



**SANTA CRUZ COUNTY
SAFE ON 17 TASK FORCE
&
TRAFFIC OPERATIONS OVERSIGHT COMMITTEE**

Wednesday, March 13, 2019
10:00am - 12:00pm

CHP San Jose
2020 Junction Ave, San Jose, CA 95131

Teleconference: (515) 604-9928
Access Code: 631038

REVISED AGENDA

1. Call to Order - *Introductions*
2. Oral communications

Any member of the public may address the committee OR speak on something that is not already on the agenda. Speakers are requested to sign the sign-in sheet and state their name clearly so that their names can be accurately recorded in the minutes of the meeting.

3. Additions or Deletions to the Agenda
4. Approve Draft Minutes of the September 19, 2018 Joint Safe on 17 and TOS Oversight Committee Meeting (page 3)
5. Information Items
 - a. Freeway Service Patrol - Program Update (Amy Naranjo) (page 6)
 - b. Articles (page 9)
 - c. Public Feedback
 - Presentation by William Ross – Los Gatos resident (page 22)
 - Handout - Ideas to Deter Speeding on Hwy 17 by Gene Marshack, CHP volunteer (page 82)



6. California Highway Patrol – Safe on 17 Program Information
 - a. San Jose: Review collision and enforcement statistics and extra enforcement hours for September 2018 through February 2019 (page 85)
 - b. Santa Cruz: Review collision and enforcement statistics and extra enforcement hours for September 2018 through February 2019 (page 90)
 - c. Highway 17 Extra CHP Enforcement Hours and Public Information Activities (page 95)
7. Santa Clara County FireSafe Council (Patty Ciesla)
 - a. Wildfire Prevention Project
8. Caltrans District 5 Highway 17 Project Update (Susana Cruz)
 - a. Construction Projects (page 96)
 - b. Maintenance Projects/Updates
9. Caltrans District 4 Highway 17 Project Update (Victor Gauthier)
 - a. Construction Projects
 - b. Maintenance Projects/Updates
10. Traffic Operations Systems
 - a. Transportation Management Center Update (Ramin Bolourchian)
 - b. Communications Update
 - c. Hwy 1 and 17 TOS Equipment Update (Jacques Van Zeventer)
 - Caltrans QuickMap Update
 - CCTVs
 - Traffic Detection Equipment
 - Other
11. Next Meeting Date:

Wednesday, September 18, 2019 10:00 am to 12:00 pm at SCCRTC office (1523 Pacific Ave, Santa Cruz, 95060)



**JOINT MEETING OF SANTA CRUZ COUNTY TRAFFIC OPERATIONS
SYSTEMS (TOS) OVERSIGHT COMMITTEE AND
SAFE ON 17 TASK FORCE**

DRAFT MINUTES

Wednesday, September 19, 2018
10:00am-12:00pm

**Santa Cruz County Regional Transportation Commission
1523 Pacific Ave, Santa Cruz, CA 95060**

Meeting Participants

Sean	Vienna	AMBAG
Joon	Kang	Caltrans D4
Art	De La Cerda	Caltrans D4 Maintenance
Ruben	Magallanes	Caltrans D4 Maintenance
Victor	Gauthier	Caltrans D4 PIO (teleconference)
Ramin	Bolourchian	Caltrans D4 TMC
Devin	Porr	Caltrans D5 Construction
Jennifer	Wilson	Caltrans D5 Construction
Eric	DeGroodt	Caltrans D5 Maintenance
Susana	Cruz	Caltrans D5 PIO (teleconference)
Jennifer	Calate	Caltrans D5 Planning
Shayne	Sandeman	Caltrans D5 Traffic Management (teleconference)
Tom	Byington	CHP San Jose
Moe	Edwards	CHP San Jose
George	Gori	CHP San Jose
Craig	Kunzler	CHP Santa Cruz
Ian	Troxell	CHP Santa Cruz
Ashley	Keene	KION
Doug	Ley	Redtree Partners
Jeffrey L.	Bates	Redwood Estates Service Association
Andrea	Eberle	representing Assemblymember Mark Stone
Gary	Richards	San Jose Mercury News (teleconference)
Brian	Winterhalder	Santa Clara County Fire
Amy	Naranjo	Santa Cruz County Regional Transportation Commission (Staff)
Gine	Johnson	Santa Cruz County Regional Transportation Commission (Alternate Commissioner)
Ed	Bottorff	Santa Cruz County Regional Transportation Commission (Commissioner)
John	Wilson	Scotts Valley Police Department



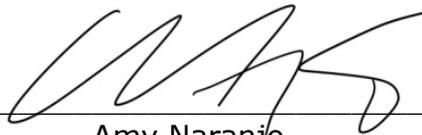
1. **Introductions** – Introductions were made.
2. **Additions or Deletions to the Agenda** –none were made
3. **Oral Communications** – SCCRTC Commission Alternate Gine Johnson shared constituent concerns about the upcoming winter/storm season and inquired about messaging and protocols for alerting motorists about extended road closures and detour routes, especially for medical emergencies during extended shut downs. CHP Santa Cruz recommends motorist call 911 for medical emergencies and will share driving tips and emergency information via social media. Devin Porr, Caltrans D5, said Caltrans is looking into installing moveable median barriers permanently at certain locations to provide additional locations where traffic can be rerouted in the case of an extended road closure.
4. **Minutes of the March 21, 2018 Joint TOS Oversight Committee and Safe on 17 Meeting were reviewed and accepted.**
5. **Received Information Items** – Amy Naranjo from SCCRTC staff provided a program update for the Freeway Service Patrol (FSP) program and shared news articles related to collisions on Highway 17 since the March 2018 meeting. Amy clarified for Lt. Gori from CHP San Jose that officers can request FSP service from the Santa Cruz operator when additional support is needed. Amy also provided a summary of injury and fatal collisions and traffic volumes on Highway 17 since the program inception.
6. **Received Update on California Highway Patrol Safe on 17 Program Statistics and Public Information Efforts** – Lieutenant Ian Troxell (CHP Santa Cruz) introduced Craig Kunzler as the new Captain for the Santa Cruz Area office. Lt. Troxell provided an update that officers (statewide) are now on "9/80" work schedules which impacts how personnel are deployed to incidents on Highway 17 and elsewhere. CHP Santa Cruz is improving enforcement using Caltrans traffic data to deploy patrols at strategic locations and times. CHP San Jose developed a community-oriented policing team (COPS) as part of their strategic plan to help reduce collisions at hot-spots and increase CHP presence on Highway 17. The program is led by Moe Edwards and Tom Byington. CHP San Jose also increased commercial vehicle enforcement. CHP Santa Cruz and San Jose continue to share safety messaging and send traffic alerts using social media.
7. **Received Caltrans District 5 Highway 17 Project Update** - Devin Porr and Jennifer Wilson provided project updates. A repaving project from Santa's Village Rd to the county line will go out to bid in October 2018 with work expected to begin in May 2019. High friction surface treatments (HFST) will be applied in certain locations. Lane closures and cross-overs will impact



overnight travel weeknights (Monday – Thursdays) throughout the entirety of the project, which is expected for completion in 2021. Caltrans is also working on a minor project to improve maintenance vehicle pullout areas on Highways 1 and 17.

- 8. Received Caltrans District 4 Highway 17 Project Update** – Joon King provided project updates. A project to repave 13 miles of Highway 17 from Highway 280 to Summit Rd is currently in the design phase. The contract is expected to be awarded in 2020 with construction following in 2021. underway. This project will also include drainage, guard rail, loop detector, and safety improvement.
- 9. Received Traffic Operations Systems Updates** - Traffic Management Center (TMC) Update - Ramin Bolourchian stated updating the messages that appear on the changeable message signs (CMSs) can be challenging due to software limitations, and if anyone sees any problems with the CMSs, to please contact the TMC. Shayne Sandeman, Caltrans D5, shared that all CCTVs are in operation, a new CMS will be installed on Highway 9 near Glen Arbor Rd, and Caltrans Quickmap also features Waze real-time traffic information.
- 10. Approved Next Meeting Date** – Next Joint Safe on 17 Task Force & TOS Oversight Committee Meeting – Wednesday, March 13, 2019 10:00 to 12:00 at Santa Cruz County Regional Transportation Commission.

Respectively submitted by: _____


Amy Naranjo

TO: Safe on 17 Task Force & Traffic Operation Systems Committee
FROM: Amy Naranjo, Transportation Planner
RE: Freeway Service Patrol Highway 17 Update

RECOMMENDATIONS

Receive an update on the Freeway Service Patrol Program for Highway 17.

BACKGROUND

The Santa Cruz County Regional Transportation Commission (RTC), in collaboration with the California Department of Transportation (Caltrans) and the California Highway Patrol (CHP), operates the Freeway Service Patrol (FSP) program in Santa Cruz County. The FSP program is a free service of privately-owned tow trucks that patrol designated routes on congested California freeways and highways. The FSP program is designed to reduce congestion, improve safety, and reduce fuel consumption and auto emissions by minimizing the congestion associated with collisions and other incidents.

The FSP program in Santa Cruz County consists of two (2) tow trucks that patrol Highway 17 from Mount Herman Road to the Santa Clara County line and Highway 1 from the Highway 9 intersection to State Park Drive. Highway 17 is patrolled during the weekday from 6:30am to 9:30am and 3:30pm to 6:30pm. Weekend service is provided from 1:00 pm to 7:00 pm on Saturdays during the spring (March to April) and summer (Memorial Day to Labor Day) and year-round on Sundays.

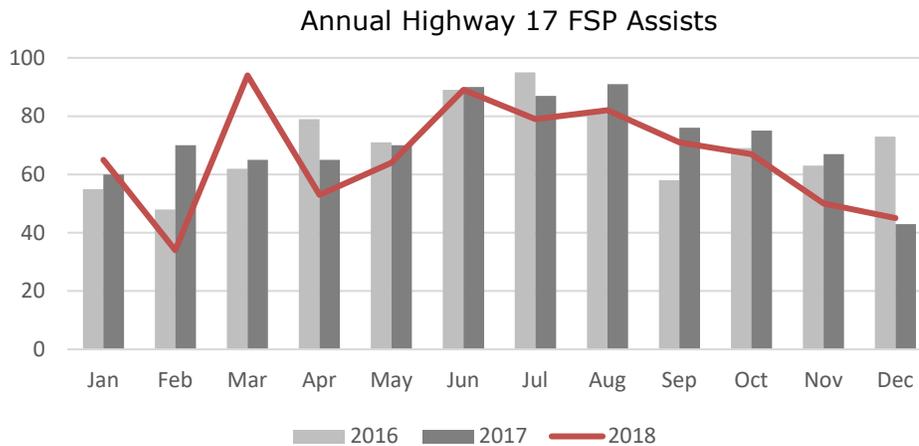
As the SAFE, the SCCRTC levies a \$1 annual fee on all registered vehicles in Santa Cruz County. The funds raised are used to help fund all SAFE projects including FSP. The FSP project also receives funds from Caltrans with the RTC matching at least 25% of the annual allocation. Matching fund sources from recent years include the Santa Cruz County's regional share of State Transportation Improvement Program (STIP) funds, Service Authority for Freeway Emergency (SAFE) funds, and Regional Surface Transportation Program (RSTP) funds. Additional funds are available in FY18/19 through Measure D and Senate Bill 1.

DISCUSSION

2018 FSP Assists and Benefits

Several variables are used to evaluate the level, quality and benefit of FSP service. The total annual number of FSP assists is one of the primary service indicators. Other indicators include average duration for FSP service, average assists per truck hour, a cost-benefit ratio and customer service ratings

The Freeway Service Patrol provided 793 assists over 1,955 hours on Highway 17 in 2018, averaging 0.37 assists per truck hour. The average assist duration was just under 10 minutes. Two-thirds of all assists involved assistance directly to motorists, primarily fixing flat tires, addressing mechanical issues, and assisting CHP with collisions. Free tow service was provided to 177 motorists. More than 90% of those assisted by the FSP who filled out a survey card gave the program a good or excellent rating.



Each time the FSP assists a motorist and removes a disabled vehicle from the roadway, the FSP is also helping all those motorists who are commuting on the highway at that time. The effectiveness of the FSP program is assessed by calculating the annual cost benefit (B/C) ratio of each FSP beat. The Santa Cruz County FSP program showed the following benefit cost ratios in 2016/17¹:

FSP Beat	Benefit Cost Ratio
Highway 1	3:1
Highway 17	4:1
Santa Cruz County Average	4:1

Annual savings in incident delay, fuel consumption and air pollutant emissions due to FSP service are calculated based on the number of assists, beat geometries and traffic volumes. The savings are then translated into benefits using monetary values for delay (\$18.00/vehicle-hour) and fuel consumption (\$2.92/gallon).

