along SR 299 approximately 4.4 miles east of the East Access, and the Sierra Pacific Industries plant lies another 1.2 miles to the east of that. The Shasta Green plant has both eastbound and westbound turn lanes along SR 299. The Sierra Pacific Industries plant has no turn lanes.

The nearby Hatchet Ridge Wind Farm accesses SR 299 at Bunch Grass Lookout Road. This access is approximately one mile east of the East Access for the Fountain Wind project. Both eastbound and westbound turn lanes serve the Hatchet Ridge access. Bunch Grass Lookout Road is located at a four-way intersection on SR 299, with Terry Mill Road accessing to the south.

3.0 EXISTING TRAFFIC CONDITIONS

According to the Caltrans 2020 listing of Annual Average Daily Traffic (AADT) volumes (see **Appendix A**), urban centers on each end of SR 229 record the highest traffic volumes, then diminish significantly in the rural and mountainous areas in between. There are nine daily and peak hour count locations listed between I-5 in Redding, California, and Plumas Street in Burney, California[1].

The highest existing two-way AADT on SR 299 is 18,800 vehicles per day at I-5 in Redding where the highway has a four-lane freeway alignment. The highest existing two-way peak hour volume is 2,200 vehicles per hour. The capacity of a lane along a freeway segment is calculated as a function of the Free-Flow Speed (FFS), which is affected by the

[1] CalTrans Traffic Census Program.

percentage of heavy trucks traveling along the segment (see **Appendix A**), the average grade of the segment (see **Appendix A**), and either the observed free-flow speed or the average number of access points per mile within the segment.

The two access roads for the Fountain Wind project are all located within the segment of SR 299 between Big Bend Road and Tamarack Road. Volume, speed, and classification counts were collected at two locations along this segment on April 4, April 5, and April 6, 2023 (see **Appendix B**). The observed AADT along this segment was 1.55 times less than the 2020 Caltrans AADT collected along this segment. Additionally, the observed truck percentage along this segment was 1.4 times higher than the 2020 Caltrans observed truck percentage.

Roadway segment traffic volume and capacity information is summarized in **Table 1.1**. Roadway segment geometric and crash information (see **Appendix C**) are summarized in **Table 1.2** and **Table 1.3**.

Roadway capacity calculations are included in **Appendix D**. The roadway segments that are affected by project traffic are anticipated to have sufficient capacity for construction demand and post-construction demand.

Table 1.1 - Roadway Segment Traffic Information Summary

Segment Number	Road Name	Location	Milepost (From-To)	2020 Caltrans AADT Two-Way		2023 Observed AADT		2020 Caltrans Peak Hour Two-Way		2023 Observed Peak Hour		Construction Peak Hour		Post-Construction Peak Hour		Heavy Vehicles			Capacity pc/h/ln		Pre-Construction LOS Better than C? (D/C)[f]		Construction LOS Better than C? (D/C)[f]		Post-Construction LOS Better than C? (D/C)[f]	
				Ahead	Back	EB	WB	EB (Ahead)	EB (Back)	EB	WB	EB	WB	EB	WB	(%)	SUT	TT	EB	WB	EB	WB	EB	WB	EB	WB
0	CA-299 E	I-5 Junction (Redding)	24.8																							
1		I-5 to Hawley Road	24.9-25.5	10800	18800			575[c]	1100[c]			666[e]	1160[e]	583[e]	1108[e]	4.73	17	83	2006	2006	(YES)-A 0.16	(YES)-B 0.31	(YES)-A 0.19	(YES)-B 0.33	(YES)-A 0.16	(YES)-B 0.31
2		Hawley Road to Old Oregon Trail	25.5 -27.2	9500	10800			475[c]	575[c]			566[e]	635[e]	483[e]	583[e]	3.76	23	77	1998	2006	(YES)-A 0.13	(YES)-A 0.16	(YES)-A 0.16	(YES)-A 0.18	(YES)-A 0.14	(YES)-A 0.16
3		Old Oregon Trail to Deschutes Road	27.2-31.5	4750	7700			260[c]	455[c]			351[e]	515[e]	268[e]	463[e]	3.76[a]			1700	1700	(YES)-A 0.16	(YES)-B 0.28	(YES)-B 0.22	(YES)-C 0.32	(YES)-A 0.17	(YES)-C 0.29
4		Deschutes Road to Terry Mill Road	31.5-53.3	3950	3900			130[c]	130[c]			221[e]	190[e]	138[e]	138[e]	14.9[a]			1400	1400	(YES)-A 0.1	(YES)-A 0.1	(YES)-A 0.17	(YES)-A 0.14	(YES)-A 0.1	(YES)-A 0.1
5		Terry Mill Road to Big Bend Road	53.5-60.1	3350	3550			135[c]	135[c]			226[e]	195[e]	143[e]	143[e]	14.9[a]			1700	1700	(YES)-A 0.08	(YES)-A 0.08	(YES)-A 0.14	(YES)-A 0.12	(YES)-A 0.09	(YES)-A 0.09
6		Big Bend Road to Site Entrance 1	60.1-62.3	3350[a]	3550[a]	1275[b]	1255[b]	168[a&c&g]	168[a&c&g]	138[b&d]	133[b&d]	259[e]	228[e]	176[e]	176[e]	31[b]			1700	1700	(YES)-A 0.11	(YES)-A 0.11	(YES)-B 0.16	(YES)-A 0.14	(YES)-A 0.11	(YES)-A 0.11
7		Site Entrance 1 to Site Entrance 2	62.3-67.3	3250[a]	3350[a]	1269[a]	1259[a]	168[a&c&g]	168[a&c&g]	161[a&b&d]	133[a&b&d]	259[e]	228[e]	176[e]	176[e]	31[b]			1100	1100	(YES)-A 0.16	(YES)-A 0.16	(YES)-A 0.25	(YES)-A 0.22	(YES)-A 0.17	(YES)-A 0.17
8		Site Entrance 2 to Tamarack Road	67.3 -73.1	3150	3150	1263[b]	1263[b]	200[c]	200[c]	161[b&d]	126[b&d]	291[e]	260[e]	208[e]	208[e]	30[b]			1100	1700	(YES)-A 0.19	(YES)-A 0.13	(YES)-A 0.28	(YES)-B 0.16	(YES)-A 0.2	(YES)-A 0.13
9		Tamarack Road to Elm Street	73.1-74.5	3600	2400			180[c]	185[c]			271[e]	245[e]	188[e]	193[e]	17.5			1700	1700	(YES)-A 0.11	(YES)-A 0.12	(YES)-A 0.17	(YES)-A 0.15	(YES)-A 0.12	(YES)-A 0.12
10		Elm Street to Plumas Street (Burney)	74.5-75.0	8200	3600			435[c]	180[c]			526[e]	240[e]	443[e]	188[e]	19			1700	1700	(YES)-C 0.27	(YES)-A 0.11	(YES)-C 0.33	(YES)-A 0.15	(YES)-C 0.28	(YES)-A 0.12

Table Notes:

(a) - Assumed Value from Neighboring Segment. Segment 7 volumes are averages.

(b) - Observed Value from counts performed on April 4, 5, and 6 of 2023

(c) - Numbers listed in Appendix A were representatives of two-way traffic. These Numbers are divided by two under the assumption of equal traffic in each direction.

(d) - Peak Hour Count from QC - Were Adjusted using a correction factor of 1.55

(e) - Peak hour analysis used the highest AM or PM Volumes.

(f) - Demand over Capacity Ratio

(g) – Reference values only, not used for peak hour construction volumes analysis

Table 1.2 - Roadway Segment Geometric and Crash Information

Segment Number	Road Name	Location	Milepost (From-To)	Length (mi)	Surface / Condition	Elevation Start (ft)	Elevation End (ft)	Eastbound Average Grade	Westbound Average Grade	Lane Width (ft)	Shoulder Width (ft)	Number of Directional Travel Lanes	Passing Zones	Roadway Functional Classification	Passing Zones	Average Access Points per Mile	Truck Route Designation	Weight and Load Limitations	Posted Speed Limit
0	CA-299 E	I-5 Junction (Redding)	24.8		Asphalt / Good	640				12	6	2		Principal Arterial			Terminal Access / STAA Route	80000 lb Max	55
1		I-5 to Hawley Road	24.9 - 25.5	0.6		641	628	-0.41	0.41				n/a			0			
2		Hawley Road to Old Oregon Trail	25.5 -27.2	1.7		628	621	-0.08	0.08							0			
3		Old Oregon Trail to Deschutes Road	27.2 - 31.5	4.3		621	539	-0.36	0.36			1	Passing Zones	Minor Arterial	Passing Zones	8			
4		Deschutes Road to Terry Mill Road	31.5 - 53.3	21.8		539	2092	1.35	-1.35				Passing Lanes		Passing Lanes	4			
5		Terry Mill Road to Big Bend Road	53.5 - 60.1	6.8		2092	3128	2.89	-2.89				Passing Lanes EB only		Passing Lanes EB only	6			
6		Big Bend Road to Site Entrance 1	60.1 - 62.3	2.3		3128	3640	4.22	-4.22				Passing Zones		Passing Zones	3			
7		Site Entrance 1 to Site Entrance 2	62.3 - 67.3	4.9		3640	4215	2.22	-2.22				Passing Lanes		Passing Lanes	2			
8		Site Entrance 2 to Tamarack Road	67.3 -73.1	5.8		4215	3209	-3.29	3.29				Passing Lanes EB only		Passing Lanes EB only	2			
9		Tamarack Road to Elm Street	73.1 - 74.5	1.4		3209	3189	-0.27	0.27				Passing Zones		Passing Zones	5			
10		Elm Street to Plumas Street (Burney)	74.5 - 75.0	0.5		3189	3125	-2.42	2.42				Constricted		Constricted	22			

Table 1.3 - Roadway Segment Geometric and Crash Collision Rates

																SR-299 (TIMS Tool- UC Berkeley)				Statewide 3-Yr Rates (2018, 2019, 2020)	
Segment Number	**Road Name**	**Location**	**Milepost (From-To)**	**Length (mi)**	**2020 Caltrans Ahead AADT 2wy**	**2020 Caltrans Back AADT 2wy**	**Ahead MVM**	**Back MVM**	**Total MVM**	**Number of Directional Travel Lanes**	**Passing Zones**	**Roadway Functional Classification**	**Passing Zones**	**Average Access Points per Mile**	**Truck Route Designation**	**Weight and Load Limitations**	**Number of Crashes 2018-2020**	**Number of Fatal Crashes 2018-2020**	**Crash Total per MVM**	**Fatal+Injury per MVM**	**Crash Total per MVM**	**Fatal+Injury per MVM**
0	CA-299 E	I-5 Junction (Redding)	24.8							2	n/a	Principal Arterial			Terminal Access / STAA Route	80000 lb Max						
1		I-5 to Hawley Road	24.9 - 25.5	0.6	10800	18800	2.3652	4.1172	6.4824					0			5	0	0.77	0.00	1.05	0.5
2		Hawley Road to Old Oregon Trail	25.5 -27.2	1.7	9500	10800	5.89475	6.7014	12.59615					0			1	0	0.08	0.00	1.05	0.5
3		Old Oregon Trail to Deschutes Road	27.2 - 31.5	4.3	4750	7700	7.455125	12.08515	19.540275	1	Passing Zones	Minor Arterial	Passing Zones	8			16	0	0.82	0.00	1.07	0.47
4		Deschutes Road to Terry Mill Road	31.5 - 53.3	21.8	3950	3900	31.43015	31.0323	62.46245		Passing Lanes		Passing Lanes	4			37	6	0.59	0.10	1.07	0.47
5		Terry Mill Road to Big Bend Road	53.5 - 60.1	6.8	3350	3550	8.3147	8.8111	17.1258		Passing Lanes EB only		Passing Lanes EB only	6			11	0	0.64	0.00	1.07	0.47
6		Big Bend Road to Site Entrance 1	60.1 - 62.3	2.3	3350 [a]	3550 [a]	2.812325	2.980225	5.79255		Passing Zones		Passing Zones	3			0	0	0.00	0.00	1.07	0.47
7		Site Entrance 1 to Site Entrance 2	62.3 - 67.3	4.9	3250 [a]	3350 [a]	5.812625	5.991475	11.8041		Passing Lanes		Passing Lanes	2			4	0	0.34	0.00	1.07	0.47
8		Site Entrance 2 to Tamarack Road	67.3 -73.1	5.8	3150	3150	6.66855	6.66855	13.3371		Passing Lanes EB only		Passing Lanes EB only	2			4	0	0.30	0.00	1.07	0.47
9		Tamarack Road to Elm Street	73.1 - 74.5	1.4	3600	2400	1.8396	1.2264	3.066		Passing Zones		Passing Zones	5			1	0	0.33	0.00	1.07	0.47
10		Elm Street to Plumas Street (Burney)	74.5 - 75.0	0.5	8200	3600	1.4965	0.657	2.1535		Constricted		Constricted	22			2	0	0.93	0.00	1.07	0.47

4.0 CONSTRUCTION TRAFFIC OVERVIEW

Westwood estimated the full construction period traffic volume based on the types of delivery, construction, operations, maintenance, and worker vehicles required during the various phases of the project. Westwood estimated trips into and out of the development area based on the projected number of deliveries, the required types of equipment and material, and the projected number of employees necessary to complete the project over the estimated construction period. Typically, the selected construction contractor will determine the project timeline. These volumes of trips were calculated using a spreadsheet that lists every known phase of construction with corresponding equipment, material, and numbers of employees, which are then averaged over the course of the project period.

During construction, the project will employ an estimated maximum number of 199 workers/day during the peak period of construction, which include construction workers, project management staff, equipment operators, survey staff, and delivery vehicle drivers during the peak period. The calculation of workers and delivery vehicles was developed using a construction estimation based on time and materials and using crew productivity data from RS Means, an industry-standard construction cost estimating software package. The total number of trips was determined by using the number of employees in each of the categories listed above, dividing that number by an estimated vehicle occupancy of 2 employees and multiplying by the number of workdays for each employee category. Typically, construction projects show a bell-curve distribution of workers through the construction period. Initial site mobilization and early site preparation work will have fewer workers. The number of workers will build to a peak during the period of greatest activity. As construction draws to a close, the average number of workers per day will decrease as crews complete their work.

As a result, the estimated number of workdays and total number of two-way trips for each category are:

- 250 days for commuters (36,966 total two-way trips);
- 250 days for equipment (262 total two-way trips);
- 250 days for aggregate deliveries (26,749 total two-way trips);
- 200 days for turbine deliveries (5,909 total two-way trips);
- 230 days for concrete deliveries (5,140 total two-way trips);
- 250 days for miscellaneous materials deliveries (560 total two-way trips) and;
- 250 days for water deliveries (8,418 total two-way trips)

Thus, over the estimated two-year construction period, the total number of all two-way trips is approximately 84,003 trips.

After the construction of the wind farm, operations, and maintenance traffic will be limited to a few passenger vehicle trips per day.

General summaries of the construction work tasks, and related delivery and construction vehicles are listed below.

4.1 WORK TASKS

Work Tasks are generally listed in chronological order, but extensive overlap can be expected depending on the contractor's scheduling.

- Survey the project site and set construction stakes
- Install and maintain erosion and sediment control
- Timber removal/clear and grub laydown, substations, O&M, access roads, and turbine pads areas
- Grade field office and O&M locations
- Deliver and Install Field Office trailers
- Grade temporary laydown areas
- Improve logging roads/construct access roads – grade and place aggregate
- Erect security fencing – enclosing laydown yards and facilities
- Excavate turbine foundations
- Place foundation mud mat
- Place foundation reinforcing
- Place foundation forms
- Place foundation concrete
- Strip forms
- Backfill foundations
- Unload turbine components
- Erect turbine tower sections using base crane
- Erect top turbine tower section, nacelle, hub, and blades using topping crane
- Grade transformer pad areas
- Install turbine transformers
- Connect turbine to transformer wiring
- Grade substation and switching substation areas
- Construct substation and O&M foundations
- Trench underground collector system (34.5kV)
- Install overhead collection system lines (34.5kV)
- Construct O&M Facility
- Construct substation and switching substation equipment and main power transformer foundations
- Install step-up substation and switching substation equipment and Supervisory Control and Data Acquisition (SCADA)
- Place step-up substation and switching substation aggregate
- Install security fence around step-up substation and switching substation
- Connect step-up substation to switching substation
- Connect switching substation to transmission line
- Test and commission equipment

- Remove field offices, security fencing, and replace topsoil
- Remove staging area security fences and replace topsoil
- Restore, revegetate, and remove temporary erosion and sediment control

4.2 CONSTRUCTION EQUIPMENT

Examples of the types of equipment generally used in wind farm construction are listed below. **Exhibit 4** lists the number and type of equipment assumed for construction:

- Erosion and sediment control – silt fence trenchers
- Timber harvest/removal – typical forestry equipment such as feller-bunchers, shears, skidders, hydro-axe, and logging trucks
- Grading (field office location, staging areas, O&M facility, step-up substation, and switching substation) – medium bulldozers, scrapers, road grader, compaction rollers, and water trucks
- Logging road/access road improvements – medium bulldozers, road grader, scrapers, compaction rollers, and water trucks
- Materials handling equipment (unloading wind turbine components) – hydraulic (helper) cranes, small flat-bed trailers pulled by pick-up trucks, heavy crawler cranes
- Security fencing – skid-steer with auger attachment, and hydraulic post driver attachment, and hand tools for each crew
- Turbine foundations – medium bulldozer, excavator, hydraulic crane, and concrete pump truck
- Tower base erection – hydraulic (helper) cranes and base crane
- Tower top/nacelle/hub/blades erection – hydraulic cranes and topper crane
- Pad mounted transformers at each turbine – truck mounted or mobile hydraulic crane
- Turbine wiring – hand tools
- 34.5 kV underground collector trenching – specialized trenching equipment, cable plows, and back hoes, cable reel trailers
- 34.5 kV overhead collection line – backhoe with auger attachment, specialized pole setting equipment (boom trucks), bucket trucks, cable reel trailers
- O&M and substation equipment foundations – back hoe
- Substation construction – bulldozer, backhoe, compaction roller, water trucks, mobile hydraulic crane, large crane (MPT)
- Switching substation construction – bulldozers, backhoes, compaction rollers, water trucks, mobile hydraulic crane
- Substation to interconnect transmission line – foundation auger mounted on back hoe, mobile hydraulic crane
- O&M Building – mobile hydraulic crane
- Removal of temporary aggregate (field office location and staging areas) – Front end loader

- Revegetation and removal of erosion and sediment control – chisel plow (decompaction), small tractor and tilling equipment, skid steer loader, hydro seeding/hydro-mulching equipment

4.3 MATERIALS

Examples of materials used in the construction of wind farms is listed below. **Exhibit 4** lists the materials assumed for construction:

- Silt fence, bio log, and other erosion and sediment control materials
- Aggregate (access roads, staging areas, O&M facility, substations)
- Security fencing (field office location, staging areas, substations)
- Field Offices and storage trailers
- Formwork for foundations (equipment pads, O&M, substation transformers and equipment, and switching substation equipment)
- Rebar for above concrete foundations
- Concrete for wind turbine foundations and transformer pads
- Concrete for O&M facility foundation
- Concrete for substation foundations (Main Power Transformer (MPT), electrical equipment, and control building)
- O&M Building materials
- Collection system wiring (underground and overhead)
- Electrical equipment (transformers, switch gear, circuit breakers, junction boxes, conduit, SCADA, etc.)
- Structural steel for substation racking
- Structural steel poles for overhead collection line
- Main power transformers
- Transmission line cables (from switching substation to transmission line)
- Water for aggregate/backfill compaction, vegetation establishment, and dust control
- Miscellaneous consumables
- Plant stock, seed, and mulch

4.4 MATERIAL DELIVERY VEHICLES

The types of vehicles used for material deliveries is listed below. **Exhibit 4** lists the material delivery vehicles assumed for construction:

- Semi-Trailer Flatbed Trucks for hauling logs off of site
- Single Unit Flatbed Trucks - Erosion and sediment control materials, plant stock, seed, and mulch, miscellaneous consumables
- Gravel Semi-Trailer Dump Trucks with a 16 cubic yard load capacity (loose volume) with an approximate gross vehicle weight of 80,000 pounds and a load weight of approximately 40,000 pounds.
- Field office trailers (one 40’ x 12’ for PM use; 12’ x 36’ triple wide for subs use)

- Concrete Trucks- with a 10 CY capacity, weighing approximately 69,000 pounds
- Semi-Trailer Flat Bed – security fence, concrete forms, rebar, O&M building components, transformers, miscellaneous turbine materials, structural steel for substations, electrical equipment for substation, - Non-permit load size 8'-6" x 8'-6" x 48'-0", gross vehicle weight 80,000 pounds, up to 45,000 pound loads
- Cable trailers – 34.5 kV underground, 34.5 kV overhead, and overhead transmission from switching substation to transmission line
- Overhead collection system pole trailers
- Water trucks – 4000 gallon capacity, single unit tank trucks, weighing approximately 59,000 pounds
- Lowboy Multi-Axel Trailer –Main power transformer, substation control building
- Workers' trucks (Pick-up trucks –average 1.5 occupants)

4.5 EQUIPMENT DELIVERY VEHICLES

Types of vehicles used for the delivery of construction equipment:

- Lowboy semi-trailer – Logging equipment, bulldozers, scrapers, compaction rollers, road grader, excavator, trenching equipment, backhoes, hydraulic (helper) cranes, crawler cranes, skid steer loaders, trenchers, cable plows, agricultural plows
- Single unit flatbed truck – Hydro much/hydro-seed equipment
- Small flatbed trailers towed behind pick-up trucks for small equipment and tools

5.0 CONSTRUCTION & SCHEDULE

Construction of wind farms requires that a few tasks be repeated across the project site. Some sequencing of tasks is required, but many tasks may overlap across the site for efficient scheduling. The construction of the operations and maintenance facility, substation, switching substation, and underground and overhead collection systems can overlap with other tasks or can be exceptions, depending on the scheduling of and priority of precedent activities.

For the purpose of determining the daily volume of traffic, construction time is estimated to take approximately two years (approximately 250 business days), with construction occurring only during the spring, summer, and fall. Wind farm sites are large and allow many crews to work simultaneously without interfering with one another. Nevertheless, the size of the project (number of wind turbines) impacts the construction time significantly because the cost of mobilizing the large cranes required for turbine erection is high, and because the cranes are in such high demand that mobilizing a small number of cranes is typical on wind projects.

6.0 OVERSIZED LOADS AND PERMITTING

The logistics of delivering the oversized loads for the wind turbines, with the use of specialized transportation vehicles, also creates schedule constraints. A Transportation Management Plan would be prepared to minimize impacts from the transportation of oversized loads and to direct deliveries to off-peak hours.

Trucks carrying turbine components such as blades and nacelles will be oversized and will be required to be accompanied by pilot cars. Oversized load transportation permits will be obtained in coordination with CalTrans.

These oversized trucks would likely be required to travel over bridges and overpasses. Weight and size limits may require detours in accordance with Caltrans direction. A logistical route analysis that focuses more on geometrics and bridge capacity will be performed following the final selection of the turbine model to be used for the project. Because there is direct project access to the state highway, and based on the fact that the adjacent Hatchet Ridge project delivered oversized components along this same infrastructure, the existing highway and bridge geometrics will likely be able to accommodate the planned deliveries. This will be verified by a logistical route survey when a turbine manufacturer, turbine model, and contractor have been selected.

Westwood has contacted Caltrans' Office of Transportation Permits. This office reviews and approves oversize/overweight permits along state highways. They have responded that any specific weight and height limitations would only be determined once a contractor has been selected and a Route Request Permit defining the origin and destination of the equipment/components is requested. The Caltrans variance coordinator will then review the request and issue the permit.

Variance permits are required for anything over 53 feet in length with a maximum kingpin of 43 feet. A variance permit would be required for each blade or component delivery.

Once the requested route permit has been received by Caltrans, it will take up to thirty days to review and issue the permit. Bridge ratings will be tested depending on the loads forecast for each component and delivery vehicle.

Also, the Transportation Permit office states that even though SR 299 is identified as a "Blue Route" and pilot cars will be assumed for each blade delivery vehicle, the contractor will likely be required to contract with the California Highway Patrol (CHP) for escorts.

As far as roadway connections to SR 299, Caltrans Transportation Permits Office noted that coordination with the District 2 Encroachments Office will be required to determine what additional planning or roadway improvements would be needed to accommodate the oversized loads. A "Swept Path Analysis" must be completed that shows turn-by-turn

impacts that might be experienced by the oversized loads along SR 299 or at side road intersections.

In summary, the sizes and weights of the selected components, the dimensions of the vehicles delivering them, the delivery routes and the route surveys will be completed as part of the Caltrans review process.

Nevertheless, all deliveries of components and materials for the Fountain Wind project will be similar to those of the Hatchet Ridge project, with the exception of turbine blade deliveries. Fountain is proposing WTG ranging from 3 to 7.2 MW. WTG models in the lower size range of those proposed will have similar blade lengths as the 2.3 MW Siemens WTGs constructed on Hatchet Ridge. The largest blade length proposed for Fountain would be approximately 261' in length, which would be approximately 90' longer than those delivered to Hatchet Ridge. Although Fountain may utilize longer blade lengths, the haul trucks will include rear-axle steering capabilities, thereby mitigating potential turning constraints.

Caltrans roads are designed to comply with the state Highway Design Manual. Vehicular design speeds are listed for various highway types. For conventional rural highways, the following design speeds are listed:

- Flat terrain 55-70 mph
- Rolling terrain 50-60 mph
- Mountainous terrain 40-50 mph

It is uncertain as to which design speed SR 299 is designed. It is likely that the design speed varies throughout its length – flat to rolling near Redding, rolling to mountainous near Montgomery Creek and Hillcrest.

According to the Caltrans Highway Design Manual, the k-value is the distance in feet required to achieve a 1% change in grade. Thus, the following k-values are listed under each condition:

- For stopping sight distances on crest vertical curves, the k-value = 68 feet when design speed is 40 mph
- For stopping sight distances on crest vertical curves, the k-value = 139 feet when design speed is 50 mph
- For stopping sight distances on sag vertical curves, the k-value = 62 feet when design speed is 40 mph
- For stopping sight distances on sag vertical curves, the k-value = 97 feet when design speed is 50 mph

According to a "desktop review", there appear to be no underpasses along SR 299 east of I-5. There are two overpasses, however – one at Churn Creek Road and one at Old Oregon Trail on the east side of Redding. Further to the east, there appear to be two creek crossings (Salt Creek Bridge 6-49 and Cedar Creek Bridge 6-20) along SR 299 between I-5 and the proposed access roadways for Fountain Wind. There is one creek crossing along SR 299 between the proposed access roads for Fountain Wind and Burney (Burney Creek Bridge 6-12). As of this writing, weight limits for these bridges have not been determined.

Regarding horizontal curves, a "desktop review" of SR 299 shows three curves with radii less than 1,000 feet. SR 299 has a curve with a radius of approximately 600 feet near Montgomery Creek. SR 299 has a curve with a radius of approximately 700 feet near Hillcrest. Near Burney, there appears to be a curve with a radius of approximately 650 feet.

The speed limit along SR 299 is 55 mph for trucks with three or more axles, but there are places along SR 299 where the advisory speed drops to 40 and 45 mph approaching the sharper curves. Also, there are passing lanes at some of the steeper inclines.

The geometry resulting from the basic highway design criteria appears to exceed the requirements for turbine component delivery, which requires a minimum k-value in the range of 20 (and which comfortably falls within the k-values of the highway design above). Further, turbine component delivery specifications require a minimum horizontal curve of 200'. Therefore, while it appears there is little risk that the turbine delivery vehicles will not be able to navigate the existing geometry of the highway, a route survey by a permit service and a "swept path" analysis will be able to verify this statement and support Caltrans authorizations.

Upon approach to the site, turbine deliveries will be directed to proceed directly to the appropriate turbine pad sites for offloading. Construction access points off SR 299 will provide adequate turning radii to ingress/egress the site with minimal time required for turning maneuvers. Because the turbine pad sites are distributed throughout the site and not directly adjacent to state SR 299, if queuing were to occur, it is expected that the queues would take place on access roads near the turbine pad sites – wholly within the project site.

7.0 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

A Construction Traffic Management Plan (CTMP) will be developed and presented once the construction contractor has been selected. Upon selection, the contractor will review the site and available aggregate and water sources. The contractor will provide input on project staging and equipment delivery that will be incorporated and used to define the CTMP. Therefore, the CTMP will be specific to the construction approach and phasing, as well as specific to the location and environment, of the project area.

Specifically, the CTMP will be implemented for the Fountain Wind Project site during construction to address the safety requirements of the project. This plan will reflect the assessment conducted to define the plan, as well as the details of the plan itself. The CTMP will include:

- A consideration of the existing traffic, pedestrian, and cycling activity along SR 299 as well as the related road/intersection operations;
- A determination of the route that minimizes conflicts with emergency vehicles between staging/loading sites and proposed wind turbine sites;
- An articulation plan to manage construction traffic in a manner that minimizes the potential impact on local wildlife;
- The specific measures to be implemented during the construction phase of the project, which incorporate the principles and guidelines of the Caltrans Transportation Permits Manual; and
- Any additional environmental protection measures that the project proposed to further avoid or minimize potential impacts to traffic and safety. **Appendix E** of this report includes a list of potential Environmental Protection Measures (EPMs) that may be applicable for inclusion in the CTMP prepared for the Fountain Wind project.

The ConnectGen/Westwood Team will work with the contractor to ensure that key transportation considerations related to residents and businesses along SR 299 and within Shasta County and the planned construction of wind turbines are sensitive to the following:

- Potential conflicts between construction-related traffic and the day-to-day activities associated with the local area, including local travel by car, school bus, bicycle, or on foot as well as the movement of logging equipment;
- The need to ensure that residents and emergency response agencies are aware of the temporary conditions during construction that could affect traffic mobility and safety in various parts of the county depending on the location of the work sites; and,
- The need to ensure that local wildlife and its habitat are not adversely impacted by the construction traffic associated with the project.

The ConnectGen/Westwood Team will work with the contractor to develop a public information strategy to ensure that communication of the traffic plan will be shared with the residents and businesses in the area. This includes installing Road Restriction Notice Signs near all work sites a minimum of one week before any lane closures or detours. This will allow residents to effectively plan their routes, and mitigate the overall impact caused by the work and deliveries to the site. An activity forecast report shall be provided to the California Energy Commission and Shasta County outlining construction activity a minimum of two weeks before any work commencing.

8.0 ANALYSIS

The traffic impacts of the Fountain Wind Project were evaluated with three different analyses during the project construction period and after the project construction period. **Vehicle Miles Traveled** (VMT) were calculated per the requirements of California Senate Bill 743. **Intersection Level of Service** (LOS) was analyzed at the intersections of the two Project access roads with SR 299. **Left Turn Warrants** were also evaluated at the intersections of the two Project access roads with SR 299.

8.1 VMT ANALYSIS

California Senate Bill 743 was signed into law in 2013 in order to utilize VMT to review the potential impact of land use projects on the State Highway System. As of July 1, 2020, the state of California has fully adopted a change in the California Environmental Quality Act (CEQA) significant impact methodology for transportation impacts to use VMT as opposed to LOS. The intent of SB 743 is to align transportation impacts under CEQA with the State's overall goals of increasing long-term sustainability by encouraging infill development, increasing reliance on mass transit, and reducing greenhouse gas (GHG) emissions. VMT analysis focuses on automobile and light-duty truck trips, although heavy duty truck trips can be included in the analysis for convenience (OPR, 2018). Construction trips typically are not analyzed in a VMT analysis because they are temporary and would not impact overall per capita VMT in the region; however, they are provided here for informational purposes. Note also that CEQA Guidelines section 15064.3 (b)(3) suggests that analysis of VMT from construction traffic be qualitative. This same section also suggests that the focus be on automobile (e.g. passenger vehicle) trips.

VMT is calculated by multiplying the amount of daily traffic on a roadway segment by the length of the segment, then summing all the segments (see **Exhibit 4**). Westwood estimated the number of trips taken by trucks and other vehicles to haul equipment, material, aggregate, turbines, concrete, water, and employees. Westwood then estimated the mileage that would be logged to perform these trips during the two-year construction period.

For this analysis, it was assumed that deliveries of manufactured components (i.e., turbine components and blades) will likely originate from the east and travel from Reno, Nevada to the site via US 395, SR 139, and SR 299. Similarly, the Project identified other equipment and materials would be delivered prior to construction from the city of Redding to the west and the town of Burney to the east. From these calculations, it is estimated that the total VMT during the construction period will be **4,766,749 vehicle miles traveled** (see **Exhibit 4**) based on the

following number of workdays and total VMT of two-way trips for each trip category:

- 250 days for commuters (1,256,844 total two-way VMT)
- 250 days for equipment (13,100 total two-way VMT)
- 250 days for aggregate trips (534,980 total two-way VMT)
- 250 days for turbine deliveries (2,025,068 total two-way VMT)
- 250 days for concrete deliveries (257,000 total two-way VMT)
- 250 days for miscellaneous materials deliveries (27,978 total two-way VMT) and;
- 250 days for water deliveries (168,360 total two-way VMT)

As provided above, the majority of VMT results from delivery of turbine components, due to the long distance traveled from Reno, NV. Construction commuter trips are the next largest contributor to construction VMT, due to the number of daily trips from construction workers. However, most of these workers are expected to come from the region and would not represent a large influx of commutes, but rather a redistribution from other construction sites in the region to the Project site. Note again that all of these vehicle miles travelled are temporary and would cease to occur following completion of construction. SB 743 was enacted to chiefly address on-going sources of greenhouse gas emissions from land use projects such as residential, office, and retail developments and not to address temporary construction traffic for renewable energy projects.

The post-construction VMT would be much less. Westwood assumed there would be four(4) vehicles per day utilized for operations and maintenance of the wind farm. It is assumed that each vehicle would be traveling an average of 60 miles per day from their place of origin to the wind farm for inspection, maintenance, and operation, and then return. Therefore, the total VMT per day post-construction is estimated to be **240 vehicle miles traveled**. Per capita daily VMT for the permanent employees at the facility is estimated to be approximately **30 vehicle miles per day**.

It is recommended that in adopting a VMT significance threshold for this project, the California Energy Commission choose a metric that takes into account that the ultimate goal and purpose of the project is to create a utility-scale electricity generation source with near-zero GHG emissions and to displace the generation of electricity through the use of GHG-emitting fossil fuels. As set forth in the Shasta County Draft EIR on VMT:

> *The intent of SB 743 is to encourage land use and transportation planning decisions and investments to reduce VMT and thereby contribute to the reduction of GHG emissions, as required by Assembly Bill 32. Therefore, for purposes of this Project, the Project's impact to VMT would be significant if it would conflict with an applicable plan, policy or regulation adopted for*

> *the purpose of reducing the emissions of GHGs. The evalution of Impact 3.10-2 in Section 3.10, GHG Emissions, concludes that the Project would result in a less-than-significant impact related to a potential conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions, aso too would result in a less-than-significant transportation impact relating to VMTs.*

Shasta County Draft EIR at p. 3.14-12.

Naturally, travel to and from the project is temporarily increased during construction. However, long-term travel to the project is negligible post-construction. Any potential reduction in VMT would likely occur in the construction phase, through the implementation of various Transportation Demand Management (TDM) programs that are designed to reduce trips. These programs are anticipated to provide other benefits such as reduction in travel times, parking requirements, traffic congestion and air pollution. All of these benefits can be achieved by reducing trips and shifting travel times and modes. Measures such as carpooling for construction workers between the site and hotels/residences in both Redding and Burney can reduce the total VMT during construction. Given the location of the site, carpooling is likely the only feasible method for reducing construction VMT, as there are no public transit facilities that serve the project site.

Additionally, most workers will arrive at the site in the early morning, and stay on-site all day, leaving in the late afternoon or early evening outside of peak hours. Accordingly, project construction will not adversely affect traffic conditions (as discussed further below).

Finally, heavy construction equipment and wind turbine components (e.g., blades, nacelles) would be delivered to the Project Site using area roadways, some of which may require transport by oversize/overweight vehicles. The transport of these materials would require Caltrans review. Further, heavy equipment associated with these components would not be hauled to/from the site daily, but rather would be hauled in and out on an as needed basis. Heavy vehicle deliveries also will arrive outside peak hours to facilitate smooth flow of traffic. The Project would implement a CTMP, as well as identify anticipated construction delivery times and vehicle travel routes to potential conflicts with other travelers. Accordingly, no significant environmental impacts are anticipated from the use of oversized vehicles to transport large turbine components.

8.2 PROJECT ACCESS LOS ANALYSIS

A **Level of Service** (LOS) analysis measured delay per vehicle and operational performance. The LOS analysis was performed using the traffic engineering industry-standard software package *Synchro/SimTraffic* for AM and PM peak hour conditions for periods during and after construction. It is noted that LOS-A generally represents free-flow conditions, while LOS-F generally represents gridlock conditions.

To estimate peak hour conditions, Westwood used the peak hour volumes that were collected on April 4, 5, and 6 (see **Appendix A**). Since the observed AADT along the segment were significantly lower than the AADT collected by Caltrans in 2020, these peak hour volumes were multiplied by a factor of 1.55, consistent with the difference in observed AADT along this segment and the 2020 Caltrans AADT collected along this segment. For the commuter traffic it was assumed that 60% of the peak hour background traffic would be coming to and from the west, while 40% would be coming to and from the east.

Directional distribution of the construction, equipment and material delivery trips was made based on the number of projected wind turbines along each access road. Therefore, it was assumed that 56% of the construction trips would use the West Access Road, and 44% would use the East Access Road. Construction trips were assigned based on these percentages.

Consistent with the proposed CTMP, it is assumed that heavy vehicle trips will occur outside the peak hours and only commuter trips will affect the peak hour traffic movements. Consistent with information provided by ConnectGen, seventy-five percent (75%) of the commuting workers are anticipated to arrive during a morning hour of 6am – 7am. Forty percent (40%) of the commuting workers are anticipated to leave the site during an afternoon peak hour of 5pm – 6pm.

Figure 1 shows the resulting turning movements projected during the construction phase of the project. The red numbers indicate the AM peak hour directional flow (either left turn, through traffic, or right turn). Likewise, blue numbers represent the PM peak hour turning volumes. **Table 2** lists the resulting levels of service by both intersection and movement in the construction phase of the project.

Table *2* - Level of Service – During and Post Construction

INTERSECTION	TRAFFIC MANEUVER	CONSTRUCTION CONDITIONS				POST CONSTRUCTION CONDITIONS			
		AM		PM		AM		PM	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
INTERSECTION CONTROL		TWSC				TWSC			
		Unmitigated				Unmitigated			
#1 SR-299 and West Access	Overall	A	*1.0*	A	*1.3*	A	*0.2*	A	*0.2*
	NBL	A	*0.00*	B	*10.10*	A	*0.00*	B	*10.10*
	NBR	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
	EBT	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
	EBR	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
	WBL	A	*7.70*	A	*0.00*	A	*7.30*	A	*0.00*
	WBT	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
INTERSECTION CONTROL		TWSC				TWSC			
		Unmitigated				Unmitigated			
#2 SR-299 and East Access	Overall	A	*0.8*	A	*1.2*	A	*0.2*	A	*0.2*
	NBL	A	*0.00*	B	*10.10*	A	*0.00*	B	*10.10*
	NBR	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
	EBT	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
	EBR	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*
	WBL	A	*7.50*	A	*0.00*	A	*7.50*	A	*0.00*
	WBT	A	*0.00*	A	*0.00*	A	*0.00*	A	*0.00*

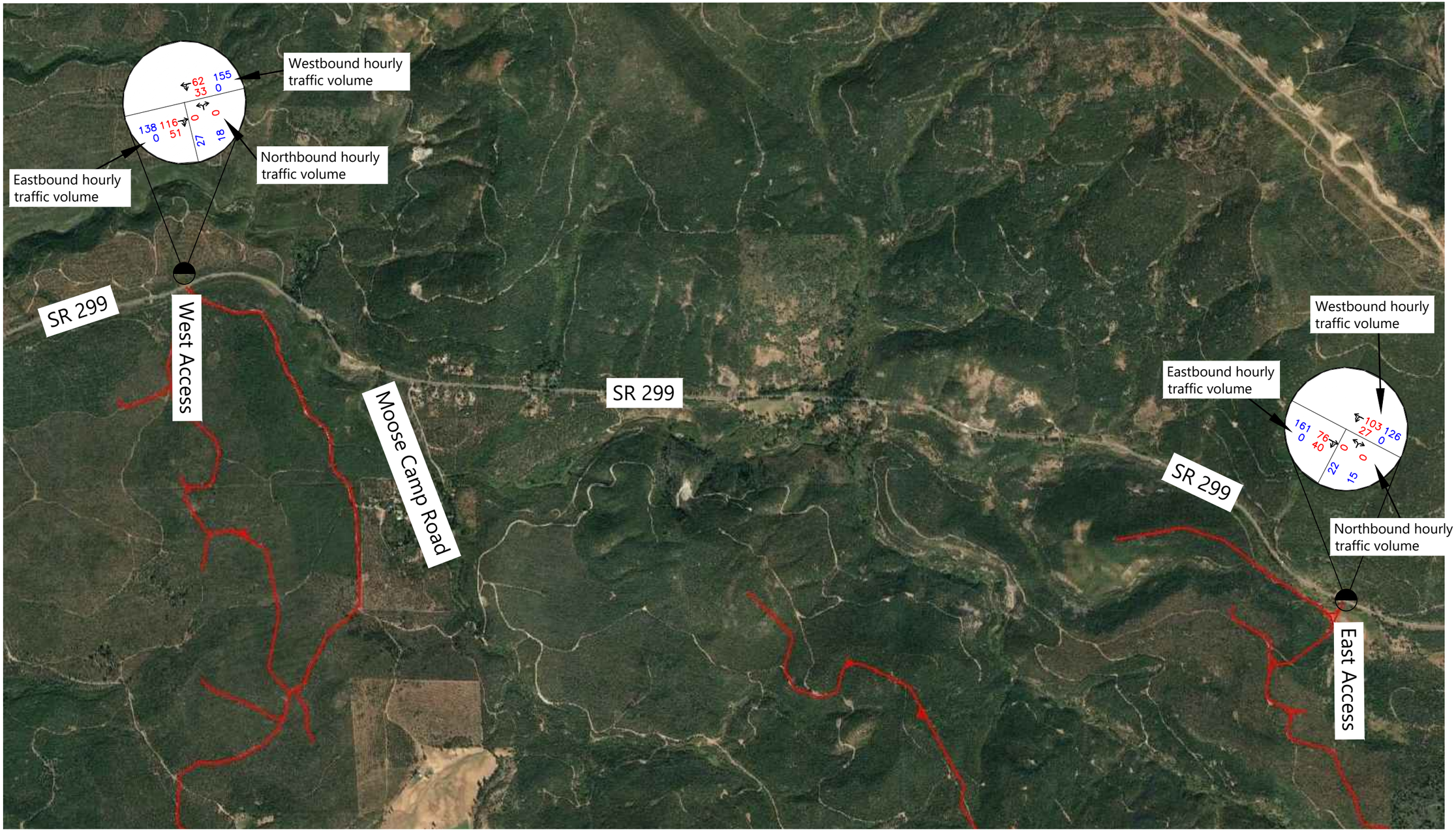
(Source: Westwood Professional Services, 2023)
NBL – Northbound Left; NBR – Northbound Right; EBT – Eastbound Through; EBR – Eastbound Right; WBL – Westbound Left; WBT – Westbound Through

In the post-construction (i.e., day-to-day operation and maintenance) scenario, there are a minimal number of employees accessing the site for operations and maintenance activities. Therefore, it was assumed a total of eight (8) operations and maintenance workers in four (4) commuter vehicles daily would be entering any of the access points during the AM peak hour from the east and west, and four would be exiting east/westbound during the PM peak hour.

Figure 2 shows the resulting turning movements projected during the post-construction phase of the project. **Table 2** also lists the resulting levels of service by both intersection and movement in the day-to-day operation and maintenance of the project.

Detailed Level of Service calculations are included in **Appendix F**.

Commuting vehicles are anticipated to enter and exit the site during the AM and PM peak hours with minimal delay under construction conditions and post-construction conditions.



Legend

LANE DESIGNATION	
AM PEAK HOUR TRAFFIC VOLUME	XX
PM PEAK HOUR TRAFFIC VOLUME	XX
SIGNALIZED INTERSECTION	
UNSIGNALIZED INTERSECTION	

0' 2000' 4000'

FOUNTAIN WIND POWER - SHASTA COUNTY, CA
CONSTRUCTION PEAK HOUR CONDITIONS

FIGURE 1

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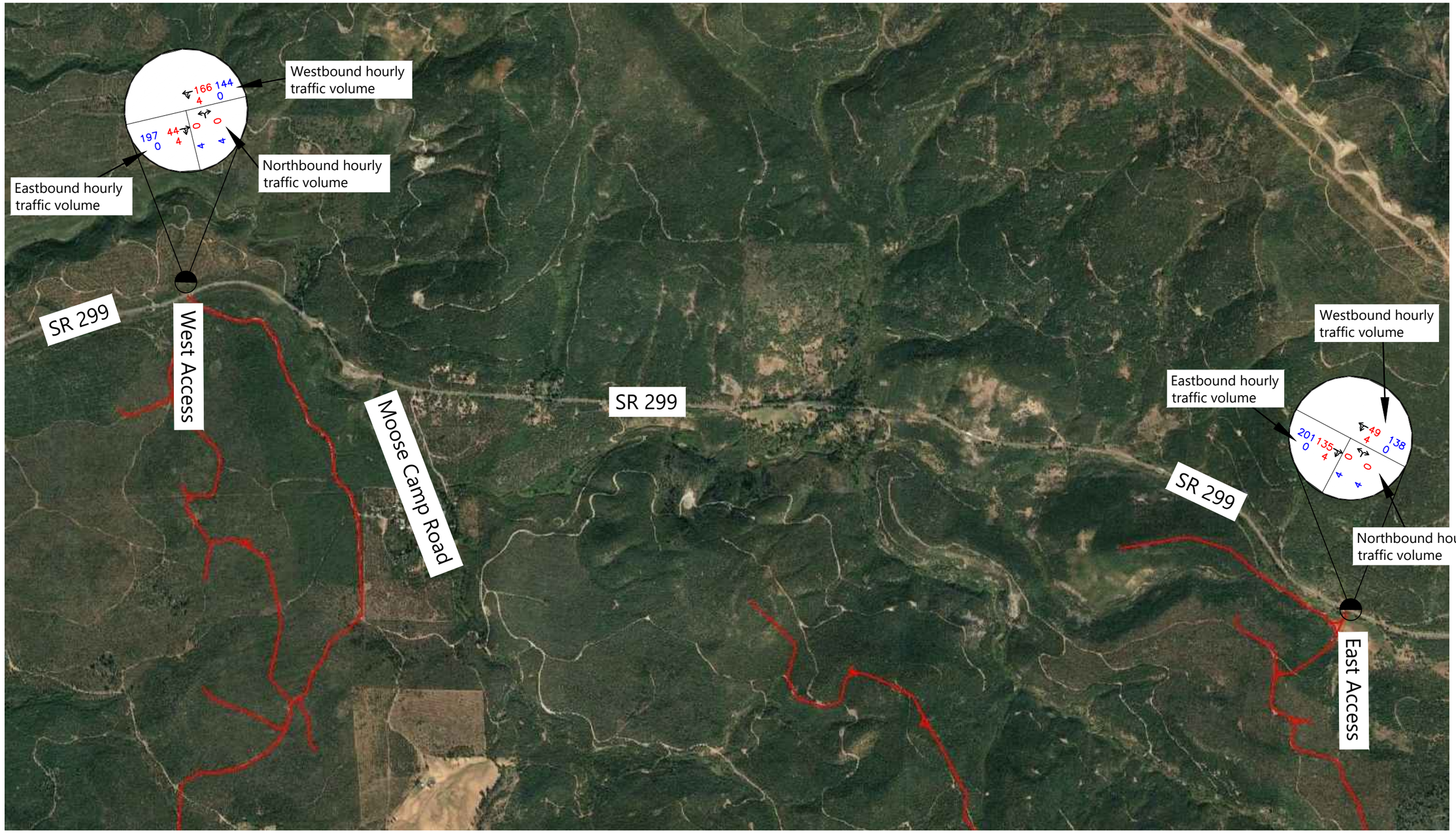
Las Vegas, NV 89118



Legend

LANE DESIGNATION	
AM PEAK HOUR TRAFFIC VOLUME	XX
PM PEAK HOUR TRAFFIC VOLUME	XX
SIGNALIZED INTERSECTION	
UNSIGNALIZED INTERSECTION	

0' 2000' 4000'

FOUNTAIN WIND POWER - SHASTA COUNTY, CA
POST CONSTRUCTION PEAK HOUR CONDITIONS

FIGURE 2

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Las Vegas, NV 89118

8.3 PROJECT ACCESS LEFT TURN LANE WARRANT ANALYSIS

To test whether any access required left turn lanes, Westwood utilized AASHTO Green Book, 2018 Edition Table 9-25, "Suggested Left-Turn Treatment Guidelines Based on Results from Benefit-Cost Evaluations for Intersections on Two-Lane Highways in Rural Areas".[2] Westwood calculated whether any project intersection met the guidelines for bypass lanes or left turn lanes on the two-lane highway. **Appendix G** of this document shows that access point left turn lanes are necessary during the AM and PM peak hour in the construction scenario. This analysis assumes that peak hour traffic will only be impacted by commuter traffic for the project. Shifting the arrival of at least seventy-five percent (75%) of the commuting AM hour traffic to 6am – 7am, promoting carpooling, and adding ingressing left turn lanes for commuters traveling to the site from Burney would further reduce congestion at project access intersections. Commuters from Burney could also be directed to drive westbound past both accesses and enter the Hillcrest Rest Area located approximately 1.6 miles to the west of the project site to turn around and head eastbound to turn right into the project site.

[2] Table 9-25, Suggested Left-Turn Treatment Guidelines Based on Results from Benefit-Cost Evaluations for Intersections on Two-Lane Highways in Rural Areas, A Policy on Geometric Design of Highways and Streets, 7th Edition, American Association of State Highway and Transportation Officials, Washington, DC, 2018.

9.0 SIGNAGE

The number of trucks turning from SR 299 onto the access roads may require advance warning signs based on sight distance. Caltrans may require any of the following to signs to be installed along SR 299 in advance of the access roads during construction.

C44 W2-2 W2-3

(These signs may be black on orange for construction)

10.0 SUMMARY

During construction, the project will employ an estimated maximum number of 199 workers/day during the peak period of construction, which include construction workers, project management staff, equipment operators, survey staff, and delivery vehicle drivers during the peak period. Thus, over the estimated two-year construction period, the total number of all two-way trips is approximately 84,003 trips.

After construction of the wind farm, operations and maintenance traffic will be limited to a few passenger vehicle trips per day.

Westwood estimated that the total VMT during the construction period will be **4,766,749 vehicle miles traveled**. The total VMT per day post-construction is assumed to be **240 vehicle miles traveled**. Per capita daily VMT during operations is estimated to be **30 miles per day**. It is recommended that in adopting a VMT significance threshold for this project, the California Energy Commission choose a metric that takes into account that the ultimate goal and purpose of the project is to create a utility-scale electricity generation source with near-zero GHG emissions and to displace the generation of electricity through the use of GHG-emitting fossil fuels. Naturally, travel to and from the project is temporarily increased during construction. However, long-term travel to the project is negligible post-construction. Any potential reduction in VMT would likely occur in the construction phase, through the implementation of various Transportation Demand Management (TDM) programs that are designed to reduce trips. These programs are anticipated to provide other benefits such as reduction in travel times, parking requirements, traffic congestion and air pollution. All of these benefits can be achieved by reducing trips and shifting travel times and modes. Measures such as carpooling for construction workers between the site and hotels/residences in both Redding and Burney can reduce the total VMT during construction. Given the location of the site, carpooling

is likely the only feasible method for reducing construction VMT, as there are no public transit facilities that serve the project site.

Commuting vehicles are anticipated to enter and exit the site during the AM and PM peak hours with minimal delay under construction conditions and post-construction conditions.

Both project access intersections meet the warrants for left turn lanes during the AM and PM peak hour in the construction scenario. Shifting the arrival of at least seventy-five percent (75%) of the commuting AM peak hour traffic to 6am – 7am, promoting carpooling, and adding ingressing left turn lanes for commuters traveling to the site from Burney would further reduce congestion at project access intersections. Commuters from Burney could also be directed to drive westbound past both accesses and enter the Hillcrest Rest Area located approximately 1.6 miles to the west of the project site to turn around and head eastbound to turn right into the project site.

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Data Source(s): Westwood (2023); .

- Turbines
- Delivery Flow
- Major Roads
- Access Roads
- Batching Plants
- O&M Facility
- Staging Areas
- Substation Switching Station

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N

0 0.25 0.5 1 Miles

Fountain Wind Project

Shasta County, California

Project Site Plan

EXHIBIT 1

May 13, 2023

Map Document: \\westwoodps.local\GFS\Global Projects\0023714.00\GIS\ArcPro\Traffic Study\Fountain Wind TIS_1.aprx 5/13/2023 7:53 PM PLaholt

Map Document: \\westwoodps.local\GFS\Global Projects\0023714.00\GIS\ArcPro\Traffic Study\Fountain Wind TIS_1.aprx 5/13/2023 7:50 PM PLahoti
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Modoc National Forest
Siskiyou
Modoc
I-5
Siskiyou
Shasta
Modoc
Shasta
Modoc
Lassen
SR 299
US 395
Trinity
Shasta
Lumber Destination
Aggregate Source
Shasta National Forest
Shasta
Lassen
Whiskeytown Shasta Trinity NRA
Site
Concrete Source
Redding
Eagle Lake
Lassen Volcanic National Park
Shasta
Plumas
Anderson
I-5
Cottonwood
Shasta
Tehama
Plumas
Tehama
Susanville
Plumas
Lassen
Honey Lake
Lake Almanor
Lassen National Forest
Red Bluff
Plumas National Forest
Orland
Chico
Paradise
Lake Oroville State Recreation Area
Willows
Reno
Sacramento Riv Nat'l Wildlife Ref
I-5
I-5
Tahoe National Forest
Truckee
I-580
I-580
Live Oak
Colusa
Grass Valley
Yuba City
I-80
I-80
Lake Tahoe
Auburn State Recreation Area
Eldorado National Forest
Roseville
Citrus Heights
Woodland
I-505
I-505
I-80 Bus
Sacramento
Lake Berryessa
Elk Grove

Data Source(s): Westwood (2023); .

Material Locations
Turbines Related Deliveries
National Highways
California Rail Network
Major Roads
Concrete Delivery Route
Timber Removed Route
Aggregate Delivery Route
Water Delivery Route
Worker Commute Route
Equipment and Miscellaneous Deliveries

N
0 5 10 20 Miles

Fountain Wind Project

Shasta County, California

Regional Delivery Routes

EXHIBIT 2

May 13, 2023

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Trinity
Shasta
Castle Crags State Park
Shasta National Forest
Whiskeytown Shasta Trinity NRA
Ahjumawi Lava Springs State Park
Lumber Destination
Aggregate Source
Water Source
Burney
SR 299
Shasta
Lassen
Concrete Source
Redding
I-5
Anderson
Shingletown
Lassen Volcanic National Park
Shasta
Plumas
Lassen
Plumas
Shasta
Tehama

Data Source(s): Westwood (2023); .

- Material Locations
- Equipment and Miscellaneous Deliveries
- Water Delivery Route
- Aggregate Delivery Route
- Timber Removed Route
- Worker Commute Route
- Concrete Delivery Route
- Turbines Related Deliveries
- Major Roads

N
0 2.5 5 10 Miles

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Fountain Wind Project

Shasta County, California

Local Delivery Routes

EXHIBIT 3

May 13, 2023

Map Document: \\westwoodps.local\GPS\Global Projects\0023714.00\GIS\ArcPro\Traffic Study\Fountain Wind TIS_1.aprx 5/13/2023 7:52 PM PLaholt

Exhibit 4 - Fountain Wind Project - Estimated Vehicle Trips During Construction

	Vehicles	Number of One Way Truck Trips	Number of Two-Way Truck Trips	Estimated Gross Vehicle Weight (Pounds)	Load Weight (Pounds)	Miles	VMT	Notes/ Assumptions
	Commuter Trips - Pick-up trucks							
	Total Pick-up Trucks Two-Way Trips	18483	36,966				1,256,844	Assume 60% trips from West and 40% trips from East
	Peak Number of Pick-up Truck Trips/Day	100	200					
	Equipment							
	Feller Buncher (logging)	2	4	71,711		50	200	2 nos. (Cat 522B)
	Logging Trucks	8	16	35,000		50	800	8 Flat-Bed Semi Trailers and Tractors
	Skidder	2	4	41,000		50	200	2 skidders
	Bulldozer (medium)	14	28	57,440		50	1,400	14 nos. (Cat D7 Bulldozers)
	Scraper	2	8	93,000		50	400	4 nod. (Cat 627K's)
	Drum Compactor	4	16	41,000		50	800	8 Cat CS41B
	Skid Steer Loader	13	26	4,000		50	1,300	13 nos. (Cat 272D2)
	Road Grader	3	6	42,647		50	300	3 nos. (Cat 12M)
	Excavator	5	10	66,250		50	500	5 nos. (Cat 326F)
	Trenching Equipment	4	8	52,000		50	400	4 nos. (Wolfe 7000)
	Backhoe Loader (includes setting collector system poles)	4	8	24,000		50	400	4 nos. (Cat 415F2)
	Cable Reel Truck (Includes auger for pole foundations)	7	14	46,000		50	700	7 nos. (Includes manlift basket for rigging poles)
	Concrete Pump Truck	2	4	46,000		50	200	2 nos. (Schwing 31 XT)
	Mobile Hydraulic Crane	19	38	117,235		50	1,900	19 nos. (Grove RT890E)
	Rubber Tired Forklifts	7	14	52,000		50	700	7 nos. (Forklift)
	Hydro Axe	2	4	52,000		50	200	2 nos.
	Boom Lift	12	24	93,000		50	1,200	12 nos.
	Large Crawler Crane	4	8	794,000		50	400	4 nos. (Terrex Demag CC2800-1)
	Equipments	**114**	240				12,000	Assume all trips from SR 299 West - Schedule to avoid peak hours
	Mobile Home (Field Office)	11	22	60,000	40,000	50	1,100	Assume all trips from SR 299 West - Schedule to avoid peak hours
	Total Equipments Trips	125	262			50	13,100	
	Materials							
	Erosion and Sediment Control Materials	4	8	45,000	10,000	20	160	Based on perimeter control on one side of road length
	Public Road Aggregate	60	121	80,000	40,200	20	2,420	Based on 2000 feet of public road improvements, 6" depth
	Access Road Aggregate	9,005	18,011	80,000	40,200	20	360,220	Based on 42 miles of access roads, 8 trucks
	Temporary Laydown Area Aggregate	1,923	3,846	80,000	40,200	20	76,920	Based on 18 staging areas totaling 44 acres
	Substation Aggregate	218	437	80,000	40,200	20	8,740	Based on a 5 acre substation
	O&M/Field Office Aggregate	218	437	80,000	40,200	20	8,740	Based on a 5 acre O&M/Field Office Area
	Switching Substation Aggregate	655	1,311	80,000	40,200	20	26,220	Based on an 15 acre switching substation
	Total Aggregate for Compaction Deliveries	12,084	24,171				483,420	Assume all trips from SR 299 East - Schedule to avoid peak hours
	Substation Rock	328	656	80,000	40,200	20	13,120	Based on a 3.5 acre substation
	Field Office/O&M Rock	230	460	80,000	40,200	20	9,200	Based on a 3.5 acre O&M/Field Office Area
	Switching Substation Rock	721	1,442	80,000	40,200	20	28,840	Based on an 11 acre battery storage system
	Concrete Aggregate	10	20	80,000	40,200	20	400	Based on Aggregate equal to 76% of weight
	Total Aggregate Deliveries for structures	1289	2,578	26,159	Tons		51,560	Assume all trips from SR 299 East - Schedule to avoid peak hours
	Total Aggregate Deliveries	13,373	26,749				534,980	Assume all trips from SR 299 East - Schedule to avoid peak hours
	Wind Turbine Tower Base	48	96		153,400	255	24,480	Based on GE 3.4 137, HH 110m
	Wind Turbine Tower Lower Mid-Section	48	96		120,100	255	24,480	Based on GE 3.4 137, HH 110m
	Wind Turbine Tower Upper Mid-Section	48	96		112,850	255	24,480	Based on GE 3.4 137, HH 110m
	Wind Turbine Tower Top Section	48	96		86,900	255	24,480	Based on GE 3.4 137, HH 110m
	Wind Turbine Nacelle	48	96		150,700	255	24,480	Based on GE 3.4 137
	Wind Turbine Hub	48	96		88,050	255	24,480	Based on GE 3.4 137
	Wire and Cable - Underground Colletion System	38	76	80,000	45,000	255	19,380	Based on 3 conductors, 1.9 pounds/foot
	Wire and Cable - Overhead Collection System	12	24	80,000	45,000	255	6,120	Based on 3 conductors, 2.1 pounds/foot
	Overhead Collection Line Poles	85	170	30,000	15,000	255	43,223	Assume 250' wire span, 4 - 2000 pound Poles per trailer
	Transmission Line Poles	77	154	27,000	12,000	255	39,270	Assume 750' wire span, 1 - 8000 pound Pole per trailer
	Met Poles	5	10			255	2,550	Assume 1 Met Pole can be carried on a single truck
	Transformers	48	96	80,000	45,000	255	24,480	Based on 3.5 MW transformer
	Miscellaneous Turbine Components	192	384	80,000	45,000	255	97,920	Based on 4 miscellaneous deliveries per turbine
	Pilot Cars (Front and Back)	1,490	2979			255	759,645	Pilot Cars for Wind Turbines
	Wind Turbine Blades (3)	144	288		37,750	255	177,120	Based on GE 3.4 137
	Pilot Cars for blades (Front and Back)	576	1152			255	708,480	Pilot Cars for Wind Turbines Blades
	Total Turbine Related Deliveries	2,234	5,909		3,989		2,025,068	Assume all trips from SR 299 East and US-395 from Reno - Schedule to avoid peak hours
	Concrete for Turbine Foundations	2400	4,800	69,000	40,000	50	240,000	48 turbines
	Concrete Pump Trucks	2	4			50	200	2 trucks
	Concrete for Substation Foundations	41	82	69,000	40,000	50	4,100	Based on 2 MPT - Foundation 8'-6" x 24'-0" x 1'-4"
	Concrete for Switching Station Foundations	41	82	69,000	40,000	50	4,100	Based on 40' container each with 6 foundation pies
	Concrete for Overhead Collection System Pole Foundations	25	50	40,332	11,332	50	2,500	Assume 1 concrete foundations (terminations & angles)
	Concrete for Transformer Pads	48	96	41,180	12,180	50	4,800	Assume Pad 9' x 9' x 1'
	Concrete for O&M Building	13	26	69,000	40,000	50	1,300	Based on foundation wall 78' x 70' x 1' thick x 5' deep + 4" floor slab
	Total Concrete Deliveries	2,570	5,140	24,946	CuYds		257,000	Assume all trips from SR 299 West - Schedule to avoid peak hours
	Cement for Concrete Batch Plant	2	4	80,000	40,000	50	198	Based on Aggregate equal to 16% of weight
	Formwork	2	3.84	80,000	45,000	50	192	Based on 25 reuses of forms
	Reinforcing Steel (Rebar)	96	192	80,000	45,000	50	9,600	Based on 45 tons per turbine
	Building Materials	20	40	80,000	45,000	50	2,000	Based on 5460 square foot prefabricated metal building
	Structural Steel - Substation	4	9	80,000	45,000	50	444	Based on 200,000 Pounds of Structural Steel
	Structural Steel - Switching Substation	4	8	80,000	45,000	50	400	Based on 200,000 Pounds of Structural Steel
	Elecrical Equipment - Substation	10	20	80,000	45,000	50	1,000	Includes Control Building, switch gear, capacitors, etc.
	Elecrical Equipment - Switchingsubstation	10	20	80,000	45,000	50	1,000	Includes Control Building, switch gear, capacitors, etc.
	CMP Culverts	4	8	80,000	45,000	50	400	Culvert Extensions and new culverts
	Chain Link Fence	7	14	80,000	45,000	50	724	Based on 30,600 linear feet of fence at 10.65 pounds/ ft
	Micellaneous Consumables	26	52	60,000	20,000	50	2,600	10 Trucks
	Fuel Deliveries	25	50	26,000	7,000	50	2,500	Based on 2000 Gallons/week ea. of diesel on-road & off road
	Sanitation	52	104	50,000	10,000	50	5,200	Based on weekly maintenance visits
	Plant Stock, Seed and Mulch	17	34	52,600	12,800	50	1,719	Based on 2.5 tons/acre
	Total Miscellaneous Deliveries	**280**	560				27,978	Assume all trips from SR 299 West - Schedule to avoid peak hours
	Water (Compaction)	1,228	2456	33,400	0	20	49,120	Based on 20 gallons/ton of aggregate (Roads, Laydown, etc.)
	Water (Dust Control)	2,869	5738	33,400	0	20	114,760	Based on 300 gallons/acre/day of Road, staging, and field office area areas, 6 trucks
	Water (Vegetation establishment)	110	220	33,400	0	20	4,400	Based on 10,000 gallons/acre of Laydown areas
	Water (Concrete Batching)	2	4	33,400	0	20	80	Based on Aggregate equal to 8% of weight
	Total Water	4,209	8,418	16,826,893	Gallons		168,360	Assume all trips from SR 299 East- Schedule to avoid peak hours
	Total Trips	41,274	84,003			**TOTAL VMT**	**4,766,749**	

Exhibit 4 - Fountain Wind Project - Estimated Vehicle Trips - Post-Construction

Vehicles	Number of One way Truck Trips	Number of One way Truck Trips	Miles	VMT	Notes/ Assumptions
Pick-Up Trucks - 8 Full time Employees					
Total Pick-up Trucks	4	8	50 - West ; 10 - East	240	
Equipment					
Equipment Operators	0			0	Assume all trips on SR 299 West
Mobile Home (Field Office)	0		50	0	
Materials					
Total Aggregate for Compaction Deliveries	0			0	Assume all trips on SR 299 East
Concrete Aggregate	0		0	0	Based on Aggregate equal to 76% of weight
Total Aggregate Deliveries	0			0	Assume all trips on SR 299 East
Total Turbine Related Deliveries	0			0	Assume all trips on SR 299 west - Schedule to avoid peak hours
Total Concrete Deliveries	0			0	Assume all trips on SR 299 west
Cement for Concrete Batch Plant	0		0	0	Based on Aggregate equal to 16% of weight
Total Miscellaneous Deliveries	0			0	Assume all trips on SR 299 West
Total Water	0			0	Assume all trips on SR 299 East
	Trucks				
SR 299 West	2	4		200	
SR 299 East	2	4		40	
Total Trips	4	8	TOTAL VMT	240	

APPENDIX A

Burney Express is provided by the County of Shasta and operated by RABA. This service is outside of the RABA Service Area.

Route and Stops

Burney Express mostly travels on SR 299, connecting Burney on the east to Redding on the west.

Burney Express stops include:

- Burney (@ Burney Sporting Goods)
- Montgomery Creek (@ Montgomery Creek Library)
- Round Mountain (@ Round Mountain Store/Cafe)
- Bella Vista (@ My-T Fine Foods)
- Shasta College
- Redding (@ Downtown Transit Center)

Schedule

Burney Express provides three trips in each direction during the weekdays.

WESTBOUND						
	Burney	**Montg Creek**	**Round Mtn**	**Bella Vista**	**Shasta College**	**Redding**
1st Trip	5:50 am	6:15 am	6:25 am	6:55 am	7:05 am	7:15 am
2nd Trip	11:50 am	12:15 pm	12:25 pm	12:55 pm	1:05 pm	1:15 pm
3rd Trip	3:50 pm	4:15 pm	4:25 pm	4:55 pm	5:05 pm	5:15 pm

EASTBOUND						
	Redding	**Shasta College**	**Bella Vista**	**Round Mtn**	**Montg Creek**	**Burney**
1st Trip	10:25 am	10:35 am	10:45 am	11:15 am	11:25 am	11:50 am
2nd Trip	2:25 pm	2:35 pm	2:45 pm	3:15 pm	3:25 pm	3:50 pm
3rd Trip	5:35 pm	5:45 pm	5:55 pm	6:25 pm	6:35 pm	7:00 pm

There is no service on the weekends.

There is no service on the following holidays:

- New Year's Day (January 1st), Memorial Day (last Monday of May), Independence Day (July 4th), Labor Day (first Monday of September), Thanksgiving Day (fourth Thursday of November), or Christmas Day (December 25th).

Fares

	TO			
FROM	**Shasta College/ Bella Vista**	**Round Mtn/ Montg Creek**	**Burney**	**Redding**
Redding	$2.00	$3.50	$5.00	--
Burney	$3.50	$2.00	--	$5.00

Additional Resources

- Rural Transit in Shasta County

TRUCK NETWORKS on California State Highways

DISTRICT 2

Map 2 of 12

Not to scale

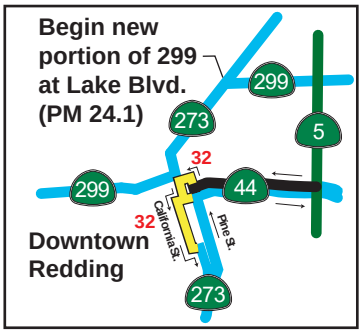
Last revised August 7, 2019

LEGEND

(CLICK HERE FOR MORE DETAILED LEGEND)

- National Network (STAA)
- Terminal Access (STAA)
- 65' California Legal Route
- 65' Ca Legal *KPRA Advisory
- *KPRA Advisory
- Airport
- Safety Roadside Rest Area

*KPRA = kingpin-to-rear-axle distance



~30' wide turn-around at PM 36.88, 2.5 miles north of Oak Flat Creek Bridge

Main St. at Indian Creek Rd. in Happy Camp (PM 41.1)

NOTE: Eastbound STAA trucks on Rte 96 prohibited from turning southbound on Rte 263.

OREGON

NEVADA

District 1

SISKIYOU

TRINITY

TEHAMA

MODOC

LASSEN

SHASTA

PLUMAS

District 3

YREKA

MONTAGUE

FORT JONES

ETNA

WEED

MOUNT SHASTA

DUNSMUIR

DORRIS

TULE-LAKE

Lava Beds National Monument

ALTURAS

SUSANVILLE

QUINCY

PORTOLA

WEAVERVILLE

REDDING

RED BLUFF

LOW CLEARANCE: EB & WB Rte 151 Railroad Overcrossing 13'-9" (PM 5.5)

Cecilville Rd. at Callahan (PM 8.9)

Lake Blvd. in City of Shasta Lake (PM 3.8)

Termo Grass-hopper Rd. (PM 43.3)

273 in Redding: NB Advisory 32' from Shasta St. to Eureka Way (PM 16.7/16.8)

SB Advisory 32' Gold St. to Eureka Way (PM 16.3/16.8)

Millville Plains Rd. (PM 10.8)

5 Dot Rd. 15 miles north of Jct 36 (PM 15.1)

NOTE: For Redding, see map at top and note at bottom right corner.

Paynes Creek Rd. (PM 64.0)

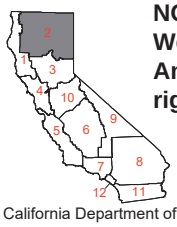
Baker Rd. (PM 39.7) to Main St./Business 5 at SR 36W (Old Beegum Rd.) in north Red Bluff (PM 41.3)

West Jct Rte 172 at Mineral (PM 83.1)

NOTE: Rte 36 in Red Bluff, Westbound STAA trucks on Antelope Blvd. MAY NOT turn right on Main St. (S. Main St. is local STAA route)

Little Giant Mill Rd. 11.2 miles east of Paynes Creek Rd. (PM 75.2)

NOTE: Rte 44 thru Redding is Advisory 32' from Market St. at Eureka Way (PM 0.00) WB to Pine St. at Shasta (PM 0.16) or EB to Pine St. at Tehama (PM 0.24). From Pine St. to I-5, 44 EB is green, 44 WB is black.



Caltrans

California Department of Transportation, Legal Truck Access

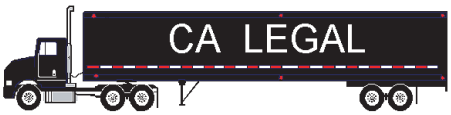
TRUCK MAP LEGEND
TRUCK LENGTHS & ROUTES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Click here for the Truck Network Map

CALIFORNIA LEGAL ROUTES

California Legal trucks (black trucks) can travel on STAA routes (green and blue routes), CA Legal routes (black routes), and Advisory routes (yellow routes). CA Legal trucks have access to the entire State highway system except where prohibited (some red routes).



California Legal Truck Tractor - Semitrailer

Semitrailer length : no limit
KPRA* : 40 feet maximum for two or more axles,
38 feet maximum for single-axle trailers
Overall length : 65 feet maximum *(KPRA = kingpin-to-rear-axle)

California Legal Truck Tractor - Semitrailer - Trailer (Doubles)

Option A
Trailer length : 28 feet 6 inches maximum (each trailer)
Overall length : 75 feet maximum

Option B
Trailer length : one trailer 28 feet 6 inches maximum
other trailer may be longer than 28 feet 6 inches
Overall length : 65 feet maximum

CA LEGAL ADVISORY ROUTES - CA Legal trucks only; however, ***travel not advised*** if KPRA length is over posted value. KPRA advisories range from 30 to 38 feet.

STAA ROUTES

The STAA Network allows the "interstate" STAA trucks which are the green trucks shown below. The STAA Network consists of the National Network (green routes, primarily interstates) and Terminal Access routes (blue, primarily State routes). ("STAA" = federal Surface Transportation Assistance Act of 1982.)

(Click here for the Truck Network Map.)

Interstate "STAA" Truck Tractor - Semitrailer

Semitrailer length : 48 feet maximum
KPRA* : no limit
Overall length : no limit *(KPRA = kingpin-to-rear-axle)

Semitrailer length : over 48 feet up to 53 feet maximum
KPRA : 40 feet maximum for two or more axles,
38 feet maximum for single-axle trailers
Overall length : no limit

Interstate "STAA" Truck Tractor - Semitrailer - Trailer (Doubles)

Trailer length : 28 feet 6 inches maximum (each trailer)
Overall length : no limit

Terminal Access - Interstate "STAA" trucks may travel on State highways that exhibit this sign.

Service Access - Interstate "STAA" trucks may travel up to one road mile from the off ramp to obtain services (food, fuel, lodging, repairs), provided the route displays this sign.

SPECIAL RESTRICTIONS

Route restricted for vehicle length or weight, cargo type, or number of axles. Click here for the list of Special Route Restrictions.

CalTrans Traffic Census Program 2020
Annual Average Daily Traffic (AADT) Volumes

DISTRICT	ROUTE	RTE_SFX	COUNTY	PM_PFX	PM	PM_SFX	DESCRIPTION	BACK_PEAK_HOUR	BACK_PEAK_MADT	BACK_AADT	AHEAD_PEAK_HOUR	AHEAD_PEAK_MADT	AHEAD_AADT
02	299		SHA		24.822		REDDING, JCT. RTE. 5				2200	22500	18800
02	299		SHA		25.540		HAWLEY ROAD	2200	22500	18800	1150	12500	10800
02	299		SHA		27.239		OLD OREGON TRAIL	1150	12500	10800	950	10500	9500
02	299		SHA		31.460		DESCHUTES ROAD	910	8200	7700	520	6000	4750
02	299		SHA		53.263		TERRY MILL ROAD	260	4850	3900	260	4900	3950
02	299		SHA		60.050		BIG BEND ROAD	270	4400	3550	270	4150	3350
02	299		SHA		73.130		TAMARACK ROAD	400	4450	3150	400	4450	3150
02	299		SHA		74.480		ELM ST	370	4050	2400	360	4200	3600
02	299		SHA		74.980		BURNEY, PLUMAS ST	360	4200	3600	870	9600	8200

CalTrans Traffic Census Program 2020
Truck Volumes and Percentages

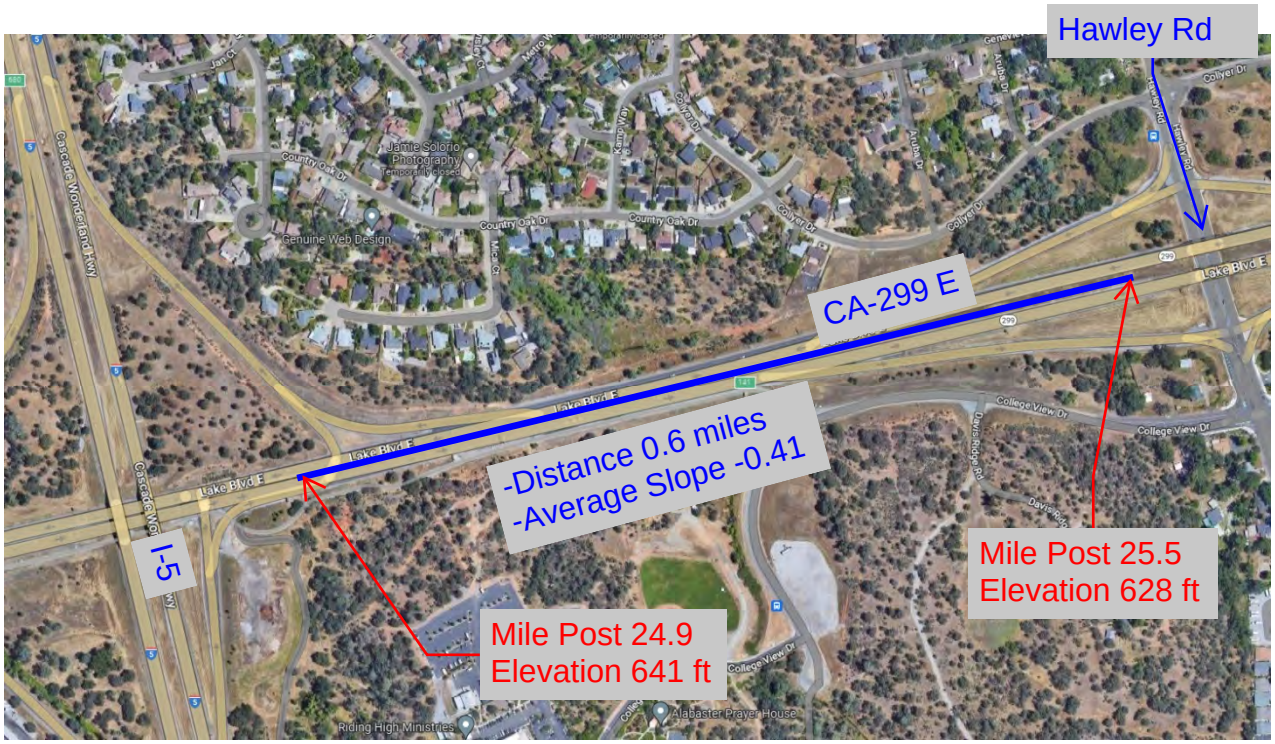
RTE	RTE_SFX	DIST	CNTY	POSTMILE_PFX	POSTMILE	POSTMILE_SFX	LEG	DESCRIPTION	VEHICLE_AADT_TOTA	TRUCK_AADT_TOTAL	TRK_PERCENT_TOT	TRK_2_AXLE	TRK_3_AXLE	TRK_4_AXLE	TRK_5_AXLE	TRK_2_AXLE_PCT	TRK_3_AXLE_PCT	TRK_4_AXLE_PCT	TRK_5_AXLE_PCT	EAL	YEAR_VER	EST
299		02	SHA		24.822		A	REDDING, JCT. RTE. 5	18800	890	4.73	552	94	11	233	62.02	10.56	1.24	26.18	110	20	V
299		02	SHA		25.540		A	HAWLEY ROAD	10800	406	3.76	69	84	19	234	17.07	20.73	4.63	57.56	94	16	E
299		02	SHA		27.239		A	OLD OREGON TRAIL	9500	357	3.76	81	47	10	219	22.66	13.29	2.72	61.33	84	16	E
299		02	SHA		60.050		B	BIG BEND ROAD	3550	529	14.90	93	76	13	347	17.59	14.35	2.55	65.51	132	16	E
299		02	SHA		72.640		O	HAYNES ROAD	3150	615	19.52	168	159	3	285	27.32	25.85	0.49	46.34	119	19	V
299		02	SHA		73.130		A	TAMARACK ROAD	3150	551	17.49	197	83	5	266	35.75	15.06	0.91	48.28	107	20	V
299		02	SHA		74.980		B	BURNEY, PLUMAS STREET	3600	684	19.00	259	104	9	312	37.87	15.20	1.32	45.61	128	20	E

Westwood

5725 W. Badura Ave, Suite 100
Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E



Fountain Wind Project

Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Average Section Average Slope
Between I-5 and Hawley Road	24.9 - 25.5	0.6	641	628	-0.41

Westwood

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main (702) 284-5300

Elevations At Locations of Interest Along CA-299E

Fountain Wind Project

Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Slope
Between Hawley Road and Old Oregon Trail	25.5 - 27.2	1.7	628	621	0.1

Westwood

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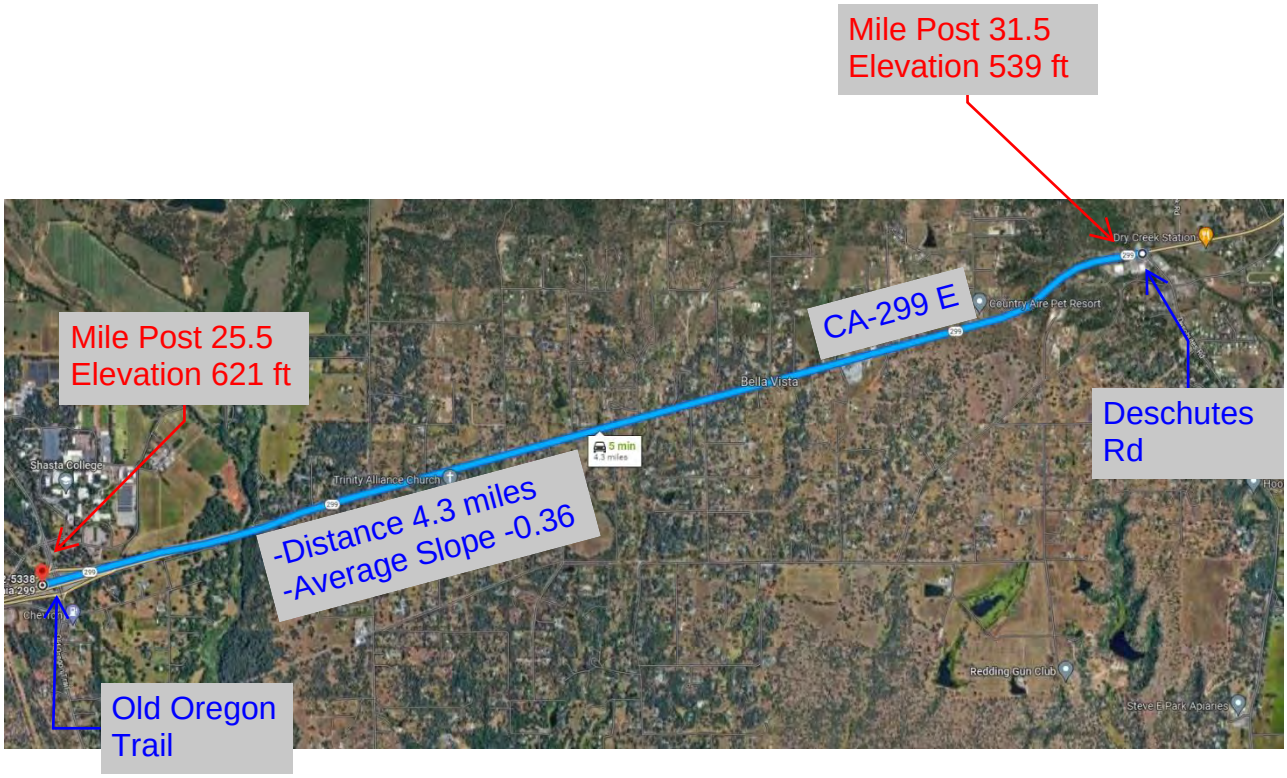
Elevations At Locations of Interest Along CA-299E



Fountain Wind Project

Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Section Average Slope
Between Old Trail and Deschutes Road	27.2 - 31.5	4.3	621	539	-0.36

Westwood

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Las Vegas, NV 89118

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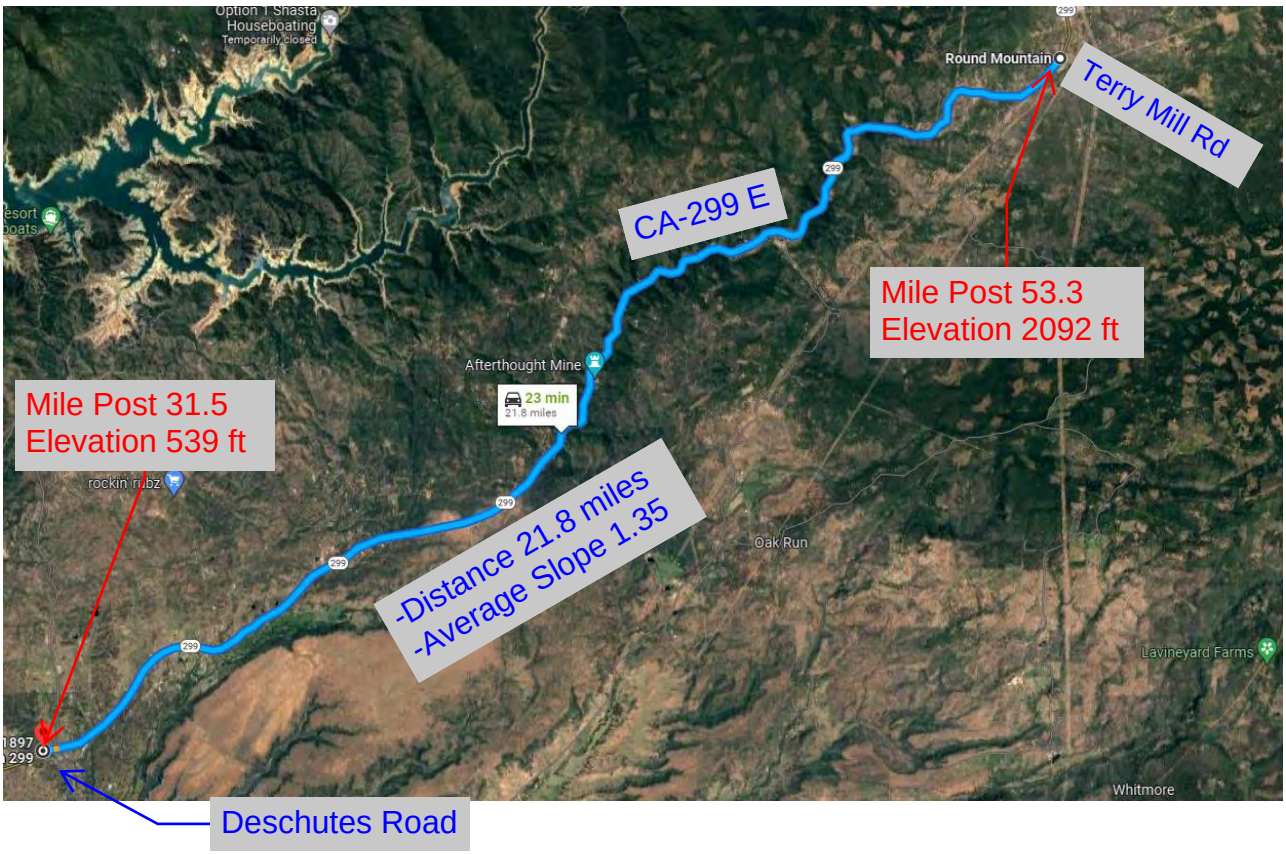
Elevations At Locations of Interest Along CA-299E



Fountain Wind Project

Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Section Average Slope
Between Deschutes Road and Terry Mill Road	31.5 - 53.3	21.8	539	2092	1.35

Westwood

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Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E

Fountain Wind Project

Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Section Average Slope
Between Terry Mill Road and Big Bend Road	53.3 - 60.1	6.8	2092	3128	2.89

Westwood

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Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E

Fountain Wind Project

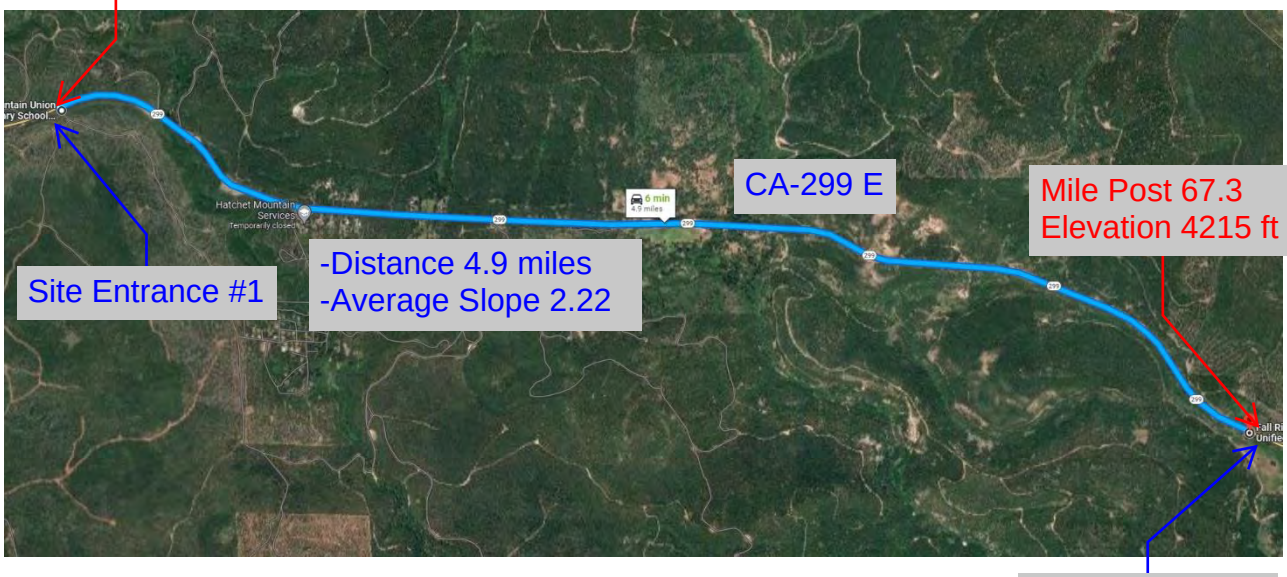
Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Section Average Slope
Between Big Bend Road and Site Entrance 1	60.1-62.4	2.3	3128	3640	4.22