There are a number of additional benefits which are not quantified or assigned a dollar value in the studies and therefore are not included in the benefit cost ratio. These benefits include reduction of auto emissions, benefits to the assisted

¹ Caltrans Draft FSP MIS Annual Report, FY 2016-2017; *most current report available*

motorists, benefits to the CHP, benefits to freeway operators, improved safety and reduction of secondary collisions.

FSP Funding

Caltrans allocates funds to each FSP program based on a formula that includes population, freeway lane miles and congestion (daily vehicle-hours of delay). Santa Cruz County FSP will receive \$240,500 from Caltrans for FY 18/19, which includes \$79,525 of additional funds from SB-1. The allocation requires a match of 25% from the administering agencies to support the FSP program. Historically, the FSP matching funds from Santa Cruz County has been approximately 40 to 50% and have been funded from a variety of sources including Santa Cruz County's regional share of State Transportation Improvement Program (STIP) funds, Service Authority for Freeway Emergency (SAFE) funds, Regional Surface Transportation Program (RSTP) funds, and local Measure D funds.

SUMMARY

The Freeway Service Patrol reduces congestion and improves safety by removing disabled vehicles from the highway. FSP provided 793 assists over 1,955 hours on Highway 17 in 2018, averaging 0.37 assists per truck hour. Santa Cruz County FSP will receive \$240,500 from Caltrans for FY 18/19, which includes \$79,525 of additional funds from SB-1.

Daniel's Law: Four years after fatal Highway 17 accident, state to require behind-the-wheel training for truck drivers

outline.com/BKmN5h

 [Santa Cruz Sentinel >](#)

Nicholas Ibarra October 09, 2018



Family and friends of Daniel McGuire, who was killed on Hwy 17 when a big rig jackknifed, were instrumental in passage of a new state law that is raising the training standards for truck drivers. (Dan Coyro — Santa Cruz Sentinel)

SANTA CRUZ — Four years after a big rig crashed on Highway 17, killing 25-year-old Santa Cruz resident Daniel McGuire, a law that could have prevented the accident is on the books.

Known as “Daniel’s Law” to its supporters, [SB 1236](#) will require commercial truck drivers to have behind-the-wheel training, on top of new federal safety standards, before setting out onto California’s roads. Authored by Sen. Bill Monning, D-Carmel, it was signed into law by Gov. Jerry Brown on Sept. 30.

"I feel victory. I feel Daniel saying, 'Good job mom.'" said Gail-Jean McGuire-Sais, Daniel McGuire's mother, as the family and friends gathered to celebrate Tuesday in her Westside Santa Cruz home. "I know my daughter will be protected as she goes over the hill, and my grandson."

"I think Daniel is smiling down on us," said father Doug McGuire.

On July 10, 2014, Daniel McGuire was commuting to work on Highway 17 when he slowed behind a line of traffic on a steep descent near Lexington Reservoir. He was fatally struck from behind by a big-rig truck that barreled into a line of 10 cars, unable to stop and weighted by two trailers full of dirt.



The crash area looking north shows one trailer on the far left and the rest of the big rig on the right at the scene of a fatal accident involving a big rig and several cars on northbound Highway 17 just before the Bear Creek Road exit in July 2014. Daniel McGuire died in the early morning accident closed the northbound lanes and several area roads. (Dan Honda/Bay Area News Group file)

More than 1,000 people attended Daniel McGuire's memorial service at Kaiser Permanente Arena in Santa Cruz later that month.

The driver, Ravinderpal Singh, had been on the job for less than three months, had never driven Highway 17, and had no behind-the-wheel training.

The day of the accident is one Daniel McGuire's family will never forget, igniting an advocacy effort that saw the family traveling to the state Capitol and even Washington D.C to make the case that truck driver training standards didn't go far enough.

"When I learned that that truck driver did not have any behind-the-wheel training I actually went into shock," McGuire-Sais said.

The new law had been called for by Daniel McGuire's family and friends, including former Santa Cruz Mayor Lynn Robinson, since soon after the 2014 accident. But prior versions had been narrowly defeated in 2015 and 2017 amid opposition from the California Farm Bureau and questions about the cost of implementation.

This year, the third time proved the charm as a slimmed-down version of the bill cleared the state Legislature, then the governor's desk, with near unanimous support. Backers included UPS, the Amalgamated Transit Union, the County of Santa Cruz, and 3,085 individual supporters.

Beginning in June 2020, applicants for a Class A or B commercial driver's licenses will now be required to complete at least 15 hours of behind-the-wheel training, including at least 10 on a public road.

Monning celebrated the success as "significant win for public safety" in a recent interview with this news organization.

"With some legislation like this, there will never be a way to measure how many lives are saved," Monning said. "We do know that this legislation will save lives and will be a lasting legacy to Daniel McGuire and his family."

Photo shows wreckage of wrong-way DUI crash on Hwy 17

 ktvu.com/news/photo-shows-wreckage-of-wrong-way-dui-crash-on-hwy-17



Photo: CHP Santa Cruz

SCOTTS VALLEY, Calif. (KTVU) - CHP Santa Cruz posted a photo of the wreckage following a wrong-way crash on Highway 17.

According to CHP Santa Cruz, a 47-year-old Redwood City man was driving northbound in the southbound lanes on the freeway portion of Highway 17 through Scotts Valley. The man, in a 1999 Volkswagen Jetta, hit a 2014 Mazda MZ6 around 11:44 p.m. Sunday.

Although the driver's car was totaled, there were no life threatening injuries in the crash.

According to CHP Santa Cruz, the driver was suspected of drug impairment and was booked into Santa Cruz County Jail early Monday morning.

Additional details have not been released.

'Safe on 17' campaign aims to reduce crashes on Highway 17 in Santa Cruz mountains

 abc7news.com/traffic/safe-on-17-campaign-aims-to-reduce-crashes-on-highway-17/4881211

By Matt Keller

Tuesday, December 11th, 2018

SANTA CRUZ, Calif. (KGO) -- Highway 17 through the Santa Cruz Mountains is a treacherous stretch of road.

Santa Clara County Firefighters says they've seen a steady increase in crashes between the Summit and Los Gatos.

Some people blame the locals, others the tourists.

"Seventeen can be a scary road to drive because the people who do commute it on a regular basis make it feel like a race track," said Ben Lomond resident Denice Austin.

Scotts Valley resident Ryan Ver Berkmoes says, "You get so many tourists and you get so many people unfamiliar with the road that they're just not set for the conditions."

Emergency personnel urging you to be "Safe on 17."

63,000 people a day drive 17 and firefighters say crashes are on the rise.

More info here- <https://t.co/POMMKBeml9> pic.twitter.com/rNflPViTha

— Matt Keller (@MattKellerABC7) December 11, 2018

Santa Clara County emergency workers held a news conference Tuesday for the "Safe on 17" campaign.

They say accidents on Highway 17 present one of the greatest hazards to the public and first responders.

63,000 people travel over the Santa Cruz Mountains every day.

The CHP reported seven crashes Tuesday by 3 p.m. and that's when it's dry. Rainy days you could see two to three times that number of crashes.

"It looks like a war zone. There's car bumpers, there's headlights. It reminds me of that Johnny Cash song, "One piece at a time." You could probably build a handful of cars up there with all the car parts, said Santa Clara County Fire Captain Brent Kirk.

What are the biggest causes of crashes on Highway 17?

The CHP says speed, distracted driving, following too close and unsafe lane changes top the list.

For more information on the "Safe on 17" campaign go [here](#).

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Safe on 17

[sccfd.org/community-education/emergency-preparedness/safe-on-17](https://www.sccfd.org/community-education/emergency-preparedness/safe-on-17)



WHY IT'S IMPORTANT TO BE SAFE ON 17

The Highway 17 corridor was identified as a high collision corridor in 1998 as a result of collision data analysis and recommendations of local, regional, county and state agencies. Collision reduction strategies, including enforcement and road improvements have made some positive impact. However, in recent years, Highway 17 from Los Gatos to the Summit has seen a steady rise in collisions.

Accidents on the highway present one of the greatest hazards to the public and our responders.

HIGHWAY HAZARDS

Over 63,000 people commute over Highway 17 daily, and more available distractions present dangerous hazards, including:

- Cellular devices
- Multi-tasking



DISTRACTED DRIVING



<https://youtu.be/p3N1ZRwhCew>

Wet weather makes travel on Highway 17 increasingly hazardous. Speed limits are established for ideal road and traffic conditions, but are not appropriate during inclement weather.

Slow for inclement weather conditions:

- Heavy fog and light rain makes roadways slippery
- Heavy rain reduces visibility between vehicles and lanes
- In cold weather, 'black ice' is not visible but extremely dangerous



<https://youtu.be/RG18JOeNBFU>

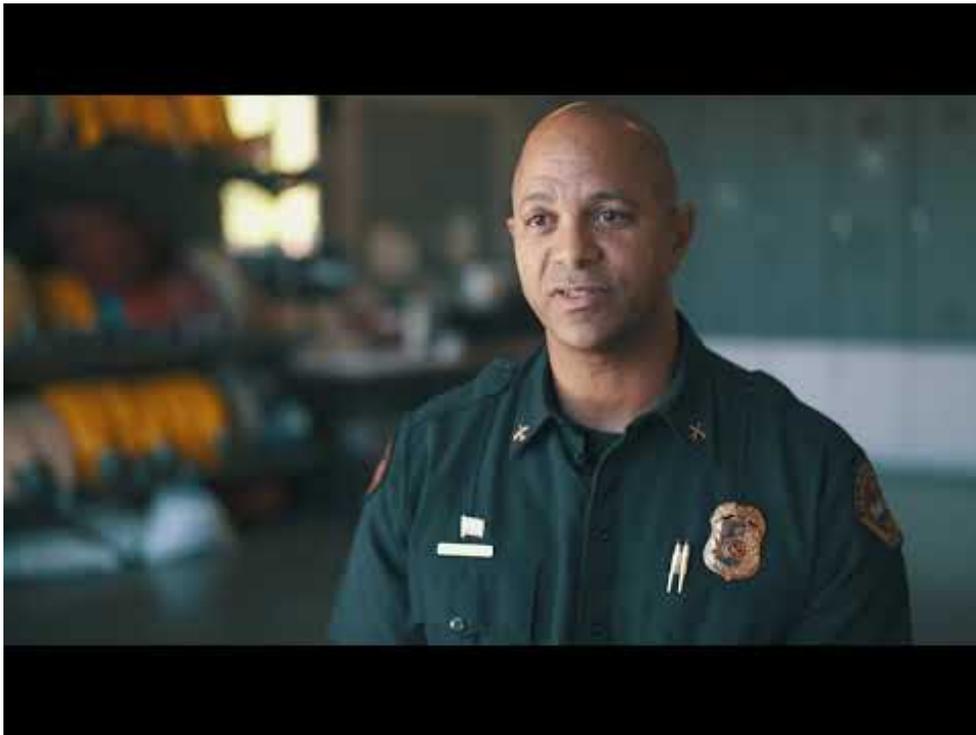


SECONDARY ACCIDENTS/RESPONDER SAFETY

Secondary accidents occur due to driver behavior and inattention near accidents on the highway, putting drivers and responders at additional risk.

Characteristics of Highway 17 itself complicate responses for our crews

- Lanes with limited or no shoulders
- Blind curves
- Traffic congestion



<https://youtu.be/bMx4mAe0aMs>

HOW CAN YOU BE SAFE ON 17?

Slow down and allow for extra travel time to account for traffic and road conditions.

leave extra space between vehicles

- Put down the cell phone and avoid distractions
- Put your phone on 'do not disturb' while driving
- Finish your morning routine before you hit the road. Don't wait until you're on the highway to eat breakfast or check your traffic apps.



SLOW DOWN



PAY ATTENTION



Slow down for lights or flares.

WATCH FOR RESPONDERS

Emergency vehicles may have to 'split traffic' by traveling down the center of the lanes when they are responding.

- Turn off your radio
- Roll your windows down
- Listen for direction

BE PREPARED FOR HIGHWAY TRAVEL AND DELAYS

Stay up-to-date on road conditions

- Caltrans road conditions are updated in real time
- 511.org

Have emergency supplies in your vehicle, in case you are stuck on the highway for an extended amount of time.