Westwood

5725 W. Badura Ave, Suite 100
Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E



Fountain Wind Project

Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Slope
Between Site Entrance 1 and Site Entrance 2	62.4-67.3	4.9	3640	4215	2.22

Westwood

5725 W. Badura Ave, Suite 100
Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E

Fountain Wind Project

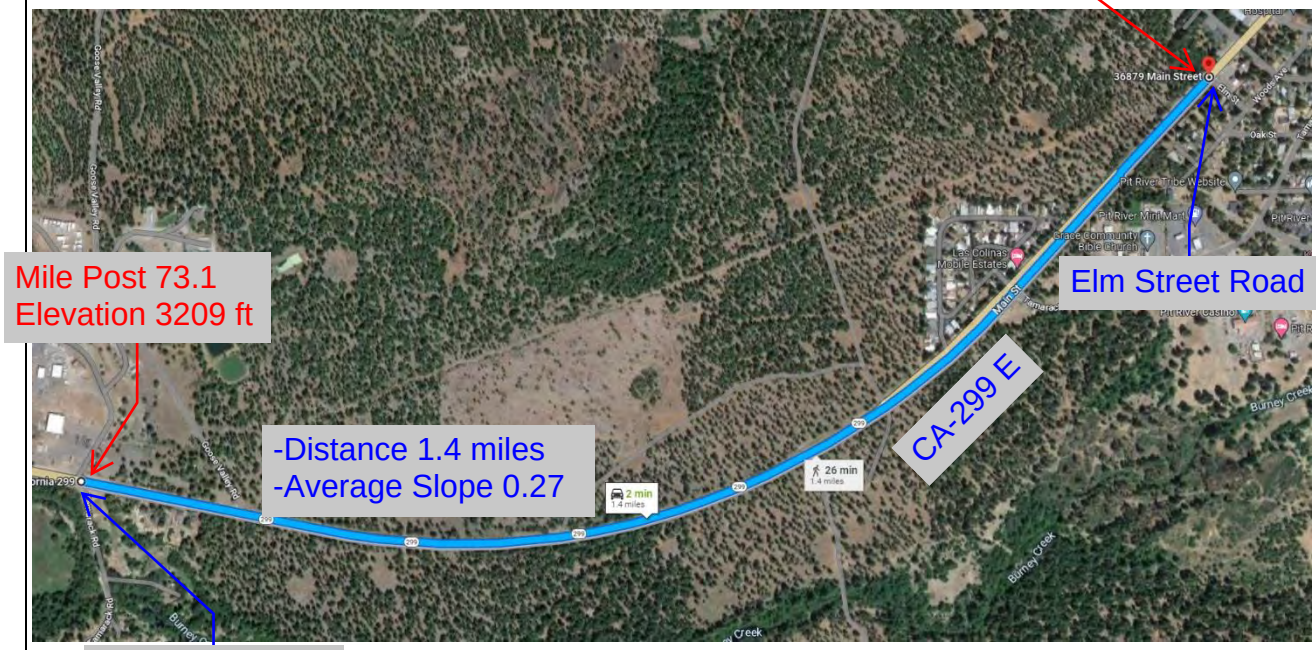
Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Slope
Between Site Entrance 2 and Tamarack Road	67.3 – 73.1	5.8	4215	3209	-3.29

Westwood

5725 W. Badura Ave, Suite 100
Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E



Fountain Wind Project

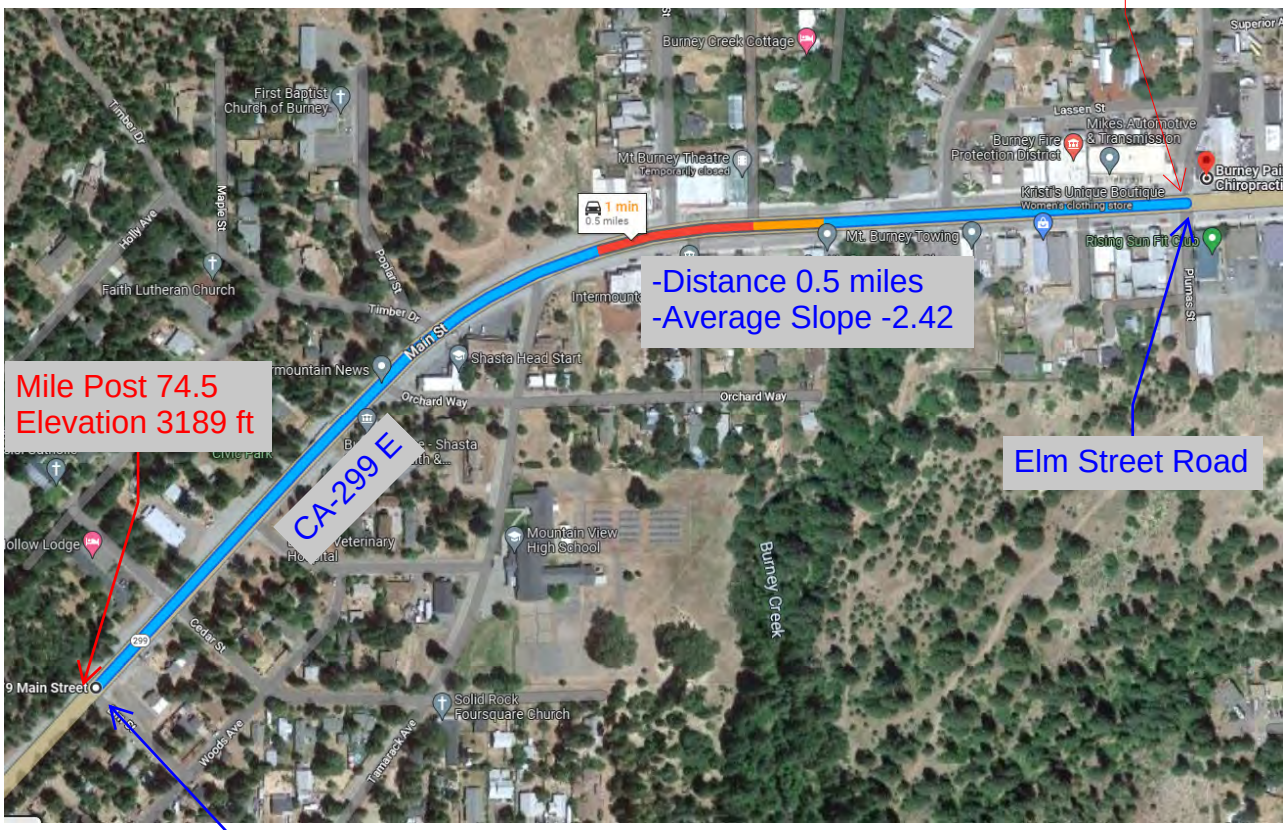
Location (Start-to-End)	Mile Post (Start-End)	Distance	Start Elevation	End Elevation	Section Average Slope
Between Tamarack Road and Elm Street	73.1 – 74.5	1.4	3209	3189	-0.27

Westwood

5725 W. Badura Ave, Suite 100
Las Vegas, NV 89118

main (702) 284-5300

Elevations At Locations of Interest Along CA-299E



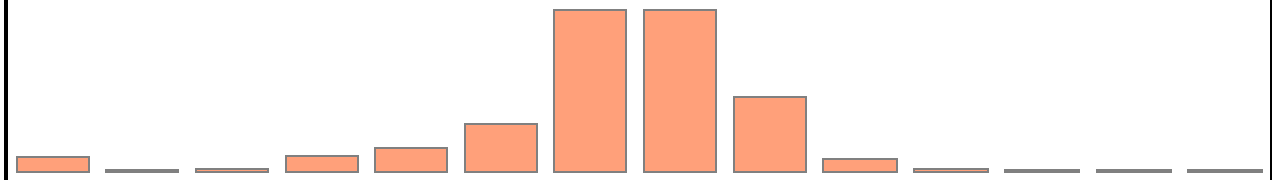
Fountain Wind Project					
Location (Start-to-End)	**Mile Post (Start-End)**	**Distance**	**Start Elevation**	**End Elevation**	**Section Average Slope**
Between Elm Street Plumas Street (Burney)	74.5 – 75.0	0.5	3189	3125	-2.42

APPENDIX B

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	1	1	5	1	0	0	0	0	0	0	8	39-48	6
01:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	41-50	1
02:00 AM	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3	31-40	2
03:00 AM	0	0	0	0	0	0	1	0	2	0	0	0	0	0	3	46-55	2
04:00 AM	1	0	0	0	1	1	3	0	3	0	0	0	0	0	9	36-45	4
05:00 AM	2	0	1	1	3	3	11	5	1	0	0	0	0	0	27	41-50	16
06:00 AM	0	0	0	1	1	6	22	8	7	**2**	0	0	0	0	47	41-50	30
07:00 AM	3	0	**4**	1	3	9	**36**	23	1	1	0	0	0	0	81	41-50	59
08:00 AM	0	0	0	0	4	**10**	28	22	5	0	0	0	0	0	69	41-50	50
09:00 AM	3	0	0	3	6	6	31	24	11	1	0	0	0	0	**85**	41-50	55
10:00 AM	**6**	0	0	**11**	2	3	22	24	11	0	0	0	0	0	79	41-50	46
11:00 AM	0	0	0	6	**8**	9	14	**27**	**13**	2	0	0	0	0	79	41-50	41
12:00 PM	**5**	0	0	**5**	**7**	4	27	23	7	4	0	0	0	0	82	41-50	50
01:00 PM	3	0	0	2	2	**12**	19	26	14	1	0	0	0	0	79	41-50	45
02:00 PM	2	0	0	0	5	8	22	30	14	2	0	**1**	0	0	84	41-50	52
03:00 PM	4	0	0	4	6	2	23	33	12	**5**	**2**	0	0	0	91	41-50	56
04:00 PM	1	0	0	2	0	6	**51**	42	**22**	4	1	0	0	0	**129**	41-50	93
05:00 PM	0	0	0	0	0	4	16	**47**	17	3	0	0	0	0	87	46-55	64
06:00 PM	1	0	0	0	5	10	13	18	22	0	0	0	0	0	69	46-55	40
07:00 PM	0	0	0	0	0	5	9	10	11	2	0	0	0	0	37	46-55	21
08:00 PM	0	0	0	0	1	6	14	11	0	0	0	0	0	0	32	41-50	25
09:00 PM	0	0	**2**	0	2	4	13	4	2	1	1	0	0	0	29	41-50	17
10:00 PM	0	0	0	0	0	1	3	3	2	1	0	0	0	0	10	41-50	6
11:00 PM	0	0	0	0	0	2	1	1	2	1	0	0	0	0	7	36-45	3
Day Total	31	0	7	36	57	114	384	384	179	30	4	1	0	0	1227	41-50	768
Percent	2.5%	0%	0.6%	2.9%	4.6%	9.3%	31.3%	31.3%	14.6%	2.4%	0.3%	0.1%	0%	0%			
AM Peak	10:00 AM	12:00 AM	7:00 AM	10:00 AM	11:00 AM	8:00 AM	7:00 AM	11:00 AM	11:00 AM	6:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	9:00 AM		
Volume	6	0	4	11	8	10	36	27	13	2	0	0	0	0	85		
PM Peak	12:00 PM	12:00 PM	9:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM	5:00 PM	4:00 PM	3:00 PM	3:00 PM	2:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	5	0	2	5	7	12	51	47	22	5	2	1	0	0	129		



Comments:

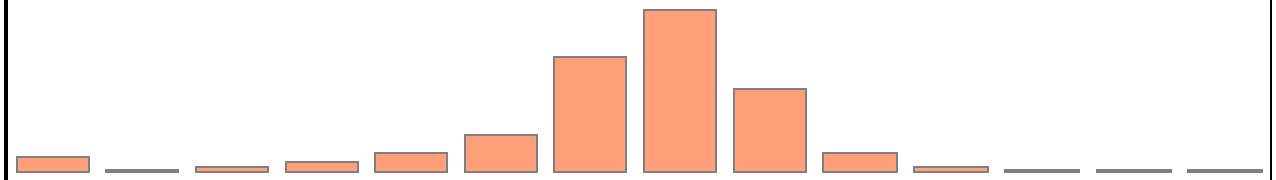
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	**4**	0	0	0	1	1	0	0	0	0	0	0	6	16-25	4
01:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	26-35	1
02:00 AM	0	0	0	0	0	1	3	0	1	1	0	0	0	0	6	36-45	4
03:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	41-50	3
04:00 AM	0	0	0	0	0	0	5	2	2	0	0	0	0	0	9	41-50	7
05:00 AM	2	0	0	0	1	3	5	8	2	**2**	**1**	0	0	0	24	41-50	13
06:00 AM	1	0	0	0	5	11	12	13	7	0	0	0	0	0	49	41-50	25
07:00 AM	1	0	1	**5**	3	6	22	21	8	1	0	0	0	0	68	41-50	43
08:00 AM	**5**	0	1	3	**8**	**14**	19	15	**14**	2	1	0	0	0	82	41-50	34
09:00 AM	2	0	0	4	7	3	20	**34**	8	2	0	0	0	0	80	41-50	54
10:00 AM	2	0	0	4	3	10	**25**	32	12	2	1	0	0	0	**91**	41-50	57
11:00 AM	3	0	1	3	2	14	20	17	14	2	0	0	0	0	76	41-50	37
12:00 PM	1	0	**2**	1	5	4	17	31	8	3	0	0	0	0	72	41-50	48
01:00 PM	4	0	0	0	1	5	26	31	15	3	0	0	0	0	85	41-50	57
02:00 PM	3	0	0	**2**	3	1	13	48	22	0	1	0	0	0	93	46-55	70
03:00 PM	1	0	0	2	**7**	4	20	43	24	5	0	0	0	0	106	46-55	67
04:00 PM	**5**	0	0	1	3	**12**	**34**	**50**	**26**	5	0	0	0	0	**136**	41-50	84
05:00 PM	1	0	0	0	0	4	23	37	21	7	3	0	0	0	96	41-50	60
06:00 PM	3	0	0	0	0	3	11	23	22	**9**	**5**	0	0	0	76	46-55	45
07:00 PM	1	0	0	0	0	1	10	9	9	1	1	**1**	0	0	33	41-50	19
08:00 PM	1	0	0	0	0	3	12	9	9	2	0	0	0	0	36	41-50	21
09:00 PM	0	0	0	0	1	2	10	8	5	2	0	0	0	0	28	41-50	18
10:00 PM	1	0	0	1	0	1	6	6	2	0	0	0	0	0	17	41-50	12
11:00 PM	1	0	0	0	0	0	4	5	1	1	0	0	0	0	12	41-50	9
Day Total	38	0	9	26	50	102	318	447	232	50	13	1	0	0	1286	41-50	765
Percent	3%	0%	0.7%	2%	3.9%	7.9%	24.7%	34.8%	18%	3.9%	1%	0.1%	0%	0%			
AM Peak	8:00 AM	12:00 AM	12:00 AM	7:00 AM	8:00 AM	8:00 AM	10:00 AM	9:00 AM	8:00 AM	5:00 AM	5:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM		
Volume	5	0	4	5	8	14	25	34	14	2	1	0	0	0	91		
PM Peak	4:00 PM	12:00 PM	12:00 PM	2:00 PM	3:00 PM	4:00 PM	4:00 PM	4:00 PM	4:00 PM	6:00 PM	6:00 PM	7:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	5	0	2	2	7	12	34	50	26	9	5	1	0	0	136		



Comments:

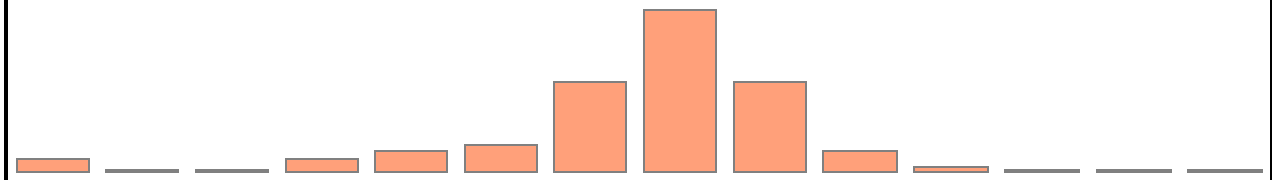
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	2	2	4	1	1	0	0	0	0	10	41-50	6
01:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	36-45	1
02:00 AM	0	0	0	0	0	1	1	2	2	1	0	0	0	0	7	46-55	4
03:00 AM	1	0	0	0	1	0	2	3	3	0	0	0	0	0	10	46-55	6
04:00 AM	0	0	0	1	0	1	7	0	4	1	0	0	0	0	14	36-45	8
05:00 AM	2	0	0	0	3	2	4	12	4	0	0	0	0	0	27	43-52	16
06:00 AM	2	0	0	1	0	5	8	16	12	**7**	0	0	0	0	51	46-55	28
07:00 AM	2	0	0	0	8	1	15	29	17	4	0	0	0	0	76	46-55	46
08:00 AM	3	0	0	1	3	8	15	33	16	3	0	0	0	0	82	46-55	49
09:00 AM	2	0	0	1	6	**10**	15	30	17	4	0	0	0	0	85	46-55	47
10:00 AM	1	0	0	**7**	1	4	**19**	26	**21**	3	**2**	0	0	0	84	46-55	47
11:00 AM	**4**	0	0	6	**13**	1	9	**42**	14	2	1	0	0	0	**92**	46-55	56
12:00 PM	2	0	0	3	6	5	21	38	14	**5**	0	0	0	0	94	41-50	59
01:00 PM	1	0	0	**6**	2	4	14	27	23	4	**4**	0	0	0	85	46-55	50
02:00 PM	3	0	0	0	6	4	20	37	24	5	1	0	0	0	100	46-55	61
03:00 PM	2	0	0	5	3	**8**	21	41	**29**	4	0	0	0	0	113	46-55	70
04:00 PM	**5**	0	0	1	**7**	6	**24**	**46**	20	5	2	0	0	0	**116**	41-50	70
05:00 PM	3	0	0	0	0	3	24	33	14	5	1	0	0	0	83	41-50	57
06:00 PM	0	0	0	2	0	0	15	32	19	4	1	0	0	0	73	46-55	51
07:00 PM	1	0	0	0	0	2	10	14	11	2	1	0	0	0	41	46-55	25
08:00 PM	1	0	0	0	1	6	10	13	3	0	0	0	0	0	34	41-50	23
09:00 PM	0	0	0	1	2	5	7	3	0	0	0	0	0	0	18	36-45	12
10:00 PM	0	0	0	0	0	1	5	4	3	0	0	0	0	0	13	41-50	9
11:00 PM	0	0	0	0	0	0	3	1	0	0	0	0	0	0	4	41-50	4
Day Total	35	0	0	35	62	79	272	486	271	60	13	0	0	0	1313	41-50	758
Percent	2.7%	0%	0%	2.7%	4.7%	6%	20.7%	37%	20.6%	4.6%	1%	0%	0%	0%			
AM Peak	11:00 AM	12:00 AM	12:00 AM	10:00 AM	11:00 AM	9:00 AM	10:00 AM	11:00 AM	10:00 AM	6:00 AM	10:00 AM	12:00 AM	12:00 AM	12:00 AM	11:00 AM		
Volume	4	0	0	7	13	10	19	42	21	7	2	0	0	0	92		
PM Peak	4:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM	3:00 PM	4:00 PM	4:00 PM	3:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	5	0	0	6	7	8	24	46	29	5	4	0	0	0	116		



Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

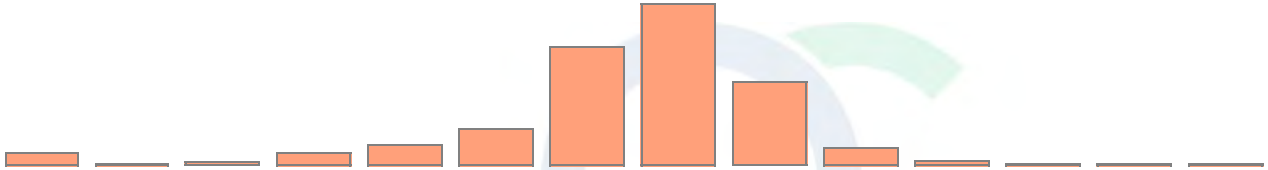
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	104	0	16	97	169	295	974	1317	682	140	30	2	0	0	3826	41-50	2291
Percent	2.7%	0%	0.4%	2.5%	4.4%	7.7%	25.5%	34.4%	17.8%	3.7%	0.8%	0.1%	0%	0%			
Cumulative Percent	2.7%	2.7%	3.1%	5.7%	10.1%	17.8%	43.3%	77.7%	95.5%	99.2%	99.9%	100%	100%	100%			

ADT
1275



85th Percentile: 52 MPH
Mean Speed(Average): 45 MPH
Median: 45 MPH
Mode: 48 MPH

Comments:

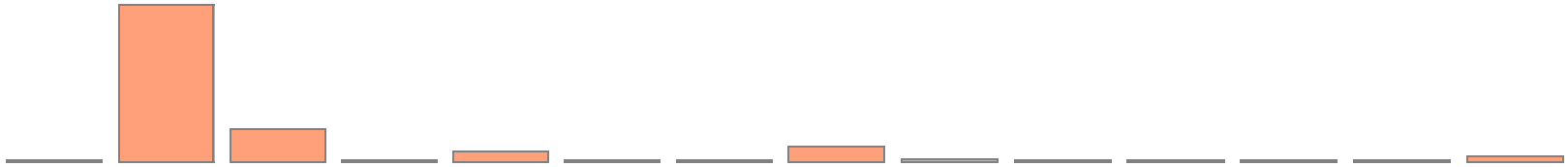
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	5	0	0	1	0	0	2	0	0	0	0	0	0	8
01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
03:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
04:00 AM	0	5	0	0	0	0	0	2	**1**	0	0	0	0	1	9
05:00 AM	0	16	3	0	2	0	0	3	1	0	0	0	0	2	27
06:00 AM	0	23	**18**	0	2	0	0	4	0	0	0	0	0	0	47
07:00 AM	**2**	51	14	0	3	**1**	0	7	1	0	0	0	0	2	81
08:00 AM	0	51	10	0	2	0	0	5	1	0	0	0	0	0	69
09:00 AM	0	**58**	14	0	**5**	0	0	5	0	0	0	0	0	3	**85**
10:00 AM	1	42	18	0	3	1	0	7	1	0	0	0	0	**6**	79
11:00 AM	0	54	12	0	5	0	0	**8**	0	0	0	0	0	0	79
12:00 PM	**1**	48	9	0	**9**	**1**	0	**8**	1	0	0	0	0	**5**	82
01:00 PM	0	53	11	0	4	0	0	6	2	0	0	0	0	3	79
02:00 PM	0	59	11	0	7	0	0	3	0	0	**2**	0	0	2	84
03:00 PM	0	69	9	0	2	0	0	3	**3**	0	1	0	0	4	91
04:00 PM	0	**103**	**18**	0	2	0	0	5	0	0	0	0	0	1	**129**
05:00 PM	0	73	10	0	1	0	0	3	0	0	0	0	0	0	87
06:00 PM	0	53	11	0	1	0	0	3	0	0	0	0	0	1	69
07:00 PM	0	30	5	0	1	0	0	1	0	0	0	0	0	0	37
08:00 PM	0	27	4	0	0	0	0	1	0	0	0	0	0	0	32
09:00 PM	1	22	2	0	1	1	0	2	0	0	0	0	0	0	29
10:00 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
11:00 PM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
Day Total	5	863	180	0	53	4	0	78	11	0	3	0	0	30	1227
Percent	0.4%	70.3%	14.7%	0%	4.3%	0.3%	0%	6.4%	0.9%	0%	0.2%	0%	0%	2.4%	
ADT 1227															
AM Peak	7:00 AM	9:00 AM	6:00 AM	12:00 AM	9:00 AM	7:00 AM	12:00 AM	11:00 AM	4:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM	9:00 AM
Volume	2	58	18	0	5	1	0	8	1	0	0	0	0	6	85
PM Peak	12:00 PM	4:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM
Volume	1	103	18	0	9	1	0	8	3	0	2	0	0	5	129

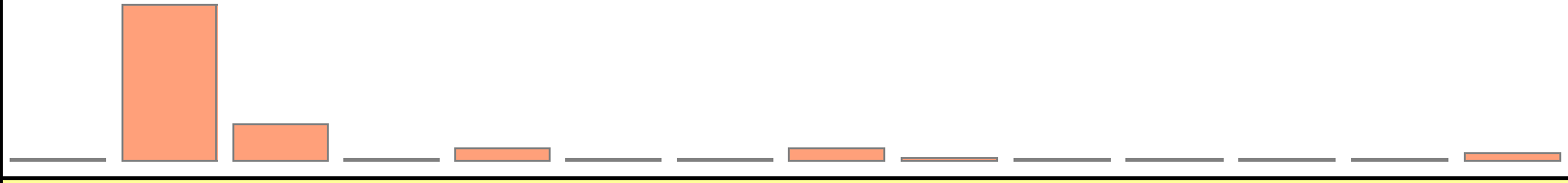
Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	2	0	1	0	1	2	0	0	0	0	0	0	0	0	6
01:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00 AM	0	3	1	0	1	0	0	1	0	0	0	0	0	0	6
03:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:00 AM	0	6	1	0	1	0	0	1	0	0	0	0	0	0	9
05:00 AM	0	14	5	0	1	0	0	2	0	0	0	0	0	2	24
06:00 AM	0	23	15	0	5	0	0	4	1	0	0	0	0	1	49
07:00 AM	1	37	19	0	4	0	0	3	3	0	0	0	0	1	68
08:00 AM	2	50	9	0	11	2	0	3	0	0	0	0	0	5	82
09:00 AM	0	49	15	0	4	1	0	8	1	0	0	0	0	2	80
10:00 AM	1	61	10	0	5	1	0	11	0	0	0	0	0	2	91
11:00 AM	0	52	13	0	3	1	0	3	1	0	0	0	0	3	76
12:00 PM	1	50	9	0	5	1	0	3	1	0	1	0	0	1	72
01:00 PM	0	61	10	0	7	0	0	3	0	0	0	0	0	4	85
02:00 PM	0	72	10	0	4	0	0	3	1	0	0	0	0	3	93
03:00 PM	0	72	21	0	6	0	0	5	0	0	1	0	0	1	106
04:00 PM	0	100	24	0	1	0	0	5	0	0	2	0	0	4	136
05:00 PM	0	74	16	0	4	0	0	1	0	0	0	0	0	1	96
06:00 PM	0	56	13	0	2	0	0	2	0	0	0	0	0	3	76
07:00 PM	0	24	6	1	1	0	0	0	0	0	0	0	0	1	33
08:00 PM	0	30	2	0	0	0	0	3	0	0	0	0	0	1	36
09:00 PM	0	19	7	0	0	0	0	2	0	0	0	0	0	0	28
10:00 PM	0	13	2	0	0	0	0	0	1	0	0	0	0	1	17
11:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	1	12
Day Total	7	880	211	1	66	8	0	63	9	0	4	0	0	37	1286
Percent	0.5%	68.4%	16.4%	0.1%	5.1%	0.6%	0%	4.9%	0.7%	0%	0.3%	0%	0%	2.9%	
ADT 1286															
AM Peak	12:00 AM	10:00 AM	7:00 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	10:00 AM	7:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	8:00 AM	10:00 AM
Volume	2	61	19	0	11	2	0	11	3	0	0	0	0	5	91
PM Peak	12:00 PM	4:00 PM	4:00 PM	7:00 PM	1:00 PM	12:00 PM	12:00 PM	3:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	1	100	24	1	7	1	0	5	1	0	2	0	0	4	136

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10
01:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00 AM	0	4	2	0	0	0	0	1	0	0	0	0	0	0	7
03:00 AM	0	5	3	0	1	0	0	0	0	0	0	0	0	1	10
04:00 AM	0	7	2	0	1	0	0	4	0	0	0	0	0	0	14
05:00 AM	0	12	2	0	3	0	0	6	0	0	**2**	0	0	2	27
06:00 AM	**1**	17	**22**	0	5	0	0	4	0	0	0	0	0	2	51
07:00 AM	0	44	16	0	**7**	0	0	7	0	0	0	0	0	2	76
08:00 AM	0	45	19	0	5	0	0	**10**	0	0	0	0	0	3	82
09:00 AM	0	54	13	0	7	0	0	9	0	0	0	0	0	2	85
10:00 AM	1	52	12	**1**	5	**2**	0	9	**1**	0	0	0	0	1	84
11:00 AM	1	**62**	14	0	5	0	0	4	1	0	1	0	0	**4**	**92**
12:00 PM	0	59	16	0	7	0	0	**8**	**2**	0	0	0	0	2	94
01:00 PM	**1**	53	16	0	**10**	**1**	0	3	0	0	0	0	0	1	85
02:00 PM	0	81	10	0	4	0	0	1	0	0	**1**	0	0	3	100
03:00 PM	1	81	20	0	5	1	0	3	0	0	0	0	0	2	113
04:00 PM	0	**82**	**21**	0	5	0	0	3	0	0	0	0	0	**5**	**116**
05:00 PM	0	62	15	0	1	0	0	2	0	0	0	0	0	3	83
06:00 PM	1	56	12	0	2	1	0	1	0	0	0	0	0	0	73
07:00 PM	1	31	6	0	2	0	0	0	0	0	0	0	0	1	41
08:00 PM	0	27	5	0	1	0	0	0	0	0	0	0	0	1	34
09:00 PM	1	12	4	0	1	0	0	0	0	0	0	0	0	0	18
10:00 PM	0	8	4	0	0	0	0	1	0	0	0	0	0	0	13
11:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
Day Total	8	866	235	1	79	5	0	76	4	0	4	0	0	35	1313
Percent	0.6%	66%	17.9%	0.1%	6%	0.4%	0%	5.8%	0.3%	0%	0.3%	0%	0%	2.7%	
ADT 1313															
AM Peak	6:00 AM	11:00 AM	6:00 AM	10:00 AM	7:00 AM	10:00 AM	12:00 AM	8:00 AM	10:00 AM	12:00 AM	5:00 AM	12:00 AM	12:00 AM	11:00 AM	11:00 AM
Volume	1	62	22	1	7	2	0	10	1	0	2	0	0	4	92
PM Peak	1:00 PM	4:00 PM	4:00 PM	12:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	4:00 PM	4:00 PM
Volume	1	82	21	0	10	1	0	8	2	0	1	0	0	5	116

Comments:

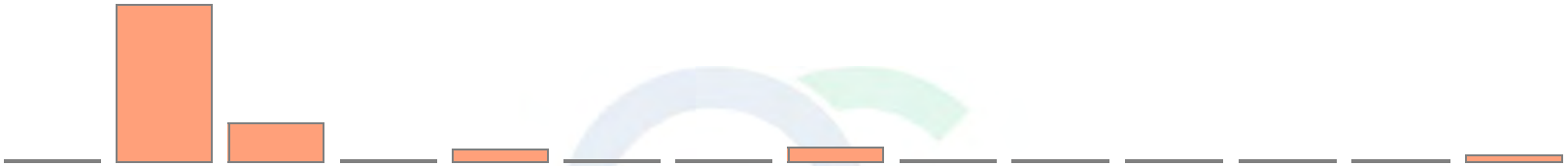
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	20	2609	626	2	198	17	0	217	24	0	11	0	0	102	3826
Percent	0.5%	68.2%	16.4%	0.1%	5.2%	0.4%	0%	5.7%	0.6%	0%	0.3%	0%	0%	2.7%	
ADT 1275															

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Mon	Tue 4 Apr 23	Wed 5 Apr 23	Thu 6 Apr 23	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		8	6	10		8			8	
01:00 AM		1	2	1		1			1	
02:00 AM		3	6	7		5			5	
03:00 AM		3	3	10		5			5	
04:00 AM		9	9	14		11			11	
05:00 AM		27	24	27		26			26	
06:00 AM		47	49	51		49			49	
07:00 AM		81	68	76		75			75	
08:00 AM		69	82	82		78			78	
09:00 AM		**85**	80	85		83			83	
10:00 AM		79	**91**	84		**85**			**85**	
11:00 AM		79	76	**92**		82			82	
12:00 PM		82	72	94		83			83	
01:00 PM		79	85	85		83			83	
02:00 PM		84	93	100		92			92	
03:00 PM		91	106	113		103			103	
04:00 PM		**129**	**136**	**116**		**127**			**127**	
05:00 PM		87	96	83		89			89	
06:00 PM		69	76	73		73			73	
07:00 PM		37	33	41		37			37	
08:00 PM		32	36	34		34			34	
09:00 PM		29	28	18		25			25	
10:00 PM		10	17	13		13			13	
11:00 PM		7	12	4		8			8	
Day Total		1227	1286	1313		1275			1275	
% Weekday Average		96.2%	100.9%	103%						
% Week Average		96.2%	100.9%	103%		100%				
AM Peak Volume		9:00 AM 85	10:00 AM 91	11:00 AM 92		10:00 AM 85			10:00 AM 85	
PM Peak Volume		4:00 PM 129	4:00 PM 136	4:00 PM 116		4:00 PM 127			4:00 PM 127	

Comments:

Report generated on 4/11/2023 4:55 PM

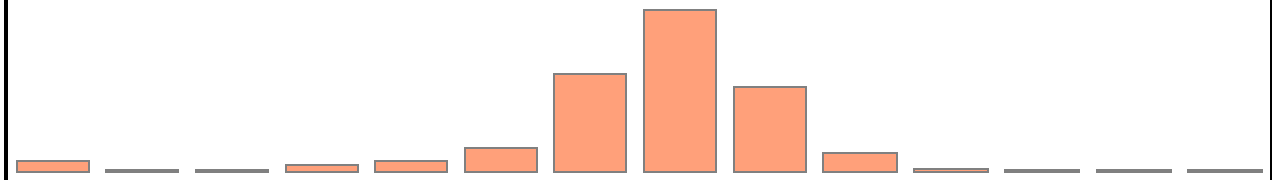
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	1	1	7	3	0	0	0	0	0	0	12	41-50	10
01:00 AM	1	0	0	0	0	0	0	2	1	0	0	0	0	0	4	46-55	3
02:00 AM	0	0	0	0	0	3	1	2	0	0	0	0	0	0	6	36-45	4
03:00 AM	0	0	0	0	0	0	2	4	5	0	1	0	0	0	12	46-55	9
04:00 AM	1	0	0	0	1	1	6	4	4	0	**2**	0	0	0	19	41-50	10
05:00 AM	3	0	3	1	4	3	15	14	6	1	0	0	0	0	50	41-50	29
06:00 AM	1	0	0	1	1	6	27	22	18	3	1	0	0	0	80	41-50	49
07:00 AM	5	0	**4**	1	3	9	42	57	24	7	1	0	0	0	153	41-50	99
08:00 AM	0	0	0	0	4	**11**	42	62	32	4	0	0	0	0	155	41-50	104
09:00 AM	3	0	0	3	6	6	**48**	**85**	28	6	0	0	0	0	**185**	41-50	133
10:00 AM	**9**	0	0	**11**	3	4	35	78	34	4	0	**1**	0	0	179	41-50	113
11:00 AM	3	0	0	6	**8**	11	34	55	**48**	**8**	1	0	0	0	174	46-55	103
12:00 PM	**6**	0	0	**5**	**8**	5	35	68	30	12	0	0	0	0	169	41-50	103
01:00 PM	6	0	0	2	2	**15**	44	74	39	5	1	0	0	0	188	41-50	118
02:00 PM	3	0	0	0	8	12	35	72	**42**	5	0	**1**	0	0	178	46-55	114
03:00 PM	6	0	0	4	7	2	34	69	37	**14**	**4**	0	0	0	177	46-55	106
04:00 PM	3	0	0	2	0	9	**60**	**90**	40	11	1	0	0	0	**216**	41-50	150
05:00 PM	3	0	0	1	0	5	29	88	33	11	2	0	0	0	172	46-55	121
06:00 PM	2	0	0	0	5	12	19	34	38	6	0	0	0	0	116	46-55	72
07:00 PM	1	0	0	0	0	7	11	29	23	6	0	0	0	0	77	46-55	52
08:00 PM	0	0	0	0	1	8	17	18	6	0	1	0	0	0	51	41-50	35
09:00 PM	0	0	**2**	0	2	5	14	6	2	2	1	0	0	0	34	41-50	20
10:00 PM	1	0	0	0	0	2	5	4	3	2	0	0	0	0	17	41-50	9
11:00 PM	1	0	0	0	0	3	4	2	3	1	0	0	0	0	14	36-45	7
Day Total	58	0	9	37	64	140	566	942	496	108	16	2	0	0	2438	41-50	1508
Percent	2.4%	0%	0.4%	1.5%	2.6%	5.7%	23.2%	38.6%	20.3%	4.4%	0.7%	0.1%	0%	0%			



AM Peak	10:00 AM	12:00 AM	7:00 AM	10:00 AM	11:00 AM	8:00 AM	9:00 AM	9:00 AM	11:00 AM	11:00 AM	4:00 AM	10:00 AM	12:00 AM	12:00 AM	9:00 AM		
Volume	9	0	4	11	8	11	48	85	48	8	2	1	0	0	185		
PM Peak	12:00 PM	12:00 PM	9:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM	4:00 PM	2:00 PM	3:00 PM	3:00 PM	2:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	6	0	2	5	8	15	60	90	42	14	4	1	0	0	216		

Comments:

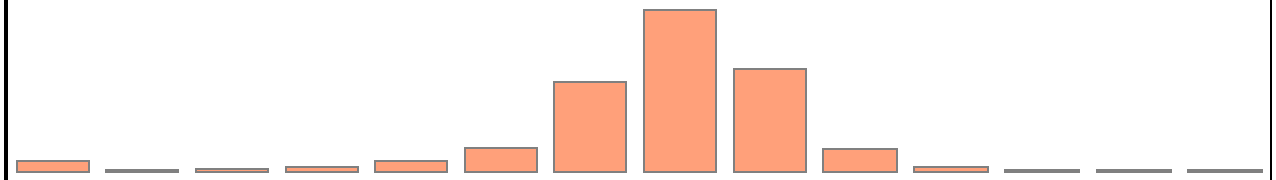
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	**4**	0	0	0	2	4	1	0	0	0	0	0	11	41-50	6
01:00 AM	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	41-50	2
02:00 AM	0	0	0	0	0	2	4	0	1	1	0	0	0	0	8	36-45	6
03:00 AM	0	0	0	0	0	0	1	4	0	1	0	0	0	0	6	41-50	5
04:00 AM	0	0	0	0	0	0	7	6	3	1	0	0	0	0	17	41-50	13
05:00 AM	2	0	0	0	3	5	7	18	11	3	**4**	**1**	0	0	54	46-55	29
06:00 AM	1	0	0	0	5	11	14	35	23	4	0	0	0	0	93	46-55	58
07:00 AM	4	0	1	**5**	3	6	27	45	34	11	3	0	0	0	139	46-55	79
08:00 AM	**6**	0	1	3	**8**	**17**	27	51	**60**	**13**	4	1	**1**	0	**192**	46-55	111
09:00 AM	3	0	0	5	7	6	36	76	35	9	0	0	1	0	178	41-50	112
10:00 AM	2	0	0	4	5	10	**46**	**81**	40	3	1	0	0	0	192	41-50	127
11:00 AM	6	0	1	3	2	16	38	56	37	12	1	0	0	0	172	41-50	94
12:00 PM	2	0	**2**	1	5	**14**	36	63	42	8	0	0	0	0	173	46-55	105
01:00 PM	7	0	2	0	1	5	**47**	63	**48**	7	0	0	0	0	180	46-55	111
02:00 PM	6	0	0	**2**	4	3	33	77	44	5	1	0	0	0	175	46-55	121
03:00 PM	2	0	0	2	**8**	7	40	86	47	8	0	**1**	0	0	201	46-55	133
04:00 PM	**8**	0	0	1	4	14	47	**94**	43	7	0	0	0	0	**218**	41-50	141
05:00 PM	3	0	0	0	2	5	38	74	44	**14**	4	0	0	0	184	46-55	118
06:00 PM	3	0	0	0	2	3	21	41	42	14	**6**	0	0	0	132	46-55	83
07:00 PM	3	0	0	0	0	2	12	18	14	2	2	1	0	0	54	46-55	32
08:00 PM	1	0	0	0	0	7	14	12	14	2	0	0	0	0	50	44-53	26
09:00 PM	0	0	0	0	1	4	11	17	5	2	0	0	0	0	40	41-50	28
10:00 PM	1	0	0	1	0	1	8	8	3	2	0	0	0	0	24	41-50	16
11:00 PM	1	0	0	0	1	0	4	5	1	1	0	0	0	0	13	41-50	9
Day Total	61	0	11	27	62	138	521	935	592	130	26	4	2	0	2509	46-55	1527
Percent	2.4%	0%	0.4%	1.1%	2.5%	5.5%	20.8%	37.3%	23.6%	5.2%	1%	0.2%	0.1%	0%			
AM Peak Volume	8:00 AM 6	12:00 AM 0	12:00 AM 4	7:00 AM 5	8:00 AM 8	8:00 AM 17	10:00 AM 46	10:00 AM 81	8:00 AM 60	8:00 AM 13	5:00 AM 4	5:00 AM 1	8:00 AM 1	12:00 AM 0	8:00 AM 192		
PM Peak Volume	4:00 PM 8	12:00 PM 0	12:00 PM 2	2:00 PM 2	3:00 PM 8	12:00 PM 14	1:00 PM 47	4:00 PM 94	1:00 PM 48	5:00 PM 14	6:00 PM 6	3:00 PM 1	12:00 PM 0	12:00 PM 0	4:00 PM 218		



Comments:

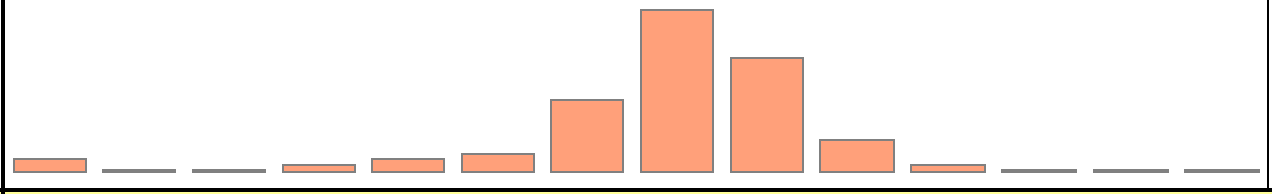
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	3	4	8	2	1	0	0	0	0	18	41-50	12
01:00 AM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4	46-55	3
02:00 AM	1	0	0	0	0	1	4	4	2	2	0	0	0	0	14	41-50	8
03:00 AM	1	0	0	0	1	0	2	5	9	4	1	0	0	0	23	46-55	14
04:00 AM	0	0	0	1	0	1	7	2	6	4	1	0	0	0	22	51-60	10
05:00 AM	2	0	0	0	3	3	11	18	13	2	**3**	0	0	0	55	46-55	31
06:00 AM	2	0	0	1	0	5	10	31	32	12	0	0	0	0	93	46-55	63
07:00 AM	**5**	0	0	0	8	1	18	50	49	15	3	**1**	**1**	0	151	46-55	99
08:00 AM	5	0	0	1	3	8	27	70	**57**	15	3	0	0	0	189	46-55	127
09:00 AM	5	0	0	1	6	**11**	30	73	49	**18**	0	0	0	0	193	46-55	122
10:00 AM	4	0	0	**7**	4	11	**34**	79	50	8	3	0	0	0	**200**	46-55	129
11:00 AM	5	0	0	6	**15**	2	21	**84**	46	8	2	0	0	0	189	46-55	130
12:00 PM	3	0	0	3	6	5	34	74	45	13	0	0	0	0	183	46-55	119
01:00 PM	**8**	0	0	**6**	2	7	21	78	60	13	**5**	**1**	0	0	201	46-55	138
02:00 PM	6	0	0	0	**7**	6	29	78	55	10	1	1	0	0	193	46-55	133
03:00 PM	6	0	0	6	6	8	**37**	**95**	**72**	12	2	0	0	0	**244**	46-55	167
04:00 PM	7	0	0	1	7	**9**	35	88	46	**18**	4	1	0	0	216	46-55	134
05:00 PM	5	0	0	0	0	3	36	58	43	17	5	0	0	0	167	46-55	101
06:00 PM	2	0	0	2	0	2	20	43	33	6	3	0	0	0	111	46-55	76
07:00 PM	2	0	0	0	0	3	17	20	17	8	1	0	0	0	68	41-50	37
08:00 PM	2	0	0	0	1	6	14	20	5	1	1	0	0	0	50	41-50	34
09:00 PM	0	0	0	1	3	9	12	5	1	1	0	0	0	0	32	36-45	21
10:00 PM	0	0	0	0	0	1	10	7	3	0	0	0	0	0	21	41-50	17
11:00 PM	0	0	0	1	0	0	3	2	0	1	0	0	0	0	7	41-50	5
Day Total	71	0	0	37	72	105	437	993	697	189	38	4	1	0	2644	46-55	1690
Percent	2.7%	0%	0%	1.4%	2.7%	4%	16.5%	37.6%	26.4%	7.1%	1.4%	0.2%	0%	0%			



AM Peak	7:00 AM	12:00 AM	12:00 AM	10:00 AM	11:00 AM	9:00 AM	10:00 AM	11:00 AM	8:00 AM	9:00 AM	5:00 AM	7:00 AM	7:00 AM	12:00 AM	10:00 AM		
Volume	5	0	0	7	15	11	34	84	57	18	3	1	1	0	200		
PM Peak	1:00 PM	12:00 PM	12:00 PM	1:00 PM	2:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	3:00 PM		
Volume	8	0	0	6	7	9	37	95	72	18	5	1	0	0	244		