Fatal Solo Crash Shuts Down Southbound Hwy 17 In Los Gatos

[sanfrancisco.cbslocal.com/2019/01/31/fatal-crash-shuts-down-southbound-hwy-17-in-los-gatos](https://www.kqed.org/news/1176114/fatal-crash-shuts-down-southbound-hwy-17-in-los-gatos)

January 30, 2019

LOS GATOS (CBS SF) — A fatal solo vehicle accident Thursday evening has shut down southbound state Highway 17 in Los Gatos, according to authorities.

CHP issued a severe traffic alert after receiving reports of an accident with injuries on southbound CA-17 south of Redwood Estates in Los Gatos that blocked all lanes.



A CHP spokesperson from the San Jose office said the first call regarding the accident was received at about 5:30 p.m. There were reports that the individual operating the vehicle was driving erratically and may have driven off the highway.

CHP confirmed the solo crash was fatal with the male driver being the only victim in the vehicle.

The freeway was closed as CHP waited for the coroner to get to the scene.

Motorists are advised to expect delays and to use alternate routes to avoid the area. There was no estimated time to reopen the roadway.

One Dead After Falling Tree Causes Crash On Hwy 17

[sanfrancisco.cbslocal.com/2019/02/14/downed-tree-on-car-blocks-all-northbound-lanes-of-hwy-17-in-los-gatos](https://www.kqed.org/news/1176144/downed-tree-on-car-blocks-all-northbound-lanes-of-hwy-17-in-los-gatos)

February 13, 2019

LOS GATOS (CBS SF) — CHP on Thursday afternoon confirmed one person died on Highway 17 after two major injury crashes, including one caused by a tree that fell onto at least one vehicle.

The two incidents snarled traffic for hours on the often congested highway, at one point closing lanes in both directions.

As of shortly after 4 p.m., CHP said the combination of an accident and a downed tree in the northbound lanes of the highway south of Summit Road had left all lanes blocked.

Chopper 5 video showed CHP investigating an earlier crash on northbound Highway 17 with a single overturned car before coming across the second incident involving multiple vehicles and a downed tree.

CHP Santa Cruz said about an hour after a rollover accident that seriously injured the driver, a tree came down on the southbound side of Highway 17 and struck a car traveling northbound.

The driver of that car was knocked unconscious and hit several other cars. Video appeared to show that the accident involved at least four or five other cars. The driver of the vehicle struck by the tree was taken to the hospital with major injuries.

CHP later confirmed that the driver of the vehicle struck by the tree died.

As of shortly before 5:30 p.m., the left southbound lane of the highway had reopened to traffic. Northbound traffic was still being diverted as of shortly before 6 p.m. as CHP investigated the fatal collision.

Hwy 17 amend update: [@CaltransD5](#) cleared the tree S/B lanes s/ of the summit. Unfortunately, we are now investigating a fatal collision N/B lanes s/ of the summit related to the tree. This comes on the heels of a separate “major inj tc” n/ the summit. We hope to clear N/B w/ hour

— CHP Santa Cruz ([@CHPscrz](#)) [February 15, 2019](#)

Authorities were able to reopen all northbound lanes of Highway 17 at about 7 p.m.

Traffic was diverted off to Summit Road during the extended closure. Motorists traveling on Highway 17 are advised to expect residual delays.

Safe on 17

Observations and Recommendations

California Highway Patrol
San Jose District Office
March 13, 2019

Bill Ross | 408.353.5763 | bill.ross.siliconvalley@gmail.com

Unverified Quote From the Internet

“Highway 17 was built to it's mostly current condition back in 1940. The "slaughter house highway", "Deadman's highway", "Blood Alley" has in the past, claimed more injuries and lives than the entire stretch of Interstate 5 from Oregon to the Mexico Border EVERY year.”

About Me

- **22 year resident of the Santa Cruz Mountains**
 - **300 yards uphill from the Valley Surprise Curve**
 - **Work from home, drive and fly to clients**
- **Married with two children**
 - **Wife commutes daily to downtown San Jose**
 - **One son at Los Gatos High School**
 - **One son at Fisher Middle School**
- **Highway 17 is a critical and daily aspect of our lives**

Relevant Facts About Santa Cruz County

- **Estimated 2017 Population: 276,000**
- **30,000+ Santa Cruz County Commuters Travel 17 Daily**
- **> 10% of Santa Cruz County commutes 17 every week day**

Population Source: <https://sccrtc.org/wp-content/uploads/2014/01/Chapter-3-Travel-Patterns.pdf>

Traffic Volume Source: <https://sccrtc.org/wp-content/uploads/2017/09/2016-Safe-on-17AnnualReportDraftwith-ATT.pdf>

Highway 17: Data from 2006 Through 2017

- **26.5 Miles in length**
 - 13.95 miles in Santa Clara County
 - 12.55 miles in Santa Cruz County
- **2752 Accidents**
 - 1555 in Santa Clara County
 - 1197 in Santa Cruz County
- **3069 Injuries**
 - 2018 in Santa Clara County
 - 1591 in Santa Cruz County
- **32 fatalities**
 - 24 in Santa Clara County
 - 8 in Santa Cruz County

Mileage Source: https://en.wikipedia.org/wiki/California_State_Route_17

Accident Data Source: <https://tims.berkeley.edu/>

Highway 17 Averages: 2006 Through 2017

- **250 Accidents Per Year**
- **9 Accidents Per Mile, Per Year**
- **279 Injuries Per Year**
- **11 Injuries Per Mile, Per Year**
- **3 Fatalities Per Year**

Costs Associated With Fatalities and Injuries

Collision Type	Economic Costs**	VSL Costs*	Total
Fatal Collision	\$1,700,000	\$10,800,000	\$12,500,000
Injury Collision	\$41,300	\$148,800	\$190,100
PDO Collision	\$5,700	\$9,700	\$15,400
All Type Average	\$38,100	\$185,600	\$223,700

*Value of a Statistical Life (Lost quality of life)

**Tangible costs such as medical costs, emergency services, productivity loss, congestion, property damage, insurance.

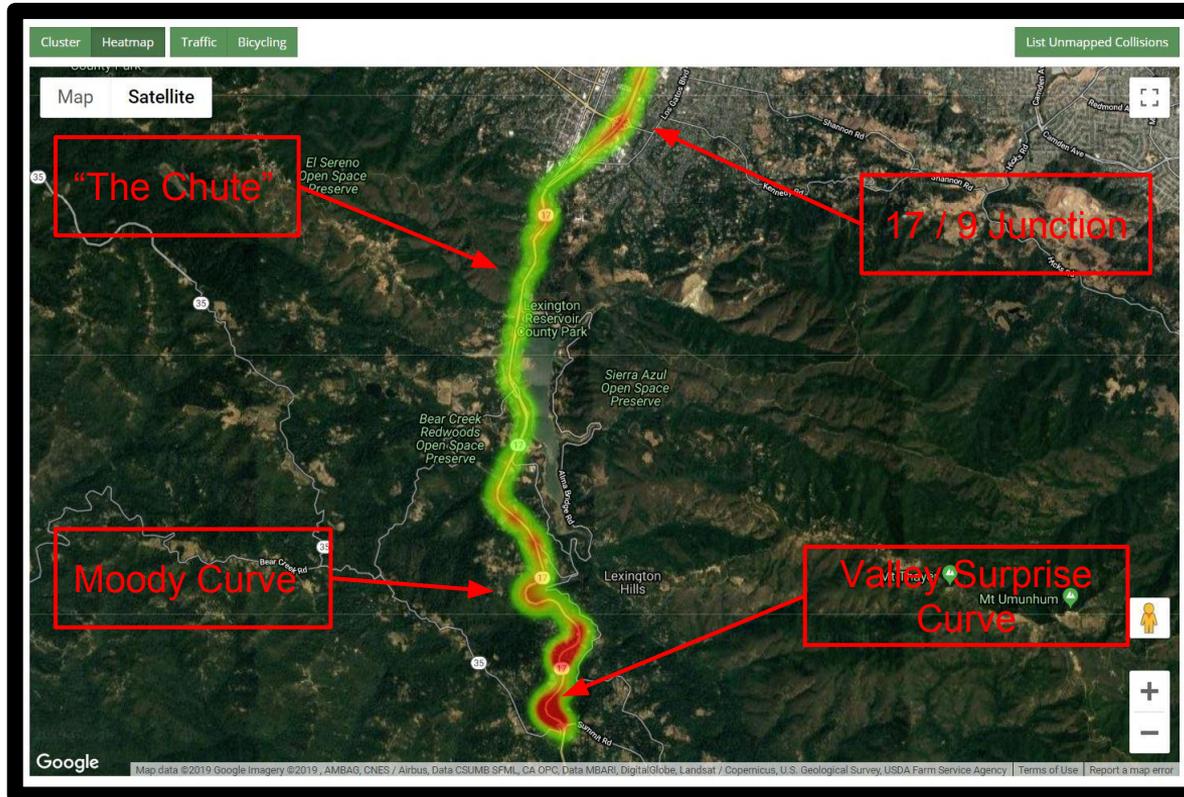
Source: SCCRTC Unified Corridor Investment Study, January 2019

The societal costs associated with motor vehicle collisions are borne not only by the individuals and families involved but by the entire community. The tangible economic costs due to collisions can include lost productivity, medical costs, legal and court costs, emergency service costs, insurance administration costs, congestion costs, property damage and workplace losses. Intangible costs due to lost quality of life from injuries and death are more difficult to evaluate but are critical in quantifying the harmful impacts of motor vehicle collisions. These intangible costs have been defined as Value of a Statistical Life (VSL). Caltrans Transportation Economics Branch utilizes a VSL cost of collisions based on severity levels that are developed by the U.S. Department of Transportation.

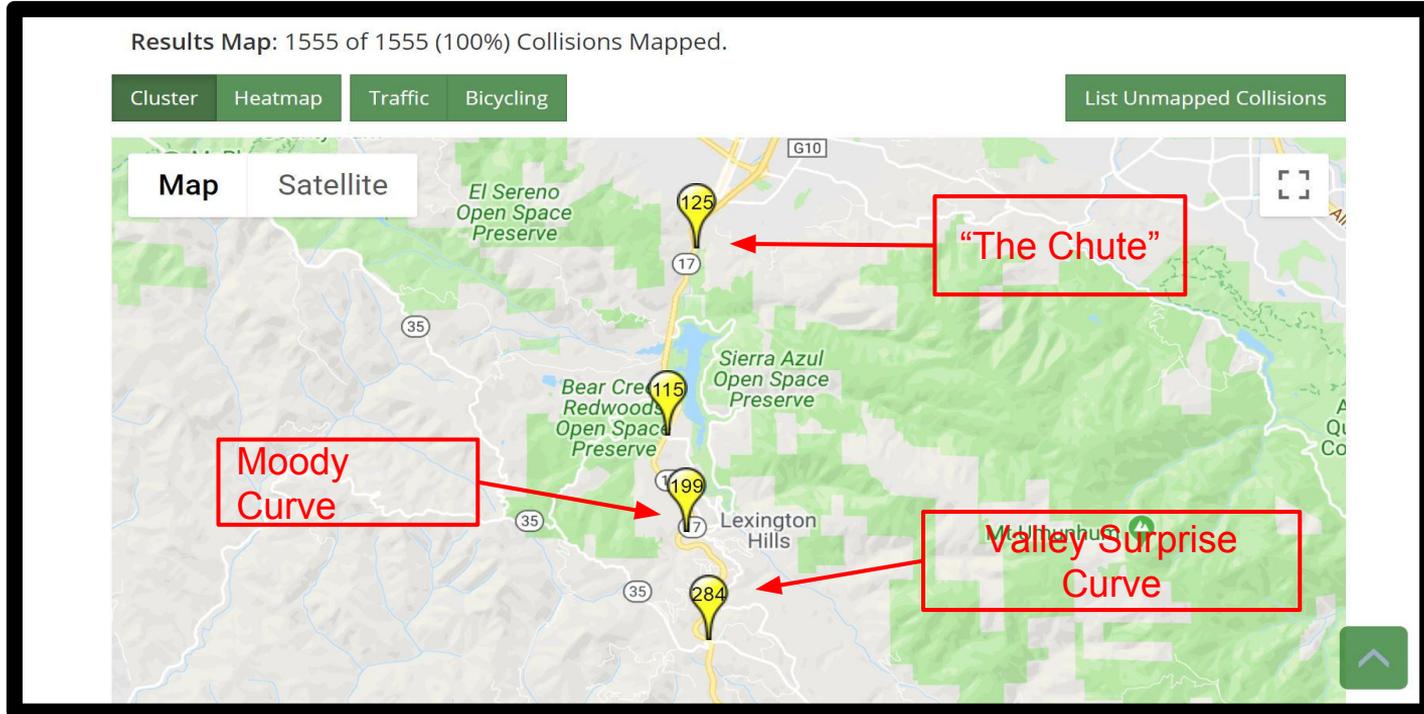
Financial Impact of Accidents: 2016 - 2017

	Cost Per Occurrence	Occurrences Count	Total Financial Cost
Injury Accidents	\$190,100	3069	\$583,416,900
Fatal Accidents	\$12,500,000	32	\$400,000,000
Total Financial Impact			\$983,416,900

Heatmap of Accident Occurrences



Number of Accidents Per “Hot Spot” 2006 - 2017



Great Literature Endures: it Captures Human Nature

- Iliad - 8th Century BC
- The Old Testament - 6th Century BC
- Aesop's Fables - 6th Century BC
- Medea - 5th Century BC
- Tao Te Ching (Lao Tzu) - 4th Century BC
- Book of Job - 4th Century BC
- Oedipus - 1st Century BC
- Art of War - 1st Century BC
- Ovid - 1st Century AD
- Meditations - 2nd Century
- The Enneads - 3rd Century
- Soliloquies: Augustine's Inner Dialogue - 4th Century
- Confessions - 5th Century
- The Arabian Knights - 7th Century
- Beowulf - 8th Century
- The Travels - 13th Century
- The Divine Comedy - 14th Century
- The Canterbury Tales - 15th Century
- Hamlet - 16th Century
- Don Quixote - 17th Century
- Candide - 18th Century
- Great Expectations - 19th Century
- Crime and Punishment - 19th Century
- War and Peace - 19th Century
- Huckleberry Finn - 19th Century
- The Catcher in the Rye - 20th Century
- Grapes of Wrath - 20th Century
- Atonement - 21st Century

*Human Nature Doesn't Change: **FIX THE ROADWAY***

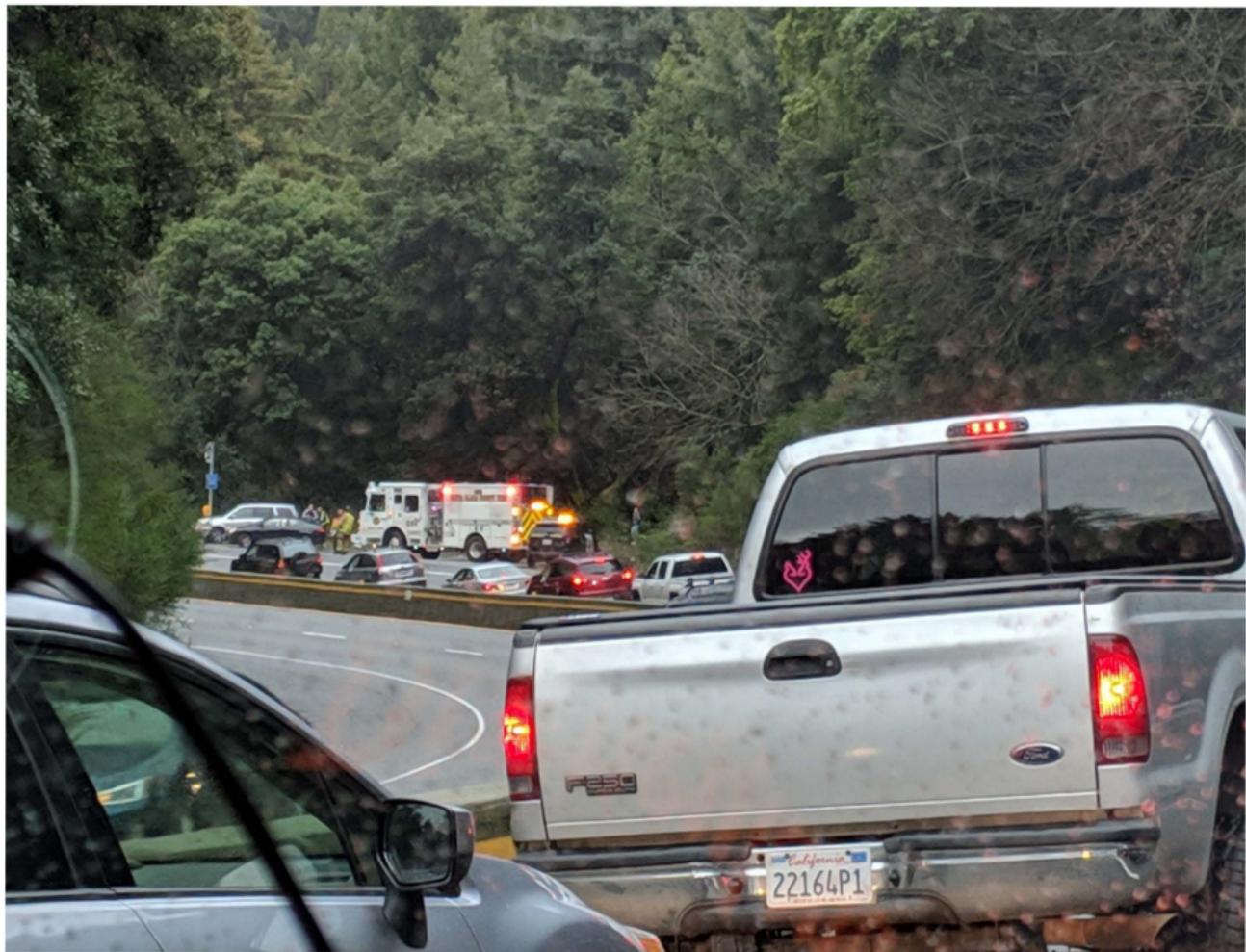
What Should Be Done (Santa Clara County)

- Upgrade Valley Surprise Curve - Ideally Bridge It
- Bridge Moody Curve
- Upgrade 17 / 9 Junction to a Diamond Intersection
- 3 Lanes Southbound From Lark Avenue to Summit Road
- 3 Lanes Northbound From Bear Creek Road to Lark Avenue
- Straighten and Widen “The Shoot”

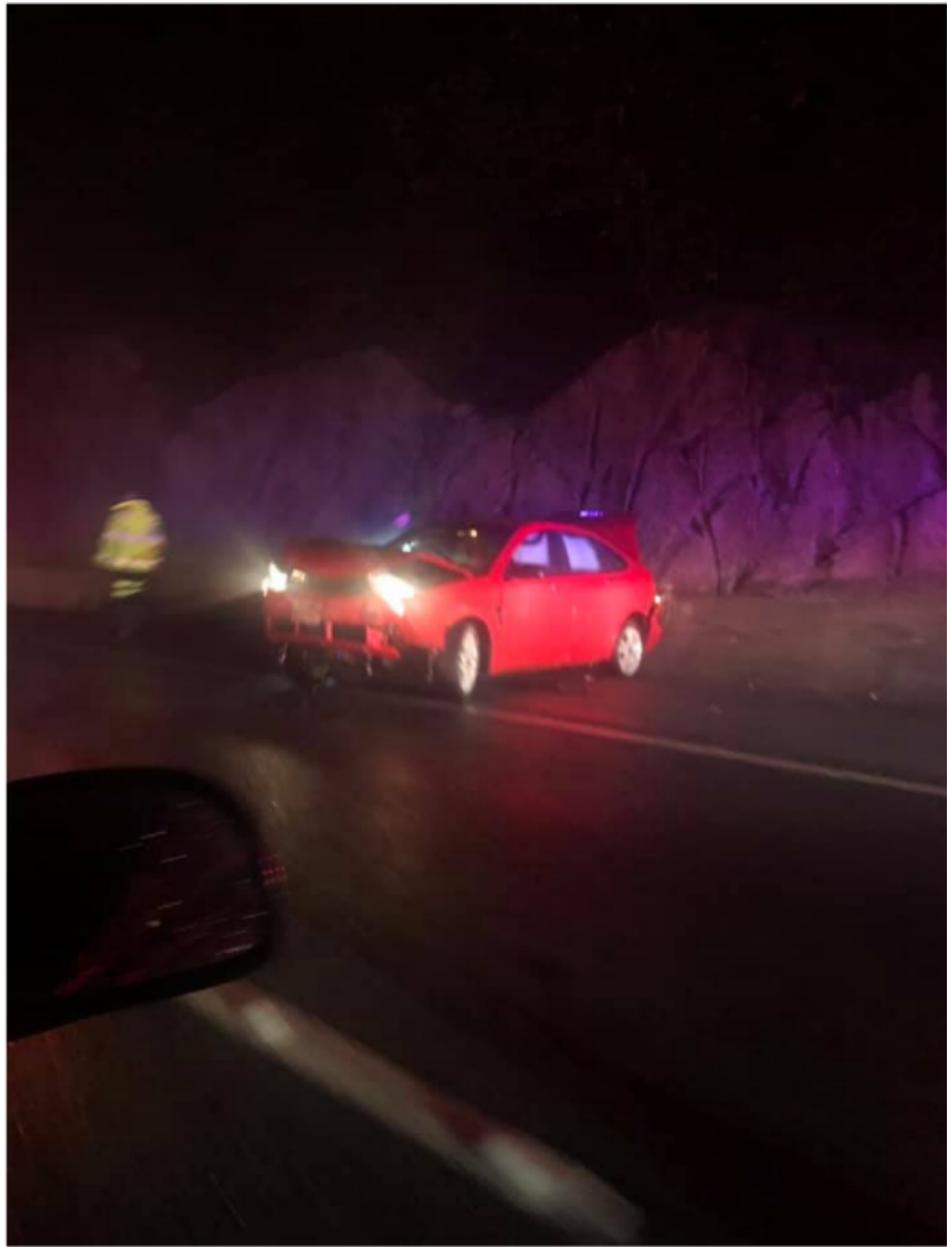
Appendix: Pictures of Recent Accidents

- **These are ONLY from January 1, 2019**
- **Most were taken by commuters and publicly posted**
- **These are NOT all-inclusive**
 - **Many occur overnight and no pictures are posted by commuters**
- **Most are from the Valley Surprise Curve and the Big Moody Curve**