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

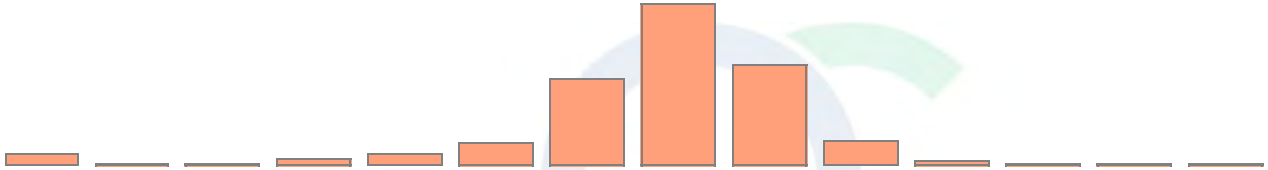
SUMMARY - Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
SPECIFIC LOCATION:
CITY/STATE: Shasta, CA

QC JOB #: 16124307
DIRECTION: EB, WB
DATE: Apr 4 2023 - Apr 6 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	190	0	20	101	198	383	1524	2870	1785	427	80	10	3	0	7591	46-55	4655
Percent	2.5%	0%	0.3%	1.3%	2.6%	5%	20.1%	37.8%	23.5%	5.6%	1.1%	0.1%	0%	0%			
Cumulative Percent	2.5%	2.5%	2.8%	4.1%	6.7%	11.8%	31.8%	69.6%	93.1%	98.8%	99.8%	100%	100%	100%			

ADT
2530



85th Percentile: 53 MPH
Mean Speed(Average): 47 MPH
Median: 47 MPH
Mode: 48 MPH

Comments:

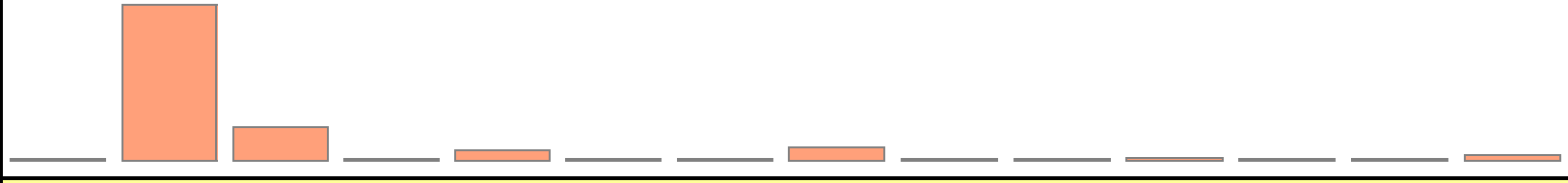
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	9	0	0	1	0	0	2	0	0	0	0	0	0	12
01:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	1	4
02:00 AM	0	4	0	0	1	0	0	1	0	0	0	0	0	0	6
03:00 AM	0	8	2	0	1	0	0	1	0	0	0	0	0	0	12
04:00 AM	0	11	2	0	1	0	0	2	**1**	0	1	0	0	1	19
05:00 AM	0	28	8	0	2	**1**	0	6	1	0	1	0	0	3	50
06:00 AM	0	48	21	0	3	0	0	7	0	0	0	0	0	1	80
07:00 AM	**2**	111	20	0	3	1	0	10	1	0	1	0	0	4	153
08:00 AM	0	106	31	0	3	0	0	**14**	1	0	0	0	0	0	155
09:00 AM	0	**130**	30	0	9	0	**1**	10	0	0	2	0	0	3	**185**
10:00 AM	1	109	**34**	0	6	1	0	14	1	0	**3**	0	**1**	**9**	179
11:00 AM	1	118	26	0	**13**	0	0	11	0	0	2	0	0	3	174
12:00 PM	**1**	106	24	0	11	**1**	0	14	1	0	**5**	0	0	**6**	169
01:00 PM	0	127	25	0	**13**	0	0	**15**	2	0	2	0	0	4	188
02:00 PM	0	124	24	**1**	13	0	0	10	0	0	2	0	**1**	3	178
03:00 PM	0	125	30	0	7	0	0	5	**3**	0	1	0	0	6	177
04:00 PM	0	**164**	**31**	0	9	0	0	8	1	0	0	0	0	3	**216**
05:00 PM	0	142	16	0	3	0	0	6	0	0	2	0	0	3	172
06:00 PM	0	93	15	0	2	0	0	4	0	0	0	0	0	2	116
07:00 PM	0	57	13	0	4	0	0	1	0	0	1	0	0	1	77
08:00 PM	0	43	4	0	1	0	0	3	0	0	0	0	0	0	51
09:00 PM	1	26	2	0	1	1	0	3	0	0	0	0	0	0	34
10:00 PM	0	15	0	0	0	0	0	1	0	0	0	0	0	1	17
11:00 PM	0	7	2	0	1	0	0	1	0	0	2	0	0	1	14
Day Total	6	1714	360	1	108	5	1	149	12	0	25	0	2	55	2438
Percent	0.2%	70.3%	14.8%	0%	4.4%	0.2%	0%	6.1%	0.5%	0%	1%	0%	0.1%	2.3%	
ADT 2438															
AM Peak	7:00 AM	9:00 AM	10:00 AM	12:00 AM	11:00 AM	5:00 AM	9:00 AM	8:00 AM	4:00 AM	12:00 AM	10:00 AM	12:00 AM	10:00 AM	10:00 AM	9:00 AM
Volume	2	130	34	0	13	1	1	14	1	0	3	0	1	9	185
PM Peak	12:00 PM	4:00 PM	4:00 PM	2:00 PM	1:00 PM	12:00 PM	12:00 PM	1:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	12:00 PM	4:00 PM
Volume	1	164	31	1	13	1	0	15	3	0	5	0	1	6	216

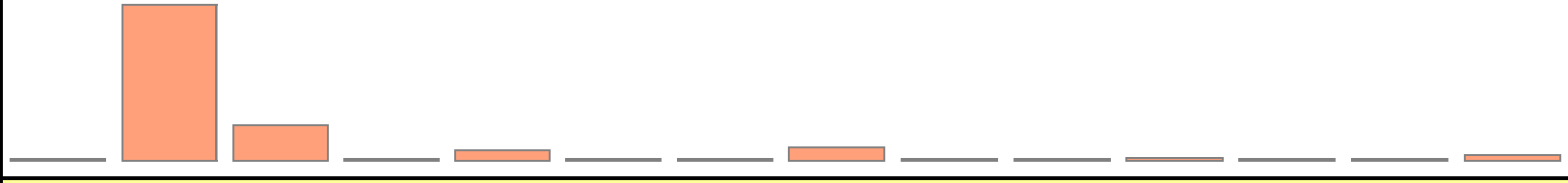
Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	2	5	1	0	1	2	0	0	0	0	0	0	0	0	11
01:00 AM	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
02:00 AM	0	3	1	0	1	0	0	2	0	0	1	0	0	0	8
03:00 AM	0	4	1	0	0	0	0	1	0	0	0	0	0	0	6
04:00 AM	0	13	1	0	1	0	0	2	0	0	0	0	0	0	17
05:00 AM	0	33	6	0	5	0	0	7	0	0	1	0	0	2	54
06:00 AM	0	54	25	0	6	0	0	6	1	0	0	0	0	1	93
07:00 AM	1	88	34	0	4	0	0	5	3	0	0	0	0	4	139
08:00 AM	2	123	37	0	14	2	0	8	0	0	0	0	0	6	192
09:00 AM	1	115	33	0	6	1	0	13	1	0	6	0	0	2	178
10:00 AM	1	135	24	0	10	1	0	14	0	0	5	0	0	2	192
11:00 AM	0	122	22	0	7	1	0	10	1	0	3	0	0	6	172
12:00 PM	1	121	22	0	10	1	0	12	1	0	3	0	0	2	173
01:00 PM	0	121	26	0	17	0	0	7	1	0	1	0	0	7	180
02:00 PM	0	130	20	0	4	0	0	14	1	0	0	0	0	6	175
03:00 PM	0	145	33	0	9	0	0	10	0	0	2	0	0	2	201
04:00 PM	1	167	28	0	5	0	0	9	0	0	2	0	0	6	218
05:00 PM	0	138	27	0	9	0	0	6	0	0	1	0	0	3	184
06:00 PM	0	92	27	0	5	0	0	5	0	0	0	0	0	3	132
07:00 PM	0	40	8	1	1	0	0	1	0	0	0	0	0	3	54
08:00 PM	0	39	4	0	0	0	0	5	0	0	1	0	0	1	50
09:00 PM	0	27	7	0	1	0	0	3	0	0	2	0	0	0	40
10:00 PM	0	19	2	0	0	0	0	1	1	0	0	0	0	1	24
11:00 PM	0	10	1	0	0	0	0	1	0	0	0	0	0	1	13
Day Total	9	1746	390	1	116	8	0	143	10	0	28	0	0	58	2509
Percent	0.4%	69.6%	15.5%	0%	4.6%	0.3%	0%	5.7%	0.4%	0%	1.1%	0%	0%	2.3%	
ADT 2509															
AM Peak	12:00 AM	10:00 AM	8:00 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	10:00 AM	7:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	8:00 AM	8:00 AM
Volume	2	135	37	0	14	2	0	14	3	0	6	0	0	6	192
PM Peak	12:00 PM	4:00 PM	3:00 PM	7:00 PM	1:00 PM	12:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	1	167	33	1	17	1	0	14	1	0	3	0	0	7	218

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	14	2	0	1	0	0	1	0	0	0	0	0	0	18
01:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
02:00 AM	0	6	4	0	1	0	0	2	0	0	0	0	0	1	14
03:00 AM	0	9	7	0	4	0	0	2	0	0	0	0	0	1	23
04:00 AM	0	13	2	0	2	0	0	5	0	0	0	0	0	0	22
05:00 AM	0	29	8	0	5	0	0	8	0	0	3	0	0	2	55
06:00 AM	**1**	41	29	0	11	0	0	9	0	0	0	0	0	2	93
07:00 AM	0	94	28	0	10	0	0	14	0	0	0	0	0	**5**	151
08:00 AM	0	120	**34**	0	13	0	0	**17**	0	0	0	0	0	5	189
09:00 AM	1	132	28	0	13	0	0	14	0	0	1	0	0	4	193
10:00 AM	1	131	28	**1**	**14**	**2**	0	16	**1**	0	2	0	0	4	**200**
11:00 AM	1	**136**	25	0	11	0	0	6	1	0	**4**	0	0	5	189
12:00 PM	0	121	29	0	13	0	0	**14**	**2**	0	1	0	0	3	183
01:00 PM	**1**	130	28	0	**18**	**1**	0	13	0	0	2	0	0	**8**	201
02:00 PM	0	149	23	0	8	0	0	5	0	0	2	0	0	6	193
03:00 PM	1	**172**	36	0	11	1	0	14	0	0	3	0	0	6	**244**
04:00 PM	0	147	**37**	0	10	0	0	11	0	0	**4**	0	0	7	216
05:00 PM	0	129	25	0	3	0	0	4	0	0	1	0	0	5	167
06:00 PM	1	83	18	0	3	1	0	2	0	0	1	0	0	2	111
07:00 PM	1	47	10	0	4	0	0	4	0	0	0	0	0	2	68
08:00 PM	0	38	6	0	3	0	0	1	0	0	0	0	0	2	50
09:00 PM	1	24	5	0	2	0	0	0	0	0	0	0	0	0	32
10:00 PM	0	14	4	0	2	0	0	1	0	0	0	0	0	0	21
11:00 PM	0	6	0	0	1	0	0	0	0	0	0	0	0	0	7
Day Total	9	1788	417	1	163	5	0	163	4	0	24	0	0	70	2644
Percent	0.3%	67.6%	15.8%	0%	6.2%	0.2%	0%	6.2%	0.2%	0%	0.9%	0%	0%	2.6%	
ADT 2644															
AM Peak	6:00 AM	11:00 AM	8:00 AM	10:00 AM	10:00 AM	10:00 AM	12:00 AM	8:00 AM	10:00 AM	12:00 AM	11:00 AM	12:00 AM	12:00 AM	7:00 AM	10:00 AM
Volume	1	136	34	1	14	2	0	17	1	0	4	0	0	5	200
PM Peak	1:00 PM	3:00 PM	4:00 PM	12:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	3:00 PM
Volume	1	172	37	0	18	1	0	14	2	0	4	0	0	8	244

Comments:

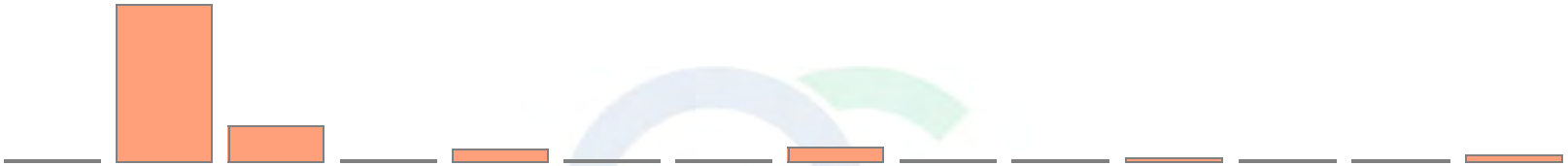
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	24	5248	1167	3	387	18	1	455	26	0	77	0	2	183	7591
Percent	0.3%	69.1%	15.4%	0%	5.1%	0.2%	0%	6%	0.3%	0%	1%	0%	0%	2.4%	
ADT 2530															

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Mon	Tue 4 Apr 23	Wed 5 Apr 23	Thu 6 Apr 23	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		12	11	18		14			14	
01:00 AM		4	3	4		4			4	
02:00 AM		6	8	14		9			9	
03:00 AM		12	6	23		14			14	
04:00 AM		19	17	22		19			19	
05:00 AM		50	54	55		53			53	
06:00 AM		80	93	93		89			89	
07:00 AM		153	139	151		148			148	
08:00 AM		155	**192**	189		179			179	
09:00 AM		**185**	178	193		185			185	
10:00 AM		179	192	**200**		**190**			**190**	
11:00 AM		174	172	189		178			178	
12:00 PM		169	173	183		175			175	
01:00 PM		188	180	201		190			190	
02:00 PM		178	175	193		182			182	
03:00 PM		177	201	**244**		207			207	
04:00 PM		**216**	**218**	216		**217**			**217**	
05:00 PM		172	184	167		174			174	
06:00 PM		116	132	111		120			120	
07:00 PM		77	54	68		66			66	
08:00 PM		51	50	50		50			50	
09:00 PM		34	40	32		35			35	
10:00 PM		17	24	21		21			21	
11:00 PM		14	13	7		11			11	
Day Total		2438	2509	2644		2530			2530	
% Weekday Average		96.4%	99.2%	104.5%						
% Week Average		96.4%	99.2%	104.5%		100%				
AM Peak Volume		9:00 AM 185	8:00 AM 192	10:00 AM 200		10:00 AM 190			10:00 AM 190	
PM Peak Volume		4:00 PM 216	4:00 PM 218	3:00 PM 244		4:00 PM 217			4:00 PM 217	

Comments:

Report generated on 4/11/2023 4:55 PM

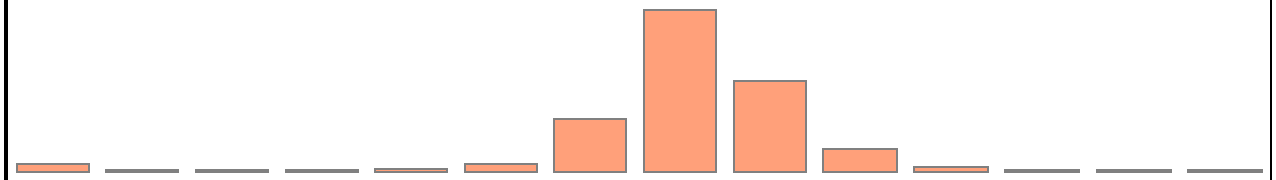
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4	41-50	4
01:00 AM	1	0	0	0	0	0	0	1	1	0	0	0	0	0	3	46-55	2
02:00 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	36-45	2
03:00 AM	0	0	0	0	0	0	1	4	3	0	1	0	0	0	9	46-55	7
04:00 AM	0	0	0	0	0	0	3	4	1	0	**2**	0	0	0	10	41-50	7
05:00 AM	1	0	**2**	0	**1**	0	4	9	5	1	0	0	0	0	23	46-55	14
06:00 AM	1	0	0	0	0	0	5	14	11	1	1	0	0	0	33	46-55	25
07:00 AM	2	0	0	0	0	0	6	34	23	**6**	1	0	0	0	72	46-55	57
08:00 AM	0	0	0	0	0	1	14	40	27	4	0	0	0	0	86	46-55	67
09:00 AM	0	0	0	0	0	0	17	**61**	17	5	0	0	0	0	**100**	45-54	78
10:00 AM	**3**	0	0	0	1	1	13	54	23	4	0	**1**	0	0	100	46-55	77
11:00 AM	3	0	0	0	0	**2**	**20**	28	**35**	6	1	0	0	0	95	46-55	63
12:00 PM	1	0	0	0	1	1	8	45	23	8	0	0	0	0	87	46-55	68
01:00 PM	**3**	0	0	0	0	3	**25**	**48**	25	4	1	0	0	0	**109**	41-50	73
02:00 PM	1	0	0	0	**3**	**4**	13	42	**28**	3	0	0	0	0	94	46-55	70
03:00 PM	2	0	0	0	1	0	11	36	25	**9**	**2**	0	0	0	86	46-55	61
04:00 PM	2	0	0	0	0	3	9	48	18	7	0	0	0	0	87	46-55	66
05:00 PM	3	0	0	**1**	0	1	13	41	16	8	2	0	0	0	85	46-55	57
06:00 PM	1	0	0	0	0	2	6	16	16	6	0	0	0	0	47	46-55	32
07:00 PM	1	0	0	0	0	2	2	19	12	4	0	0	0	0	40	46-55	31
08:00 PM	0	0	0	0	0	2	3	7	6	0	1	0	0	0	19	46-55	13
09:00 PM	0	0	0	0	0	1	1	2	0	1	0	0	0	0	5	41-50	3
10:00 PM	1	0	0	0	0	1	2	1	1	1	0	0	0	0	7	41-50	3
11:00 PM	1	0	0	0	0	1	3	1	1	0	0	0	0	0	7	38-47	4
Day Total	27	0	2	1	7	26	182	558	317	78	12	1	0	0	1211	46-55	875
Percent	2.2%	0%	0.2%	0.1%	0.6%	2.1%	15%	46.1%	26.2%	6.4%	1%	0.1%	0%	0%			



AM Peak	10:00 AM	12:00 AM	5:00 AM	12:00 AM	5:00 AM	11:00 AM	11:00 AM	9:00 AM	11:00 AM	7:00 AM	4:00 AM	10:00 AM	12:00 AM	12:00 AM	9:00 AM		
Volume	3	0	2	0	1	2	20	61	35	6	2	1	0	0	100		
PM Peak	1:00 PM	12:00 PM	12:00 PM	5:00 PM	2:00 PM	2:00 PM	1:00 PM	1:00 PM	2:00 PM	3:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM		
Volume	3	0	0	1	3	4	25	48	28	9	2	0	0	0	109		

Comments:

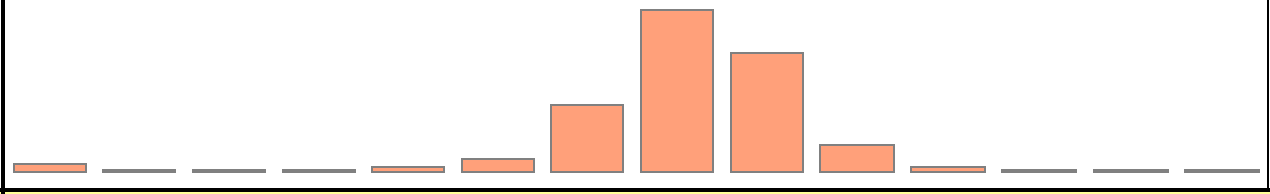
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	1	3	1	0	0	0	0	0	5	43-52	4
01:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	36-45	1
02:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	36-45	2
03:00 AM	0	0	0	0	0	0	1	1	0	1	0	0	0	0	3	41-50	2
04:00 AM	0	0	0	0	0	0	2	4	1	1	0	0	0	0	8	41-50	6
05:00 AM	0	0	0	0	**2**	2	2	10	9	1	**3**	**1**	0	0	30	46-55	19
06:00 AM	0	0	0	0	0	0	2	22	16	4	0	0	0	0	44	46-55	38
07:00 AM	**3**	0	0	0	0	0	5	24	26	10	3	0	0	0	71	46-55	50
08:00 AM	1	0	0	0	0	**3**	8	36	**46**	**11**	3	1	**1**	0	**110**	46-55	82
09:00 AM	1	0	0	**1**	0	3	16	42	27	7	0	0	1	0	98	46-55	69
10:00 AM	0	0	0	0	2	0	**21**	**49**	28	1	0	0	0	0	101	46-55	77
11:00 AM	3	0	0	0	0	2	18	39	23	10	1	0	0	0	96	46-55	62
12:00 PM	1	0	0	0	0	**10**	19	32	**34**	5	0	0	0	0	**101**	46-55	66
01:00 PM	**3**	0	**2**	0	0	0	**21**	32	33	4	0	0	0	0	95	46-55	65
02:00 PM	3	0	0	0	1	2	20	29	22	5	0	0	0	0	82	46-55	51
03:00 PM	1	0	0	0	1	3	20	43	23	3	0	**1**	0	0	95	46-55	66
04:00 PM	3	0	0	0	1	2	13	**44**	17	2	0	0	0	0	82	46-55	61
05:00 PM	2	0	0	0	**2**	1	15	37	23	**7**	**1**	0	0	0	88	46-55	60
06:00 PM	0	0	0	0	2	0	10	18	20	5	1	0	0	0	56	46-55	38
07:00 PM	2	0	0	0	0	1	2	9	5	1	1	0	0	0	21	46-55	14
08:00 PM	0	0	0	0	0	4	2	3	5	0	0	0	0	0	14	46-55	8
09:00 PM	0	0	0	0	0	2	1	9	0	0	0	0	0	0	12	41-50	10
10:00 PM	0	0	0	0	0	0	2	2	1	2	0	0	0	0	7	41-50	4
11:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26-35	1
Day Total	23	0	2	1	12	36	203	488	360	80	13	3	2	0	1223	46-55	848
Percent	1.9%	0%	0.2%	0.1%	1%	2.9%	16.6%	39.9%	29.4%	6.5%	1.1%	0.2%	0.2%	0%			
AM Peak	7:00 AM	12:00 AM	12:00 AM	9:00 AM	5:00 AM	8:00 AM	10:00 AM	10:00 AM	8:00 AM	8:00 AM	5:00 AM	5:00 AM	8:00 AM	12:00 AM	8:00 AM		
Volume	3	0	0	1	2	3	21	49	46	11	3	1	1	0	110		
PM Peak	1:00 PM	12:00 PM	1:00 PM	12:00 PM	5:00 PM	12:00 PM	1:00 PM	4:00 PM	12:00 PM	5:00 PM	5:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM		
Volume	3	0	2	0	2	10	21	44	34	7	1	1	0	0	101		



Comments:

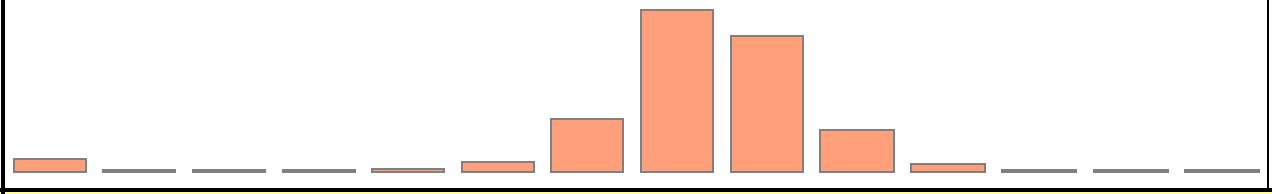
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	1	2	4	1	0	0	0	0	0	8	41-50	6
01:00 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	46-55	3
02:00 AM	1	0	0	0	0	0	3	2	0	1	0	0	0	0	7	41-50	5
03:00 AM	0	0	0	0	0	0	0	2	6	4	1	0	0	0	13	51-60	10
04:00 AM	0	0	0	0	0	0	0	2	2	3	1	0	0	0	8	51-60	5
05:00 AM	0	0	0	0	0	1	7	6	9	2	**3**	0	0	0	28	46-55	15
06:00 AM	0	0	0	0	0	0	2	15	20	5	0	0	0	0	42	46-55	35
07:00 AM	**3**	0	0	0	0	0	3	21	32	11	3	**1**	**1**	0	75	46-55	53
08:00 AM	2	0	0	0	0	0	12	37	**41**	12	3	0	0	0	107	46-55	78
09:00 AM	3	0	0	0	0	1	**15**	43	32	**14**	0	0	0	0	108	46-55	75
10:00 AM	3	0	0	0	**3**	**7**	15	**53**	29	5	1	0	0	0	**116**	46-55	82
11:00 AM	1	0	0	0	2	1	12	42	32	6	1	0	0	0	97	46-55	74
12:00 PM	1	0	0	0	0	0	13	36	31	8	0	0	0	0	89	46-55	67
01:00 PM	**7**	0	0	0	0	3	7	51	37	9	1	**1**	0	0	116	46-55	88
02:00 PM	3	0	0	0	1	2	9	41	31	5	0	1	0	0	93	46-55	72
03:00 PM	4	0	0	**1**	**3**	0	**16**	**54**	**43**	8	2	0	0	0	**131**	46-55	97
04:00 PM	2	0	0	0	0	3	11	42	26	**13**	2	1	0	0	100	46-55	68
05:00 PM	2	0	0	0	0	0	12	25	29	12	**4**	0	0	0	84	46-55	54
06:00 PM	2	0	0	0	0	2	5	11	14	2	2	0	0	0	38	46-55	25
07:00 PM	1	0	0	0	0	1	7	6	6	6	0	0	0	0	27	41-50	13
08:00 PM	1	0	0	0	0	0	4	7	2	1	1	0	0	0	16	41-50	11
09:00 PM	0	0	0	0	1	**4**	5	2	1	1	0	0	0	0	14	36-45	9
10:00 PM	0	0	0	0	0	0	5	3	0	0	0	0	0	0	8	41-50	8
11:00 PM	0	0	0	1	0	0	0	1	0	1	0	0	0	0	3	21-30	1
Day Total	36	0	0	2	10	26	165	507	426	129	25	4	1	0	1331	46-55	933
Percent	2.7%	0%	0%	0.2%	0.8%	2%	12.4%	38.1%	32%	9.7%	1.9%	0.3%	0.1%	0%			



AM Peak	7:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM	10:00 AM	9:00 AM	10:00 AM	8:00 AM	9:00 AM	5:00 AM	7:00 AM	7:00 AM	12:00 AM	10:00 AM		
Volume	3	0	0	0	3	7	15	53	41	14	3	1	1	0	116		
PM Peak	1:00 PM	12:00 PM	12:00 PM	3:00 PM	3:00 PM	9:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	5:00 PM	1:00 PM	12:00 PM	12:00 PM	3:00 PM		
Volume	7	0	0	1	3	4	16	54	43	13	4	1	0	0	131		

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

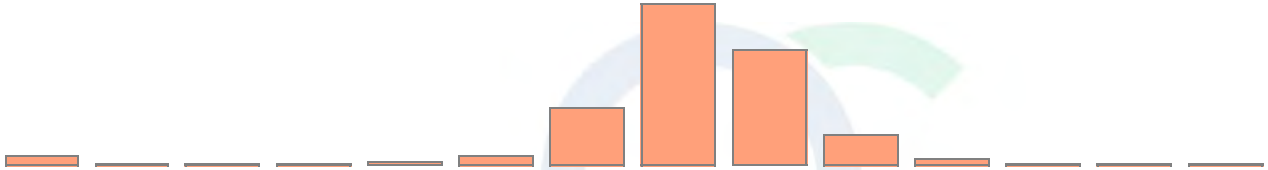
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total **Percent**	86 2.3%	0 0%	4 0.1%	4 0.1%	29 0.8%	88 2.3%	550 14.6%	1553 41.2%	1103 29.3%	287 7.6%	50 1.3%	8 0.2%	3 0.1%	0 0%	3765	46-55	2656
Cumulative Percent	2.3%	2.3%	2.4%	2.5%	3.3%	5.6%	20.2%	61.5%	90.8%	98.4%	99.7%	99.9%	100%	100%			

ADT
1255



85th Percentile: 54 MPH
Mean Speed(Average): 48 MPH
Median: 48 MPH
Mode: 48 MPH

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3
02:00 AM	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
03:00 AM	0	6	2	0	0	0	0	1	0	0	0	0	0	0	9
04:00 AM	0	6	2	0	1	0	0	0	0	0	1	0	0	0	10
05:00 AM	0	12	5	0	0	**1**	0	3	0	0	1	0	0	1	23
06:00 AM	0	25	3	0	1	0	0	3	0	0	0	0	0	1	33
07:00 AM	0	60	6	0	0	0	0	3	0	0	1	0	0	2	72
08:00 AM	0	55	**21**	0	1	0	0	**9**	0	0	0	0	0	0	86
09:00 AM	0	**72**	16	0	4	0	**1**	5	0	0	2	0	0	0	**100**
10:00 AM	0	67	16	0	3	0	0	7	0	0	**3**	0	**1**	**3**	100
11:00 AM	**1**	64	14	0	**8**	0	0	3	0	0	2	0	0	3	95
12:00 PM	0	58	15	0	2	0	0	6	0	0	**5**	0	0	1	87
01:00 PM	0	**74**	14	0	**9**	0	0	**9**	0	0	2	0	0	1	**109**
02:00 PM	0	65	13	**1**	6	0	0	7	0	0	0	0	**1**	1	94
03:00 PM	0	56	**21**	0	5	0	0	2	0	0	0	0	0	2	86
04:00 PM	0	61	13	0	7	0	0	3	**1**	0	0	0	0	2	87
05:00 PM	0	69	6	0	2	0	0	3	0	0	2	0	0	**3**	85
06:00 PM	0	40	4	0	1	0	0	1	0	0	0	0	0	1	47
07:00 PM	0	27	8	0	3	0	0	0	0	0	1	0	0	1	40
08:00 PM	0	16	0	0	1	0	0	2	0	0	0	0	0	0	19
09:00 PM	0	4	0	0	0	0	0	1	0	0	0	0	0	0	5
10:00 PM	0	5	0	0	0	0	0	1	0	0	0	0	0	1	7
11:00 PM	0	1	1	0	1	0	0	1	0	0	2	0	0	1	7
Day Total	1	851	180	1	55	1	1	71	1	0	22	0	2	25	1211
Percent	0.1%	70.3%	14.9%	0.1%	4.5%	0.1%	0.1%	5.9%	0.1%	0%	1.8%	0%	0.2%	2.1%	
ADT 1211															
AM Peak	11:00 AM	9:00 AM	8:00 AM	12:00 AM	11:00 AM	5:00 AM	9:00 AM	8:00 AM	12:00 AM	12:00 AM	10:00 AM	12:00 AM	10:00 AM	10:00 AM	9:00 AM
Volume	1	72	21	0	8	1	1	9	0	0	3	0	1	3	100
PM Peak	12:00 PM	1:00 PM	3:00 PM	2:00 PM	1:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	5:00 PM	1:00 PM
Volume	0	74	21	1	9	0	0	9	1	0	5	0	1	3	109

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
03:00 AM	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
04:00 AM	0	7	0	0	0	0	0	1	0	0	0	0	0	0	8
05:00 AM	0	19	1	0	4	0	0	5	0	0	1	0	0	0	30
06:00 AM	0	31	10	0	1	0	0	2	0	0	0	0	0	0	44
07:00 AM	0	51	15	0	0	0	0	2	0	0	0	0	0	**3**	71
08:00 AM	0	73	**28**	0	3	0	0	5	0	0	0	0	0	1	**110**
09:00 AM	**1**	66	18	0	2	0	0	5	0	0	**6**	0	0	0	98
10:00 AM	0	**74**	14	0	**5**	0	0	3	0	0	5	0	0	0	101
11:00 AM	0	70	9	0	4	0	0	**7**	0	0	3	0	0	3	96
12:00 PM	0	71	13	0	5	0	0	9	0	0	**2**	0	0	1	**101**
01:00 PM	0	60	**16**	0	**10**	0	0	4	**1**	0	1	0	0	**3**	95
02:00 PM	0	58	10	0	0	0	0	**11**	0	0	0	0	0	3	82
03:00 PM	0	**73**	12	0	3	0	0	5	0	0	1	0	0	1	95
04:00 PM	**1**	67	4	0	4	0	0	4	0	0	0	0	0	2	82
05:00 PM	0	64	11	0	5	0	0	5	0	0	1	0	0	2	88
06:00 PM	0	36	14	0	3	0	0	3	0	0	0	0	0	0	56
07:00 PM	0	16	2	0	0	0	0	1	0	0	0	0	0	2	21
08:00 PM	0	9	2	0	0	0	0	2	0	0	1	0	0	0	14
09:00 PM	0	8	0	0	1	0	0	1	0	0	2	0	0	0	12
10:00 PM	0	6	0	0	0	0	0	1	0	0	0	0	0	0	7
11:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Day Total	2	866	179	0	50	0	0	80	1	0	24	0	0	21	1223
Percent	0.2%	70.8%	14.6%	0%	4.1%	0%	0%	6.5%	0.1%	0%	2%	0%	0%	1.7%	
ADT 1223															
AM Peak	9:00 AM	10:00 AM	8:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	11:00 AM	12:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	7:00 AM	8:00 AM
Volume	1	74	28	0	5	0	0	7	0	0	6	0	0	3	110
PM Peak	4:00 PM	3:00 PM	1:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	2:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM
Volume	1	73	16	0	10	0	0	11	1	0	2	0	0	3	101

Comments:

Report generated on 4/11/2023 4:55 PM

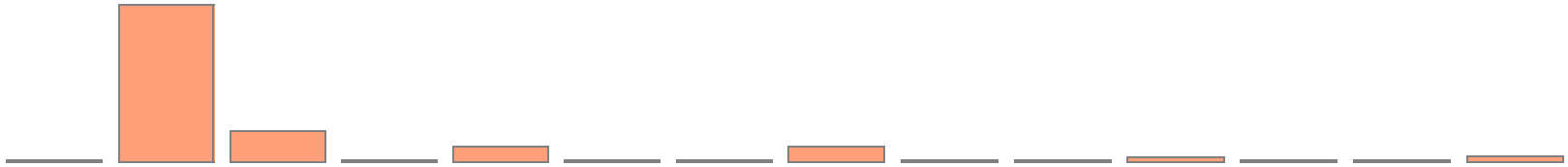
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	6	1	0	0	0	0	1	0	0	0	0	0	0	8
01:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
02:00 AM	0	2	2	0	1	0	0	1	0	0	0	0	0	1	7
03:00 AM	0	4	4	0	3	0	0	2	0	0	0	0	0	0	13
04:00 AM	0	6	0	0	1	0	0	1	0	0	0	0	0	0	8
05:00 AM	0	17	6	0	2	0	0	2	0	0	1	0	0	0	28
06:00 AM	0	24	7	0	6	0	0	5	0	0	0	0	0	0	42
07:00 AM	0	50	12	0	3	0	0	**7**	0	0	0	0	0	**3**	75
08:00 AM	0	75	15	0	8	0	0	7	0	0	0	0	0	2	107
09:00 AM	**1**	78	15	0	6	0	0	5	0	0	1	0	0	2	108
10:00 AM	0	**79**	**16**	0	**9**	0	0	7	0	0	2	0	0	3	**116**
11:00 AM	0	74	11	0	6	0	0	2	0	0	**3**	0	0	1	97
12:00 PM	0	62	13	0	6	0	0	6	0	0	1	0	0	1	89
01:00 PM	0	77	12	0	**8**	0	0	10	0	0	2	0	0	**7**	116
02:00 PM	0	68	13	0	4	0	0	4	0	0	1	0	0	3	93
03:00 PM	0	**91**	**16**	0	6	0	0	**11**	0	0	3	0	0	4	**131**
04:00 PM	0	65	16	0	5	0	0	8	0	0	**4**	0	0	2	100
05:00 PM	0	67	10	0	2	0	0	2	0	0	1	0	0	2	84
06:00 PM	0	27	6	0	1	0	0	1	0	0	1	0	0	2	38
07:00 PM	0	16	4	0	2	0	0	4	0	0	0	0	0	1	27
08:00 PM	0	11	1	0	2	0	0	1	0	0	0	0	0	1	16
09:00 PM	0	12	1	0	1	0	0	0	0	0	0	0	0	0	14
10:00 PM	0	6	0	0	2	0	0	0	0	0	0	0	0	0	8
11:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Day Total	1	922	182	0	84	0	0	87	0	0	20	0	0	35	1331
Percent	0.1%	69.3%	13.7%	0%	6.3%	0%	0%	6.5%	0%	0%	1.5%	0%	0%	2.6%	
AM Peak	9:00 AM	10:00 AM	10:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	11:00 AM	12:00 AM	12:00 AM	7:00 AM	10:00 AM
Volume	1	79	16	0	9	0	0	7	0	0	3	0	0	3	116
PM Peak	12:00 PM	3:00 PM	3:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	3:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	1:00 PM	3:00 PM
Volume	0	91	16	0	8	0	0	11	0	0	4	0	0	7	131

ADT 1331



Comments:

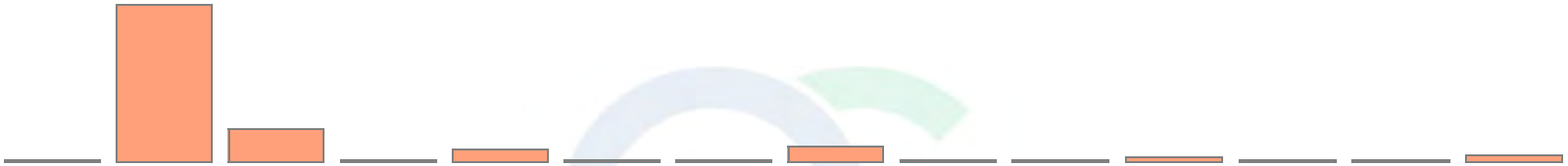
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	4	2639	541	1	189	1	1	238	2	0	66	0	2	81	3765
Percent	0.1%	70.1%	14.4%	0%	5%	0%	0%	6.3%	0.1%	0%	1.8%	0%	0.1%	2.2%	
ADT 1255															

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: EB SR 299 east of Supan Rd
QC JOB #: 16124307
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Mon	Tue 4 Apr 23	Wed 5 Apr 23	Thu 6 Apr 23	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		4	5	8		6			6	
01:00 AM		3	1	3		2			2	
02:00 AM		3	2	7		4			4	
03:00 AM		9	3	13		8			8	
04:00 AM		10	8	8		9			9	
05:00 AM		23	30	28		27			27	
06:00 AM		33	44	42		40			40	
07:00 AM		72	71	75		73			73	
08:00 AM		86	**110**	107		101			101	
09:00 AM		**100**	98	108		102			102	
10:00 AM		100	101	**116**		**106**			**106**	
11:00 AM		95	96	97		96			96	
12:00 PM		87	**101**	89		92			92	
01:00 PM		**109**	95	116		**107**			**107**	
02:00 PM		94	82	93		90			90	
03:00 PM		86	95	**131**		104			104	
04:00 PM		87	82	100		90			90	
05:00 PM		85	88	84		86			86	
06:00 PM		47	56	38		47			47	
07:00 PM		40	21	27		29			29	
08:00 PM		19	14	16		16			16	
09:00 PM		5	12	14		10			10	
10:00 PM		7	7	8		7			7	
11:00 PM		7	1	3		4			4	
Day Total		1211	1223	1331		1256			1256	
% Weekday Average		96.4%	97.4%	106%						
% Week Average		96.4%	97.4%	106%		100%				
AM Peak Volume		9:00 AM 100	8:00 AM 110	10:00 AM 116		10:00 AM 106			10:00 AM 106	
PM Peak Volume		1:00 PM 109	12:00 PM 101	3:00 PM 131		1:00 PM 107			1:00 PM 107	

Comments:

Report generated on 4/11/2023 4:55 PM

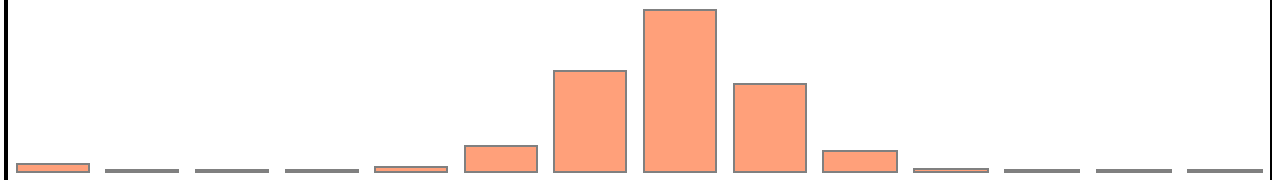
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	2	2	4	0	0	0	0	0	0	8	41-50	6
01:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	46-55	2
02:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	41-50	2
03:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	46-55	2
04:00 AM	1	0	0	0	0	1	0	5	1	1	0	0	0	0	9	46-55	6
05:00 AM	0	0	0	0	1	5	7	10	1	2	0	0	0	0	26	41-50	17
06:00 AM	0	0	0	0	0	2	15	21	7	4	**1**	0	0	0	50	41-50	36
07:00 AM	1	0	0	0	**6**	9	16	32	10	1	0	0	0	0	75	41-50	48
08:00 AM	1	0	0	0	0	1	22	33	**17**	4	0	0	0	0	78	41-50	55
09:00 AM	1	0	0	0	0	5	25	32	16	3	0	0	0	0	82	41-50	57
10:00 AM	**4**	0	0	0	0	5	**26**	25	6	2	0	0	0	0	68	41-50	51
11:00 AM	1	0	0	0	1	**13**	19	**37**	16	**6**	1	0	0	0	**94**	41-50	56
12:00 PM	0	0	0	0	**2**	9	15	27	16	3	0	0	0	0	72	46-55	43
01:00 PM	1	0	0	0	0	**10**	25	30	13	5	0	0	0	0	84	41-50	55
02:00 PM	3	0	0	0	0	1	15	30	25	4	0	0	0	0	78	46-55	55
03:00 PM	**4**	0	0	0	0	4	15	25	**41**	**6**	**2**	0	0	0	97	46-55	66
04:00 PM	3	0	0	0	0	1	**29**	**65**	21	4	1	**1**	0	0	**125**	41-50	94
05:00 PM	2	0	0	0	0	1	20	40	25	2	0	0	0	0	90	46-55	65
06:00 PM	2	0	0	0	0	0	16	23	24	4	0	0	0	0	69	46-55	47
07:00 PM	0	0	0	0	0	0	10	13	9	1	1	0	0	0	34	41-50	23
08:00 PM	0	0	0	0	1	2	12	13	4	0	0	0	0	0	32	41-50	25
09:00 PM	0	0	0	**1**	1	5	8	7	3	2	1	0	0	0	28	41-50	15
10:00 PM	0	0	0	0	0	0	2	5	1	3	0	0	0	0	11	41-50	7
11:00 PM	0	0	0	0	1	0	2	2	1	1	0	0	0	0	7	41-50	4
Day Total	24	0	0	1	13	76	302	481	261	58	7	1	0	0	1224	41-50	783
Percent	2%	0%	0%	0.1%	1.1%	6.2%	24.7%	39.3%	21.3%	4.7%	0.6%	0.1%	0%	0%			



AM Peak	10:00 AM	12:00 AM	12:00 AM	12:00 AM	7:00 AM	11:00 AM	10:00 AM	11:00 AM	8:00 AM	11:00 AM	6:00 AM	12:00 AM	12:00 AM	12:00 AM	11:00 AM		
Volume	4	0	0	0	6	13	26	37	17	6	1	0	0	0	94		
PM Peak	3:00 PM	12:00 PM	12:00 PM	9:00 PM	12:00 PM	1:00 PM	4:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	4	0	0	1	2	10	29	65	41	6	2	1	0	0	125		

Comments:

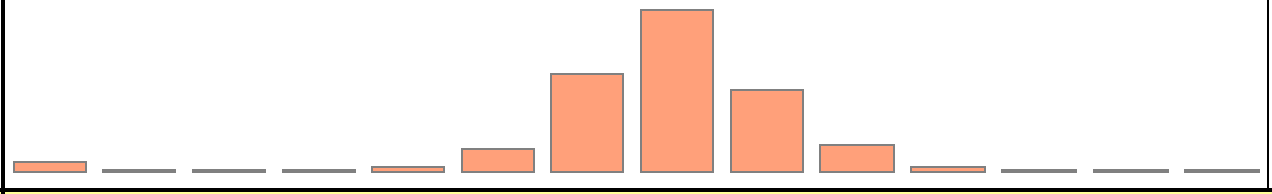
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	41-50	2
01:00 AM	0	0	0	**1**	0	1	2	0	0	0	0	0	0	0	4	36-45	3
02:00 AM	0	0	0	0	0	0	2	2	0	2	0	0	0	0	6	41-50	4
03:00 AM	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3	51-60	2
04:00 AM	0	0	0	0	0	0	3	4	1	0	0	0	0	0	8	41-50	7
05:00 AM	**2**	0	0	0	0	0	6	6	5	2	0	0	0	0	21	41-50	12
06:00 AM	1	0	0	0	0	3	9	20	12	4	0	0	0	0	49	46-55	32
07:00 AM	2	0	0	1	**7**	7	14	23	10	1	0	0	0	0	65	41-50	37
08:00 AM	1	0	0	0	1	**8**	16	33	11	4	1	0	0	0	75	41-50	49
09:00 AM	2	0	0	0	1	2	19	**45**	14	1	0	0	0	0	84	41-50	64
10:00 AM	1	0	**1**	0	0	3	**26**	29	**29**	**6**	**2**	0	0	0	**97**	46-55	58
11:00 AM	0	0	0	0	0	8	21	25	11	5	0	0	0	0	70	41-50	46
12:00 PM	0	0	0	0	**1**	3	24	23	12	6	1	0	0	0	70	41-50	47
01:00 PM	1	0	0	0	0	0	13	43	17	10	0	0	0	0	84	46-55	60
02:00 PM	0	0	0	0	0	**9**	22	43	14	2	0	0	0	0	90	41-50	65
03:00 PM	2	0	0	0	0	3	33	36	21	7	1	0	0	0	103	41-50	69
04:00 PM	3	0	0	0	0	6	**36**	**49**	30	8	1	0	0	0	**133**	41-50	85
05:00 PM	3	0	0	0	0	1	21	36	**31**	**11**	1	0	0	0	104	46-55	67
06:00 PM	**5**	0	0	0	0	0	7	31	14	8	**3**	**2**	0	0	70	46-55	45
07:00 PM	2	0	0	0	0	0	5	16	9	3	1	0	0	0	36	46-55	25
08:00 PM	0	0	0	0	1	4	10	17	3	1	0	0	0	0	36	41-50	27
09:00 PM	1	0	0	0	1	5	7	6	6	0	0	0	0	0	26	41-50	13
10:00 PM	0	0	0	0	0	3	6	10	2	0	0	0	0	0	21	41-50	16
11:00 PM	1	0	0	0	1	2	2	3	2	1	0	0	0	0	12	43-52	5
Day Total	27	0	1	2	13	69	305	501	255	83	11	2	0	0	1269	41-50	806
Percent	2.1%	0%	0.1%	0.2%	1%	5.4%	24%	39.5%	20.1%	6.5%	0.9%	0.2%	0%	0%			



AM Peak	5:00 AM	12:00 AM	10:00 AM	1:00 AM	7:00 AM	8:00 AM	10:00 AM	9:00 AM	10:00 AM	10:00 AM	10:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM		
Volume	2	0	1	1	7	8	26	45	29	6	2	0	0	0	97		
PM Peak	6:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	4:00 PM	4:00 PM	5:00 PM	5:00 PM	6:00 PM	6:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	5	0	0	0	1	9	36	49	31	11	3	2	0	0	133		

Comments:

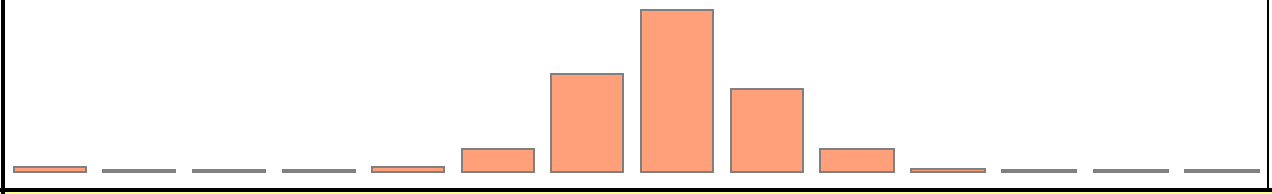
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	2	6	3	0	0	0	0	0	11	46-55	9
01:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	46-55	2
02:00 AM	0	0	0	0	0	0	4	3	0	2	0	0	0	0	9	41-50	7
03:00 AM	0	0	0	0	0	0	2	3	1	1	0	0	0	0	7	41-50	5
04:00 AM	0	0	0	0	0	2	1	3	2	0	1	0	0	0	9	46-55	5
05:00 AM	1	0	0	0	0	2	11	15	5	0	0	0	0	0	34	41-50	26
06:00 AM	0	0	0	0	**1**	1	14	16	13	2	0	0	0	0	47	41-50	30
07:00 AM	1	0	0	0	0	2	23	25	14	3	0	0	0	0	68	41-50	48
08:00 AM	0	0	0	0	0	1	19	39	17	5	0	0	0	0	81	41-50	58
09:00 AM	1	0	0	0	0	2	18	36	**22**	4	0	0	0	0	83	46-55	58
10:00 AM	**3**	0	0	0	0	3	11	29	22	5	**2**	0	0	0	75	46-55	51
11:00 AM	0	0	0	0	0	**8**	**26**	**41**	14	**7**	0	0	0	0	**96**	41-50	67
12:00 PM	1	0	0	0	0	7	23	35	16	6	0	0	0	0	88	41-50	58
01:00 PM	1	0	0	0	2	**8**	16	41	16	6	1	0	0	0	91	43-52	57
02:00 PM	0	0	0	0	0	5	19	**44**	**27**	4	0	0	0	0	99	46-55	71
03:00 PM	**2**	0	0	0	**3**	3	27	39	20	**9**	0	0	0	0	103	41-50	66
04:00 PM	2	0	0	0	0	7	**48**	40	18	6	1	**1**	0	0	**123**	41-50	88
05:00 PM	0	0	0	0	1	2	13	35	24	7	0	0	0	0	82	46-55	59
06:00 PM	0	0	0	0	0	1	14	35	19	2	0	0	0	0	71	46-55	54
07:00 PM	1	0	0	0	0	1	8	21	10	3	1	0	0	0	45	46-55	31
08:00 PM	0	0	0	0	1	5	8	14	3	0	**2**	0	0	0	33	41-50	22
09:00 PM	0	0	0	0	3	7	5	6	1	0	0	0	0	0	22	36-45	12
10:00 PM	0	0	0	0	0	1	5	1	4	0	0	0	0	0	11	39-48	6
11:00 PM	0	0	0	0	0	1	3	2	0	0	0	0	0	0	6	41-50	5
Day Total	13	0	0	0	11	69	320	530	272	72	8	1	0	0	1296	41-50	850
Percent	1%	0%	0%	0%	0.8%	5.3%	24.7%	40.9%	21%	5.6%	0.6%	0.1%	0%	0%			



AM Peak	10:00 AM	12:00 AM	12:00 AM	12:00 AM	6:00 AM	11:00 AM	11:00 AM	11:00 AM	9:00 AM	11:00 AM	10:00 AM	12:00 AM	12:00 AM	12:00 AM	11:00 AM		
Volume	3	0	0	0	1	8	26	41	22	7	2	0	0	0	96		
PM Peak	3:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	1:00 PM	4:00 PM	2:00 PM	2:00 PM	3:00 PM	8:00 PM	4:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	2	0	0	0	3	8	48	44	27	9	2	1	0	0	123		

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

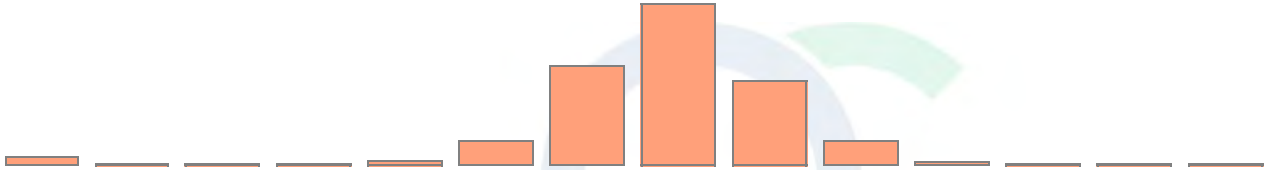
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total Percent	64 1.7%	0 0%	1 0%	3 0.1%	37 1%	214 5.6%	927 24.5%	1512 39.9%	788 20.8%	213 5.6%	26 0.7%	4 0.1%	0 0%	0 0%	3789	41-50	2439
Cumulative Percent	1.7%	1.7%	1.7%	1.8%	2.8%	8.4%	32.9%	72.8%	93.6%	99.2%	99.9%	100%	100%	100%			

ADT
1263



85th Percentile: 52 MPH
Mean Speed(Average): 47 MPH
Median: 47 MPH
Mode: 48 MPH

Comments:

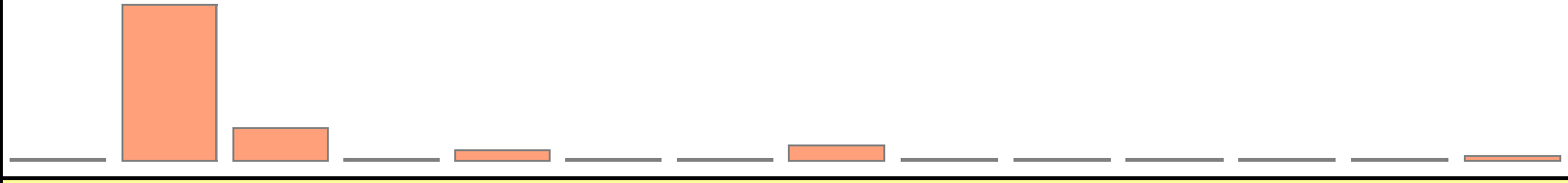
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	5	0	0	1	0	0	2	0	0	0	0	0	0	8
01:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
03:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
04:00 AM	0	6	0	0	0	0	0	2	0	0	0	0	0	1	9
05:00 AM	0	17	1	0	3	0	0	4	0	0	**1**	0	0	0	26
06:00 AM	0	26	**21**	0	1	0	0	2	0	0	0	0	0	0	50
07:00 AM	0	44	15	0	4	0	0	**11**	0	0	0	0	0	1	75
08:00 AM	0	57	10	0	6	0	0	3	**1**	0	0	0	0	1	78
09:00 AM	0	55	14	0	7	0	0	5	0	0	0	0	0	1	82
10:00 AM	0	36	16	0	3	0	0	9	0	0	0	0	0	**4**	68
11:00 AM	0	**62**	16	0	**8**	0	0	7	0	0	0	0	0	1	**94**
12:00 PM	0	48	6	0	**7**	0	0	**10**	0	0	1	0	0	0	72
01:00 PM	0	61	11	0	3	0	0	7	**1**	0	0	0	0	1	84
02:00 PM	0	52	9	0	7	0	0	5	0	0	2	0	0	3	78
03:00 PM	0	70	14	**1**	1	0	0	3	1	0	**3**	0	0	**4**	97
04:00 PM	0	**98**	**18**	0	1	0	0	5	0	0	0	0	0	3	**125**
05:00 PM	0	73	11	0	1	0	0	3	0	0	0	0	0	2	90
06:00 PM	0	53	9	0	2	0	0	3	0	0	0	0	0	2	69
07:00 PM	0	29	4	0	0	0	0	1	0	0	0	0	0	0	34
08:00 PM	0	25	5	0	1	0	0	1	0	0	0	0	0	0	32
09:00 PM	0	23	1	0	1	0	0	3	0	0	0	0	0	0	28
10:00 PM	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
11:00 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Day Total	0	863	181	1	59	0	0	86	3	0	7	0	0	24	1224
Percent	0%	70.5%	14.8%	0.1%	4.8%	0%	0%	7%	0.2%	0%	0.6%	0%	0%	2%	
ADT 1224															
AM Peak	12:00 AM	11:00 AM	6:00 AM	12:00 AM	11:00 AM	12:00 AM	12:00 AM	7:00 AM	8:00 AM	12:00 AM	5:00 AM	12:00 AM	12:00 AM	10:00 AM	11:00 AM
Volume	0	62	21	0	8	0	0	11	1	0	1	0	0	4	94
PM Peak	12:00 PM	4:00 PM	4:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	3:00 PM	12:00 PM	12:00 PM	3:00 PM	4:00 PM
Volume	0	98	18	1	7	0	0	10	1	0	3	0	0	4	125

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
01:00 AM	0	2	0	0	0	0	0	2	0	0	0	0	0	0	4
02:00 AM	0	4	0	0	1	0	0	1	0	0	0	0	0	0	6
03:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00 AM	0	6	1	0	1	0	0	0	0	0	0	0	0	0	8
05:00 AM	0	13	3	0	0	0	0	3	0	0	0	0	0	**2**	21
06:00 AM	0	21	14	0	6	0	0	6	0	0	1	0	0	1	49
07:00 AM	0	36	**17**	0	4	0	0	4	0	0	**2**	0	0	2	65
08:00 AM	0	46	11	0	**9**	0	0	8	0	0	0	0	0	1	75
09:00 AM	0	55	11	0	8	0	0	7	0	0	1	0	0	2	84
10:00 AM	0	**66**	12	0	6	**1**	0	**11**	0	0	0	0	0	1	**97**
11:00 AM	0	48	12	0	3	1	0	5	0	0	1	0	0	0	70
12:00 PM	0	50	10	0	4	0	0	5	0	0	1	0	0	0	70
01:00 PM	0	64	8	0	**7**	0	0	4	0	0	0	0	0	1	84
02:00 PM	0	74	8	0	3	0	0	5	0	0	0	0	0	0	90
03:00 PM	0	74	18	0	5	0	0	4	0	0	0	0	0	2	103
04:00 PM	0	**98**	**20**	0	2	0	0	**8**	0	0	**2**	0	0	3	**133**
05:00 PM	0	83	13	0	3	0	0	1	0	0	1	0	0	3	104
06:00 PM	0	53	8	0	2	0	0	2	0	0	0	0	0	**5**	70
07:00 PM	0	30	3	0	1	0	0	0	0	0	0	0	0	2	36
08:00 PM	0	30	3	0	0	0	0	3	0	0	0	0	0	0	36
09:00 PM	**1**	19	3	0	0	0	0	2	0	0	0	0	0	1	26
10:00 PM	0	20	1	0	0	0	0	0	0	0	0	0	0	0	21
11:00 PM	0	8	2	0	0	0	0	1	0	0	0	0	0	1	12
Day Total	1	903	179	0	66	2	0	82	0	0	9	0	0	27	1269
Percent	0.1%	71.2%	14.1%	0%	5.2%	0.2%	0%	6.5%	0%	0%	0.7%	0%	0%	2.1%	
ADT 1269															
AM Peak	12:00 AM	10:00 AM	7:00 AM	12:00 AM	8:00 AM	10:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	7:00 AM	12:00 AM	12:00 AM	5:00 AM	10:00 AM
Volume	0	66	17	0	9	1	0	11	0	0	2	0	0	2	97
PM Peak	9:00 PM	4:00 PM	4:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	6:00 PM	4:00 PM
Volume	1	98	20	0	7	0	0	8	0	0	2	0	0	5	133

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	10	0	0	1	0	0	0	0	0	0	0	0	0	11
01:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00 AM	0	5	2	0	1	0	0	1	0	0	0	0	0	0	9
03:00 AM	0	4	1	0	1	0	0	1	0	0	0	0	0	0	7
04:00 AM	0	5	2	0	0	0	0	2	0	0	0	0	0	0	9
05:00 AM	0	16	3	0	4	0	0	8	0	0	**2**	0	0	1	34
06:00 AM	0	22	**16**	0	4	0	0	5	0	0	0	0	0	0	47
07:00 AM	0	46	10	0	4	0	0	7	0	0	0	0	0	1	68
08:00 AM	0	55	12	0	3	0	0	**11**	0	0	0	0	0	0	81
09:00 AM	0	57	7	0	**8**	0	0	10	0	0	0	0	0	1	83
10:00 AM	0	50	6	0	6	0	0	10	0	0	0	0	0	**3**	75
11:00 AM	0	**68**	14	0	5	0	0	8	0	0	1	0	0	0	**96**
12:00 PM	0	59	12	0	7	0	0	**8**	**1**	0	0	0	0	1	88
01:00 PM	**1**	65	12	0	**8**	0	0	4	0	0	0	0	0	1	91
02:00 PM	0	84	9	**1**	4	0	0	0	0	0	**1**	0	0	0	99
03:00 PM	0	80	15	0	4	0	0	2	0	0	0	0	0	**2**	103
04:00 PM	0	**96**	**16**	0	3	0	0	6	0	0	0	0	0	2	**123**
05:00 PM	0	65	13	0	1	0	0	3	0	0	0	0	0	0	82
06:00 PM	0	61	7	0	2	0	0	1	0	0	0	0	0	0	71
07:00 PM	0	36	4	0	2	0	0	2	0	0	0	0	0	1	45
08:00 PM	1	28	2	0	2	0	0	0	0	0	0	0	0	0	33
09:00 PM	0	17	4	0	1	0	0	0	0	0	0	0	0	0	22
10:00 PM	0	7	3	0	0	0	0	1	0	0	0	0	0	0	11
11:00 PM	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
Day Total	2	943	170	1	72	0	0	90	1	0	4	0	0	13	1296
Percent	0.2%	72.8%	13.1%	0.1%	5.6%	0%	0%	6.9%	0.1%	0%	0.3%	0%	0%	1%	
AM Peak	12:00 AM	11:00 AM	6:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	5:00 AM	12:00 AM	12:00 AM	10:00 AM	11:00 AM
Volume	0	68	16	0	8	0	0	11	0	0	2	0	0	3	96
PM Peak	1:00 PM	4:00 PM	4:00 PM	2:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	3:00 PM	4:00 PM
Volume	1	96	16	1	8	0	0	8	1	0	1	0	0	2	123

ADT
1296

Comments:

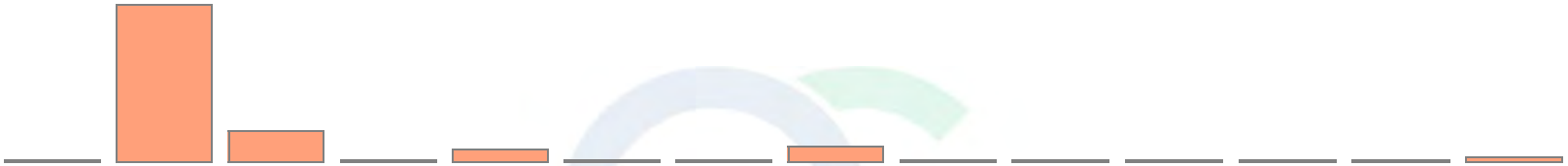
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	3	2709	530	2	197	2	0	258	4	0	20	0	0	64	3789
Percent	0.1%	71.5%	14%	0.1%	5.2%	0.1%	0%	6.8%	0.1%	0%	0.5%	0%	0%	1.7%	
ADT 1263															

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd | **QC JOB #:** 16124308

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Shasta, CA | **DATE:** Apr 4 2023 - Apr 6 2023

Start Time	Mon	Tue 4 Apr 23	Wed 5 Apr 23	Thu 6 Apr 23	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		8	2	11		7			7	
01:00 AM		2	4	2		3			3	
02:00 AM		3	6	9		6			6	
03:00 AM		2	3	7		4			4	
04:00 AM		9	8	9		9			9	
05:00 AM		26	21	34		27			27	
06:00 AM		50	49	47		49			49	
07:00 AM		75	65	68		69			69	
08:00 AM		78	75	81		78			78	
09:00 AM		82	84	83		83			83	
10:00 AM		68	**97**	75		80			80	
11:00 AM		**94**	70	**96**		**87**			**87**	
12:00 PM		72	70	88		77			77	
01:00 PM		84	84	91		86			86	
02:00 PM		78	90	99		89			89	
03:00 PM		97	103	103		101			101	
04:00 PM		**125**	**133**	**123**		**127**			**127**	
05:00 PM		90	104	82		92			92	
06:00 PM		69	70	71		70			70	
07:00 PM		34	36	45		38			38	
08:00 PM		32	36	33		34			34	
09:00 PM		28	26	22		25			25	
10:00 PM		11	21	11		14			14	
11:00 PM		7	12	6		8			8	
Day Total		1224	1269	1296		1263			1263	
% Weekday Average		96.9%	100.5%	102.6%						
% Week Average		96.9%	100.5%	102.6%		100%				
AM Peak Volume		11:00 AM 94	10:00 AM 97	11:00 AM 96		11:00 AM 87			11:00 AM 87	
PM Peak Volume		4:00 PM 125	4:00 PM 133	4:00 PM 123		4:00 PM 127			4:00 PM 127	

Comments:

Report generated on 4/11/2023 4:55 PM

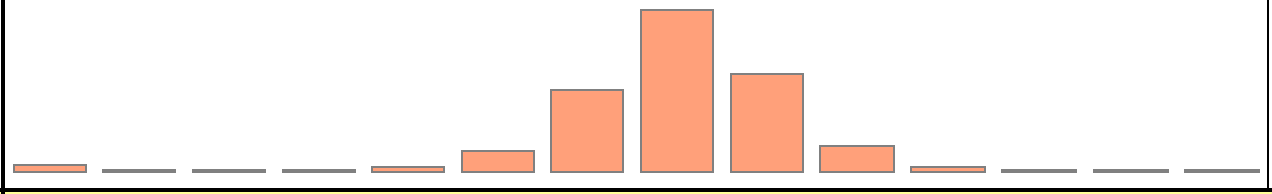
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	3	2	5	0	0	0	0	0	0	10	41-50	7
01:00 AM	0	0	0	0	0	0	0	2	3	0	0	0	0	0	5	46-55	5
02:00 AM	0	0	0	0	0	2	4	2	1	0	0	0	0	0	9	41-50	6
03:00 AM	1	0	0	0	0	0	0	3	4	1	0	0	0	0	9	46-55	7
04:00 AM	1	0	0	0	2	2	1	7	2	2	1	0	0	0	18	46-55	9
05:00 AM	0	0	**2**	0	1	6	13	22	5	4	0	0	0	0	53	41-50	35
06:00 AM	1	0	0	0	0	3	24	37	11	8	1	0	0	0	85	41-50	61
07:00 AM	1	0	0	0	**6**	10	24	66	32	3	1	**1**	0	0	144	46-55	98
08:00 AM	1	0	0	0	0	2	39	75	**45**	9	0	0	0	0	171	46-55	120
09:00 AM	2	0	0	0	0	10	**46**	74	39	6	1	1	0	0	179	41-50	120
10:00 AM	**7**	0	0	0	0	11	41	67	36	13	**2**	0	0	0	177	41-50	108
11:00 AM	2	0	0	0	1	**15**	31	**79**	43	**14**	1	0	0	0	**186**	46-55	122
12:00 PM	1	0	0	**1**	**3**	**13**	34	61	41	12	3	**1**	0	0	170	46-55	102
01:00 PM	1	0	0	0	0	11	**41**	77	38	9	2	0	0	0	179	41-50	118
02:00 PM	3	0	0	0	1	12	26	66	64	12	1	0	0	0	185	46-55	130
03:00 PM	**4**	0	0	0	0	4	26	58	**66**	**20**	2	0	0	0	180	46-55	124
04:00 PM	4	0	0	1	3	1	41	**111**	46	9	1	1	0	0	**218**	46-55	157
05:00 PM	3	0	0	0	0	3	33	67	43	10	3	0	0	0	162	46-55	110
06:00 PM	3	0	0	0	3	1	25	35	43	6	1	0	0	0	117	46-55	78
07:00 PM	0	0	0	0	0	1	15	29	23	4	**4**	0	0	0	76	46-55	52
08:00 PM	0	0	0	0	1	5	15	19	5	0	0	0	0	0	45	41-50	34
09:00 PM	0	0	0	1	1	7	10	7	4	3	1	0	0	0	34	36-45	17
10:00 PM	0	0	0	0	0	0	5	6	2	4	0	0	0	0	17	41-50	11
11:00 PM	0	0	0	1	1	0	3	5	1	2	0	0	0	0	13	41-50	8
Day Total	35	0	2	4	23	122	499	980	597	151	25	4	0	0	2442	46-55	1577
Percent	1.4%	0%	0.1%	0.2%	0.9%	5%	20.4%	40.1%	24.4%	6.2%	1%	0.2%	0%	0%			



AM Peak	10:00 AM	12:00 AM	5:00 AM	12:00 AM	7:00 AM	11:00 AM	9:00 AM	11:00 AM	8:00 AM	11:00 AM	10:00 AM	7:00 AM	12:00 AM	12:00 AM	11:00 AM		
Volume	7	0	2	0	6	15	46	79	45	14	2	1	0	0	186		
PM Peak	3:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	1:00 PM	4:00 PM	3:00 PM	3:00 PM	7:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM		
Volume	4	0	0	1	3	13	41	111	66	20	4	1	0	0	218		

Comments:

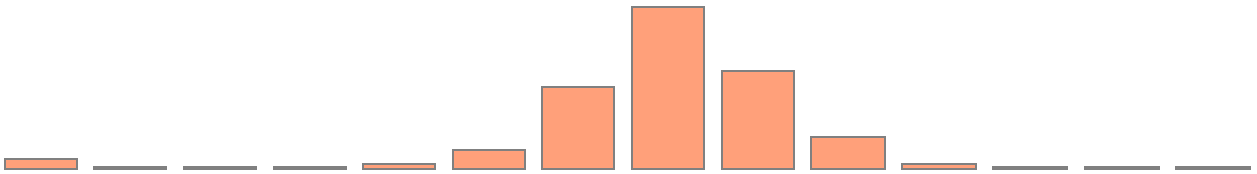
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	3	4	0	0	0	0	0	0	7	41-50	7
01:00 AM	0	0	0	1	0	1	2	1	0	0	0	0	0	0	5	41-50	3
02:00 AM	0	0	0	0	0	1	2	4	0	2	0	0	0	0	9	41-50	6
03:00 AM	0	0	0	0	0	1	0	1	2	2	0	0	0	0	6	51-60	4
04:00 AM	0	0	0	0	0	1	3	8	3	0	0	0	0	0	15	41-50	11
05:00 AM	2	0	0	**2**	0	1	12	14	15	5	0	1	0	0	52	46-55	29
06:00 AM	4	0	0	0	0	4	11	42	25	11	1	0	0	0	98	46-55	67
07:00 AM	**5**	0	0	1	**7**	8	21	39	34	14	2	1	**1**	0	133	46-55	73
08:00 AM	2	0	0	0	1	8	35	**83**	42	**17**	2	0	0	0	190	46-55	125
09:00 AM	3	0	**1**	0	1	3	29	77	50	8	2	**2**	0	0	176	46-55	127
10:00 AM	4	0	1	0	0	4	35	82	**59**	15	**4**	0	0	0	**204**	46-55	141
11:00 AM	3	0	0	0	1	**15**	**42**	56	33	15	4	1	0	0	170	41-50	98
12:00 PM	1	0	0	0	**4**	6	36	59	44	**19**	2	0	0	0	171	46-55	103
01:00 PM	4	0	0	0	1	2	40	87	35	15	1	0	0	0	185	41-50	127
02:00 PM	2	0	0	0	1	**11**	42	71	35	4	2	0	0	0	168	41-50	113
03:00 PM	3	0	0	0	0	9	**54**	71	48	17	1	0	**1**	0	204	41-50	125
04:00 PM	5	0	0	0	2	8	47	**88**	43	13	1	0	0	0	**207**	41-50	135
05:00 PM	5	0	0	0	0	5	39	68	**62**	16	1	0	0	0	196	46-55	130
06:00 PM	**6**	0	0	0	0	1	10	58	28	11	**4**	**2**	0	0	120	46-55	86
07:00 PM	4	0	0	0	0	3	9	23	15	4	1	0	0	0	59	46-55	38
08:00 PM	0	0	0	0	2	5	12	22	5	1	0	0	0	0	47	41-50	34
09:00 PM	2	0	0	0	1	9	8	11	8	0	0	0	0	0	39	43-52	19
10:00 PM	0	0	0	0	0	3	8	13	5	0	0	0	0	0	29	41-50	21
11:00 PM	1	0	0	0	2	2	3	5	2	1	0	0	0	0	16	41-50	8
Day Total	56	0	2	4	23	111	503	987	593	190	28	7	2	0	2506	46-55	1580
Percent	2.2%	0%	0.1%	0.2%	0.9%	4.4%	20.1%	39.4%	23.7%	7.6%	1.1%	0.3%	0.1%	0%			
AM Peak	7:00 AM	12:00 AM	9:00 AM	5:00 AM	7:00 AM	11:00 AM	11:00 AM	8:00 AM	10:00 AM	8:00 AM	10:00 AM	9:00 AM	7:00 AM	12:00 AM	10:00 AM		
Volume	5	0	1	2	7	15	42	83	59	17	4	2	1	0	204		
PM Peak	6:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	12:00 PM	6:00 PM	6:00 PM	3:00 PM	12:00 PM	4:00 PM		
Volume	6	0	0	0	4	11	54	88	62	19	4	2	1	0	207		



Comments:

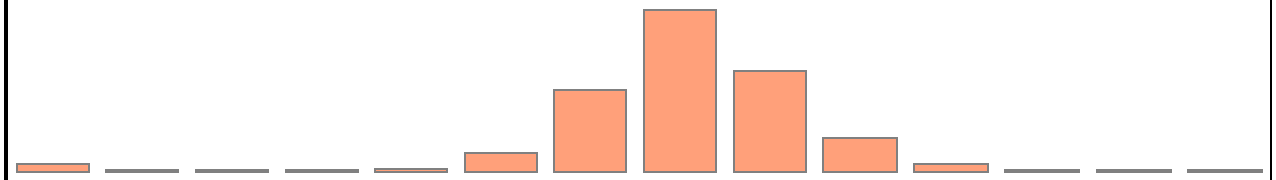
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	3	3	8	3	0	0	0	0	0	17	41-50	11
01:00 AM	0	0	0	0	0	0	2	2	1	0	0	0	0	0	5	41-50	4
02:00 AM	0	0	0	0	0	0	5	6	3	2	0	0	0	0	16	41-50	11
03:00 AM	0	0	0	0	0	0	6	7	3	5	2	0	0	0	23	41-50	13
04:00 AM	1	0	0	0	0	4	1	4	2	0	2	0	0	0	14	46-55	6
05:00 AM	1	0	0	0	0	2	14	27	13	4	2	**1**	0	0	64	41-50	41
06:00 AM	1	0	0	0	1	1	21	25	29	17	2	0	0	0	97	46-55	54
07:00 AM	1	0	0	0	0	2	27	51	34	15	**6**	0	0	0	136	46-55	85
08:00 AM	2	0	0	0	0	4	33	**85**	53	15	4	0	0	0	**196**	46-55	138
09:00 AM	5	0	0	0	0	5	33	74	**56**	16	1	0	0	0	190	46-55	130
10:00 AM	**6**	0	0	0	**2**	5	28	72	51	**18**	4	0	0	0	186	46-55	123
11:00 AM	4	0	0	0	0	**9**	**43**	75	43	17	1	0	0	0	192	41-50	118
12:00 PM	5	0	0	0	0	9	39	77	41	13	1	0	0	0	185	46-55	118
01:00 PM	2	0	0	0	2	10	38	84	43	18	2	0	0	0	199	46-55	127
02:00 PM	4	0	0	**1**	0	9	36	80	58	9	1	0	0	0	198	46-55	138
03:00 PM	3	0	0	0	**3**	**13**	41	**92**	**59**	**23**	2	0	0	0	**236**	46-55	151
04:00 PM	**6**	0	0	0	0	12	**63**	82	39	14	4	**2**	0	0	222	41-50	145
05:00 PM	1	0	0	0	1	4	22	70	47	11	**6**	0	0	0	162	46-55	117
06:00 PM	1	0	0	0	0	2	16	52	30	9	1	0	**1**	0	112	46-55	82
07:00 PM	2	0	0	0	1	3	14	26	17	5	1	0	0	0	69	46-55	43
08:00 PM	1	0	0	0	1	6	13	18	5	0	3	1	0	0	48	41-50	31
09:00 PM	1	0	0	0	3	11	12	8	3	1	0	0	0	0	39	36-45	23
10:00 PM	0	0	0	0	0	1	7	2	6	0	0	0	0	0	16	41-50	9
11:00 PM	0	0	0	0	1	1	3	3	1	0	0	0	0	0	9	41-50	6
Day Total	47	0	0	1	15	116	520	1030	640	212	45	4	1	0	2631	46-55	1670
Percent	1.8%	0%	0%	0%	0.6%	4.4%	19.8%	39.1%	24.3%	8.1%	1.7%	0.2%	0%	0%			



AM Peak	10:00 AM	12:00 AM	12:00 AM	12:00 AM	10:00 AM	11:00 AM	11:00 AM	8:00 AM	9:00 AM	10:00 AM	7:00 AM	5:00 AM	12:00 AM	12:00 AM	8:00 AM		
Volume	6	0	0	0	2	9	43	85	56	18	6	1	0	0	196		
PM Peak	4:00 PM	12:00 PM	12:00 PM	2:00 PM	3:00 PM	3:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	5:00 PM	4:00 PM	6:00 PM	12:00 PM	3:00 PM		
Volume	6	0	0	1	3	13	63	92	59	23	6	2	1	0	236		

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

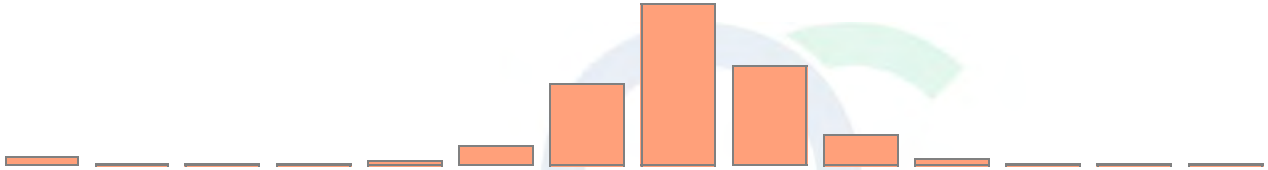
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	138	0	4	9	61	349	1522	2997	1830	553	98	15	3	0	7579	46-55	4827
Percent	1.8%	0%	0.1%	0.1%	0.8%	4.6%	20.1%	39.5%	24.1%	7.3%	1.3%	0.2%	0%	0%			
Cumulative Percent	1.8%	1.8%	1.9%	2%	2.8%	7.4%	27.5%	67%	91.2%	98.5%	99.8%	100%	100%	100%			

ADT
2526



85th Percentile: 53 MPH
Mean Speed(Average): 47 MPH
Median: 47 MPH
Mode: 48 MPH

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	7	0	0	1	0	0	2	0	0	0	0	0	0	10
01:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
02:00 AM	0	5	1	0	1	0	0	2	0	0	0	0	0	0	9
03:00 AM	0	6	1	0	1	0	0	0	0	0	0	0	0	1	9
04:00 AM	0	10	3	0	1	0	0	2	0	0	1	0	0	1	18
05:00 AM	0	34	6	0	3	**1**	0	7	0	0	2	0	0	0	53
06:00 AM	0	50	27	0	2	0	0	5	0	0	0	0	0	1	85
07:00 AM	0	100	24	0	4	0	0	14	**1**	0	0	0	0	1	144
08:00 AM	0	119	31	0	7	0	0	12	1	0	0	0	0	1	171
09:00 AM	0	**121**	32	0	11	1	0	10	0	0	2	0	0	2	179
10:00 AM	0	106	**36**	0	7	0	0	**17**	0	0	**4**	0	0	**7**	177
11:00 AM	0	121	35	0	**15**	0	0	11	0	0	2	0	0	2	**186**
12:00 PM	0	112	25	0	**13**	0	0	**16**	0	0	**4**	0	0	0	170
01:00 PM	0	123	27	0	10	0	0	15	**1**	0	2	0	0	1	179
02:00 PM	0	122	31	0	13	**1**	0	13	0	0	2	0	0	3	185
03:00 PM	0	126	**36**	**1**	5	0	0	4	1	0	3	0	0	**4**	180
04:00 PM	0	**162**	31	0	10	0	0	10	0	0	1	0	0	4	**218**
05:00 PM	0	134	17	0	1	0	0	5	0	0	2	0	0	3	162
06:00 PM	0	92	14	0	3	0	0	4	0	0	1	0	0	3	117
07:00 PM	0	57	14	0	4	0	0	1	0	0	0	0	0	0	76
08:00 PM	0	36	5	0	1	0	0	3	0	0	0	0	0	0	45
09:00 PM	0	28	1	0	1	0	0	4	0	0	0	0	0	0	34
10:00 PM	0	14	2	0	0	0	0	1	0	0	0	0	0	0	17
11:00 PM	0	9	0	0	1	0	0	1	0	0	2	0	0	0	13
Day Total	0	1699	399	1	115	3	0	159	4	0	28	0	0	34	2442
Percent	0%	69.6%	16.3%	0%	4.7%	0.1%	0%	6.5%	0.2%	0%	1.1%	0%	0%	1.4%	
ADT 2442															
AM Peak	12:00 AM	9:00 AM	10:00 AM	12:00 AM	11:00 AM	5:00 AM	12:00 AM	10:00 AM	7:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	10:00 AM	11:00 AM
Volume	0	121	36	0	15	1	0	17	1	0	4	0	0	7	186
PM Peak	12:00 PM	4:00 PM	3:00 PM	3:00 PM	12:00 PM	2:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	4:00 PM
Volume	0	162	36	1	13	1	0	16	1	0	4	0	0	4	218

Comments:

Report generated on 4/11/2023 4:55 PM

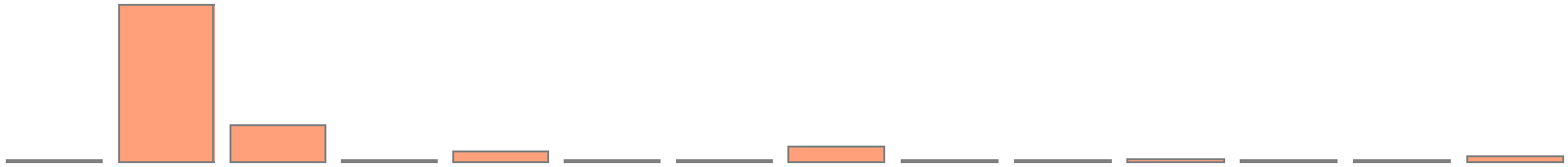
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
01:00 AM	0	2	0	0	0	0	0	3	0	0	0	0	0	0	5
02:00 AM	0	4	0	0	1	0	0	3	0	0	1	0	0	0	9
03:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
04:00 AM	0	9	4	0	1	0	0	1	0	0	0	0	0	0	15
05:00 AM	0	31	8	0	0	**1**	0	8	0	0	2	0	0	2	52
06:00 AM	0	51	27	0	7	0	0	8	0	0	1	0	0	4	98
07:00 AM	0	75	**40**	0	5	0	0	6	0	0	2	0	0	**5**	133
08:00 AM	0	122	40	0	10	0	0	13	0	0	3	0	0	2	190
09:00 AM	0	111	33	0	10	1	0	14	0	0	4	0	0	3	176
10:00 AM	0	**136**	30	0	**13**	1	0	13	0	0	**7**	0	0	4	**204**
11:00 AM	0	115	24	0	7	1	0	**15**	0	0	5	0	0	3	170
12:00 PM	0	121	26	0	9	0	0	12	0	0	**2**	0	0	1	171
01:00 PM	0	125	26	0	**16**	0	0	**14**	0	0	0	0	0	4	185
02:00 PM	0	128	20	0	5	0	0	13	0	0	0	0	0	2	168
03:00 PM	0	150	**34**	0	8	0	0	8	0	0	1	0	0	3	204
04:00 PM	0	**157**	24	0	8	0	0	11	0	0	2	0	0	5	**207**
05:00 PM	0	151	24	0	7	0	0	8	0	0	1	0	0	5	196
06:00 PM	0	86	22	0	2	0	0	4	0	0	0	0	0	**6**	120
07:00 PM	0	43	9	0	1	0	0	1	0	0	1	0	0	4	59
08:00 PM	0	38	4	0	0	0	0	5	0	0	0	0	0	0	47
09:00 PM	**1**	26	4	0	1	0	0	3	0	0	2	0	0	2	39
10:00 PM	0	26	2	0	0	0	0	1	0	0	0	0	0	0	29
11:00 PM	0	10	2	0	1	0	0	2	0	0	0	0	0	1	16
Day Total	1	1727	405	0	113	4	0	166	0	0	34	0	0	56	2506
Percent	0%	68.9%	16.2%	0%	4.5%	0.2%	0%	6.6%	0%	0%	1.4%	0%	0%	2.2%	
AM Peak	12:00 AM	10:00 AM	7:00 AM	12:00 AM	10:00 AM	5:00 AM	12:00 AM	11:00 AM	12:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	7:00 AM	10:00 AM
Volume	0	136	40	0	13	1	0	15	0	0	7	0	0	5	204
PM Peak	9:00 PM	4:00 PM	3:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	6:00 PM	4:00 PM
Volume	1	157	34	0	16	0	0	14	0	0	2	0	0	6	207

ADT
2506



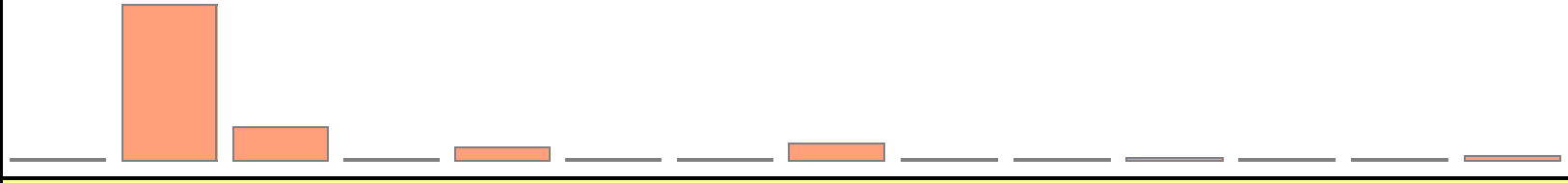
Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	14	1	0	1	0	0	1	0	0	0	0	0	0	17
01:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
02:00 AM	0	8	3	0	2	0	0	3	0	0	0	0	0	0	16
03:00 AM	0	10	6	0	4	0	0	3	0	0	0	0	0	0	23
04:00 AM	0	8	2	0	0	0	0	3	0	0	0	0	0	1	14
05:00 AM	0	35	9	0	6	0	0	10	0	0	**3**	0	0	1	64
06:00 AM	0	46	28	0	10	0	0	12	0	0	0	0	0	1	97
07:00 AM	0	89	26	0	8	0	0	12	0	0	0	0	0	1	136
08:00 AM	0	125	**38**	0	12	0	0	**19**	0	0	0	0	0	2	**196**
09:00 AM	0	129	23	0	**15**	0	0	17	0	0	1	0	0	5	190
10:00 AM	0	126	23	0	13	0	0	16	0	0	2	0	0	**6**	186
11:00 AM	0	**138**	23	0	14	0	0	10	0	0	3	0	0	4	192
12:00 PM	0	127	22	0	**13**	0	0	**16**	**1**	0	1	0	0	5	185
01:00 PM	**1**	137	29	0	12	0	0	16	0	0	2	0	0	2	199
02:00 PM	0	155	24	**1**	10	0	0	2	0	0	2	0	0	4	198
03:00 PM	0	**167**	**39**	0	11	0	0	13	0	0	3	0	0	3	**236**
04:00 PM	0	160	33	1	5	0	0	13	0	0	**4**	0	0	**6**	222
05:00 PM	0	131	21	0	3	0	0	5	0	0	1	0	0	1	162
06:00 PM	0	85	18	0	3	0	0	4	0	0	1	0	0	1	112
07:00 PM	0	52	6	0	4	0	0	5	0	0	0	0	0	2	69
08:00 PM	1	39	2	0	3	0	0	2	0	0	0	0	0	1	48
09:00 PM	0	30	5	0	2	0	0	1	0	0	0	0	0	1	39
10:00 PM	0	10	4	0	1	0	0	1	0	0	0	0	0	0	16
11:00 PM	0	8	0	0	1	0	0	0	0	0	0	0	0	0	9
Day Total	2	1833	386	2	153	0	0	184	1	0	23	0	0	47	2631
Percent	0.1%	69.7%	14.7%	0.1%	5.8%	0%	0%	7%	0%	0%	0.9%	0%	0%	1.8%	
ADT 2631															
AM Peak	12:00 AM	11:00 AM	8:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	5:00 AM	12:00 AM	12:00 AM	10:00 AM	8:00 AM
Volume	0	138	38	0	15	0	0	19	0	0	3	0	0	6	196
PM Peak	1:00 PM	3:00 PM	3:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	4:00 PM	3:00 PM
Volume	1	167	39	1	13	0	0	16	1	0	4	0	0	6	236

Comments:

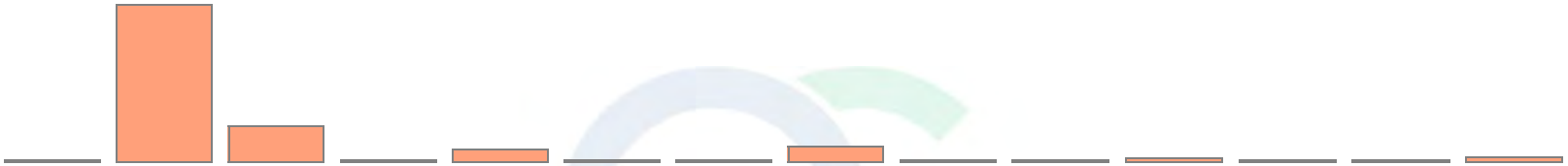
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	3	5259	1190	3	381	7	0	509	5	0	85	0	0	137	7579
Percent	0%	69.4%	15.7%	0%	5%	0.1%	0%	6.7%	0.1%	0%	1.1%	0%	0%	1.8%	
ADT 2526															

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd | **QC JOB #:** 16124308

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Shasta, CA | **DATE:** Apr 4 2023 - Apr 6 2023