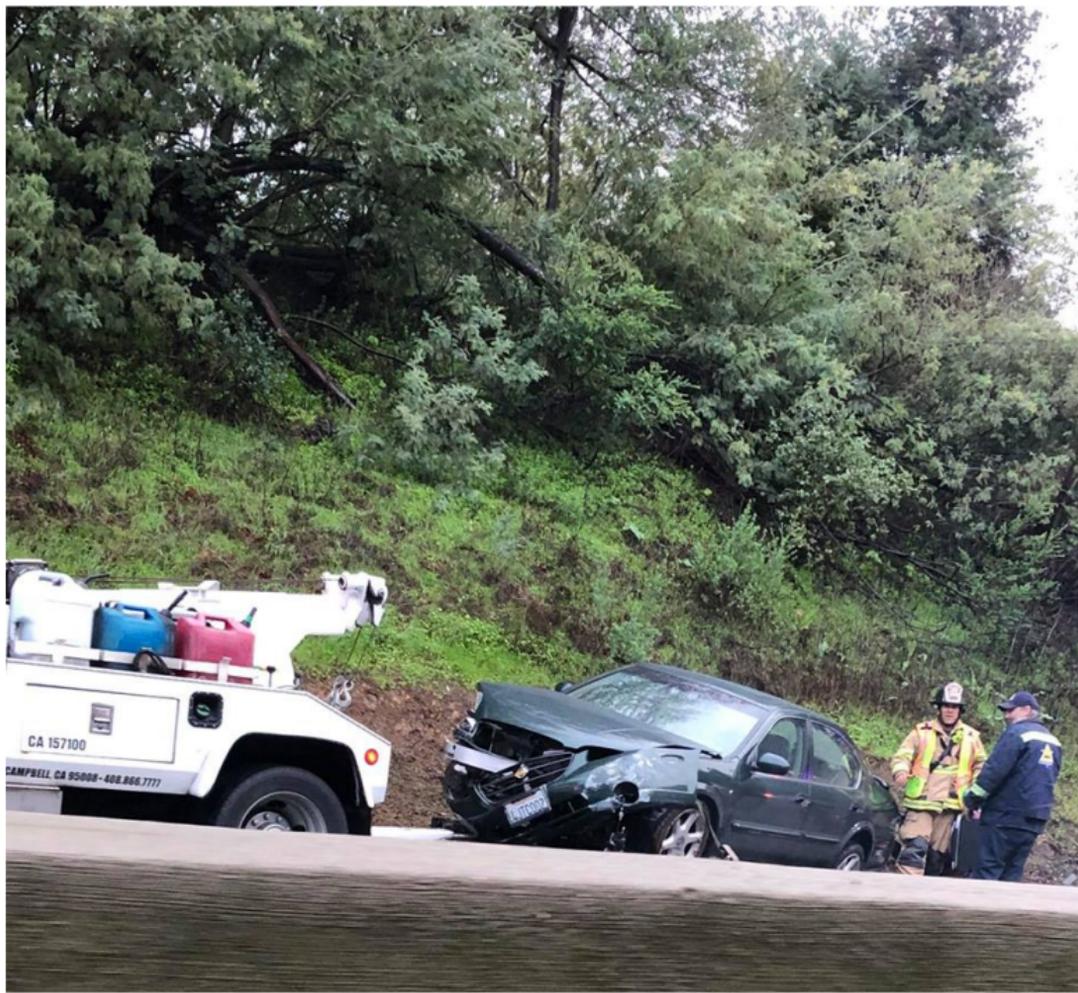






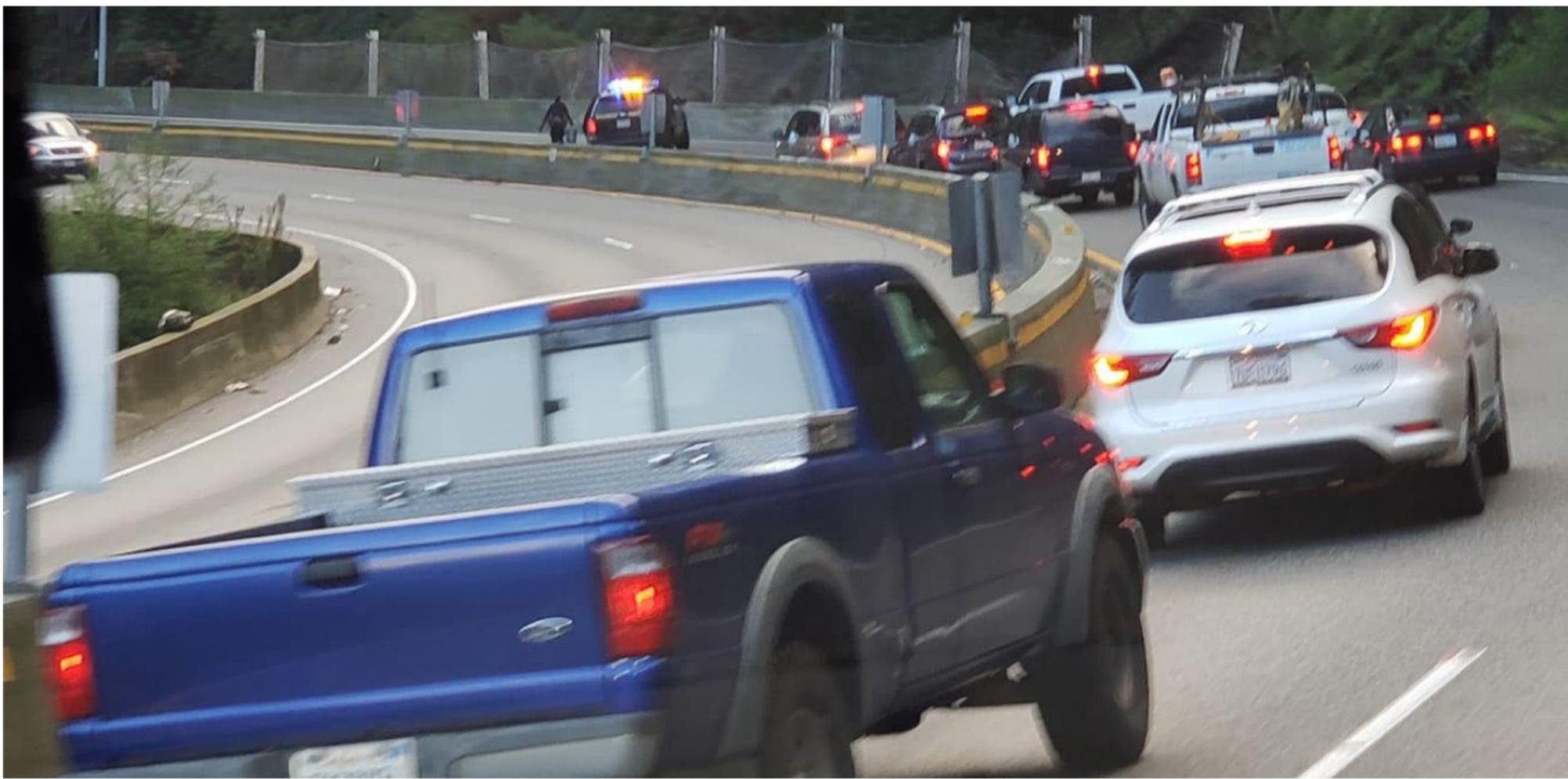




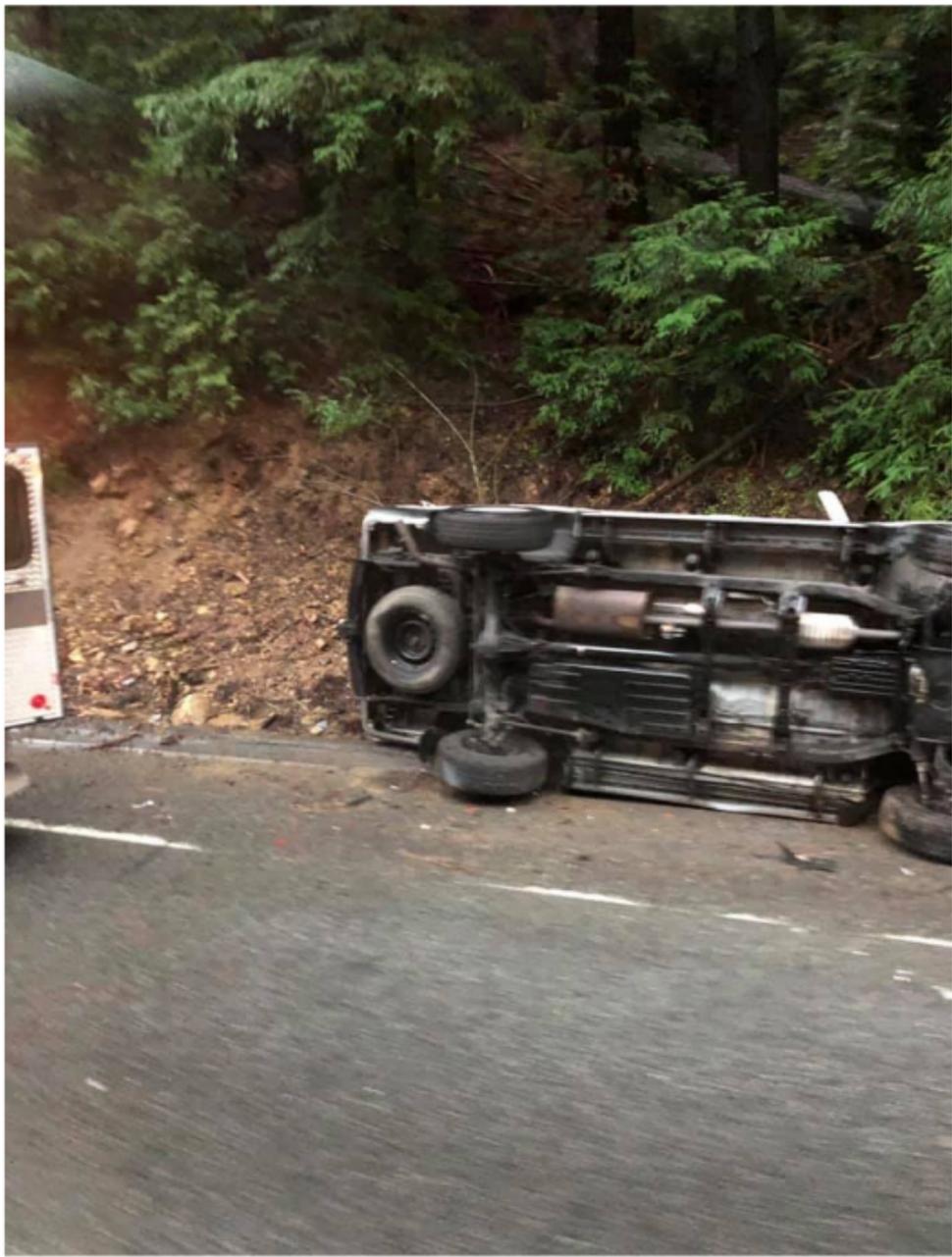


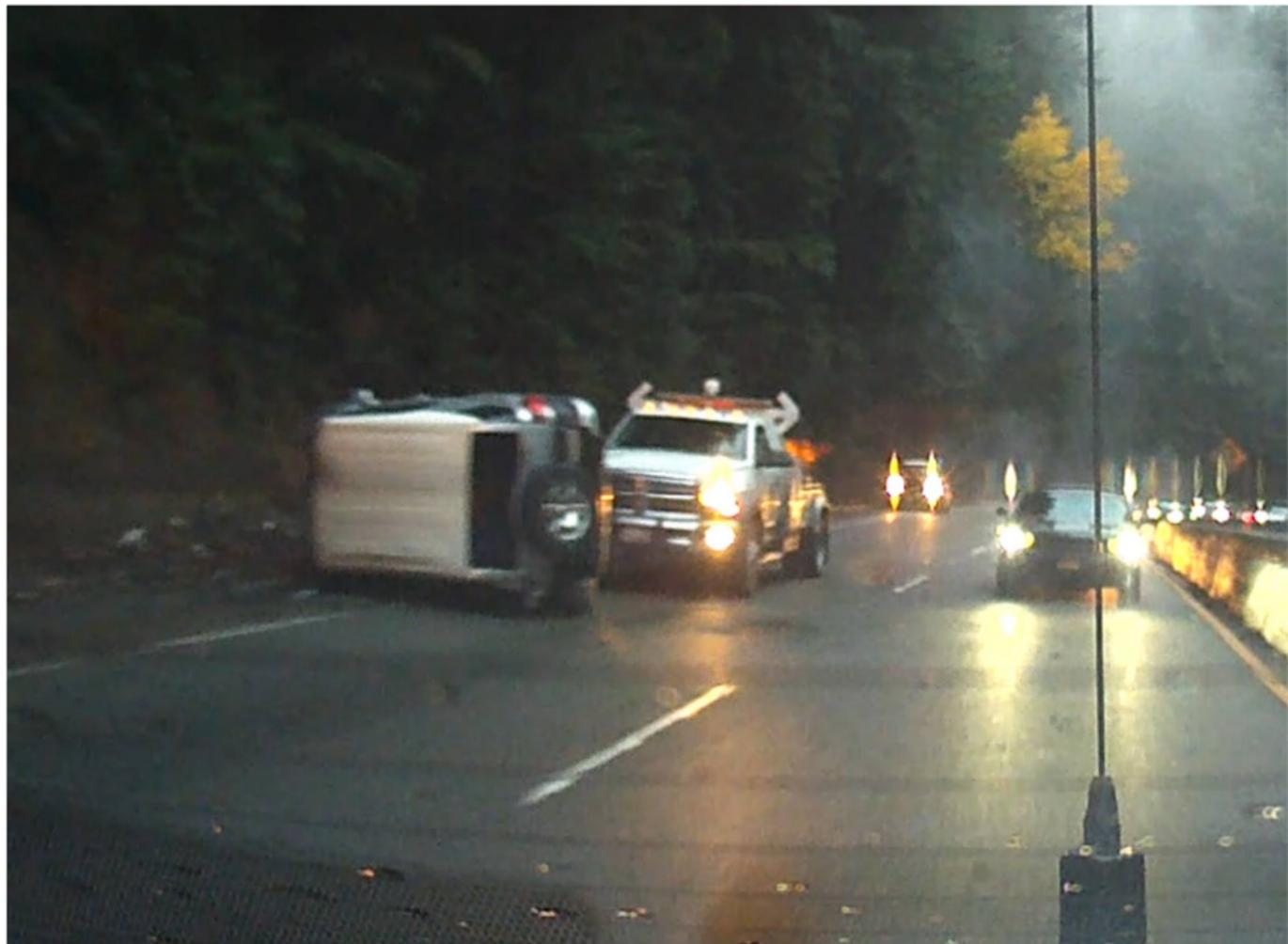








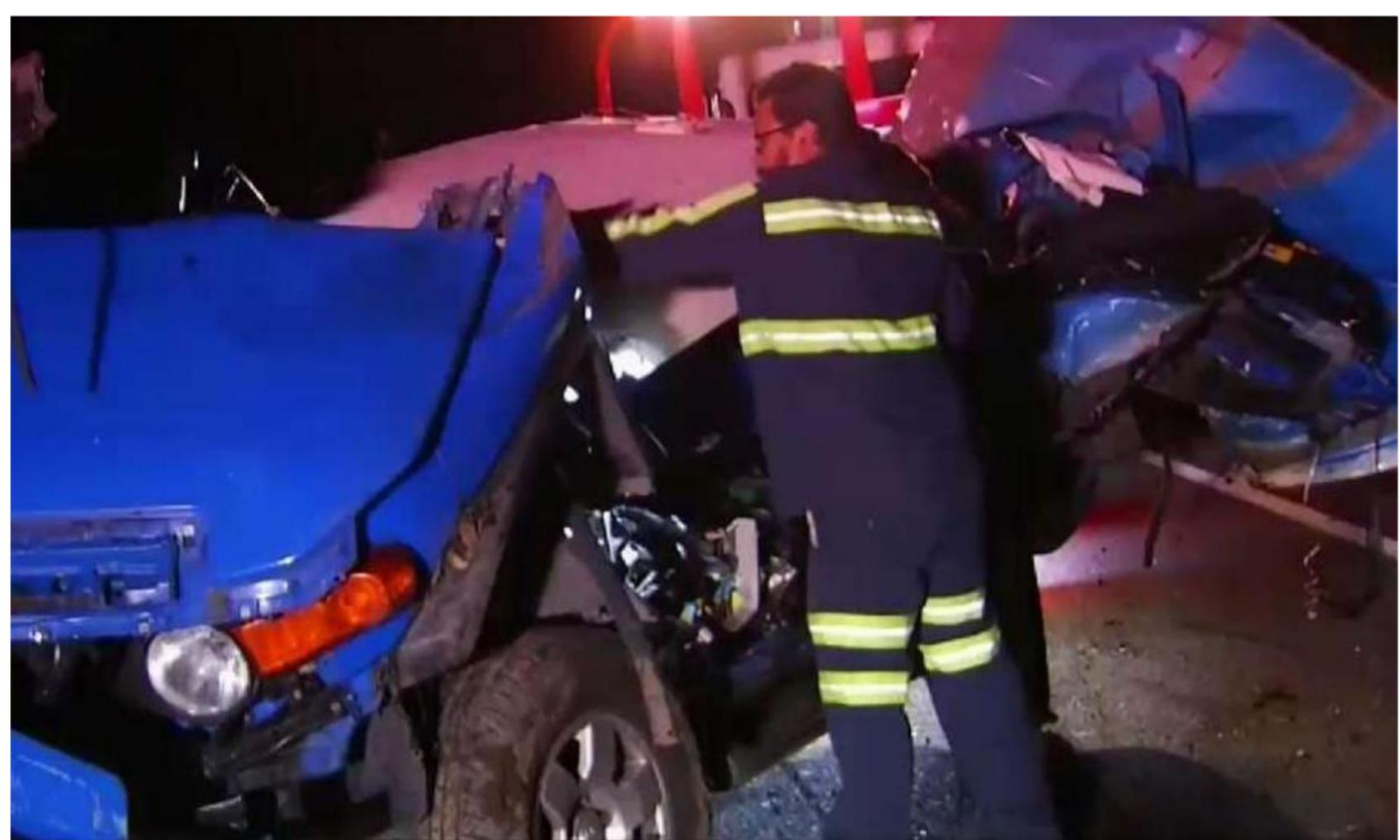


























CA 157100

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Tweet



KCBS Radio - The Traffic Leader

@KCBSAMFMTraffic



CHP will NOT be able to recover the vehicle that went off the roadway until tomorrow. No updates on when CHP will reopen NB-17

KCBS Radio - The Traffic Leader @KCBSA...

CHP has once again shut down both lanes of NB-17 after Summit Rd. Traffic is being diverted onto Summit Rd as emergency crews work to recover a vehicle that went off the roadway.

Show this thread









Santa Clara County Fire Department

15 hrs

👍 Like Page

Between 5 p.m. Friday evening and 12:00 a.m. Monday morning, #SCCFD responded to over a dozen incidents on Highway 17, including a vehicle over the side that required the rescue of 3 occupants and temporarily closed all northbound lanes.

We remind everyone who travels Highway 17 to SLOW DOWN, PAY ATTENTION, and WATCH FOR RESPONDERS!

sccfd.org/safeon17

#SafeOn17 #sccfdincidents #valleysurprise

CHP - San Jose CHP - Santa Cruz Caltrans District 4 Santa Clara County Firefighters

👍 🤔 😞 19

5 Comments



On southbound Highway 17, a Toyota pick-up truck ended up crashing at Big Moody Curve.



Matt Keller ✓

@MattKellerABC7



Big Moody Curve on SB17 claims another victim.

Driver wasn't hurt.

♥ 21 9:51 AM - Mar 6, 2019



Slick roadways in Santa Cruz Mountains after wet weather



1 minute left



Slick roadways in Santa Cruz Mountains after wet weather



1 minute left























HWY 17 Traffic Deterrents

Presented By Gene Marshack (V34029) Senior Volunteer San Jose Division

Defined:

Placing a visual on the side of the road that encourages drivers to drive safer.

Advantages Over Increased Patrolling:

Little ongoing cost after initial installation
Communicates message to all drivers, not just those cited.
They function 24 hours a day 365 days a year.

Potential Pitfalls

May cause the kangaroo effect due to drivers slowing down too much
Locations of deterrents get known over time
Deterrents may cause driver distractions



One Total Integrated Solution

Place Two License Plate Reader Cameras Several Miles Apart

Benefits:

Collects Specific Car Information With Specific Violation

Travel Time Between Cameras Used To Determine Speed

Sign Showing Plate and Speed Could Warn Driver Of Being Tracked And Cause Concern That A Ticket May be Imminent

Collected Data Would Provide Supplemental Information Should a Ticket Be Issued At A Later Date

No Kangaroo Effect Due To Length Of Controlled Area And Hidden Cameras

Location Of Cameras Could Be Periodically Moved.

Provide Enforcement Agencies Ability To Study Time and Violation Locations



Other Possible Deterrent Ideas

Place Markers Everywhere An Injury Accident Has Occurred In Past Year

Driver Reporting System Implemented Similar To 800-EXHAUST

Solar Power Lights That Flash Red And Blue At Night

Cardboard Police Cars

Put Up Signs That Display An Accident Statistic For A Specific Curve

Send Out Random Signals That Trigger Speed Trap Detectors.

San Jose Area CHP Collision Summary for SR-17

Revised 3/12/19

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	PDO	11	19	11	8	5	9	17	6	8	14	15	18	24	39	35
	INJURY	3	2	6	5	4	4	3	3	0	3	4	7	13	19	24
	FATAL	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	TOTAL	14	21	17	13	9	13	20	9	8	18	19	25	37	58	60
FEBRUARY	PDO	10	7	14	14	12	6	11	8	15	16	10	13	35	19	21
	INJURY	5	4	6	6	6	5	2	3	6	7	9	7	9	8	13
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	TOTAL	15	11	20	20	18	11	13	11	21	23	19	20	44	27	35
MARCH	PDO	19	13	11	5	14	11	17	12	14	12	22	45	29	41	
	INJURY	3	3	3	3	2	5	4	1	8	7	9	14	16	22	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
	TOTAL	22	16	14	8	16	16	21	13	22	19	31	60	45	63	0
APRIL	PDO	11	15	5	8	10	9	10	16	10	14	26	24	33	23	
	INJURY	4	7	7	3	5	6	3	5	9	8	7	9	21	9	
	FATAL	0	1	0	1	0	0	0	1	0	0	0	1	0	0	
	TOTAL	15	23	12	12	15	15	13	22	19	22	33	34	54	32	0
MAY	PDO	13	10	5	5	16	11	10	11	2	14	25	16	25	7	
	INJURY	6	7	0	7	5	4	4	2	5	5	10	10	9	8	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	19	17	5	12	21	15	14	13	7	19	35	26	34	15	0
JUNE	PDO	9	13	9	3	13	15	16	20	12	8	19	18	17	22	
	INJURY	3	2	3	4	2	3	4	4	5	4	9	7	4	8	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	12	15	12	7	15	18	20	24	17	12	28	25	21	30	0
JULY	PDO	15	10	9	8	7	16	14	5	12	14	15	16	12	11	
	INJURY	1	5	3	6	2	7	5	8	6	6	10	11	8	4	
	FATAL	0	0	0	0	0	1	0	0	0	1	0	0	0	0	
	TOTAL	16	15	12	14	9	24	19	13	18	21	25	27	20	15	0
AUGUST	PDO	13	9	13	10	9	8	14	10	15	11	18	13	6	12	
	INJURY	2	1	2	7	2	8	6	4	6	3	5	6	0	8	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	15	10	15	17	11	16	20	14	21	14	23	19	6	20	0
SEPTEMBER	PDO	6	5	8	10	7	10	9	13	18	17	20	15	18		
	INJURY	3	0	1	2	0	4	1	4	5	3	8	5	6		
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0		
	TOTAL	9	5	9	12	7	14	10	17	23	20	28	20	24	0	0
OCTOBER	PDO	21	13	14	10	8	30	14	12	6	26	25	29	11		
	INJURY	8	5	6	3	3	2	5	3	5	4	6	18	5		
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	1		
	TOTAL	29	18	20	13	11	32	19	15	11	30	31	47	17	0	0
NOVEMBER	PDO	11	11	7	20	11	12	9	12	14	17	18	27	42		
	INJURY	8	6	3	9	1	6	4	4	7	7	9	6	10		
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0		
	TOTAL	19	17	10	29	12	18	13	16	21	24	27	33	52	0	0
DECEMBER	PDO	16	10	13	20	11	7	8	10	7	15	24	25	15		
	INJURY	6	7	4	3	4	7	1	1	3	5	8	21	4		
	FATAL	0	0	0	0	0	0	0	0	1	0	0	0	0		
	TOTAL	22	17	17	23	15	14	9	11	11	20	32	46	19	0	0

TOTAL PDO:	155	135	119	121	123	144	149	135	133	178	237	259	267	174	56
TOTAL INJURY:	52	49	44	58	36	61	42	42	65	62	94	121	105	86	37
TOTAL FATALITIES:	0	1	0	1	0	1	0	1	1	2	0	2	1	0	2
TOTAL COLLISIONS:	207	185	163	180	159	206	191	178	199	242	331	382	373	260	95

San Jose Area CHP SR-17 Citation Summary

Revised 3/12/19

Regular Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	PCF	126	96	150	279	158	69	58	109		
	Other	20	32	40	25	14	21	12	55		
	Mechanical	2	3	13	13	42	34	10	41		
	TOTAL	148	131	203	317	214	124	80	205	0	0
FEBRUARY	PCF	109	94	211	284	59	138	80	84		
	Other	23	7	14	7	13	12	6	9		
	Mechanical	4	2	26	48	20	33	32	12		
	TOTAL	136	103	251	339	92	183	118	105	0	0
MARCH	PCF	114	101	154	276	220	137	103	218	97	
	Other	6	15	19	13	32	11	10	59	8	
	Mechanical	1	10	38	42	30	19	26	38	13	
	TOTAL	121	126	211	331	282	167	139	315	118	0
APRIL	PCF	110	199	114	223	240	114	122	376	141	
	Other	28	9	20	11	30	14	16	39	21	
	Mechanical	2	42	49	43	26	25	20	42	27	
	TOTAL	140	250	183	277	296	153	158	457	189	0
MAY	PCF	242	154	165	324	201	152	91	587	134	
	Other	30	36	32	13	16	14	12	60	34	
	Mechanical	6	33	32	35	42	28	25	43	24	
	TOTAL	278	223	229	372	259	194	128	690	192	0
JUNE	PCF	267	91	267	197	233	114	70	483	75	
	Other	42	12	40	23	15	8	15	50	12	
	Mechanical	6	11	57	58	29	38	30	34	25	
	TOTAL	315	114	364	278	277	160	115	567	112	0
JULY	PCF	174	87	135	155	73	48	85	102	10	
	Other	46	18	14	10	21	6	20	20	12	
	Mechanical	6	7	16	25	34	25	32	32	24	
	TOTAL	226	112	165	190	128	79	137	154	46	0
AUGUST	PCF	124	76	178	154	200	57	145			
	Other	32	21	9	10	21	9	23			
	Mechanical	8	18	21	18	31	26	41			
	TOTAL	164	115	208	182	252	92	209	0	0	0