Start Time	Mon	Tue 4 Apr 23	Wed 5 Apr 23	Thu 6 Apr 23	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		10	7	17		11			11	
01:00 AM		5	5	5		5			5	
02:00 AM		9	9	16		11			11	
03:00 AM		9	6	23		13			13	
04:00 AM		18	15	14		16			16	
05:00 AM		53	52	64		56			56	
06:00 AM		85	98	97		93			93	
07:00 AM		144	133	136		138			138	
08:00 AM		171	190	**196**		186			186	
09:00 AM		179	176	190		182			182	
10:00 AM		177	**204**	186		**189**			**189**	
11:00 AM		**186**	170	192		183			183	
12:00 PM		170	171	185		175			175	
01:00 PM		179	185	199		188			188	
02:00 PM		185	168	198		184			184	
03:00 PM		180	204	**236**		207			207	
04:00 PM		**218**	**207**	222		**216**			**216**	
05:00 PM		162	196	162		173			173	
06:00 PM		117	120	112		116			116	
07:00 PM		76	59	69		68			68	
08:00 PM		45	47	48		47			47	
09:00 PM		34	39	39		37			37	
10:00 PM		17	29	16		21			21	
11:00 PM		13	16	9		13			13	
Day Total		2442	2506	2631		2528			2528	
% Weekday Average		96.6%	99.1%	104.1%						
% Week Average		96.6%	99.1%	104.1%		100%				
AM Peak Volume		11:00 AM 186	10:00 AM 204	8:00 AM 196		10:00 AM 189			10:00 AM 189	
PM Peak Volume		4:00 PM 218	4:00 PM 207	3:00 PM 236		4:00 PM 216			4:00 PM 216	

Comments:

Report generated on 4/11/2023 4:55 PM

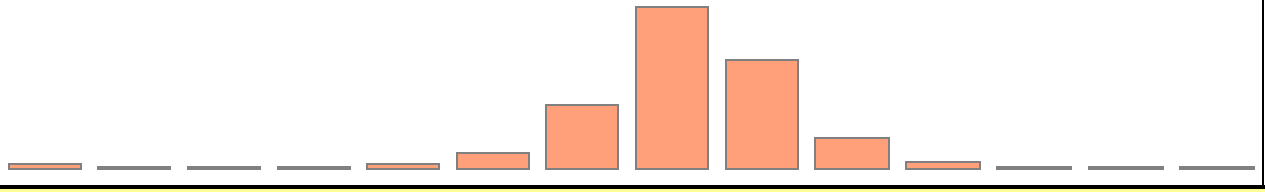
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	31-40	1
01:00 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	46-55	3
02:00 AM	0	0	0	0	0	2	3	1	0	0	0	0	0	0	6	36-45	5
03:00 AM	1	0	0	0	0	0	0	3	2	1	0	0	0	0	7	46-55	5
04:00 AM	0	0	0	0	**2**	1	1	2	1	1	1	0	0	0	9	31-40	3
05:00 AM	0	0	**2**	0	0	1	6	12	4	2	0	0	0	0	27	41-50	18
06:00 AM	1	0	0	0	0	1	9	16	4	4	0	0	0	0	35	41-50	25
07:00 AM	0	0	0	0	0	1	8	34	22	2	1	**1**	0	0	69	46-55	56
08:00 AM	0	0	0	0	0	1	17	**42**	28	5	0	0	0	0	93	46-55	70
09:00 AM	1	0	0	0	0	5	**21**	42	23	3	1	1	0	0	97	46-55	65
10:00 AM	**3**	0	0	0	0	**6**	15	42	**30**	**11**	**2**	0	0	0	**109**	46-55	72
11:00 AM	1	0	0	0	0	2	12	42	27	8	0	0	0	0	92	46-55	69
12:00 PM	**1**	0	0	**1**	1	4	**19**	34	25	9	**3**	**1**	0	0	98	46-55	59
01:00 PM	0	0	0	0	0	1	16	**47**	25	4	2	0	0	0	95	46-55	72
02:00 PM	0	0	0	0	1	**11**	11	36	**39**	8	1	0	0	0	**107**	46-55	75
03:00 PM	0	0	0	0	0	0	11	33	25	**14**	0	0	0	0	83	46-55	58
04:00 PM	1	0	0	1	**3**	0	12	46	25	5	0	0	0	0	93	46-55	71
05:00 PM	1	0	0	0	0	2	13	27	18	8	3	0	0	0	72	46-55	45
06:00 PM	1	0	0	0	3	1	9	12	19	2	1	0	0	0	48	46-55	31
07:00 PM	0	0	0	0	0	1	5	16	14	3	3	0	0	0	42	46-55	30
08:00 PM	0	0	0	0	0	3	3	6	1	0	0	0	0	0	13	41-50	9
09:00 PM	0	0	0	0	0	2	2	0	1	1	0	0	0	0	6	36-45	4
10:00 PM	0	0	0	0	0	0	3	1	1	1	0	0	0	0	6	41-50	4
11:00 PM	0	0	0	1	0	0	1	3	0	1	0	0	0	0	6	41-50	4
Day Total	11	0	2	3	10	46	197	499	336	93	18	3	0	0	1218	46-55	835
Percent	0.9%	0%	0.2%	0.2%	0.8%	3.8%	16.2%	41%	27.6%	7.6%	1.5%	0.2%	0%	0%			
AM Peak	10:00 AM	12:00 AM	5:00 AM	12:00 AM	4:00 AM	10:00 AM	9:00 AM	8:00 AM	10:00 AM	10:00 AM	10:00 AM	7:00 AM	12:00 AM	12:00 AM	10:00 AM		
Volume	3	0	2	0	2	6	21	42	30	11	2	1	0	0	109		
PM Peak	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM	2:00 PM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM		
Volume	1	0	0	1	3	11	19	47	39	14	3	1	0	0	107		



Comments:

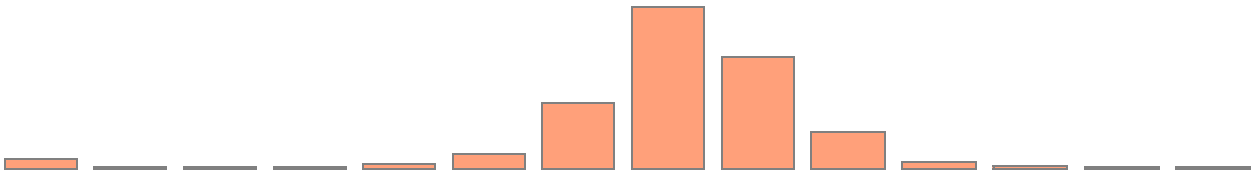
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	2	3	0	0	0	0	0	0	5	41-50	5
01:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	41-50	1
02:00 AM	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3	41-50	2
03:00 AM	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3	46-55	2
04:00 AM	0	0	0	0	0	1	0	4	2	0	0	0	0	0	7	46-55	6
05:00 AM	0	0	0	**2**	0	1	6	8	10	3	0	1	0	0	31	46-55	18
06:00 AM	**3**	0	0	0	0	1	2	22	13	7	1	0	0	0	49	46-55	35
07:00 AM	3	0	0	0	0	1	7	16	24	**13**	2	1	**1**	0	68	46-55	40
08:00 AM	1	0	0	0	0	0	19	50	31	13	1	0	0	0	**115**	46-55	81
09:00 AM	1	0	**1**	0	0	1	10	32	**36**	7	2	**2**	0	0	92	46-55	68
10:00 AM	3	0	0	0	0	1	9	**53**	30	9	2	0	0	0	107	46-55	83
11:00 AM	3	0	0	0	**1**	**7**	**21**	31	22	10	**4**	1	0	0	100	46-55	53
12:00 PM	1	0	0	0	**3**	3	12	36	**32**	**13**	1	0	0	0	**101**	46-55	68
01:00 PM	**3**	0	0	0	1	2	**27**	**44**	18	5	1	0	0	0	101	41-50	71
02:00 PM	2	0	0	0	1	2	20	28	21	2	**2**	0	0	0	78	46-55	49
03:00 PM	1	0	0	0	0	**6**	21	35	27	10	0	0	**1**	0	101	46-55	62
04:00 PM	2	0	0	0	2	2	11	39	13	5	0	0	0	0	74	46-55	52
05:00 PM	2	0	0	0	0	4	18	32	31	5	0	0	0	0	92	46-55	63
06:00 PM	1	0	0	0	0	1	3	27	14	3	1	0	0	0	50	46-55	41
07:00 PM	2	0	0	0	0	3	4	7	6	1	0	0	0	0	23	46-55	13
08:00 PM	0	0	0	0	1	1	2	5	2	0	0	0	0	0	11	45-54	7
09:00 PM	1	0	0	0	0	4	1	5	2	0	0	0	0	0	13	46-55	7
10:00 PM	0	0	0	0	0	0	2	3	3	0	0	0	0	0	8	46-55	6
11:00 PM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	4	41-50	3
Day Total	29	0	1	2	10	42	198	486	338	107	17	5	2	0	1237	46-55	824
Percent	2.3%	0%	0.1%	0.2%	0.8%	3.4%	16%	39.3%	27.3%	8.6%	1.4%	0.4%	0.2%	0%			
AM Peak	6:00 AM	12:00 AM	9:00 AM	5:00 AM	11:00 AM	11:00 AM	11:00 AM	10:00 AM	9:00 AM	7:00 AM	11:00 AM	9:00 AM	7:00 AM	12:00 AM	8:00 AM		
Volume	3	0	1	2	1	7	21	53	36	13	4	2	1	0	115		
PM Peak	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM	1:00 PM	1:00 PM	12:00 PM	12:00 PM	2:00 PM	12:00 PM	3:00 PM	12:00 PM	12:00 PM		
Volume	3	0	0	0	3	6	27	44	32	13	2	0	1	0	101		



Comments:

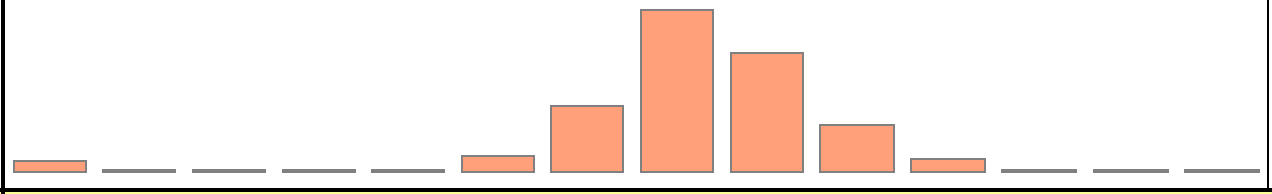
Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	**3**	1	2	0	0	0	0	0	0	6	36-45	4
01:00 AM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3	41-50	3
02:00 AM	0	0	0	0	0	0	1	3	3	0	0	0	0	0	7	46-55	6
03:00 AM	0	0	0	0	0	0	4	4	2	4	2	0	0	0	16	41-50	8
04:00 AM	1	0	0	0	0	2	0	1	0	0	1	0	0	0	5	31-40	2
05:00 AM	0	0	0	0	0	0	3	12	8	4	2	**1**	0	0	30	46-55	20
06:00 AM	1	0	0	0	0	0	7	9	16	**15**	2	0	0	0	50	51-60	31
07:00 AM	0	0	0	0	0	0	4	26	20	12	**6**	0	0	0	68	46-55	46
08:00 AM	2	0	0	0	0	3	14	**46**	**36**	10	4	0	0	0	**115**	46-55	82
09:00 AM	**4**	0	0	0	0	3	15	38	34	12	1	0	0	0	107	46-55	72
10:00 AM	3	0	0	0	**2**	2	**17**	43	29	13	2	0	0	0	111	46-55	72
11:00 AM	4	0	0	0	0	1	17	34	29	10	1	0	0	0	96	46-55	63
12:00 PM	**4**	0	0	0	0	2	16	42	25	7	1	0	0	0	97	46-55	67
01:00 PM	1	0	0	0	0	2	**22**	43	27	12	1	0	0	0	108	46-55	70
02:00 PM	4	0	0	**1**	0	4	17	36	31	5	1	0	0	0	99	46-55	67
03:00 PM	1	0	0	0	0	**10**	14	**53**	**39**	**14**	2	0	0	0	**133**	46-55	92
04:00 PM	4	0	0	0	0	5	15	42	21	8	3	**1**	0	0	99	46-55	63
05:00 PM	1	0	0	0	0	2	9	35	23	4	**6**	0	0	0	80	46-55	58
06:00 PM	1	0	0	0	0	1	2	17	11	7	1	0	**1**	0	41	46-55	28
07:00 PM	1	0	0	0	**1**	2	6	5	7	2	0	0	0	0	24	46-55	12
08:00 PM	1	0	0	0	0	1	5	4	2	0	1	1	0	0	15	41-50	9
09:00 PM	1	0	0	0	0	4	7	2	2	1	0	0	0	0	17	36-45	11
10:00 PM	0	0	0	0	0	0	2	1	2	0	0	0	0	0	5	41-50	3
11:00 PM	0	0	0	0	1	0	0	1	1	0	0	0	0	0	3	46-55	2
Day Total	34	0	0	1	4	47	200	500	368	140	37	3	1	0	1335	46-55	868
Percent	2.5%	0%	0%	0.1%	0.3%	3.5%	15%	37.5%	27.6%	10.5%	2.8%	0.2%	0.1%	0%			



AM Peak Volume	9:00 AM 4	12:00 AM 0	12:00 AM 0	12:00 AM 0	10:00 AM 2	12:00 AM 3	10:00 AM 17	8:00 AM 46	8:00 AM 36	6:00 AM 15	7:00 AM 6	5:00 AM 1	12:00 AM 0	12:00 AM 0	8:00 AM 115		
PM Peak Volume	12:00 PM 4	12:00 PM 0	12:00 PM 0	2:00 PM 1	7:00 PM 1	3:00 PM 10	1:00 PM 22	3:00 PM 53	3:00 PM 39	3:00 PM 14	5:00 PM 6	4:00 PM 1	6:00 PM 1	12:00 PM 0	3:00 PM 133		

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

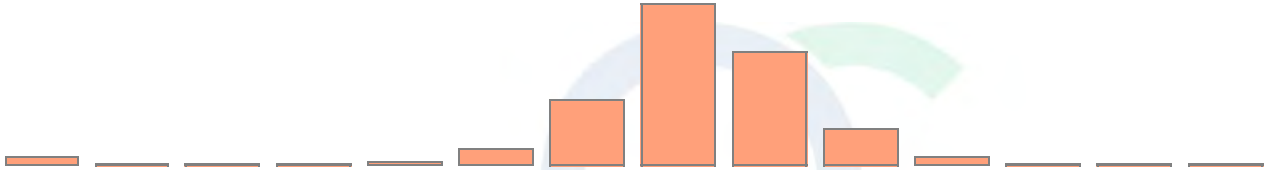
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	74	0	3	6	24	135	595	1485	1042	340	72	11	3	0	3790	46-55	2527
Percent	2%	0%	0.1%	0.2%	0.6%	3.6%	15.7%	39.2%	27.5%	9%	1.9%	0.3%	0.1%	0%			
Cumulative Percent	2%	2%	2%	2.2%	2.8%	6.4%	22.1%	61.3%	88.8%	97.7%	99.6%	99.9%	100%	100%			

ADT
1263



85th Percentile: 54 MPH
Mean Speed(Average): 48 MPH
Median: 48 MPH
Mode: 48 MPH

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00 AM	0	3	1	0	0	0	0	2	0	0	0	0	0	0	6
03:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	1	7
04:00 AM	0	4	3	0	1	0	0	0	0	0	1	0	0	0	9
05:00 AM	0	17	5	0	0	**1**	0	3	0	0	1	0	0	0	27
06:00 AM	0	24	6	0	1	0	0	3	0	0	0	0	0	1	35
07:00 AM	0	56	9	0	0	0	0	3	**1**	0	0	0	0	0	69
08:00 AM	0	62	**21**	0	1	0	0	**9**	0	0	0	0	0	0	93
09:00 AM	0	66	18	0	4	1	0	5	0	0	2	0	0	1	97
10:00 AM	0	**70**	20	0	4	0	0	8	0	0	**4**	0	0	**3**	**109**
11:00 AM	0	59	19	0	**7**	0	0	4	0	0	2	0	0	1	92
12:00 PM	0	64	19	0	6	0	0	6	0	0	**3**	0	0	0	98
01:00 PM	0	62	16	0	7	0	0	**8**	0	0	2	0	0	0	95
02:00 PM	0	**70**	**22**	0	6	**1**	0	8	0	0	0	0	0	0	**107**
03:00 PM	0	56	22	0	4	0	0	1	0	0	0	0	0	0	83
04:00 PM	0	64	13	0	**9**	0	0	5	0	0	1	0	0	**1**	93
05:00 PM	0	61	6	0	0	0	0	2	0	0	2	0	0	1	72
06:00 PM	0	39	5	0	1	0	0	1	0	0	1	0	0	1	48
07:00 PM	0	28	10	0	4	0	0	0	0	0	0	0	0	0	42
08:00 PM	0	11	0	0	0	0	0	2	0	0	0	0	0	0	13
09:00 PM	0	5	0	0	0	0	0	1	0	0	0	0	0	0	6
10:00 PM	0	3	2	0	0	0	0	1	0	0	0	0	0	0	6
11:00 PM	0	2	0	0	1	0	0	1	0	0	2	0	0	0	6
Day Total	0	836	218	0	56	3	0	73	1	0	21	0	0	10	1218
Percent	0%	68.6%	17.9%	0%	4.6%	0.2%	0%	6%	0.1%	0%	1.7%	0%	0%	0.8%	
ADT 1218															
AM Peak	12:00 AM	10:00 AM	8:00 AM	12:00 AM	11:00 AM	5:00 AM	12:00 AM	8:00 AM	7:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	10:00 AM	10:00 AM
Volume	0	70	21	0	7	1	0	9	1	0	4	0	0	3	109
PM Peak	12:00 PM	2:00 PM	2:00 PM	12:00 PM	4:00 PM	2:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	4:00 PM	2:00 PM
Volume	0	70	22	0	9	1	0	8	0	0	3	0	0	1	107

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 5 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
03:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:00 AM	0	3	3	0	0	0	0	1	0	0	0	0	0	0	7
05:00 AM	0	18	5	0	0	**1**	0	5	0	0	2	0	0	0	31
06:00 AM	0	30	13	0	1	0	0	2	0	0	0	0	0	**3**	49
07:00 AM	0	39	23	0	1	0	0	2	0	0	0	0	0	3	68
08:00 AM	0	**76**	**29**	0	1	0	0	5	0	0	3	0	0	1	**115**
09:00 AM	0	56	22	0	2	1	0	7	0	0	3	0	0	1	92
10:00 AM	0	70	18	0	**7**	0	0	2	0	0	**7**	0	0	3	107
11:00 AM	0	67	12	0	4	0	0	**10**	0	0	4	0	0	3	100
12:00 PM	0	71	16	0	5	0	0	7	0	0	1	0	0	1	**101**
01:00 PM	0	61	**18**	0	**9**	0	0	**10**	0	0	0	0	0	**3**	101
02:00 PM	0	54	12	0	2	0	0	8	0	0	0	0	0	2	78
03:00 PM	0	**76**	16	0	3	0	0	4	0	0	1	0	0	1	101
04:00 PM	0	59	4	0	6	0	0	3	0	0	0	0	0	2	74
05:00 PM	0	68	11	0	4	0	0	7	0	0	0	0	0	2	92
06:00 PM	0	33	14	0	0	0	0	2	0	0	0	0	0	1	50
07:00 PM	0	13	6	0	0	0	0	1	0	0	1	0	0	2	23
08:00 PM	0	8	1	0	0	0	0	2	0	0	0	0	0	0	11
09:00 PM	0	7	1	0	1	0	0	1	0	0	**2**	0	0	1	13
10:00 PM	0	6	1	0	0	0	0	1	0	0	0	0	0	0	8
11:00 PM	0	2	0	0	1	0	0	1	0	0	0	0	0	0	4
Day Total	0	824	226	0	47	2	0	84	0	0	25	0	0	29	1237
Percent	0%	66.6%	18.3%	0%	3.8%	0.2%	0%	6.8%	0%	0%	2%	0%	0%	2.3%	
ADT 1237															
AM Peak	12:00 AM	8:00 AM	8:00 AM	12:00 AM	10:00 AM	5:00 AM	12:00 AM	11:00 AM	12:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	6:00 AM	8:00 AM
Volume	0	76	29	0	7	1	0	10	0	0	7	0	0	3	115
PM Peak	12:00 PM	3:00 PM	1:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	9:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM
Volume	0	76	18	0	9	0	0	10	0	0	2	0	0	3	101

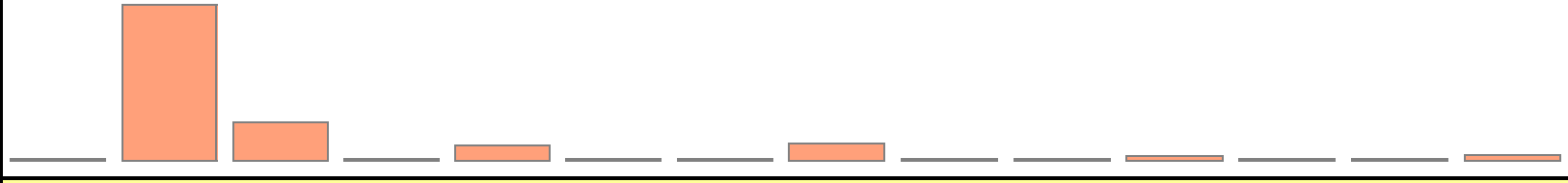
Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	4	1	0	0	0	0	1	0	0	0	0	0	0	6
01:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
02:00 AM	0	3	1	0	1	0	0	2	0	0	0	0	0	0	7
03:00 AM	0	6	5	0	3	0	0	2	0	0	0	0	0	0	16
04:00 AM	0	3	0	0	0	0	0	1	0	0	0	0	0	1	5
05:00 AM	0	19	6	0	2	0	0	2	0	0	1	0	0	0	30
06:00 AM	0	24	12	0	6	0	0	7	0	0	0	0	0	1	50
07:00 AM	0	43	16	0	4	0	0	5	0	0	0	0	0	0	68
08:00 AM	0	70	**26**	0	**9**	0	0	**8**	0	0	0	0	0	2	**115**
09:00 AM	0	72	16	0	7	0	0	7	0	0	1	0	0	**4**	107
10:00 AM	0	**76**	17	0	7	0	0	6	0	0	**2**	0	0	3	111
11:00 AM	0	70	9	0	9	0	0	2	0	0	2	0	0	4	96
12:00 PM	0	68	10	0	6	0	0	8	0	0	1	0	0	**4**	97
01:00 PM	0	72	17	0	4	0	0	**12**	0	0	2	0	0	1	108
02:00 PM	0	71	15	0	6	0	0	2	0	0	1	0	0	4	99
03:00 PM	0	**87**	**24**	0	**7**	0	0	11	0	0	3	0	0	1	**133**
04:00 PM	0	64	17	**1**	2	0	0	7	0	0	**4**	0	0	4	99
05:00 PM	0	66	8	0	2	0	0	2	0	0	1	0	0	1	80
06:00 PM	0	24	11	0	1	0	0	3	0	0	1	0	0	1	41
07:00 PM	0	16	2	0	2	0	0	3	0	0	0	0	0	1	24
08:00 PM	0	11	0	0	1	0	0	2	0	0	0	0	0	1	15
09:00 PM	0	13	1	0	1	0	0	1	0	0	0	0	0	1	17
10:00 PM	0	3	1	0	1	0	0	0	0	0	0	0	0	0	5
11:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Day Total	0	890	216	1	81	0	0	94	0	0	19	0	0	34	1335
Percent	0%	66.7%	16.2%	0.1%	6.1%	0%	0%	7%	0%	0%	1.4%	0%	0%	2.5%	
ADT 1335															
AM Peak	12:00 AM	10:00 AM	8:00 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	10:00 AM	12:00 AM	12:00 AM	9:00 AM	8:00 AM
Volume	0	76	26	0	9	0	0	8	0	0	2	0	0	4	115
PM Peak	12:00 PM	3:00 PM	3:00 PM	4:00 PM	3:00 PM	12:00 PM	12:00 PM	1:00 PM	12:00 PM	12:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	3:00 PM
Volume	0	87	24	1	7	0	0	12	0	0	4	0	0	4	133

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

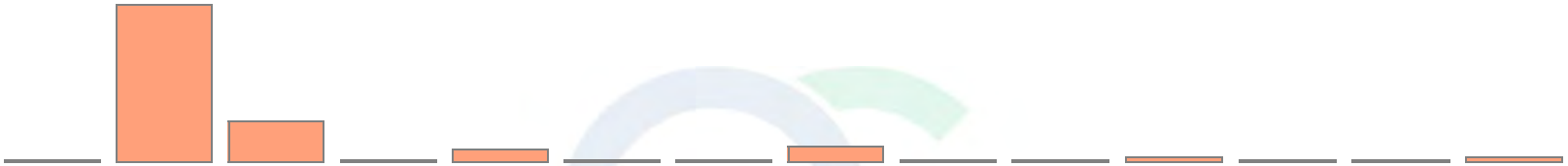
Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd
QC JOB #: 16124308
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Shasta, CA
DATE: Apr 4 2023 - Apr 6 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	0	2550	660	1	184	5	0	251	1	0	65	0	0	73	3790
Percent	0%	67.3%	17.4%	0%	4.9%	0.1%	0%	6.6%	0%	0%	1.7%	0%	0%	1.9%	

ADT
1263



Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: WB SR 299 west of Bunch Grass Lookout Rd **QC JOB #:** 16124308

SPECIFIC LOCATION: **DIRECTION:** WB

CITY/STATE: Shasta, CA **DATE:** Apr 4 2023 - Apr 6 2023

Start Time	Mon	Tue 4 Apr 23	Wed 5 Apr 23	Thu 6 Apr 23	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		2	5	6		4			4	
01:00 AM		3	1	3		2			2	
02:00 AM		6	3	7		5			5	
03:00 AM		7	3	16		9			9	
04:00 AM		9	7	5		7			7	
05:00 AM		27	31	30		29			29	
06:00 AM		35	49	50		45			45	
07:00 AM		69	68	68		68			68	
08:00 AM		93	**115**	**115**		108			108	
09:00 AM		97	92	107		99			99	
10:00 AM		**109**	107	111		**109**			**109**	
11:00 AM		92	100	96		96			96	
12:00 PM		98	**101**	97		99			99	
01:00 PM		95	101	108		101			101	
02:00 PM		**107**	78	99		95			95	
03:00 PM		83	101	**133**		**106**			**106**	
04:00 PM		93	74	99		89			89	
05:00 PM		72	92	80		81			81	
06:00 PM		48	50	41		46			46	
07:00 PM		42	23	24		30			30	
08:00 PM		13	11	15		13			13	
09:00 PM		6	13	17		12			12	
10:00 PM		6	8	5		6			6	
11:00 PM		6	4	3		4			4	
Day Total		1218	1237	1335		1263			1263	
% Weekday Average		96.4%	97.9%	105.7%						
% Week Average		96.4%	97.9%	105.7%		100%				
AM Peak Volume		10:00 AM 109	8:00 AM 115	8:00 AM 115		10:00 AM 109			10:00 AM 109	
PM Peak Volume		2:00 PM 107	12:00 PM 101	3:00 PM 133		3:00 PM 106			3:00 PM 106	

Comments:

Report generated on 4/11/2023 4:55 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

APPENDIX C

CASE_ID	ACCIDENT_YE	PRIMARY_RD	SECONDARY_	STATE_ROUT	COLLISION_SI	NUMBER_KILL	NUMBER_INJU	MOTORCYCLE	TRUCK_ACCI	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
8819497	2019	CHURN CREEI	RT 299	299	3	0	2			40.6140213	-122.3494873	SHASTA	REDDING	-122.3534393	40.61416245
90858538	2018	SR-299 E/B TO	CHURN CREEI	299	2	0	1	Y		40.61386108	-122.3527832	SHASTA	REDDING	-122.3527832	40.61386108
9286452	2020	RT 299	RT 5	299	3	0	1			40.6124382	-122.3628387	SHASTA	REDDING	-122.3606796	40.6126709
9001532	2019	LAKE BL	RT 5	299	4	0	1			40.6140213	-122.3494873	SHASTA	REDDING	-122.3542175	40.61380386
91320575	2020	SR-299 (EAST	I-5	299	4	0	1			40.61296844	-122.3588867	SHASTA	REDDING	-122.3588943	40.61298752
8711810	2018	CHURN CREEI	RT 299	299	3	0	2					SHASTA	REDDING	-122.3475113	40.6149826
90985017	2019	SR-299	JIM HARVEY R	299	3	0	2			40.62654877	-122.2921524	SHASTA	UNINCORPOR	-122.2921524	40.62654877
91342181	2020	SR-299	JACK PINE LAI	299	4	0	2			40.63106155	-122.2710114	SHASTA	UNINCORPOR	-122.2710037	40.63101196
90701577	2018	SR-299	MOOSE CAMP	299	4	0	1			40.86534882	-121.838707	SHASTA	UNINCORPOR	-121.838707	40.86546326
90755792	2018	SR-299	MOOSE CAMP	299	2	0	1		Y	40.86225891	-121.7965088	SHASTA	UNINCORPOR	-121.7965317	40.86219025
91248564	2020	SR-299	INTERMOUNT/	299	4	0	2			40.63140869	-122.2691574	SHASTA	UNINCORPOR	-122.2691574	40.63140488
91060860	2019	SR-299	WILSON WAY	299	4	0	1			40.63291168	-122.2616577	SHASTA	UNINCORPOR	-122.261673	40.63295746
90762950	2018	SR-299 W/B	HELENA LN	299	4	0	3			40.63050842	-122.2733536	SHASTA	UNINCORPOR	-122.2733536	40.63051987
90808511	2018	SR-299	JIM HARVEY R	299	3	0	2		Y	40.62628937	-122.2935028	SHASTA	UNINCORPOR	-122.2934952	40.62626266
91204327	2020	SR-299	HELENA LANE	299	3	0	2			40.63055038	-122.2733002	SHASTA	UNINCORPOR	-122.2732925	40.63053131
91157996	2019	SR-299	BEST LANE	299	3	0	1			40.63256836	-122.2641068	SHASTA	UNINCORPOR	-122.2640839	40.63245773
91021148	2019	SR-299	JIM HARVEY R	299	4	0	1			40.62638092	-122.2929306	SHASTA	UNINCORPOR	-122.2929306	40.62638092
91021813	2019	SR-299 E/B	NEAL LANE	299	3	0	3			40.6291008	-122.2789993	SHASTA	UNINCORPOR	-122.2790375	40.62930298
91274616	2020	SR-299	KERN DR.	299	2	0	1			40.63439941	-122.2555313	SHASTA	UNINCORPOR	-122.2555008	40.63426971
91324201	2020	SR-299	WILSON WAY	299	3	0	2			40.63301086	-122.2616119	SHASTA	UNINCORPOR	-122.2616043	40.63297272
91151052	2019	SR-299	BUNCH GRAS:	299	4	0	1			40.85232925	-121.7687531	SHASTA	UNINCORPOR	-121.7687531	40.852314
91104457	2019	SR-299	NEAL LANE	299	4	0	3		Y	40.62950134	-122.2781525	SHASTA	UNINCORPOR	-122.2781448	40.62948608
91204321	2020	SR-299 E/B	DESCHUTES F	299	3	0	1			40.63623047	-122.2492905	SHASTA	UNINCORPOR	-122.2492981	40.63624191
90684697	2018	SR-299	E. STILLWATE	299	3	0	4			40.62564087	-122.2967911	SHASTA	UNINCORPOR	-122.2967758	40.62555695
91282907	2020	SR-299	BUNCH GRAS:	299	3	0	1			40.85227966	-121.7691803	SHASTA	UNINCORPOR	-121.7691803	40.852314
91340043	2020	SR-299	LIVONA LANE	299	2	0	2			40.62860107	-122.282608	SHASTA	UNINCORPOR	-122.2826004	40.62857056
91047179	2019	SR-299	CLASSIC MEA	299	3	0	1			40.66463852	-122.1855621	SHASTA	UNINCORPOR	-122.1855545	40.66463089
90837967	2018	SR-299	WOODMAN LN	299	1	2	0			40.68505096	-122.1483994	SHASTA	UNINCORPOR	-122.1483765	40.68497467
91425650	2020	SR-299	WOODMAN LN	299	1	1	0			40.68233871	-122.1533966	SHASTA	UNINCORPOR	-122.1534348	40.68239212
91205190	2020	SR-299 W/B	DUBOIS RD	299	2	0	1			40.7461319	-122.0624084	SHASTA	UNINCORPOR	-122.0624542	40.74617767
91342176	2020	SR-299	CEDAR CREEI	299	4	0	3			40.77843094	-122.0041733	SHASTA	UNINCORPOR	-122.0041656	40.77837372
90886613	2018	STATE ROUTE	WOODMAN LA	299	2	0	4			40.68016052	-122.1583633	SHASTA	UNINCORPOR	-122.1583557	40.68014145
90644228	2018	SR-299	SUGAR PINE C	299	3	0	1			40.72277069	-122.0819778	SHASTA	UNINCORPOR	-122.0819702	40.72277069
90810688	2018	STATE ROUTE	MCCANLESS C	299	3	0	3		Y	40.76263046	-122.0120773	SHASTA	UNINCORPOR	-122.0120239	40.76260757
91326012	2020	SR-299	SUGAR PINE C	299	3	0	1			40.70849991	-122.0904388	SHASTA	UNINCORPOR	-122.0905151	40.70850372
91090774	2019	SR-299	SUGAR PINE C	299	3	0	4			40.72045898	-122.0818787	SHASTA	UNINCORPOR	-122.0818558	40.72045517
91302056	2020	SR-299	DU BOIS RD	299	4	0	1			40.74914169	-122.053299	SHASTA	UNINCORPOR	-122.0533295	40.74919128
90854104	2018	SR-299	DUSTY OAKS	299	1	1	0			40.68719101	-122.1363907	SHASTA	UNINCORPOR	-122.1363907	40.68719864
91050412	2019	SR-299	SUGAR PINE C	299	4	0	1			40.72917938	-122.0761719	SHASTA	UNINCORPOR	-122.0761719	40.72917938
91072818	2019	SR-299E	OLD ALTURAS	299	1	1	0		Y	40.64796829	-122.2215576	SHASTA	UNINCORPOR	-122.2215958	40.64799881
90809718	2018	SR-299E	OLD ALTURAS	299	2	0	1			40.64464951	-122.2257233	SHASTA	UNINCORPOR	-122.2257538	40.64469528
90996953	2019	SR-299	SUGAR PINE C	299	3	0	1			40.72048187	-122.0817337	SHASTA	UNINCORPOR	-122.0818405	40.72050095
90919994	2019	SR-299	WOODMAN LA	299	4	0	1			40.6778183	-122.1643524	SHASTA	UNINCORPOR	-122.16436	40.67783737
91083218	2019	SR-299	OAK RUN RD	299	4	0	1			40.75667191	-122.0183716	SHASTA	UNINCORPOR	-122.0183792	40.75667191
91214975	2020	SR-299	SUGAR PINE C	299	1	1	0		Y	40.74610138	-122.0625381	SHASTA	UNINCORPOR	-122.0625381	40.74609756
91144029	2019	SR-299	SUGAR PINE C	299	4	0	1			40.70853043	-122.090477	SHASTA	UNINCORPOR	-122.0905151	40.70853424
90808400	2018	SR-299	SEAMAN GULC	299	4	0	2			40.70338821	-122.0962296	SHASTA	UNINCORPOR	-122.0962296	40.70338821
91099443	2019	SR-299	SUGAR PINE C	299	3	0	2			40.7426796	-122.0681686	SHASTA	UNINCORPOR	-122.0681763	40.74269867
90656470	2018	STATE ROUTE	SUGAR PINE C	299	3	0	1			40.73303986	-122.073761	SHASTA	UNINCORPOR	-122.0737839	40.7330513
91104434	2019	SR-299	SEAMAN GULC	299	4	0	1			40.69715118	-122.1024094	SHASTA	UNINCORPOR	-122.1024551	40.69722366
91134646	2019	SR-299	DU BOIS RD	299	4	0	1			40.7469902	-122.054863	SHASTA	UNINCORPOR	-122.0548172	40.74694824
90735661	2018	SR-299	SUGAR PINE C	299	3	0	1			40.71260071	-122.0838394	SHASTA	UNINCORPOR	-122.0839996	40.71272659
90928589	2019	STATE ROUTE	SUGAR PINE C	299	4	0	1		Y	40.71331024	-122.0837097	SHASTA	UNINCORPOR	-122.0837021	40.71331024
90877327	2018	SR-299	OAK RUN RD	299	3	0	1			40.7458992	-122.0627975	SHASTA	UNINCORPOR	-122.0627213	40.74584961
91045708	2019	SR-299	MPM 49.30	299	4	0	1			40.77845001	-122.002121	SHASTA	UNINCORPOR	-122.0021286	40.7784729
91179899	2020	SR-299	OLD ALTURAS	299	4	0	1			40.64075089	-122.2319717	SHASTA	UNINCORPOR	-122.2320251	40.64084244

91125452	2019	SR-299	JAVELINA	299	4	0	3			40.69430161	-122.1070709	SHASTA	UNINCORPOR	-122.1070938	40.69433975
91308639	2020	SR-299	SEAMAN GULC	299	4	0	1			40.73141098	-122.0760727	SHASTA	UNINCORPOR	-122.0760727	40.73141098
91040564	2019	STATE ROUTE	SUGAR PINE C	299	4	0	1			40.71950912	-122.0822067	SHASTA	UNINCORPOR	-122.082222	40.71951675
91350106	2020	SR-299	DU BOIS RD	299	4	0	1			40.75172043	-122.043457	SHASTA	UNINCORPOR	-122.043457	40.75175095
90888718	2018	STATE ROUTE	WOODMAN LA	299	4	0	1			40.68085861	-122.156662	SHASTA	UNINCORPOR	-122.1566696	40.6808815
91361577	2020	STATE ROUTE	SUGAR PINE C	299	1	1	3		Y	40.74485016	-122.0633698	SHASTA	UNINCORPOR	-122.0633926	40.74487305
91287794	2020	SR-299	TERRY MILL R	299	4	0	2		Y	40.79309845	-121.9433975	SHASTA	UNINCORPOR	-121.9433746	40.79306793
90819703	2018	SR-299	WEBSTER WA	299	4	0	2			40.85292053	-121.9041595	SHASTA	UNINCORPOR	-121.9042282	40.85293198
90684368	2018	SR-299	KING MILL RD	299	4	0	1			40.80075073	-121.9389267	SHASTA	UNINCORPOR	-121.9389191	40.80075073
91273293	2020	SR-299	WOODHILL DF	299	4	0	1			40.84542084	-121.9145203	SHASTA	UNINCORPOR	-121.9145203	40.84545517
90635010	2018	SR-299 W/B	WOODHILL DF	299	4	0	1			40.84569931	-121.9019089	SHASTA	UNINCORPOR	-121.9019089	40.8456955
91247262	2020	SR-299	WOODHILL DF	299	4	0	1			40.84613037	-121.9015427	SHASTA	UNINCORPOR	-121.9014893	40.84609604
90818855	2018	SR-299	FENDERS FER	299	1	1	1			40.82154846	-121.9329071	SHASTA	UNINCORPOR	-121.9329071	40.82154846
90819804	2018	SR-299	DUNN MOODY	299	2	0	2			40.81800842	-121.9355774	SHASTA	UNINCORPOR	-121.9356232	40.81804276
91313828	2020	SR-299	BIG BEND RD	299	2	0	1			40.8655014	-121.9126587	SHASTA	UNINCORPOR	-121.912674	40.86553955
90719178	2018	STATE ROUTE	BIG BEND RD	299	3	0	2		Y	40.8468399	-121.9011612	SHASTA	UNINCORPOR	-121.9012146	40.8468399
91272133	2020	SR-299	WOODHILL DF	299	4	0	1			40.85972977	-121.9088516	SHASTA	UNINCORPOR	-121.9087982	40.85977554
90965735	2019	SR-299	WOODHILL DF	299	3	0	2			40.84671021	-121.9074936	SHASTA	UNINCORPOR	-121.9075089	40.84665298
90873289	2018	STATE ROUTE	TAMARACK RI	299	3	0	1			40.87707138	-121.7395706	SHASTA	UNINCORPOR	-121.7395782	40.87708282
91189927	2020	SR-299	BUNCH GRAS	299	3	0	1	Y		40.85231018	-121.7603226	SHASTA	UNINCORPOR	-121.7603226	40.85228729
91316938	2020	SR-299	TAMARACK RI	299	3	0	1	Y		40.87429047	-121.7061768	SHASTA	UNINCORPOR	-121.7061996	40.87418365
90952284	2019	SR-299	MOOSE CAMP	299	2	0	1			40.85593033	-121.7442398	SHASTA	UNINCORPOR	-121.7444077	40.85620117
90984073	2019	STATE ROUTE	ELM ST.	299	2	0	11		Y	40.87779999	-121.6768723	SHASTA	UNINCORPOR	-121.6768417	40.87776566
91253047	2020	SR-299	PINE STREET	299	4	0	2			40.88008881	-121.6739578	SHASTA	UNINCORPOR	-121.6739655	40.88009644
91163903	2020	SR-299	TIMBER DR	299	4	0	3			40.88127136	-121.6725006	SHASTA	UNINCORPOR	-121.6725006	40.88127136

$$\text{Crash Rate} = \frac{(\text{Number of Crashes}) \times (1{,}000{,}000)}{\text{Vehicle Miles of Travel}}$$

$$\text{Fatality Rate} = \frac{(\text{Number of Victims}) \times (100{,}000{,}000)}{\text{Vehicle Miles of Travel}}$$

The terms Rural and Urban are not to be confused with Inside and Outside Cities since they are not necessarily the same. Urban areas are defined and approved by the Federal Highway Administration (FHWA) on the general basis of urban characteristics and do not necessarily coincide with city boundaries.

Suburban areas are defined as areas inside city limits but classified as rural, plus areas outside city limits but classified as urban by the FHWA. All areas not classified as urban are rural.

D. Basic or Average Crash Rate Tables

The basic or average crash rate tables begin on page 83. The rates shown were all reviewed and revised during March 2020, with addition of Intersection Rate Group 31 – Roundabout, all access.

The average rates for all highway, intersection and ramp rate groups are primarily based on crash data for the years 2015 through 2019. These five years data were also used to determine the percentages of fatal and injury crashes.

It should be noted that some of the rate groups are based on limited amounts of mileage and travel. The use of these rate groups by local agencies as a standard or average rate for local roads may or may not be entirely appropriate.

E. Pedestrian and Bicycle Fatality and Injury Data

The pedestrian tables begin on page 91. The data contained in these tables includes the number of pedestrians that were involved in crashes on California state highways. Beginning 2012, crosswalks on state highways are included as intersection crash locations.

The bicycle tables begin on page 101. The data contained in these tables include the number of bicyclists that were involved in crashes on California state highways.

The pedestrian and bicyclist data also include crashes in the ramp area 4 and intersection area 6 as defined below.

- **Non-state Route – Associated with Ramp Area 4** is the area in an interchange on a county road or city street within 100 feet outside the outermost ramp terminal.

- **Non-state Route – Associated with State Route Intersection Area 6** is when a vehicle leaves the road from or when the crash occurs on a non-state route outside the state right of way limits and within 250 feet from the center of the intersection.