San Jose Area CHP SR-17 Citation Summary

Revised 3/12/19

Regular Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
SEPTEMBER	PCF	125	37	194	193	146	115	226			
	Other	42	13	14	11	13	5	34			
	Mechanical	7	21	35	18	30	20	33			
	TOTAL	174	71	243	222	189	140	293	0	0	0
OCTOBER	PCF	115	101	175	98	167	70	159			
	Other	27	17	17	24	23	8	28			
	Mechanical	7	11	55	18	28	10	39			
	TOTAL	149	129	247	140	218	88	226	0	0	0
NOVEMBER	PCF	79	56	277	116	116	93	320			
	Other	17	2	16	20	17	10	34			
	Mechanical	1	5	34	26	20	25	38			
	TOTAL	97	63	327	162	153	128	392	0	0	0
DECEMBER	PCF	121	90	198	117	97	86	148			
	Other	49	10	5	6	8	5	30			
	Mechanical	4	12	61	20	11	10	35			
	TOTAL	174	112	264	143	116	101	213	0	0	0

ANNUAL TOTALS: 2,122 1,549 2,895 2,953 2,476 1,609 2,208 2,493 657 -

San Jose Area CHP SR-17 Citation Summary

Revised 3/12/19

Overtime Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	PCF	0	0	33	1	0	46	20	20	39	2
	Other	0	0	7	49	0	1	2	2	3	34
	Mechanical	0	0	21	19	0	8	11	5	14	5
	TOTAL	0	0	61	69	0	55	33	27	56	41
FEBRUARY	PCF	0	0	43	75	0	62	55	0	37	10
	Other	0	0	16	3	0	1	1	0	7	79
	Mechanical	0	0	20	17	0	19	20	0	23	3
	TOTAL	0	0	79	95	0	82	76	0	67	92
MARCH	PCF	0	85	38	58	159	60	70	0	0	
	Other	0	20	7	1	4	1	2	0	36	
	Mechanical	0	14	13	13	21	5	28	0	6	
	TOTAL	0	119	58	72	184	66	100	0	42	0
APRIL	PCF	0	185	59	82	102	62	94	88	4	
	Other	0	31	7	11	14	4	3	18	33	
	Mechanical	0	11	25	30	14	9	13	10	12	
	TOTAL	0	227	91	123	130	75	110	116	49	0
MAY	PCF	0	119	89	93	74	71	40	131	0	
	Other	0	1	17	13	6	5	1	8	23	
	Mechanical	0	21	14	21	16	18	8	13	6	
	TOTAL	0	141	120	127	96	94	49	152	29	0
JUNE	PCF	50	33	177	78	691	107	32	38	0	
	Other	0	0	19	6	78	6	2	6	18	
	Mechanical	0	5	47	33	145	30	15	10	10	
	TOTAL	50	38	243	117	914	143	49	54	28	0
JULY	PCF	0	39	0	0	0	43	0	0	0	
	Other	0	3	0	0	0	2	0	0	0	
	Mechanical	0	12	0	0	0	7	0	0	0	
	TOTAL	0	54	0	0	0	52	0	0	0	0
AUGUST	PCF	0	42	0	0	74	30	56	48	0	
	Other	0	4	0	0	4	1	3	7	0	
	Mechanical	0	8	0	0	13	10	10	12	0	
	TOTAL	0	54	0	0	91	41	69	67	0	0

San Jose Area CHP SR-17 Citation Summary

Revised 3/12/19

Overtime Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
SEPTEMBER	PCF	0	68	49	0	47	82	56	82	0	
	Other	0	12	4	0	10	0	6	9	0	
	Mechanical	0	19	36	0	13	10	5	13	0	
	TOTAL	0	99	89	0	70	92	67	104	0	0
OCTOBER	PCF	0	49	45	0	49	61	68	57	0	
	Other	0	2	48	0	2	3	5	4	0	
	Mechanical	0	15	2	0	9	2	4	21	0	
	TOTAL	0	66	95	0	60	66	77	82	0	0
NOVEMBER	PCF	0	45	45	0	34	53	46	105	0	
	Other	0	11	5	0	1	0	6	3	0	
	Mechanical	0	16	13	0	11	10	5	27	0	
	TOTAL	0	72	63	0	46	63	57	135	0	0
DECEMBER	PCF	0	7	62	0	43	20	58	45	7	
	Other	0	10	6	0	3	2	5	2	61	
	Mechanical	0	27	19	0	4	11	4	14	7	
	TOTAL	0	44	87	0	50	33	67	61	75	0
ANNUAL TOTALS:		50	914	986	603	1,641	862	754	798	346	133

Santa Cruz CHP Collision Summary for SR-17

Revised 3/12/19

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	PDO	32	34	19	22	16	24	11	11	11	9	10	56	46	49	44
	INJURY	6	10	9	6	9	13	9	10	3	3	4	14	20	22	21
	FATAL	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	TOTAL	38	44	28	28	26	38	20	21	14	13	14	70	66	71	65
FEBRUARY	PDO	45	25	28	31	16	20	15	23	8	32	36	17	23	17	46
	INJURY	17	4	10	9	15	4	7	10	5	14	7	5	11	11	21
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	TOTAL	62	29	38	40	31	24	22	33	13	46	43	22	34	29	68
MARCH	PDO	38	35	18	17	13	26	26	30	16	20	17	55	25	56	
	INJURY	16	14	2	6	13	7	14	20	6	13	8	22	11	30	
	FATAL	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
	TOTAL	54	49	20	23	26	33	40	51	22	33	25	77	36	86	0
APRIL	PDO	45	41	22	20	18	28	18	15	13	19	18	31	48	20	
	INJURY	11	11	7	10	12	6	4	9	10	8	7	9	16	7	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	56	52	29	30	30	34	22	24	23	27	25	40	64	27	0
MAY	PDO	39	16	24	10	12	26	18	11	11	16	23	29	16	12	
	INJURY	13	8	9	5	16	8	7	6	8	9	7	10	10	11	
	FATAL	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	52	25	33	15	28	34	25	17	19	25	30	39	26	23	0
JUNE	PDO	24	13	15	10	13	11	9	14	11	11	14	18	20	10	
	INJURY	3	6	1	6	6	4	9	10	9	6	4	10	13	10	
	FATAL	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
	TOTAL	27	19	16	16	19	15	18	24	21	17	18	28	33	20	0
JULY	PDO	9	16	18	14	10	11	19	24	9	12	15	15	22	11	
	INJURY	5	4	4	6	6	9	5	9	10	9	7	8	9	9	
	FATAL	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	15	20	23	20	16	20	24	33	19	21	22	23	31	20	0
AUGUST	PDO	6	16	11	15	8	11	11	9	8	12	14	28	13	13	
	INJURY	4	5	4	4	1	5	2	4	4	5	4	7	3	8	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	10	21	15	19	9	16	13	13	12	17	18	35	16	21	0
SEPTEMBER	PDO	4	13	9	5	8	11	7	14	14	22	14	24	22	11	
	INJURY	6	4	3	9	7	7	7	4	5	9	11	8	11	9	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	10	17	12	14	15	18	14	18	19	31	25	32	33	20	0
OCTOBER	PDO	27	13	21	13	9	12	25	15	17	19	15	89	26	21	
	INJURY	12	3	9	3	5	13	8	10	4	14	7	20	9	8	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	39	16	30	16	14	25	33	25	21	33	22	109	35	29	0
NOVEMBER	PDO	47	36	11	19	13	27	16	29	20	39	15	48	30	36	
	INJURY	13	12	8	5	7	11	6	8	3	10	6	13	12	8	
	FATAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	60	48	19	24	20	38	22	37	23	49	21	61	42	44	0
DECEMBER	PDO	43	21	34	21	16	45	7	30	13	20	49	52	16	22	
	INJURY	17	3	19	5	10	16	6	8	2	9	21	19	5	10	
	FATAL	2	0	0	0	1	0	0	0	0	0	0	0	0	0	
	TOTAL	62	24	53	26	27	61	13	38	15	29	70	71	21	32	0
TOTAL PDO:		359	279	230	197	152	252	182	225	151	231	240	462	307	278	90
TOTAL INJURY:		123	84	85	74	107	103	84	108	69	109	93	145	130	143	42
TOTAL FATALITIES:		3	1	1	0	2	1	0	1	1	1	0	0	0	1	1
TOTAL COLLISIONS:		485	364	316	271	261	356	266	334	221	341	333	607	437	422	133

Santa Cruz Area CHP SR-17 Citation Summary

Revised 3/12/19

Regular Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	PCF	287	396	401	368	413	354	201	89	112	259
	Other	68	84	68	69	43	26	15	12	12	128
	Mechanical	16	30	21	17	73	44	41	15	37	
	TOTAL	371	510	490	454	529	424	257	116	161	387
FEBRUARY	PCF	303	420	478	309	325	253	286	78	92	414
	Other	65	70	68	63	22	18	68	5	4	150
	Mechanical	10	19	19	23	38	51	37	5	9	
	TOTAL	378	509	565	395	385	322	391	88	105	564
MARCH	PCF	322	351	422	354	273	341	286	60	113	
	Other	44	42	86	111	29	33	46	13	19	
	Mechanical	21	29	11	20	40	38	27	7	19	
	TOTAL	387	422	519	485	342	412	359	80	151	0
APRIL	PCF	324	431	283	365	346	290	278	100	187	
	Other	86	49	88	29	22	22	72	10	57	
	Mechanical	36	23	15	16	36	30	20	10	36	
	TOTAL	446	503	386	410	404	375	370	120	280	0
MAY	PCF	429	505	455	444	375	310	296	280	199	
	Other	46	82	77	27	22	32	54	20	22	
	Mechanical	69	14	25	45	22	33	34	12	23	
	TOTAL	544	601	557	516	419	375	384	312	244	0
JUNE	PCF	523	391	291	339	303	154	152	102	302	
	Other	42	68	58	29	33	21	54	20	49	
	Mechanical	68	3	13	65	24	55	46	20	66	
	TOTAL	633	462	362	433	360	230	252	142	417	0
JULY	PCF	446	378	288	331	220	245	159	232	191	
	Other	38	67	69	35	21	31	62	46	13	
	Mechanical	82	4	8	74	34	50	33	44	29	
	TOTAL	566	449	365	440	275	326	254	322	233	0
AUGUST	PCF	498	585	317	477	317	289	106	135	117	
	Other	84	35	78	32	56	27	41	54	40	
	Mechanical	24	18	25	34	55	23	21	24	30	
	TOTAL	606	638	420	543	428	339	168	213	187	0

Santa Cruz Area CHP SR-17 Citation Summary

Revised 3/12/19

Regular Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
SEPTEMBER	PCF	389	472	334	338	240	284	99	147	370	
	Other	95	37	58	31	43	31	7	10	163	
	Mechanical	32	18	19	31	45	36	19	12		
	TOTAL	516	527	411	400	328	351	125	169	533	0
OCTOBER	PCF	307	540	457	381	224	229	88	82	400	
	Other	47	47	57	24	31	33	9	3	350	
	Mechanical	10	14	15	41	32	36	10	16		
	TOTAL	364	601	529	446	287	298	116	101	750	0
NOVEMBER	PCF	267	449	327	319	238	199	123	295	396	
	Other	80	25	53	31	24	6	16	9	180	
	Mechanical	15	18	17	47	28	2	16	20		
	TOTAL	362	492	397	397	290	207	155	324	576	0
DECEMBER	PCF	209	454	297	264	170	137	75	320	480	
	Other	65	43	75	24	4	13	24	17	173	
	Mechanical	11	16	14	42	16	2	9	30		
	TOTAL	285	513	386	330	190	152	108	367	653	0
ANNUAL TOTALS:		5,458	6,227	5,387	5,249	4,237	3,811	2,939	2,354	4,290	951