CALIFORNIA STATE HIGHWAYS
STATEWIDE TRAVEL AND CRASH RATES

LANE TYPE	2020 ROAD MILES	2020 TRAVEL (MVM)	2020 CRASHES TOTAL PER MVM	2020 CRASHES FATAL+ INJURY PER MVM	2020 VICTIMS FATALITIES PER 100 MVM	3-YR Rates (2018, 2019, 2020) CRASHES TOTAL PER MVM	3-YR Rates (2018, 2019, 2020) CRASHES FATAL + INJURY PER MVM	3-YR Rates (2018, 2019, 2020) VICTIMS FATALITIES PER 100 MVM
RURAL (INSIDE + OUTSIDE CITY)								
2 AND 3 LN	7,058.8	9,766.5	0.99	0.45	3.44	1.03	0.46	3.32
4+ UND	70.2	252.9	0.85	0.28	1.58	0.96	0.33	2.51
4+ DIV	324.1	1,730.2	0.61	0.23	1.56	0.74	0.27	1.53
SUBTOTAL	7,453.0	11,749.6	0.93	0.41	3.12	0.99	0.43	3.04
2 AND 3 LN EXP	718.5	1,550.2	0.68	0.29	2.45	0.72	0.30	2.34
4+ DIV EXP	589.5	3,651.3	0.53	0.19	1.31	0.60	0.21	1.30
NON FWY	8,761.1	16,951.1	0.82	0.35	2.67	0.88	0.37	2.61
FREEWAY	1,720.1	22,914.6	0.46	0.15	0.83	0.49	0.16	0.87
TOTAL	10,481.2	39,865.7	0.61	0.24	1.61	0.65	0.25	1.60
URBAN (INSIDE + OUTSIDE CITY)								
2 AND 3 LN	921.2	3,310.4	1.09	0.48	2.45	1.20	0.52	1.95
4+ UND	86.1	621.4	1.37	0.62	2.09	1.41	0.63	2.32
4+ DIV	588.7	6,287.1	1.00	0.50	2.00	1.13	0.56	1.72
SUBTOTAL	1,595.9	10,218.9	1.05	0.50	2.15	1.17	0.55	1.83
2 AND 3 LN EXP	97.8	356.8	0.93	0.37	2.52	0.92	0.35	1.72
4+ DIV EXP	187.3	2,147.5	0.71	0.29	0.79	0.79	0.31	0.93
NON FWY	1,881.0	12,723.2	0.99	0.46	1.93	1.10	0.50	1.67
FREEWAY	2,691.4	120,925.3	0.78	0.24	0.61	0.95	0.30	0.51
TOTAL	4,572.4	133,648.5	0.80	0.27	0.73	0.96	0.32	0.62
STATEWIDE								
2 AND 3 LN	7,980.0	13,076.9	1.02	0.46	3.19	1.07	0.47	2.97
4+ UND	156.2	874.3	1.22	0.53	1.94	1.29	0.55	2.37
4+ DIV	912.8	8,017.3	0.91	0.44	1.91	1.05	0.50	1.68
SUBTOTAL	9,049.0	21,968.5	0.99	0.45	2.67	1.07	0.48	2.47
2 AND 3 LN EXP	816.3	1,907.0	0.73	0.31	2.46	0.76	0.31	2.22
4+ DIV EXP	776.8	5,798.8	0.60	0.23	1.12	0.67	0.25	1.16
NON FWY	10,642.1	29,674.3	0.89	0.40	2.36	0.97	0.43	2.20
FREEWAY	4,411.5	143,839.9	0.73	0.23	0.64	0.88	0.28	0.56
TOTAL	15,053.6	173,514.2	0.76	0.26	0.93	0.89	0.30	0.84

APPENDIX D

HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	5/15/2023
Agency	California Energy Commission	Analysis Year	2020
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	PRE-CONSTRUCTION_Segment 1- Eastbound - between I-5 and Hawley Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	-0.41
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	575	Heavy Vehicle Adjustment Factor (f_{HV})	0.942
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	324
Total Trucks, %	4.73	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	30	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	70	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	306	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.35
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	5/15/2023
Agency	California Energy Commission	Analysis Year	2020
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	PRE-CONSTRUCTION_Segment 1- Eastbound - between I-5 and Hawley Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	0.41
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	1100	Heavy Vehicle Adjustment Factor (f_{HV})	0.936
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	625
Total Trucks, %	4.73	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	30	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	70	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.7
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	585	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	5/15/2023
Agency	California Energy Commission	Analysis Year	2020
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	PRE-CONSTRUCTION_Segment 2 - Eastbound - between Hawley Road and Old Oregon Trail	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	-0.08
Measured or Base Free-Flow Speed	Base	Grade Length, mi	1.70
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	5
Median Type	Divided	Total Lateral Clearance (TLC), ft	11
Free-Flow Speed (FFS), mi/h	54.6		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	475	Heavy Vehicle Adjustment Factor (f_{HV})	0.951
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	266
Total Trucks, %	3.76	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	23	Adjusted Capacity (c_{adj}), pc/h/ln	1998
Tractor-Trailers (TT), %	77	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	5.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	253	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.82
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	5/15/2023
Agency	California Energy Commission	Analysis Year	2020
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	PRE-CONSTRUCTION_Segment 2 - Eastbound - between Hawley Road and Old Oregon Trail	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	0.08
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	575	Heavy Vehicle Adjustment Factor (f_{HV})	0.950
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	322
Total Trucks, %	3.76	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	23	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	77	Volume-to-Capacity Ratio (v/c)	0.16

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	306	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.92
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	Carlos Arias	Date	5/15/2023
Agency	Westwood	Analysis Year	2020
Jurisdiction	Shasta County	Time Period Analyzed	Peak Hour
Project Description	Fountain Wind Two Lane e-w E Bound - Along CA-299E from Old Oregon Trail to Plumas Street	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22704
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	277	Opposing Demand Flow Rate, veh/h	484
Peak Hour Factor	0.94	Total Trucks, %	3.76
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient	3.71254	Speed Power Coefficient	0.48424
PF Slope Coefficient	-1.26145	PF Power Coefficient	0.76719
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22704	-	-	59.0

Vehicle Results

Average Speed, mi/h	59.0	Percent Followers, %	37.5
Segment Travel Time, minutes	4.37	Followers Density, followers/mi/ln	1.8
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	99999
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	138	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.28696	Speed Power Coefficient	1.58663
PF Slope Coefficient	-0.96880	PF Power Coefficient	0.89273
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	99999	-	-	61.2

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	92	46
Percentage of Heavy Vehicles (HV%), %	5.96	32.90
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.2	5.7

Vehicle Results

Average Speed, mi/h	61.2	Percent Followers, %	15.3
Segment Travel Time, minutes	18.58	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	15105
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	144	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.24983	Speed Power Coefficient	1.54401
PF Slope Coefficient	-0.96855	PF Power Coefficient	0.89690
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15105	-	-	61.1

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	96	48
Percentage of Heavy Vehicles (HV%), %	5.96	32.72
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.5	5.8

Vehicle Results

Average Speed, mi/h	61.1	Percent Followers, %	15.6
Segment Travel Time, minutes	2.81	Followers Density, followers/mi/ln	0.4
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	35904
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	144	Opposing Demand Flow Rate, veh/h	144
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.08

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.8
Speed Slope Coefficient	4.53356	Speed Power Coefficient	0.66486
PF Slope Coefficient	-1.17419	PF Power Coefficient	0.79683
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	0.5
%Improved % Followers	9.4	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	35904	-	-	59.3

Vehicle Results

Average Speed, mi/h	59.3	Percent Followers, %	22.1
Segment Travel Time, minutes	6.89	Followers Density, followers/mi/ln	0.5
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12144
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	179	Opposing Demand Flow Rate, veh/h	179
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	30.47189	Speed Power Coefficient	0.74794
PF Slope Coefficient	-1.43469	PF Power Coefficient	0.80690
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	7.2	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12144	-	-	42.4

Vehicle Results

Average Speed, mi/h	42.4	Percent Followers, %	30.1
Segment Travel Time, minutes	3.25	Followers Density, followers/mi/ln	1.2
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	25872
Measured FFS	Measured	Free-Flow Speed, mi/h	46.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	179	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	46.0
Speed Slope Coefficient	12.22850	Speed Power Coefficient	1.55917
PF Slope Coefficient	-0.91332	PF Power Coefficient	0.77795
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	25872	-	-	45.8

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	115	63
Percentage of Heavy Vehicles (HV%), %	12.40	64.76
Initial Average Speed (Sint), mi/h	74.4	63.6
Average Speed at Midpoint (SPLmid), mi/h	76.5	61.6
Percent Followers at Midpoint (PFPLmid), %	8.8	0.0

Vehicle Results

Average Speed, mi/h	45.8	Percent Followers, %	21.3
Segment Travel Time, minutes	6.42	Followers Density, followers/mi/ln	0.8
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	30624
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	213	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	30.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.19

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	28.73583	Speed Power Coefficient	1.16507
PF Slope Coefficient	-0.82245	PF Power Coefficient	1.06542
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30624	-	-	44.7

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	135	78
Percentage of Heavy Vehicles (HV%), %	12.00	61.11
Initial Average Speed (Sint), mi/h	72.7	55.9
Average Speed at Midpoint (SPLmid), mi/h	74.7	53.9
Percent Followers at Midpoint (PFPLmid), %	11.0	-

Vehicle Results

Average Speed, mi/h	44.7	Percent Followers, %	14.6

Segment Travel Time, minutes	7.78	Followers Density, followers/mi/ln	0.7
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	7392
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	191	Opposing Demand Flow Rate, veh/h	197
Peak Hour Factor	0.94	Total Trucks, %	17.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.9
Speed Slope Coefficient	3.62198	Speed Power Coefficient	0.54015
PF Slope Coefficient	-1.19891	PF Power Coefficient	0.80879
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	14.0	% Improved Avg Speed	0.6

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	7392	-	-	59.9

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	27.0
Segment Travel Time, minutes	1.39	Followers Density, followers/mi/ln	0.7
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	463	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	19.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.6
Speed Slope Coefficient	3.59598	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36655	PF Power Coefficient	0.74751

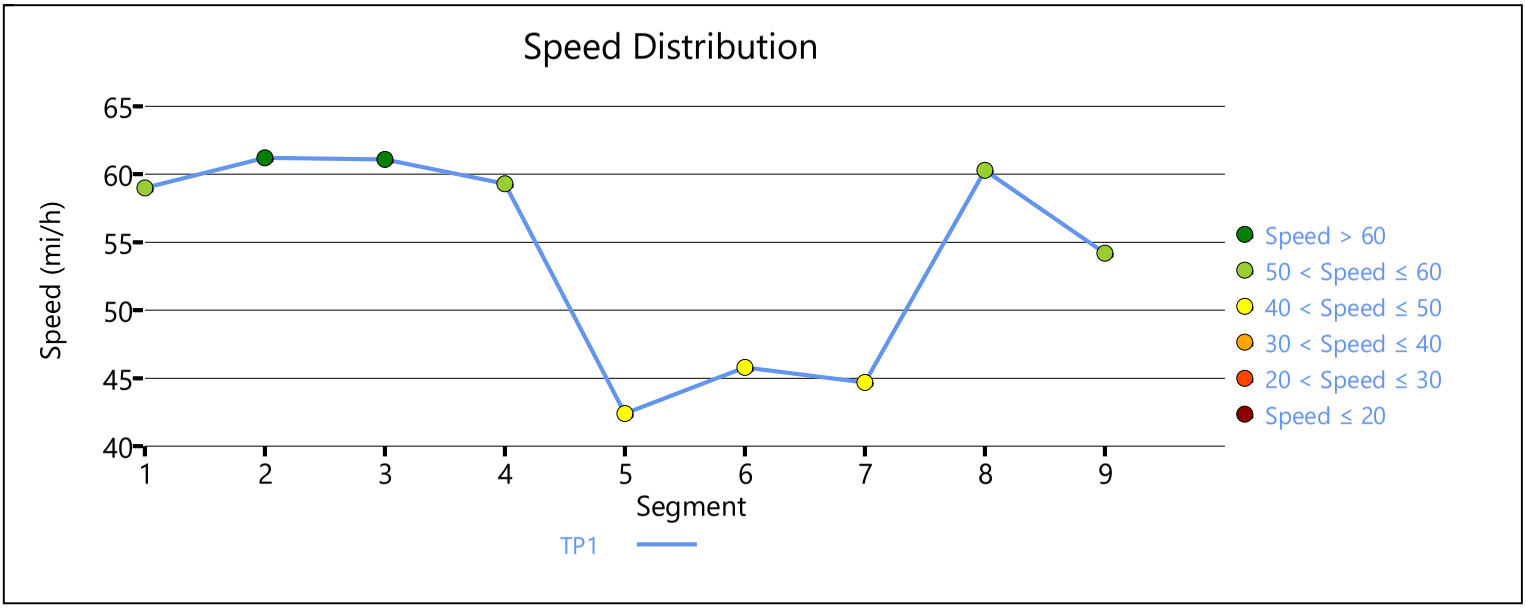
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	4.6
%Improved % Followers	10.7	% Improved Avg Speed	0.0

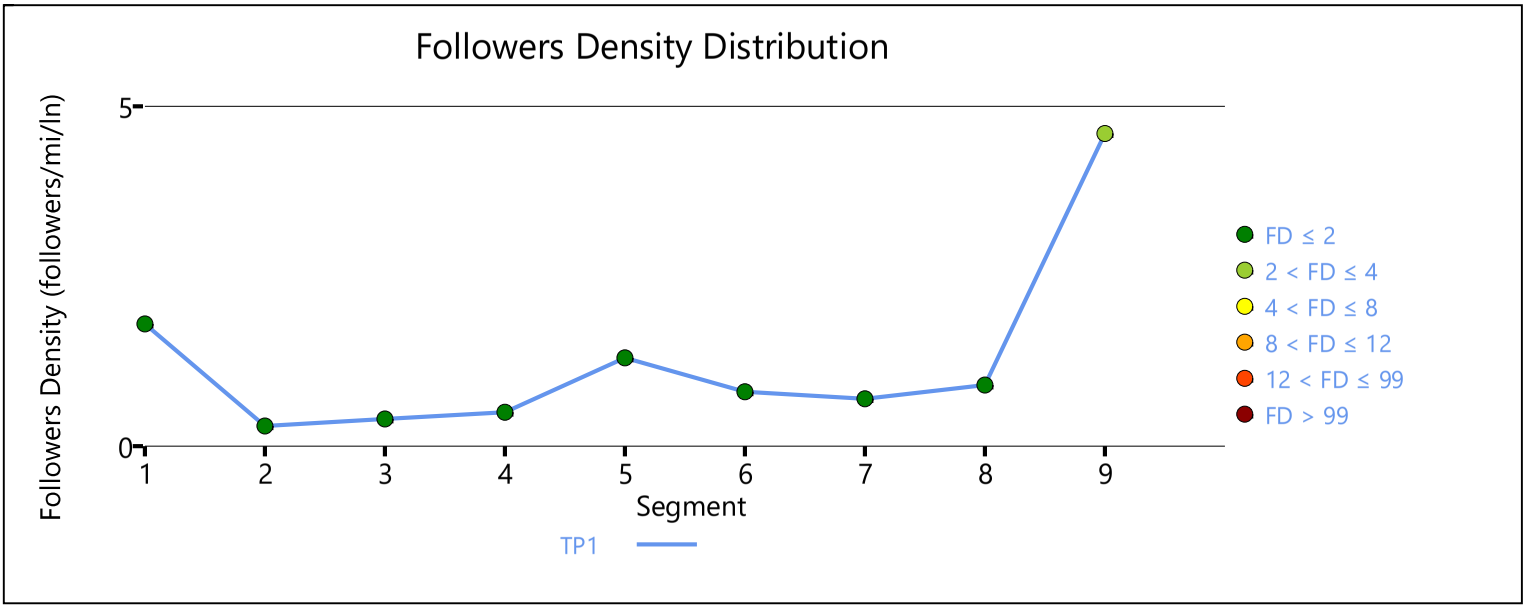
Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	54.2

Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	53.6
Segment Travel Time, minutes	0.55	Followers Density, followers/mi/ln	4.1
Vehicle LOS	C		





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HCS7 Two-Lane Highway Report

Project Information

Analyst	Carlos Arias	Date	4/12/2023
Agency	Westwood	Analysis Year	2020
Jurisdiction	Shasta County	Time Period Analyzed	Peak Hour
Project Description	Fountain Wind Two Lane e-w _ West Bound - Along CA-299E from Old Oregon Trail to Plumas Street	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	191	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	19.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.5
Speed Slope Coefficient	3.88683	Speed Power Coefficient	0.44359
PF Slope Coefficient	-1.43208	PF Power Coefficient	0.73380
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	54.2

Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	34.7
Segment Travel Time, minutes	0.55	Followers Density, followers/mi/ln	1.2
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	7392
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	197	Opposing Demand Flow Rate, veh/h	191
Peak Hour Factor	0.94	Total Trucks, %	17.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.9
Speed Slope Coefficient	3.62000	Speed Power Coefficient	0.54167
PF Slope Coefficient	-1.19762	PF Power Coefficient	0.80923
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	7392	-	-	59.8

Vehicle Results

Average Speed, mi/h	59.8	Percent Followers, %	27.5
Segment Travel Time, minutes	1.40	Followers Density, followers/mi/ln	0.9
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	30624
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	213	Opposing Demand Flow Rate, veh/h	213
Peak Hour Factor	0.94	Total Trucks, %	30.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	30.13295	Speed Power Coefficient	0.73099
PF Slope Coefficient	-1.45615	PF Power Coefficient	0.80231
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30624	-	-	40.9

Vehicle Results

Average Speed, mi/h	40.9	Percent Followers, %	34.3
Segment Travel Time, minutes	8.51	Followers Density, followers/mi/ln	1.8
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	25872
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	179	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	12.22850	Speed Power Coefficient	1.55917
PF Slope Coefficient	-0.91061	PF Power Coefficient	0.78832
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	25872	-	-	46.8

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	115	63
Percentage of Heavy Vehicles (HV%), %	12.40	64.76
Initial Average Speed (Sint), mi/h	74.4	63.6
Average Speed at Midpoint (SPLmid), mi/h	76.5	61.6
Percent Followers at Midpoint (PFPLmid), %	8.8	0.0

Vehicle Results

Average Speed, mi/h	46.8	Percent Followers, %	20.9
Segment Travel Time, minutes	6.29	Followers Density, followers/mi/ln	0.8
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12144
Measured FFS	Measured	Free-Flow Speed, mi/h	46.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	179	Opposing Demand Flow Rate, veh/h	179
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	46.0
Speed Slope Coefficient	30.47189	Speed Power Coefficient	0.74794
PF Slope Coefficient	-1.43570	PF Power Coefficient	0.80084
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	13.9	% Improved Avg Speed	0.5

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12144	-	-	41.4

Vehicle Results

Average Speed, mi/h	41.6	Percent Followers, %	30.3
Segment Travel Time, minutes	3.31	Followers Density, followers/mi/ln	1.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	35904
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	144	Opposing Demand Flow Rate, veh/h	144
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.08

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.8
Speed Slope Coefficient	4.53356	Speed Power Coefficient	0.66486
PF Slope Coefficient	-1.17419	PF Power Coefficient	0.79683
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	0.5
%Improved % Followers	8.5	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	35904	-	-	59.3

Vehicle Results

Average Speed, mi/h	59.3	Percent Followers, %	22.1
Segment Travel Time, minutes	6.89	Followers Density, followers/mi/ln	0.5
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	15105
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	138	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.24983	Speed Power Coefficient	1.54401
PF Slope Coefficient	-0.96855	PF Power Coefficient	0.89690
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15105	-	-	61.2

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	92	46
Percentage of Heavy Vehicles (HV%), %	5.96	32.90
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.1	5.6

Vehicle Results

Average Speed, mi/h	61.2	Percent Followers, %	15.1
Segment Travel Time, minutes	2.81	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	99999
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	138	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.28696	Speed Power Coefficient	1.58663
PF Slope Coefficient	-0.96880	PF Power Coefficient	0.89273
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	99999	-	-	61.2

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	92	46
Percentage of Heavy Vehicles (HV%), %	5.96	32.90
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.2	5.7

Vehicle Results

Average Speed, mi/h	61.2	Percent Followers, %	15.3
Segment Travel Time, minutes	18.58	Followers Density, followers/mi/ln	0.3
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22704
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	484	Opposing Demand Flow Rate, veh/h	277
Peak Hour Factor	0.94	Total Trucks, %	3.76
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

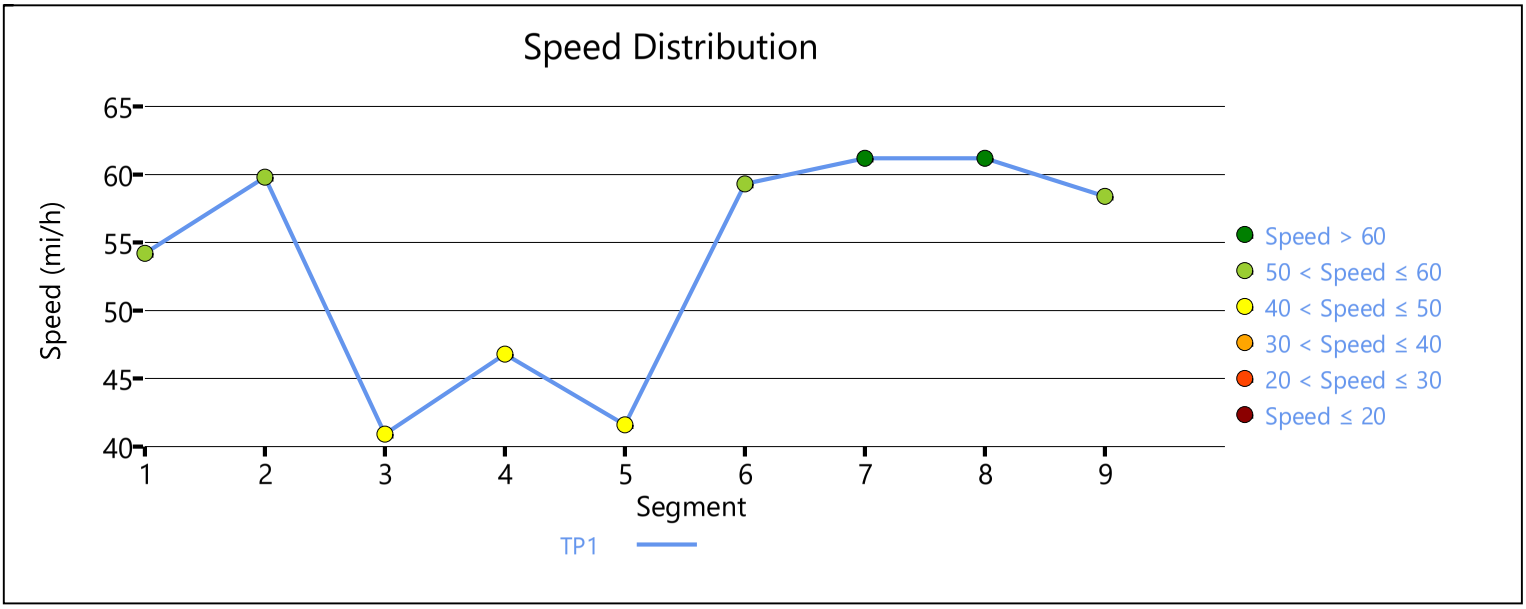
Segment Vertical Class	1	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient	3.65687	Speed Power Coefficient	0.52021
PF Slope Coefficient	-1.23195	PF Power Coefficient	0.77833
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	4.2
%Improved % Followers	4.9	% Improved Avg Speed	0.0

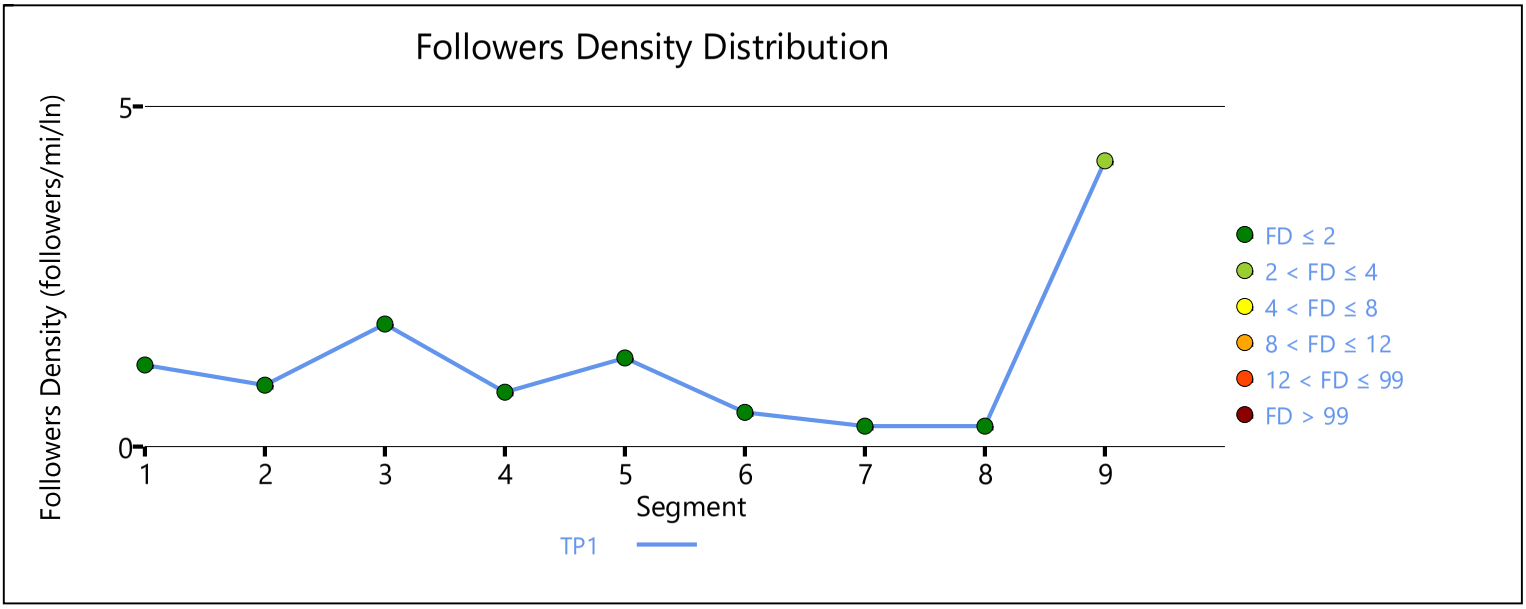
Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	22704	-	-	58.4

Vehicle Results			
Average Speed, mi/h	58.4	Percent Followers, %	50.4
Segment Travel Time, minutes	4.42	Followers Density, followers/mi/ln	4.0
Vehicle LOS	B		





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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2025
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	CONSTRUCTION_Segment 1- Eastbound - between I-5 and Hawley Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	-0.41
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	666	Heavy Vehicle Adjustment Factor (f_{HV})	0.942
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	376
Total Trucks, %	4.73	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	30	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	70	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	7.0
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	354	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.43
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2025
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	CONSTRUCTION_Segment 1- Eastbound - between I-5 and Hawley Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	0.41
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	1160	Heavy Vehicle Adjustment Factor (f_{HV})	0.936
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	659
Total Trucks, %	4.73	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	30	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	70	Volume-to-Capacity Ratio (v/c)	0.33

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	12.3
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	617	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2025
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	CONSTRUCTION_Segment 2 - Eastbound - between Hawley Road and Old Oregon Trail	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	-0.08
Measured or Base Free-Flow Speed	Base	Grade Length, mi	1.70
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	5
Median Type	Divided	Total Lateral Clearance (TLC), ft	11
Free-Flow Speed (FFS), mi/h	54.6		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	566	Heavy Vehicle Adjustment Factor (f_{HV})	0.951
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	316
Total Trucks, %	3.76	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	23	Adjusted Capacity (c_{adj}), pc/h/ln	1998
Tractor-Trailers (TT), %	77	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	5.9
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	301	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.91
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2025
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	CONSTRUCTION_Segment 2 - Eastbound - between Hawley Road and Old Oregon Trail	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	0.08
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	635	Heavy Vehicle Adjustment Factor (f_{HV})	0.950
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	356
Total Trucks, %	3.76	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	23	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	77	Volume-to-Capacity Ratio (v/c)	0.18

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	338	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.97
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	Carlos Arias	Date	6/9/2023
Agency	Westwood	Analysis Year	2025
Jurisdiction	Shasta County	Time Period Analyzed	Peak Hour
Project Description	Fountain Wind Two Lane e-w E Bound - Along CA-299E from Old Oregon Trail to Plumas Street	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22704
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	373	Opposing Demand Flow Rate, veh/h	548
Peak Hour Factor	0.94	Total Trucks, %	3.76
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient	3.72711	Speed Power Coefficient	0.47597
PF Slope Coefficient	-1.26788	PF Power Coefficient	0.76437
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22704	-	-	58.6

Vehicle Results

Average Speed, mi/h	58.6	Percent Followers, %	45.0
Segment Travel Time, minutes	4.41	Followers Density, followers/mi/ln	2.9
Vehicle LOS	B		

Segment 2

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	99999
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	235	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.28696	Speed Power Coefficient	1.58663
PF Slope Coefficient	-0.96880	PF Power Coefficient	0.89273
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	99999	-	-	60.9

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	150	85
Percentage of Heavy Vehicles (HV%), %	5.96	30.60
Initial Average Speed (Sint), mi/h	61.5	60.7
Average Speed at Midpoint (SPLmid), mi/h	63.2	59.0
Percent Followers at Midpoint (PFPLmid), %	16.8	10.0

Vehicle Results

Average Speed, mi/h	60.9	Percent Followers, %	23.4
Segment Travel Time, minutes	18.66	Followers Density, followers/mi/ln	0.9
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	15105
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	235	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.24983	Speed Power Coefficient	1.54401
PF Slope Coefficient	-0.96855	PF Power Coefficient	0.89690
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15105	-	-	60.9

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	150	85
Percentage of Heavy Vehicles (HV%), %	5.96	30.60
Initial Average Speed (Sint), mi/h	61.5	60.7
Average Speed at Midpoint (SPLmid), mi/h	63.2	59.0
Percent Followers at Midpoint (PFPLmid), %	16.7	9.9

Vehicle Results

Average Speed, mi/h	60.9	Percent Followers, %	23.2
Segment Travel Time, minutes	2.82	Followers Density, followers/mi/ln	0.9
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	35904
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	240	Opposing Demand Flow Rate, veh/h	207
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.8
Speed Slope Coefficient	4.58482	Speed Power Coefficient	0.64081
PF Slope Coefficient	-1.19424	PF Power Coefficient	0.79047
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	8.4	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	35904	-	-	58.5

Vehicle Results

Average Speed, mi/h	58.5	Percent Followers, %	32.1
Segment Travel Time, minutes	6.97	Followers Density, followers/mi/ln	1.2
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12144
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	276	Opposing Demand Flow Rate, veh/h	243
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	30.59918	Speed Power Coefficient	0.71659
PF Slope Coefficient	-1.47032	PF Power Coefficient	0.80180
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	2.9
%Improved % Followers	6.2	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12144	-	-	38.2

Vehicle Results

Average Speed, mi/h	38.2	Percent Followers, %	40.7
Segment Travel Time, minutes	3.61	Followers Density, followers/mi/ln	2.8
Vehicle LOS	B		

Segment 6

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	25872
Measured FFS	Measured	Free-Flow Speed, mi/h	46.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	276	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.25

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	46.0
Speed Slope Coefficient	12.22850	Speed Power Coefficient	1.55917
PF Slope Coefficient	-0.91332	PF Power Coefficient	0.77795
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	25872	-	-	45.2

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	169	106
Percentage of Heavy Vehicles (HV%), %	12.40	60.59
Initial Average Speed (Sint), mi/h	74.3	64.5
Average Speed at Midpoint (SPLmid), mi/h	76.4	62.4
Percent Followers at Midpoint (PFPLmid), %	12.7	0.5

Vehicle Results

Average Speed, mi/h	45.2	Percent Followers, %	28.5
Segment Travel Time, minutes	6.51	Followers Density, followers/mi/ln	1.7
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	30624
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	310	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	30.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	28.73583	Speed Power Coefficient	1.16507
PF Slope Coefficient	-0.82245	PF Power Coefficient	1.06542
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30624	-	-	42.3

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	188	122
Percentage of Heavy Vehicles (HV%), %	12.00	57.68
Initial Average Speed (Sint), mi/h	72.4	56.3
Average Speed at Midpoint (SPLmid), mi/h	74.4	54.3
Percent Followers at Midpoint (PFPLmid), %	15.4	-

Vehicle Results

Average Speed, mi/h	42.3	Percent Followers, %	21.0

Segment Travel Time, minutes	8.22	Followers Density, followers/mi/ln	1.5
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	7392
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	288	Opposing Demand Flow Rate, veh/h	261
Peak Hour Factor	0.94	Total Trucks, %	17.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.9
Speed Slope Coefficient	3.64391	Speed Power Coefficient	0.52382
PF Slope Coefficient	-1.21262	PF Power Coefficient	0.80405
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.7
%Improved % Followers	13.0	% Improved Avg Speed	0.1

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	7392	-	-	59.3

Vehicle Results

Average Speed, mi/h	59.4	Percent Followers, %	36.0
Segment Travel Time, minutes	1.41	Followers Density, followers/mi/ln	1.5
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	560	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	19.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.33

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.6
Speed Slope Coefficient	3.59598	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36655	PF Power Coefficient	0.74751

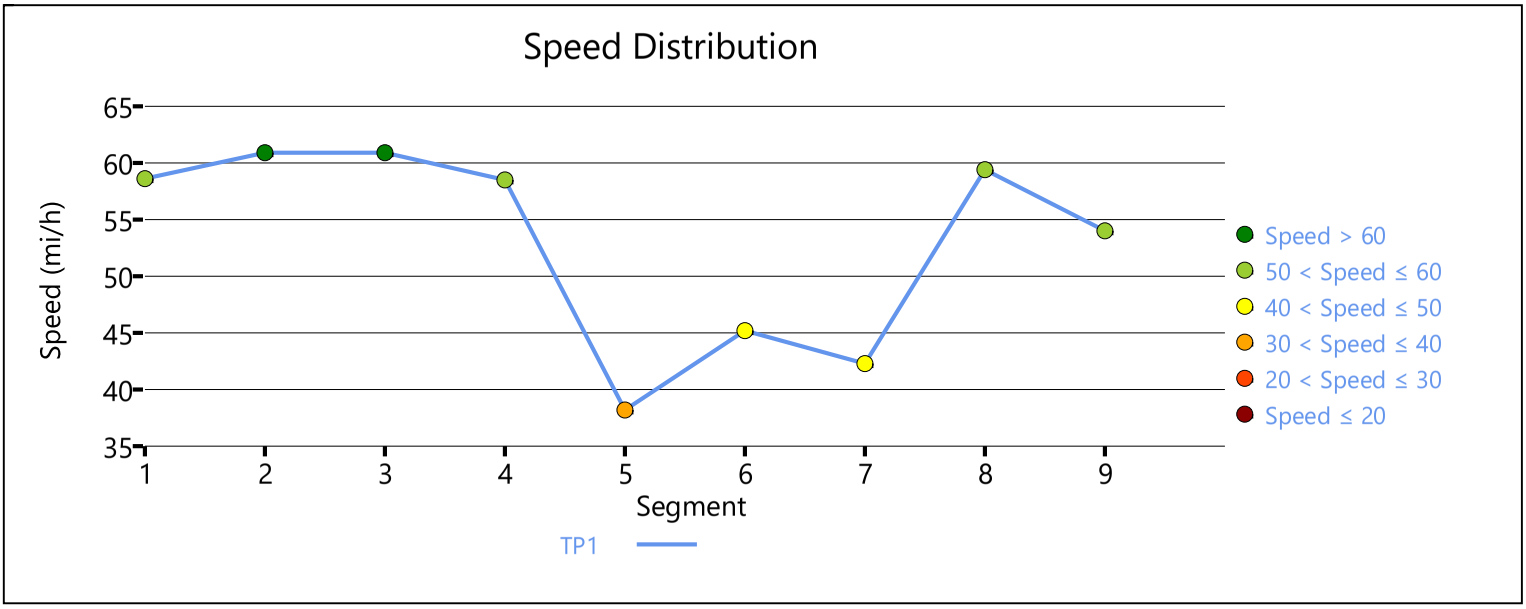
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	6.1
%Improved % Followers	9.7	% Improved Avg Speed	0.0

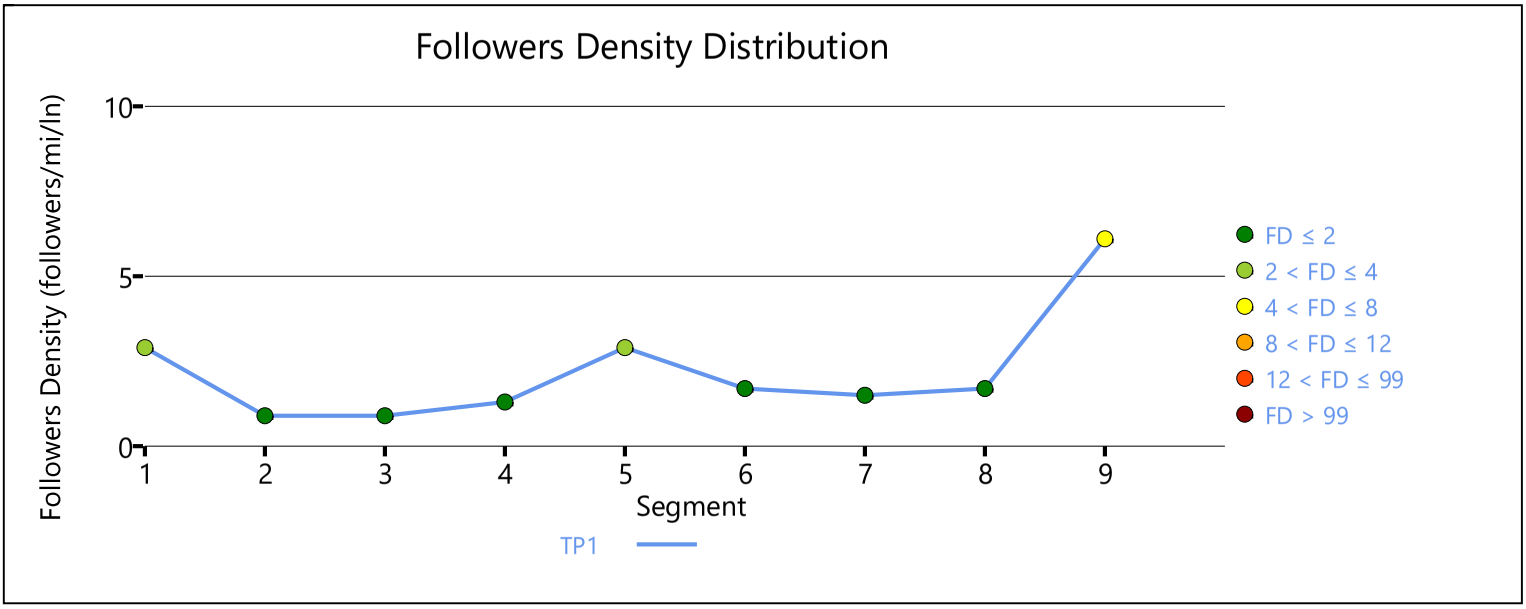
Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	54.0

Vehicle Results

Average Speed, mi/h	54.0	Percent Followers, %	58.7
Segment Travel Time, minutes	0.56	Followers Density, followers/mi/ln	5.5
Vehicle LOS	C		





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HCS7 Two-Lane Highway Report

Project Information

Analyst	Carlos Arias	Date	6/9/2023
Agency	Westwood	Analysis Year	2025
Jurisdiction	Shasta County	Time Period Analyzed	Peak Hour
Project Description	Fountain Wind Two Lane e-w _ West Bound - Along CA-299E from Old Oregon Trail to Plumas Street	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	255	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	19.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.5
Speed Slope Coefficient	3.88683	Speed Power Coefficient	0.44359
PF Slope Coefficient	-1.43208	PF Power Coefficient	0.73380
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	53.8

Vehicle Results

Average Speed, mi/h	53.8	Percent Followers, %	40.9
Segment Travel Time, minutes	0.56	Followers Density, followers/mi/ln	1.9
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	7392
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	261	Opposing Demand Flow Rate, veh/h	288
Peak Hour Factor	0.94	Total Trucks, %	17.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.15

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.9
Speed Slope Coefficient	3.65256	Speed Power Coefficient	0.51767
PF Slope Coefficient	-1.21772	PF Power Coefficient	0.80222
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	7392	-	-	59.4

Vehicle Results

Average Speed, mi/h	59.4	Percent Followers, %	33.9
Segment Travel Time, minutes	1.41	Followers Density, followers/mi/ln	1.5
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	30624
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	277	Opposing Demand Flow Rate, veh/h	310
Peak Hour Factor	0.94	Total Trucks, %	30.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	30.30657	Speed Power Coefficient	0.69074
PF Slope Coefficient	-1.50563	PF Power Coefficient	0.79558
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30624	-	-	37.9

Vehicle Results

Average Speed, mi/h	37.9	Percent Followers, %	41.8
Segment Travel Time, minutes	9.19	Followers Density, followers/mi/ln	3.1
Vehicle LOS	B		

Segment 4

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	25872
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.22

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	12.22850	Speed Power Coefficient	1.55917
PF Slope Coefficient	-0.91061	PF Power Coefficient	0.78832
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	25872	-	-	46.4

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	151	91
Percentage of Heavy Vehicles (HV%), %	12.40	61.80
Initial Average Speed (Sint), mi/h	74.4	64.2
Average Speed at Midpoint (SPLmid), mi/h	76.4	62.2
Percent Followers at Midpoint (PFPLmid), %	11.4	0.3

Vehicle Results

Average Speed, mi/h	46.4	Percent Followers, %	25.8
Segment Travel Time, minutes	6.33	Followers Density, followers/mi/ln	1.3
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12144
Measured FFS	Measured	Free-Flow Speed, mi/h	46.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	276
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	46.0
Speed Slope Coefficient	30.65835	Speed Power Coefficient	0.70288
PF Slope Coefficient	-1.48821	PF Power Coefficient	0.79349
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	2.4
%Improved % Followers	14.0	% Improved Avg Speed	0.9

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12144	-	-	38.2

Vehicle Results

Average Speed, mi/h	38.5	Percent Followers, %	38.3
Segment Travel Time, minutes	3.58	Followers Density, followers/mi/ln	2.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	35904
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	207	Opposing Demand Flow Rate, veh/h	240
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.8
Speed Slope Coefficient	4.60786	Speed Power Coefficient	0.63042
PF Slope Coefficient	-1.20320	PF Power Coefficient	0.78760
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	8.6	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	35904	-	-	58.7

Vehicle Results

Average Speed, mi/h	58.7	Percent Followers, %	29.4
Segment Travel Time, minutes	6.95	Followers Density, followers/mi/ln	1.0
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	15105
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	202	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.24983	Speed Power Coefficient	1.54401
PF Slope Coefficient	-0.96855	PF Power Coefficient	0.89690
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15105	-	-	61.0

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	131	72
Percentage of Heavy Vehicles (HV%), %	5.96	31.23
Initial Average Speed (Sint), mi/h	61.5	60.7
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	14.9	8.4

Vehicle Results

Average Speed, mi/h	61.0	Percent Followers, %	20.6
Segment Travel Time, minutes	2.81	Followers Density, followers/mi/ln	0.7
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	99999
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	202	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.28696	Speed Power Coefficient	1.58663
PF Slope Coefficient	-0.96880	PF Power Coefficient	0.89273
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	99999	-	-	61.0

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	131	72
Percentage of Heavy Vehicles (HV%), %	5.96	31.23
Initial Average Speed (Sint), mi/h	61.5	60.7
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	15.0	8.6

Vehicle Results

Average Speed, mi/h	61.0	Percent Followers, %	20.7
Segment Travel Time, minutes	18.63	Followers Density, followers/mi/ln	0.7
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22704
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	548	Opposing Demand Flow Rate, veh/h	373
Peak Hour Factor	0.94	Total Trucks, %	3.76
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.32

Intermediate Results

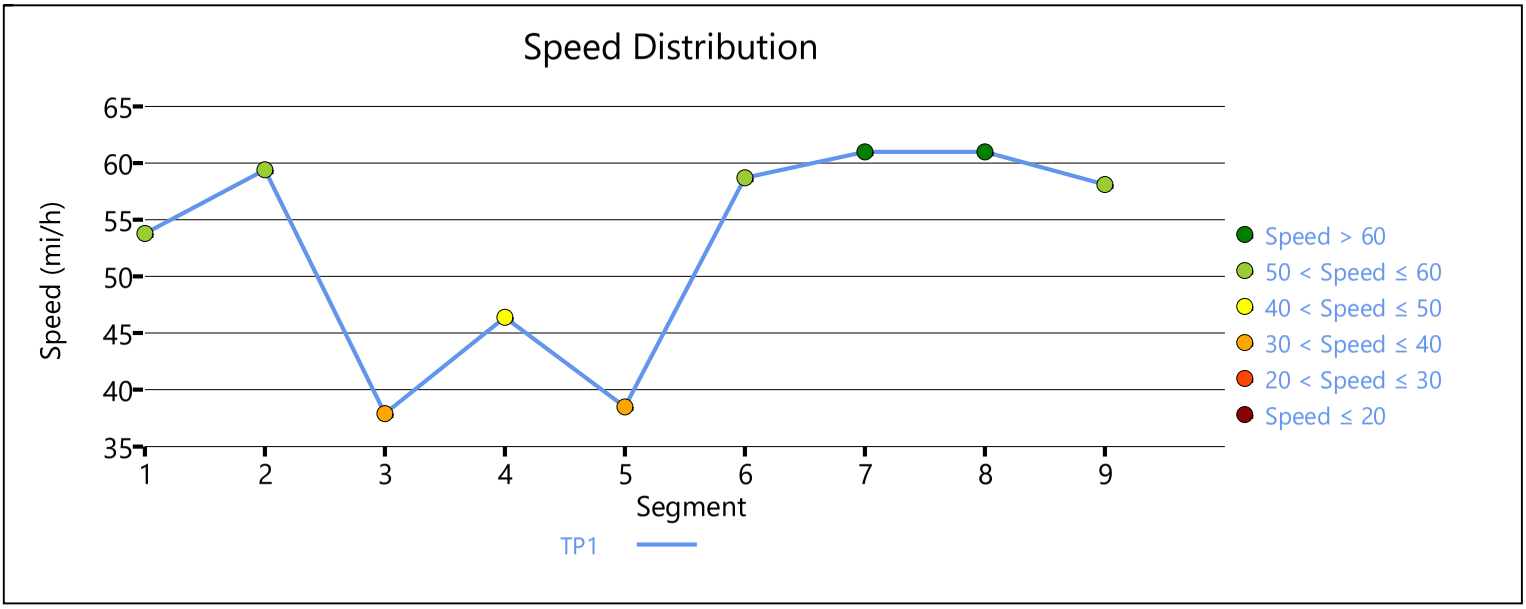
Segment Vertical Class	1	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient	3.68478	Speed Power Coefficient	0.50130
PF Slope Coefficient	-1.24770	PF Power Coefficient	0.77267
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	5.1
%Improved % Followers	4.3	% Improved Avg Speed	0.0

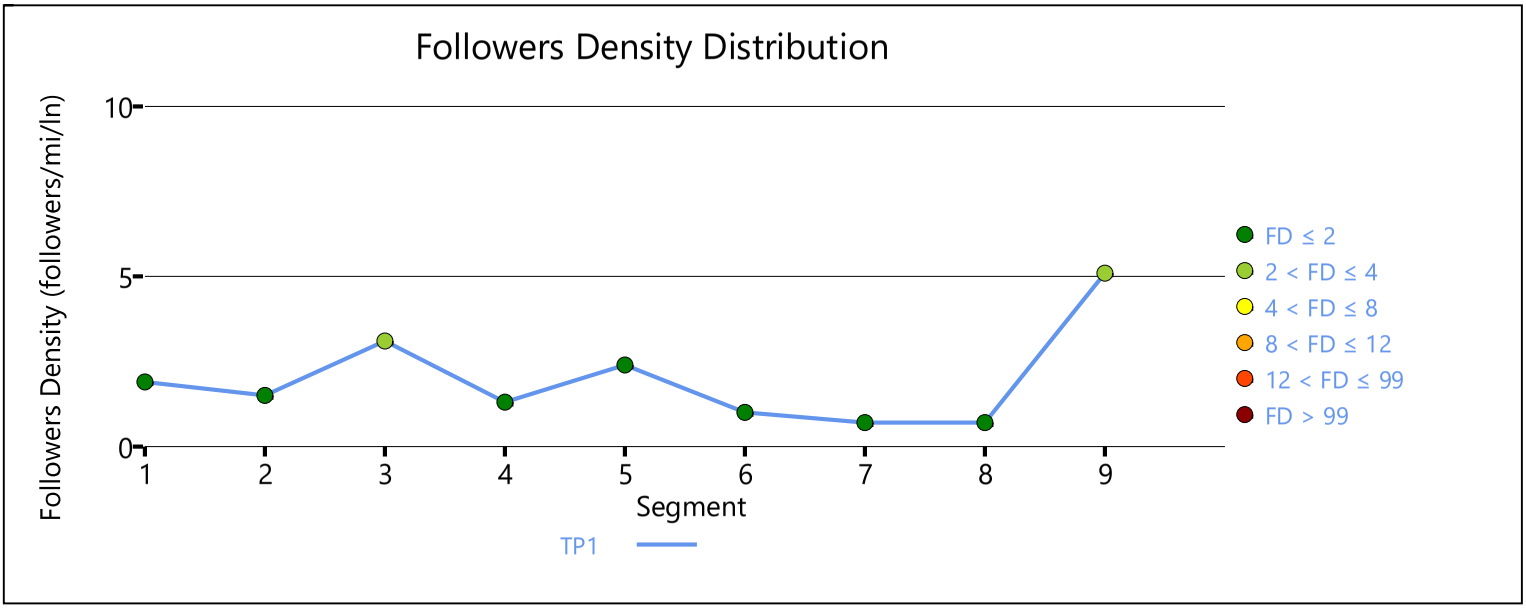
Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	22704	-	-	58.1

Vehicle Results			
Average Speed, mi/h	58.1	Percent Followers, %	54.3
Segment Travel Time, minutes	4.44	Followers Density, followers/mi/ln	4.9
Vehicle LOS	C		





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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2027
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	POST-CONSTRUCTION_Segment 1- Eastbound - between I-5 and Hawley Road	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	-0.41
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	583	Heavy Vehicle Adjustment Factor (f_{HV})	0.942
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	329
Total Trucks, %	4.73	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	30	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	70	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	310	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.36
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2027
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	POST-CONSTRUCTION_Segment 1- Eastbound - between I-5 and Hawley Road	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	0.41
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	1108	Heavy Vehicle Adjustment Factor (f_{HV})	0.936
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	630
Total Trucks, %	4.73	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	30	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	70	Volume-to-Capacity Ratio (v/c)	0.31

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	11.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	B
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	589	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.68
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2027
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	POST-CONSTRUCTION_Segment 2 - Eastbound - between Hawley Road and Old Oregon Trail	Unit	United States Customary

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	-0.08
Measured or Base Free-Flow Speed	Base	Grade Length, mi	1.70
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	5
Median Type	Divided	Total Lateral Clearance (TLC), ft	11
Free-Flow Speed (FFS), mi/h	54.6		

Direction 1 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 1 Demand and Capacity

Volume(V) veh/h	483	Heavy Vehicle Adjustment Factor (f_{HV})	0.951
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	270
Total Trucks, %	3.76	Capacity (c), pc/h/ln	2064
Single-Unit Trucks (SUT), %	23	Adjusted Capacity (c_{adj}), pc/h/ln	1998
Tractor-Trailers (TT), %	77	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.2
Total Lateral Clearance Adj. (f_{LLC})	0.4	Density (D), pc/mi/ln	5.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	257	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.83
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Multilane Highway Report

Project Information

Analyst	PJV	Date	6/9/2023
Agency	California Energy Commission	Analysis Year	2027
Jurisdiction	Shasta County	Time Period Analyzed	PEAK HOUR
Project Description	POST-CONSTRUCTION_Segment 2 - Eastbound - between Hawley Road and Old Oregon Trail	Unit	United States Customary

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Specific Grade
Segment Length (L), ft	-	Percent Grade, %	0.08
Measured or Base Free-Flow Speed	Base	Grade Length, mi	0.60
Base Free-Flow Speed (BFFS), mi/h	55.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	55.0		

Direction 2 Adjustment Factors

Driver Population	Mostly Familiar	Final Speed Adjustment Factor (SAF)	0.975
Driver Population SAF	0.975	Final Capacity Adjustment Factor (CAF)	0.968
Driver Population CAF	0.968		

Direction 2 Demand and Capacity

Volume(V) veh/h	583	Heavy Vehicle Adjustment Factor (f_{HV})	0.950
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	326
Total Trucks, %	3.76	Capacity (c), pc/h/ln	2072
Single-Unit Trucks (SUT), %	23	Adjusted Capacity (c_{adj}), pc/h/ln	2006
Tractor-Trailers (TT), %	77	Volume-to-Capacity Ratio (v/c)	0.16

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	53.6
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	6.1
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.0		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	310	Effective Speed Factor (S_t)	4.79
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	2.92
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	C

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HCS7 Two-Lane Highway Report

Project Information

Analyst	Carlos Arias	Date	6/9/2023
Agency	Westwood	Analysis Year	2027
Jurisdiction	Shasta County	Time Period Analyzed	Peak Hour
Project Description	Fountain Wind Two Lane e-w E Bound - Along CA-299E from Old Oregon Trail to Plumas Street	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22704
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	285	Opposing Demand Flow Rate, veh/h	493
Peak Hour Factor	0.94	Total Trucks, %	3.76
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient	3.71453	Speed Power Coefficient	0.48307
PF Slope Coefficient	-1.26236	PF Power Coefficient	0.76680
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	22704	-	-	58.9

Vehicle Results

Average Speed, mi/h	58.9	Percent Followers, %	38.3
Segment Travel Time, minutes	4.38	Followers Density, followers/mi/ln	1.9
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	99999
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	147	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.28696	Speed Power Coefficient	1.58663
PF Slope Coefficient	-0.96880	PF Power Coefficient	0.89273
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	99999	-	-	61.1

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	98	49
Percentage of Heavy Vehicles (HV%), %	5.96	32.62
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.8	6.1

Vehicle Results

Average Speed, mi/h	61.1	Percent Followers, %	16.0
Segment Travel Time, minutes	18.58	Followers Density, followers/mi/ln	0.4
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	15105
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	147	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.24983	Speed Power Coefficient	1.54401
PF Slope Coefficient	-0.96855	PF Power Coefficient	0.89690
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15105	-	-	61.1

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	98	49
Percentage of Heavy Vehicles (HV%), %	5.96	32.62
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.7	6.0

Vehicle Results

Average Speed, mi/h	61.1	Percent Followers, %	15.9
Segment Travel Time, minutes	2.81	Followers Density, followers/mi/ln	0.4
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	35904
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	152	Opposing Demand Flow Rate, veh/h	152
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.8
Speed Slope Coefficient	4.54104	Speed Power Coefficient	0.66128
PF Slope Coefficient	-1.17713	PF Power Coefficient	0.79590
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	0.6
%Improved % Followers	9.3	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	35904	-	-	59.2

Vehicle Results

Average Speed, mi/h	59.2	Percent Followers, %	23.1
Segment Travel Time, minutes	6.90	Followers Density, followers/mi/ln	0.5
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12144
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	187
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	30.49005	Speed Power Coefficient	0.74331
PF Slope Coefficient	-1.43973	PF Power Coefficient	0.80616
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.4
%Improved % Followers	7.1	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12144	-	-	42.0

Vehicle Results

Average Speed, mi/h	42.0	Percent Followers, %	31.1
Segment Travel Time, minutes	3.28	Followers Density, followers/mi/ln	1.3
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	25872
Measured FFS	Measured	Free-Flow Speed, mi/h	46.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	46.0
Speed Slope Coefficient	12.22850	Speed Power Coefficient	1.55917
PF Slope Coefficient	-0.91332	PF Power Coefficient	0.77795
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	25872	-	-	45.7

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	120	67
Percentage of Heavy Vehicles (HV%), %	12.40	64.30
Initial Average Speed (Sint), mi/h	74.4	63.7
Average Speed at Midpoint (SPLmid), mi/h	76.4	61.7
Percent Followers at Midpoint (PFPLmid), %	9.2	0.0

Vehicle Results

Average Speed, mi/h	45.7	Percent Followers, %	22.0
Segment Travel Time, minutes	6.43	Followers Density, followers/mi/ln	0.9
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	30624
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	221	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	30.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	28.73583	Speed Power Coefficient	1.16507
PF Slope Coefficient	-0.82245	PF Power Coefficient	1.06542
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30624	-	-	44.5

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	140	82
Percentage of Heavy Vehicles (HV%), %	12.00	60.75
Initial Average Speed (Sint), mi/h	72.7	56.0
Average Speed at Midpoint (SPLmid), mi/h	74.7	54.0
Percent Followers at Midpoint (PFPLmid), %	11.4	-

Vehicle Results

Average Speed, mi/h	44.5	Percent Followers, %	15.2

Segment Travel Time, minutes	7.81	Followers Density, followers/mi/ln	0.8
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	7392
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	200	Opposing Demand Flow Rate, veh/h	205
Peak Hour Factor	0.94	Total Trucks, %	17.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.9
Speed Slope Coefficient	3.62509	Speed Power Coefficient	0.53776
PF Slope Coefficient	-1.20092	PF Power Coefficient	0.80811
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	13.9	% Improved Avg Speed	0.6

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	7392	-	-	59.8

Vehicle Results

Average Speed, mi/h	60.2	Percent Followers, %	27.9
Segment Travel Time, minutes	1.40	Followers Density, followers/mi/ln	0.8
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	471	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	19.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.6
Speed Slope Coefficient	3.59598	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.36655	PF Power Coefficient	0.74751

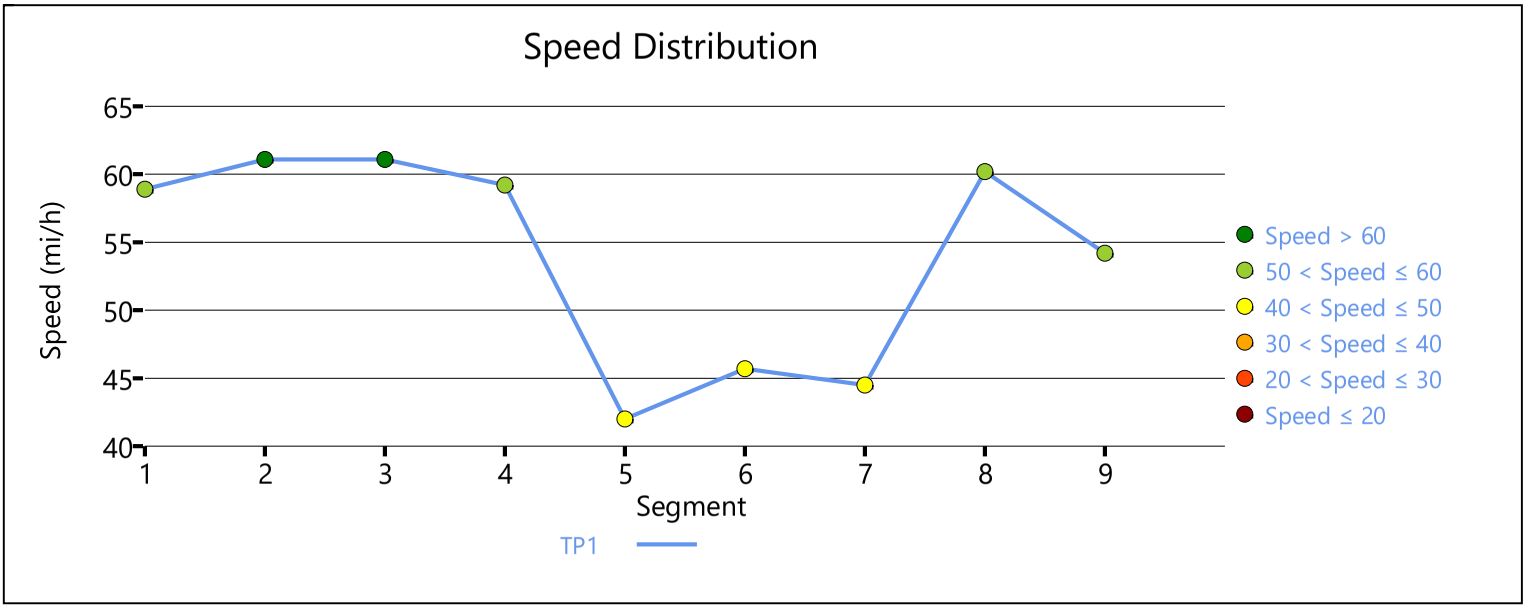
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	4.7
%Improved % Followers	10.6	% Improved Avg Speed	0.0

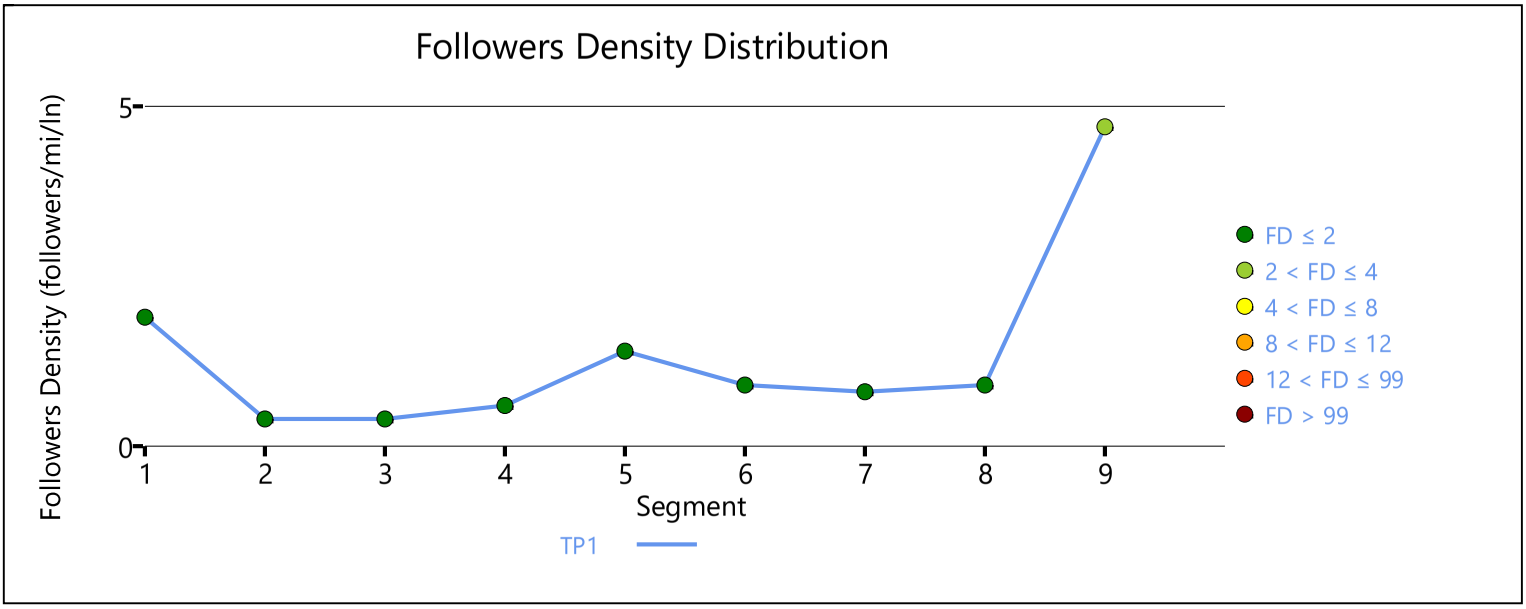
Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	54.2

Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	54.1
Segment Travel Time, minutes	0.55	Followers Density, followers/mi/ln	4.2
Vehicle LOS	C		





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HCS7 Two-Lane Highway Report

Project Information

Analyst	Carlos Arias	Date	6/9/2023
Agency	Westwood	Analysis Year	2027
Jurisdiction	Shasta County	Time Period Analyzed	Peak Hour
Project Description	Fountain Wind Two Lane e-w _ West Bound - Along CA-299E from Old Oregon Trail to Plumas Street	Unit	United States Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2640
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	22.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	200	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	19.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.5
Speed Slope Coefficient	3.88683	Speed Power Coefficient	0.44359
PF Slope Coefficient	-1.43208	PF Power Coefficient	0.73380
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2640	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	35.6
Segment Travel Time, minutes	0.55	Followers Density, followers/mi/ln	1.3
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	7392
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	205	Opposing Demand Flow Rate, veh/h	200
Peak Hour Factor	0.94	Total Trucks, %	17.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.12

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	60.9
Speed Slope Coefficient	3.62315	Speed Power Coefficient	0.53925
PF Slope Coefficient	-1.19967	PF Power Coefficient	0.80854
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	7392	-	-	59.8

Vehicle Results

Average Speed, mi/h	59.8	Percent Followers, %	28.4
Segment Travel Time, minutes	1.40	Followers Density, followers/mi/ln	1.0
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	30624
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	221	Opposing Demand Flow Rate, veh/h	221
Peak Hour Factor	0.94	Total Trucks, %	30.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.13

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	30.14962	Speed Power Coefficient	0.72693
PF Slope Coefficient	-1.46084	PF Power Coefficient	0.80165
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	30624	-	-	40.5

Vehicle Results

Average Speed, mi/h	40.5	Percent Followers, %	35.3
Segment Travel Time, minutes	8.59	Followers Density, followers/mi/ln	1.9
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	25872
Measured FFS	Measured	Free-Flow Speed, mi/h	47.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1100	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	12.22850	Speed Power Coefficient	1.55917
PF Slope Coefficient	-0.91061	PF Power Coefficient	0.78832
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	25872	-	-	46.7

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	120	67
Percentage of Heavy Vehicles (HV%), %	12.40	64.30
Initial Average Speed (Sint), mi/h	74.4	63.7
Average Speed at Midpoint (SPLmid), mi/h	76.4	61.7
Percent Followers at Midpoint (PFPLmid), %	9.2	0.0

Vehicle Results

Average Speed, mi/h	46.7	Percent Followers, %	21.6
Segment Travel Time, minutes	6.29	Followers Density, followers/mi/ln	0.9
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	12144
Measured FFS	Measured	Free-Flow Speed, mi/h	46.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	187
Peak Hour Factor	0.94	Total Trucks, %	31.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	4	Free-Flow Speed, mi/h	46.0
Speed Slope Coefficient	30.49005	Speed Power Coefficient	0.74331
PF Slope Coefficient	-1.44074	PF Power Coefficient	0.80011
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	1.4
%Improved % Followers	14.0	% Improved Avg Speed	0.5

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12144	-	-	41.0

Vehicle Results

Average Speed, mi/h	41.2	Percent Followers, %	31.4
Segment Travel Time, minutes	3.35	Followers Density, followers/mi/ln	1.2
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	35904
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	6.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	152	Opposing Demand Flow Rate, veh/h	152
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	59.8
Speed Slope Coefficient	4.54104	Speed Power Coefficient	0.66128
PF Slope Coefficient	-1.17713	PF Power Coefficient	0.79590
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	0.6
%Improved % Followers	8.5	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	35904	-	-	59.2

Vehicle Results

Average Speed, mi/h	59.2	Percent Followers, %	23.1
Segment Travel Time, minutes	6.90	Followers Density, followers/mi/ln	0.5
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	15105
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	147	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.24983	Speed Power Coefficient	1.54401
PF Slope Coefficient	-0.96855	PF Power Coefficient	0.89690
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	15105	-	-	61.1

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	98	49
Percentage of Heavy Vehicles (HV%), %	5.96	32.62
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.7	6.0

Vehicle Results

Average Speed, mi/h	61.1	Percent Followers, %	15.9
Segment Travel Time, minutes	2.81	Followers Density, followers/mi/ln	0.4
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Lanes	Length, ft	99999
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	147	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	14.90
Segment Capacity, veh/h	1400	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	7.28696	Speed Power Coefficient	1.58663
PF Slope Coefficient	-0.96880	PF Power Coefficient	0.89273
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	99999	-	-	61.1

Passing Lane Results

	Faster Lane	Slower Lane
Flow Rate, veh/h	98	49
Percentage of Heavy Vehicles (HV%), %	5.96	32.62
Initial Average Speed (Sint), mi/h	61.5	60.6
Average Speed at Midpoint (SPLmid), mi/h	63.2	58.9
Percent Followers at Midpoint (PFPLmid), %	11.8	6.1

Vehicle Results

Average Speed, mi/h	61.1	Percent Followers, %	16.0
Segment Travel Time, minutes	18.58	Followers Density, followers/mi/ln	0.4
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	22704
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	493	Opposing Demand Flow Rate, veh/h	285
Peak Hour Factor	0.94	Total Trucks, %	3.76
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.29

Intermediate Results

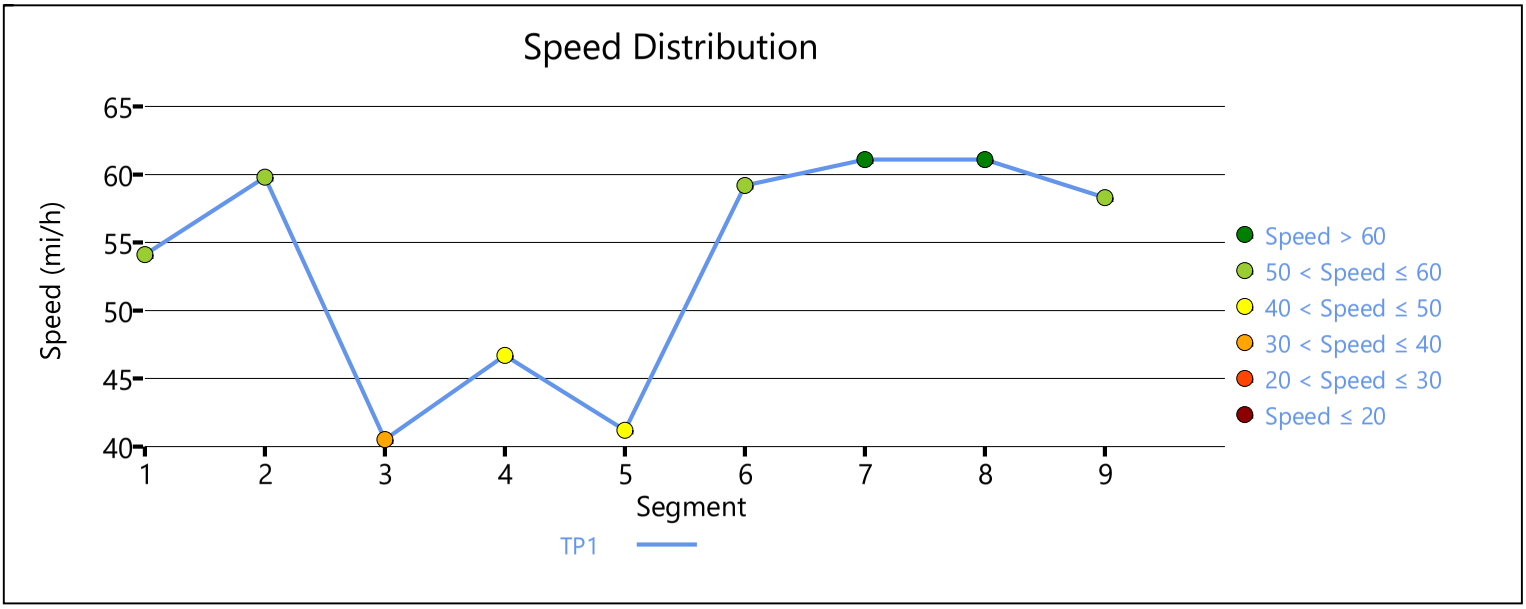
Segment Vertical Class	1	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient	3.65951	Speed Power Coefficient	0.51835
PF Slope Coefficient	-1.23352	PF Power Coefficient	0.77779
In Passing Lane Effective Length?	Yes	Total Segment Density, veh/mi/ln	4.3
%Improved % Followers	4.8	% Improved Avg Speed	0.0

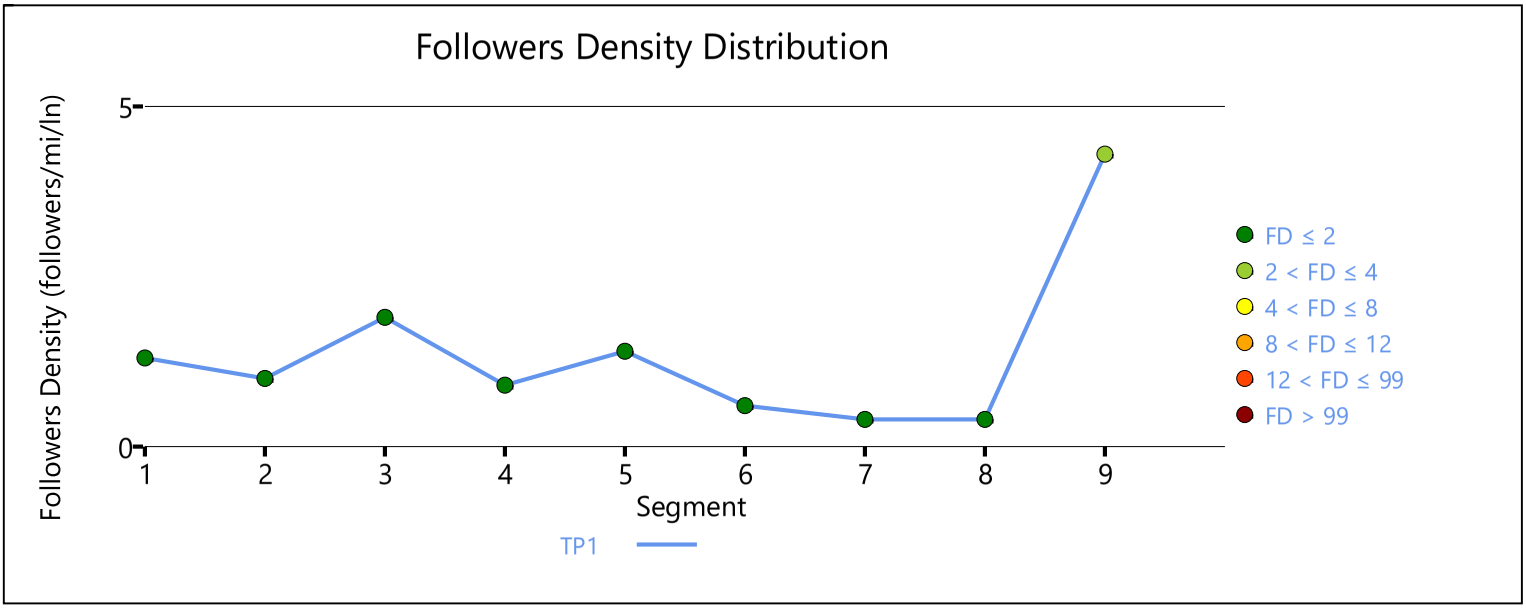
Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	22704	-	-	58.3

Vehicle Results			
Average Speed, mi/h	58.3	Percent Followers, %	50.9
Segment Travel Time, minutes	4.42	Followers Density, followers/mi/ln	4.1
Vehicle LOS	C		





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APPENDIX E

APPENDIX E – Potential Transportation Environmental Protection Measures for the Fountain Wind Project

Resource Category	Measure	Implementation			
		Preconstruction	Construction	Operations	Decommissioning
Transportation					
TRANS-1	[Project] will coordinate with CalTrans and Shasta County to implement a Transportation and Traffic Management Plan that minimizes risks and inconvenience to the public, while ensuring safe and efficient construction of the Project. The plan will focus on turbine component deliveries, traffic and circulation primarily within and in the vicinity of the Project area. It will be designed to minimize potential hazards from increased truck traffic and worker traffic and to minimize impacts to traffic flow in the vicinity of the Project.	X	X		
TRANS-2	To minimize conflicts between Project traffic and background traffic, deliveries of project components will be scheduled around local volume peaks to the extent feasible.		X		
TRANS-3	Road clearances may include temporarily blocking road intersections via construction cones and/or staffing blocked intersections with a traffic-control flagger to allow haul trucks sole access to the road while delivering Project components. If required, public road closures are not expected to exceed 15 minutes during each/any road closure event.		X		X
TRANS-4	The Project will coordinate with CalTrans to determine whether temporary speed limit reductions during construction are applicable where Project access points intersect with State Highway 299.	X	X		
TRANS-5	Construction deliveries would be coordinated to avoid major traffic-generating events in Redding, to the extent practicable.		X		
TRANS-6	The Project would coordinate with local law enforcement, to manage traffic flows and monitor traffic speed during deliveries.		X		X
TRANS-7	All staging activities and parking of equipment and vehicles would occur within the Project Area and would not occur on maintained State Highways or County roads.		X		

Resource Category	Measure	Implementation			
		Preconstruction	Construction	Operations	Decommissioning
TRANS-8	Equipment and material deliveries to the site would be performed by professional transportation companies familiar with the type of equipment, loads involved, and U.S. DOT, CalTrans, and Shasta County regulations.		X		X
TRANS-9	Road signs would be erected to notify travelers and local residents that construction is occurring in the area and provide information regarding the timing and route for oversized vehicle movements and deliveries. The erection/placement of road signs and the Project construction activities would be performed in accordance with the Shasta County and CalTrans requirements.		X		
TRANS-10	Escort vehicles would assist delivery of oversized turbine components to give drivers additional warning of oversized loads.		X		

APPENDIX F

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	116	51	33	62	0	0
Future Vol, veh/h	116	51	33	62	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	55	36	67	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	181	0	293	154
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	139	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1394	-	698	892
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	888	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1394	-	679	892
Mov Cap-2 Maneuver	-	-	-	-	679	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	864	-

Approach	EB	WB	NW
HCM Control Delay, s	0	2.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1394	-
HCM Lane V/C Ratio	-	-	-	0.026	-
HCM Control Delay (s)	0	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	40	27	103	0	0
Future Vol, veh/h	76	40	27	103	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	43	29	112	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	126	0	275	105
Stage 1	-	-	-	-	105	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1460	-	715	949
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1460	-	700	949
Mov Cap-2 Maneuver	-	-	-	-	700	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	842	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1460	-
HCM Lane V/C Ratio	-	-	-	0.02	-
HCM Control Delay (s)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	138	0	0	155	27	18
Future Vol, veh/h	138	0	0	155	27	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	150	0	0	168	29	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	318	150
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1431	-	675	896
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	862	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1431	-	675	896
Mov Cap-2 Maneuver	-	-	-	-	675	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	862	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	749	-	-	1431	-
HCM Lane V/C Ratio	0.065	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	161	0	0	126	22	15
Future Vol, veh/h	161	0	0	126	22	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	175	0	0	137	24	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	175	0	312	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	137	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1401	-	681	868
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1401	-	681	868
Mov Cap-2 Maneuver	-	-	-	-	681	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	746	-	-	1401	-
HCM Lane V/C Ratio	0.054	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	44	4	4	166	0	0
Future Vol, veh/h	44	4	4	166	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	4	4	180	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	52	0	238	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	188	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1554	-	750	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	844	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	748	1018
Mov Cap-2 Maneuver	-	-	-	-	748	-
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0.2	0
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1554	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	135	4	4	49	0	0
Future Vol, veh/h	135	4	4	49	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	4	4	53	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	210	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	61	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1430	-	778	898
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1430	-	776	898
Mov Cap-2 Maneuver	-	-	-	-	776	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	959	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1430	-
HCM Lane V/C Ratio	-	-	-	0.003	-
HCM Control Delay (s)	0	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	197	0	0	144	4	4
Future Vol, veh/h	197	0	0	144	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	214	0	0	157	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	214	0	371	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	157	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1356	-	630	826
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1356	-	630	826
Mov Cap-2 Maneuver	-	-	-	-	630	-
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	715	-	-	1356	-
HCM Lane V/C Ratio	0.012	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	201	0	0	138	4	4
Future Vol, veh/h	201	0	0	138	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	218	0	0	150	4	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	218	0	368	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	150	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1352	-	632	822
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1352	-	632	822
Mov Cap-2 Maneuver	-	-	-	-	632	-
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	878	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

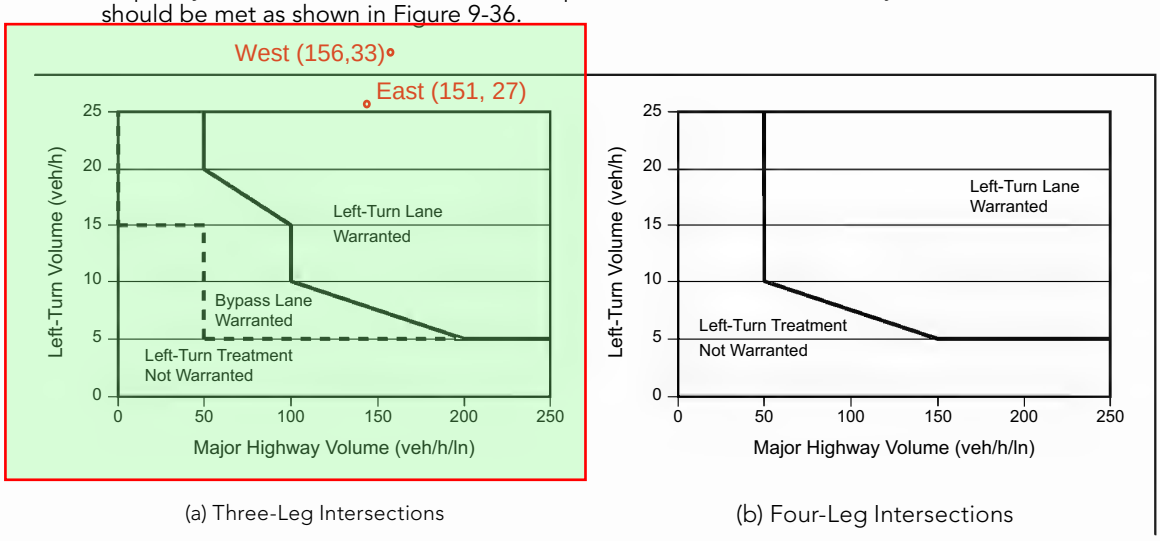
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	715	-	-	1352	-
HCM Lane V/C Ratio	0.012	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

APPENDIX G

Table 9-25. Suggested Left-Turn Treatment Guidelines Based on Results from Benefit–Cost Evaluations for Intersections on Two-Lane Highways in Rural Areas (*16*)

Left-Turn Lane Peak-Hour Volume (veh/h)	Three-Leg Intersection, Major-Road Two-Lane Highway Peak-Hour Volume (veh/h/ln) that Warrants a Bypass Lane	Three-Leg Intersection, Major-Road Two-Lane Highway Peak-Hour Volume (veh/h/ln) that Warrants a Left-Turn Lane	Four-Leg Intersection, Major-Road Two-Lane Highway Peak-Hour Volume (veh/h/ln) that Warrants a Left-Turn Lane
5	50	200	150
10	50	100	50
15	< 50	100	50
20	< 50	50	< 50
25	< 50	50	< 50
30	< 50	50	< 50
35	< 50	50	< 50
40	< 50	50	< 50
45	< 50	50	< 50
50 or More	< 50	50	< 50

Note: These guidelines apply where the major road is uncontrolled and the minor-road approaches are stop- or yield-controlled. Both the left-turn peak-hour volume and the major-rad volume warrants should be met as shown in Figure 9-36.



(a) Three-Leg Intersections

(b) Four-Leg Intersections

Figure 9-36. Suggested Left-Turn Treatment Warrants Based on Results from Benefit–Cost Evaluations for Intersections on Two-Lane Highways in Rural Areas (*16*)

The construction and post construction volumes have been applied using the AASHTO warrants above, and have yielded the following results:

APPENDIX H

Data Request Identifier	Request Source	Topic	Information	Adequate	Information Required To Make AFC Conform With Regulations	Applicant Response
	Deficiency Letter Matrix	Traffic and Transportation	...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.	No	**Please expand the analysis of Impact 3.14-2.** Impact 3.14-2 of Secion 3.14.3 (Direct and Indirect Effects) presents the analysis of the project relative to CEQA Guidelines Section 15064.3(b), which relates to the evaluation of a project's transportation impacts. Specifically, analysis using vehicle miles of travel (VMT) is identified as the most appropriate measure for the analysis of transportation impacts. The analysis of Impact 3.14-2 relies on GHG analysis in Sections 3.10, GHG Emissions, since the intent of SB 743 is to encourage land use and transportation planning decisions and investments that reduce VMT threshold, the County decided to rely on an established environmental standard that is protective of resources of legislative concern. The less-than-significant impact finding is in part a result of a potential net offset of annual CO2e emissions with implementation (i.e., due to ongoing power generation). The VMT analysis demonstrates that the project will result in a short-term increase in VMT during construction. However, no discussion or analysis is presented of potential TDM strategies (carpooling, ridesharing, etc) or other measures that could be implemented to reduce VMT during construction, although identified in Appendix H, Page 17.	See Section 8.1 of the Updated TIA for discussion of carpooling as a means to reduce construction-related VMT.
	Deficiency Letter Matrix	Traffic and Transportation	A regional transportation setting, on topographic maps (scale of 1:250,000), identifying the project location and major transportation facilities. Include a reference to the transportation element of any applicable local or regional plan.	No	**Please update Section 3.14.1.3 (Regulatory Setting) of the DEIR Transportation Section.** The Regulatory Setting should include reference to the Regional Transportation Plan & Sustainable Communities Strategy for the Shasta Region and Caltrans Tranportation Concept reports for each State route in the study area. Also please verify the scale of Exhibit 1 of the Traffic report.	The Regulatory Setting section of the CEC EIR made a reference to the Regional Transporation Plan and Sustainable Communities Strategy for the Shasta Region (2015) and the Route 299 TCR (210). Links to these documents are provided here: https://dot.ca.gov/-/media/dot-media/district-1/documents/Signed-FINAL-299-TCR-12_10-a11y and https://www.srta.ca.gov/142/Regional-Transportation-Plan. Table 1.2 of the Updated TIA for more information about the functional classification, truck route designations, and weight and load limitations of California State Route 299. Exhibit 1 is scaled as printed.
TRAF-004	Deficiency Letter Matrix	Traffic and Transportation	An identification, on topographic maps at a scale of 1:24,000, and a description of existing and planned roads, rail lines, (including light rail), bike trails, airports, bus routes serving the project vicinity, pipelines, and canals in the project area affected by or serving the proposed facility. For each road identified, include the following, where applicable:	No	**Please expand the description of regional and local roadways affected and/or serving the proposed project.** For logical study segments, the descriptions should summarize the roadway functional classification number of directional travel lanes, posted speed limits, average daily traffic volumes served, applicable weight restrictions, and truck route designation. Also please verify the scale of Exhibit 1 of the Traffic report.	The requested information is included in Tables 1.1 and 1.2 of the revised report. Each exhibit is scaled as printed.
TRAF-005	Deficiency Letter Matrix	Traffic and Transportation	Road classification and design capacity;	No	**Please update the capacities documented in Table 3.14-2.** The hourly capacities presented are base capacity values, representative of ideal conditions. Base capacities do not account for the impacts of heavy vehicles, grades or other sources of friction that will lower the capacity of a freeway or highway lane.	The capacities have been updated in Table 1.1 of the revised report as requested.
TRAF-006a	Deficiency Letter Matrix	Traffic and Transportation	Current daily average and peak traffic counts;	No	**Please collect new average daily vehicle traffic counts.** Traffic data from Caltrans Traffic Census Program, representing 2017 conditions, is documented. The data provided through the Caltrans Traffic Census Program are traffic volume estimates and not actual counts. In addition, the data is pre COVID-19 Pandemic and does not capture post pandemic changes in travel behavior. 24-hour vehicle classification traffic counts should be collected (in 15-minute increments) for a minimum three days (Tuesday, Wednesday, Thursday), during a representative time of year.	Average Daily Vehicle Traffic Counts have been collected near the projected access locations and are presented in Table 1.1 of the report. Raw traffic data is included in Appendix B of the report.
TRAF-007	Deficiency Letter Matrix	Traffic and Transportation	Current and projected levels of service before project development, during construction, and during project operation;	No	**Please update roadway capacity and intersection operations analysis.** As outlined above, the roadway capacity analysis was conducted using base capacity values that do not account for the impacts of heavy vehicles, grades or other sources of friction that will lower the capacity of a freeway or highway lane. In addition, the analysis needs to be updated based on new traffic count data.	The analyses have been revised as requested. Results are presented in Table 1.1 and Appendix D of the Updated TIA.
TRAF-008	Deficiency Letter Matrix	Traffic and Transportation	Weight and load limitations;	No	**Please expand the description of regional and local roadways affected and/or serving the proposed project.** Identify weight and load limitations on study roadways.	The requested information is included in Table 1.2 of the revised report.
TRAF-009	Deficiency Letter Matrix	Traffic and Transportation	Estimated percentage of current traffic flows for passenger vehicles and trucks; and	No	**Please collect new average daily vehicle traffic counts.** The heavy vehicle percentages from Caltrans Traffic Census Program on SR 299 are provided. The data is pre COVID-19 Pandemic and does not capture post pandemic changes in travel behavior. 24-hour vehicle classification traffic counts should be collected (in 15-minute increments) for a minimum three days (Tuesday, Wednesday, Thursday), during a representative time of year when construction is anticipated.	Average Daily Vehicle Traffic Counts have been collected near the projected access locations and are presented in Table 1.1 of the report. Raw traffic data is included in Appendix B of the report.
TRAF-010	Deficiency Letter Matrix	Traffic and Transportation	An identification of any road features affecting public safety.	No	**Please collect collision records on study roadways.** Collect and map the most recent 3- year collision data available for the study corridors to identify locations where road features or characteristics may be affecting public safety. Expand impact discussion Impact 3.14-3 to incorporate relevant findings of collision analysis.	The requested information is included in Table 1.2 of the revised report.

Data Request Identifier	Request Source	Topic	Information	Adequate	Information Required To Make AFC Conform With Regulations	Applicant Response
TRAF-006b	Deficiency Letter Matrix	Traffic and Transportation	An assessment of the construction and operation impacts of the proposed project on the transportation facilities identified in (g)(5)(C). Also include anticipated project specific traffic, estimated changes to daily average and peak traffic counts, levels of service, and traffic/truck mix, and the impact of construction of any facilities identified in (g)(5)(C).	No	**Please see above.**	Please refer to Table 1.1 and Section 8.0 of the Updated TIA.
	Deficiency Letter Matrix	Traffic and Transportation	Tables that identify laws, regulations, ordinances, standards, adopted local, regional, state, and federal land use plans, leases, and permits applicable to the proposed project, and a discussion of the applicablility of, and conformance with each. The table or matrix shall explicitly reference pages in the application wherein conformance, with each law or standard during both construction and operation of the facility is discussed.	No	**The Law, Ordinance, Regulation, or Standard Consistency Matrix (TN 248290) doees not identify the specific Shasta County Code ordinances or standards that are applicable during constrution and operation of the proposed facility.**	See Section 8.1 of the Updated TIA; Please also see LORS Matrix submitted as TN# 249636.
	Deficiency Letter Matrix	Traffic and Transportation	The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and provide the name of the official who will serve as a contact person for Commission staff.	No	**Please provide agency contact information. The DEIR list of federal, state, and local agencies consulted does not include the contact's phone number, address, email address, or the subject matter relevant to the contact. The list does not indicate who should sere as the contact person for Commission staff.**	N/A. Applicant to provide requested information outside of traffic study. Please see table with local agency contact information submitted as TN# 249533.
TRAF-004	Follow-up Questions	Traffic and Transportation	A description of the methodology applied and the software used to complete the capacity analysis is missing.	No	**Not provided by CEC with follow-up questions**	Roadway capacity analysis was performed with HCS Software for the pre-construction, construction, and post-construction scenarios. Traffic data collected by Caltrans in 2020 and roadway characteristics observed from desktop review (i.e., speed limit, number and width of lanes, etc.) were used to calculate roadway capacity. Project access Level of Service (LOS) methodology is described in Section 8.2.
TRAF-010	Follow-up Questions	Traffic and Transportation	An analysis of the collision records is missing. Table 1.2 of the revised report (TN# 250644) includes total number of collisions. However, no information is provided relative to how the collision rates compare to statewide averages for similar facilities or how the characteristics of the roadway that may be affecting public safety or contributing to the reported collisions?	No	**Not provided by CEC with follow-up questions**	Noted. To facilitate statewide crash averages for similar facilities' in California, crash comparisons were initially performed for the most recent year, 2020. However, due to the Covid-19 pandemic, Westwood expanded crash data analysis to include the years 2018, 2019, and 2020, to ensure any pandemic outliers did not skew data analysis. To include the expanded data set, Table 1.2 was updated, and Table 1.3 was added to reflect additional crash analysis within boundaries of the project site commuter and delivery routes, in conjunction with statewide data (see Appendix C). The crash rates along the roadway segments of SR 299 are less than the statewide averages for similar 4-lane divided and 2/3-lane facilities.