Santa Cruz Area CHP SR-17 Citation Summary

Revised 3/12/19

Overtime Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	PCF	32	0	49	6	56	0	51	0	31	43
	Other	5	0	6	0	5	0	2	0	4	1
	Mechanical	0	0	0	0	12	0	3	0	8	16
	TOTAL	37	0	55	6	73	0	56	0	43	60
FEBRUARY	PCF	24	0	43	52	55	74	62	0	2	4
	Other	5	0	7	2	1	2	10	0	0	1
	Mechanical	0	0	1	5	2	3	2	0	0	0
	TOTAL	29	0	51	59	58	79	74	0	2	5
MARCH	PCF	16	14	46	57	50	51	44	0	42	
	Other	3	0	4	4	4	2	5	0	3	
	Mechanical	1	0	5	11	11	2	3	0	13	
	TOTAL	20	14	55	72	65	54	52	0	58	0
APRIL	PCF	38	56	40	112	61	75	70	17	30	
	Other	3	6	7	1	4	2	2	1	7	
	Mechanical	0	0	0	2	10	6	2	2	12	
	TOTAL	41	62	47	115	75	83	74	20	49	0
MAY	PCF	24	64	84	112	50	32	34	43	36	
	Other	12	4	9	8	1	3	0	1	2	
	Mechanical	2	0	5	16	2	3	2	4	8	
	TOTAL	38	68	98	136	53	38	36	48	46	0
JUNE	PCF	31	36	47	85	51	0	26	24	122	
	Other	6	8	5	6	5	0	2	3	10	
	Mechanical	2	0	1	14	7	0	4	2	35	
	TOTAL	39	44	53	105	63	0	32	29	177	0
JULY	PCF	27	49	0	64	38	75	62	0	0	
	Other	2	8	0	4	4	5	3	0	0	
	Mechanical	1	0	0	24	10	2	14	0	0	
	TOTAL	30	57	0	92	52	82	79	0	4	0
AUGUST	PCF	15	51	7	107	61	30	26	24	0	
	Other	3	5	4	4	8	1	1	7	0	
	Mechanical	0	2		6	7	0	1	2	0	
	TOTAL	18	58	11	117	76	31	28	33	0	0

Santa Cruz Area CHP SR-17 Citation Summary

Revised 3/12/19

Overtime Citations

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
SEPTEMBER	PCF	14	46	74	83	47	55	14	0	31	
	Other	1	5	14	0	4	3	3	0	3	
	Mechanical	0	1	5	1	6	0	0	0	10	
	TOTAL	15	52	93	84	57	58	17	0	44	0
OCTOBER	PCF	0	44	87	63	30	58	13	0	0	
	Other	0	11	10	4	4	3	2	0	0	
	Mechanical	0	2	2	2	2	3	2	0	0	
	TOTAL	0	57	99	69	36	64	17	0	0	0
NOVEMBER	PCF	0	49	63	61	59	0	14	30	15	
	Other	0	4	3	7	5	0	6	7	2	
	Mechanical	0	5	0	7	5	0	5	4	11	
	TOTAL	0	58	66	75	69	0	20	41	28	0
DECEMBER	PCF	0	43	37	0	25	0	9	47	29	
	Other	0	1	9	0	1	0	0	9	3	
	Mechanical	0	4	0	0	0	0	2	1	8	
	TOTAL	0	48	46	0	26	0	11	57	40	0
ANNUAL TOTALS:		267	518	674	930	703	489	496	228	491	65

Extra California Highway Patrol Hours Worked on Highway 17

Revised 3/12/19

San Jose Area

Santa Cruz Area

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	0	0	36	40	0	16	28	20	42	19
FEBRUARY	0	0	44	56	0	29	36	28	26.5	73
MARCH	0	152	36	44	88	43	36	0	40.5	
APRIL	0	232	48	68	84	36	60	114.5	12	
MAY	0	180	68	68	56	68	76	129	28	
JUNE	22	48	132	64	380	49	16	45	28	
JULY	0	28	0	0	0	20	28	22	0	
AUGUST	0	32	0	0	42	28	4	20	0	
SEPTEMBER	0	52	56	0	96	48	36	76.5	0	
OCTOBER	0	32	60	0	36	28	32	15.5	0	
NOVEMBER	0	40	48	0	32	24	53.5	74	0	
DECEMBER	0	32	48	0	24	48	39	95	47	

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JANUARY	32	0	48	9	48	22	106	30	60	60
FEBRUARY	24	0	70.5	36	72	18	6	54	50	36
MARCH	28	18	66	61	60	37	0	0	0	
APRIL	28	88	58.5	117.5	64	45	61	30	74	
MAY	42.5	86.5	60	104	44	83	112	36	23	
JUNE	44	64	66	75.5	39	0	54	24	0	
JULY	32.5	81	0	86.5	32	42	66.5	12	0	
AUGUST	51	107	6	108.75	71	36	60	8	0	
SEPTEMBER	25.5	84.5	79	97	63.5	38	24	24	36	
OCTOBER	0	57	70	42	45	30	34	0	0	
NOVEMBER	0	60	76	75	70	48	58	6	36	
DECEMBER	0	54	81	0	56	0	53.5	42	16	

TOTAL	22	828	576	340	838	437	444.5	639.5	224	92
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307.5	700	681	812.25	665	399	635	266	295	96
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PROJECT UPDATE – SANTA CRUZ COUNTY

PREPARED FOR THE MARCH 7, 2019 SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION MEETING

PROJECTS UNDER CONSTRUCTION

	Project	Location Post Mile (PM)	Description	Construction Timeline	Construction Cost	Funding Source	Project Manager (Resident Engineer)	Contractor	Comments
1.	Santa Cruz 1 CAPM and Bridge Rails (1C85U)	In and near Santa Cruz from North Aptos up to Jct. Route 9 PM (10.2 to 17.5)	Pavement Rehabilitation, ADA Curb Ramps, Guardrail/Barrier rail/Bridge	January 2019 - June 2023	\$19 million	SHOPP	Luis Duazo	Granite Construction Company Watsonville, CA	1C85U combines two projects 1C850 and 1F520 for construction. Ten Accessible Pedestrian Signal (APS) locations also added to 1C85U. Project awarded on Feb. 19, 2019
2.	Highway 17 Storm Water Mitigation (0Q600)	North of the Fishhook to Sims Road (PM 0.7-1.4)	Construct multiple storm water improvements	Winter 2017-Summer 2019	\$7.4 million	SHOPP	Brandy Rider (BR)	Graniterock, Watsonville, CA	Major Construction is complete. Erosion control and vegetation establishment continues through May 2019.
3.	Highway 17 North Route 17 CAPM (1F760)	Scotts Valley from just north of the Granite Creek Road overcrossing to SCL (PM 6.0/12.5)	Maintenance pavement overlay	Spring 2019	\$19 million	SHOPP SB-1	Brandy Rider (BR)	Granite Construction Company, Watsonville, CA	Bids open November 1, 2018 with Granite being the lowest bidder; contract approved Dec. 19, 2018.
4.	Highway 129 Open Grade Overlay and Metal Beam Guardrail Upgrade (1F030)	Watsonville to School Road (PM 1.8/9.9 & SBt PM 0.0/0.4)	Place open-graded friction course and replace, raise, and update the existing metal beam guardrail and end treatments	Fall 2017 - Nov. 26, 2018	\$5.5 million	SHOPP	Brandy Rider (JW)	Graniterock, Watsonville, CA	Construction to be completed and project accepted on Nov. 26, 2018
5.	Highway 129/ Carlton Road Intersection Improvements (1F350)	Near Watsonville at Carlton Road (PM 3.2-3.5)	Realign Carlton Road and construct a new intersection with left-turn channelization	Fall 2018-Summer 2019	\$2.7 million	SHOPP	Brandy Rider (JW)	Graniterock, Watsonville, CA	Construction has begun, and Carlton Road is now closed with Thompson Road being used as a detour. Project on Schedule.



PROJECT UPDATE – SANTA CRUZ COUNTY

PREPARED FOR THE MARCH 7, 2019 SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION MEETING

PROJECTS IN DEVELOPMENT

	Project	Location Post Mile (PM)	Description	Construction Timeline	Estimated Construction Cost	Funding Source	Project Manager	Phase	Comments
6.	Highway 1 Soquel Creek Scour Protection (1H480)	In Capitola at Soquel Creek Bridge (PM 13.3)	Bridge preventative maintenance – Place scour protection	Winter 2022	\$2.2 million	SHOPP	Luis Duazo	PA&ED	
7	TMS Detection Repair (1H990)	Various locations throughout District 5 along SRs 1, 17, 68, 156, 101 (PM Various)	Replace failed TMS Detection	Summer 2020	\$451,000	SHOPP SB-1	Brandy Rider	PS&E/RW	
8.	Highway 1/ Highway 17 Ramp Safety Improvements (1H060)	From the fishhook to Pasatiempo overcrossing (PM 16.7)	Construct ramp safety improvements	Spring 2020	\$5.8 million	SHOPP	Luis Duazo	PS&E/RW	
9.	Highway 1 Davenport Culvert Replacement (0J200)	Near Davenport and south of Waddell Creek Bridge (PM 31.9/35.7)	Replace culverts	Fall 2021	\$3.6 million	SHOPP SB-1	Brandy Rider	PA&ED	



PROJECT UPDATE – SANTA CRUZ COUNTY

PREPARED FOR THE MARCH 7, 2019 SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION MEETING

10.	SCr 9 South Drainage and Erosion Control Improvements (1F920)	From SR 1 and 9 to slightly north of Glen Arbor Road (PM 0.0/8.5)	Upgrade drainage systems and stabilize slopes	Fall 2020	\$2 million	SHOPP	Brandy Rider	PS&E/RW	
11.	Highway 9 PM 1.0 and 4.0 Viaduct (1K120)	Near SCr north of Vernon Street (PM 1/1)	Construct side-hill viaduct, restore roadway and facilities, place Water Pollution Control BMPs, erosion control	Fall 2022	\$9.9 million	SHOPP	Luis Duazo	PA&ED	
12.	SCr 9 Upper Drainage and Erosion Control Improvements (1G950)	In Boulder Creek from Holiday Lane to just south of Ben Lomond to the SR 236/9 Junction (PM 8.5/25.5)	Upgrade drainage and erosion control	Fall 2022	\$5.4 million	SHOPP	Luis Duazo	PA&ED	
13.	Highway 9 San Lorenzo River Bridge and Kings Creek Bridge Replacement (1H470)	Near Boulder Creek, at San Lorenzo River Bridge and at Kings Creek Bridge (PM 13.6/15.5)	Replace bridges	Summer 2022	\$12 million	SHOPP SB-1	Brandy Rider	PA&ED	
14.	Spring Creek Road Soldier Pile Wall (1K140)	Near Boulder Creek at Spring Creek Road (PM 15)	Construct Soldier pile wall, restore roadway and facilities, place water pollution control BMPs, erosion control	Spring 2020	\$2.8 million	SHOPP	Brandy Rider	PS&E/RW	Environmental complete, imitating project design phase (PS&E/RW).



PROJECT UPDATE – SANTA CRUZ COUNTY

PREPARED FOR THE MARCH 7, 2019 SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION MEETING

15.	PM 19.97 Hairpin Tieback (1K130)	Near Boulder Creek about 1.1 miles south of the SR 236/9 Junction (PM 19.97)	Soldier Pile Tieback Retaining Wall	Spring 2021	\$2.6 million	SHOPP	Luis Duazo	PA&ED	
16.	Highway 9 Shoulder Widening, Guardrail Upgrades, and Center Rumble Strips (1C650)	North of Boulder Creek to south of SR 35 (PM 22.1-23.8)	Shoulder widening, guardrail upgrades, and center rumble strips	Spring 2019	\$7.7 million	SHOPP	Luis Duazo	PS&E	Construction contract approval scheduled in November 2018. The contractor may suspend work for winter and delay the start of construction until March through May 2019, depending on weather.
17.	Highway 17 Pasatiempo Shoulder Widening (1C670)	South of Pasatiempo overcrossing (PM 0.2/0.5)	Shoulder widening and soil nail wall	Spring 2019	\$5.7 million	SHOPP	Luis Duazo	PS&E/RW	Project is on schedule; contract approved on Dec. 19, 2018.
18.	Highway 17 Wildlife Habitat Crossing (1G260)	From Laurel Road to just north of Laurel Road (PM 9.442-9.692)	Construct wildlife undercrossing	2020	\$5.6 million	SHOPP	Aaron Henkel	PS&E/RW	Project is in design and on schedule.
19.	Highway 129/ Lakeview Road Intersection Improvements (1G990)	Near Watsonville, at Lakeview Road (PM 1.4)	Construct roundabout and improve street lighting	2020	\$4.5 million	SHOPP	Luis Duazo	PS&E/RW	



PROJECT UPDATE – SANTA CRUZ COUNTY

PREPARED FOR THE MARCH 7, 2019 SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION MEETING

20.	Highway 152 Americans with Disabilities Act (ADA) (1E020)	Near Watsonville from Wagner Avenue to south of Holohan Road (PM 1.3-R2.0)	Install sidewalks for ADA compliance	January 2019	\$1.9 million	SHOPP	Mike Lew	Construction	Contract approved on Dec. 19, 2018;
21.	Highway 152 Corralitos Creek ADA (05- 1F620)	Near Watsonville, East of Beverly Drive to Holohan / College Road (PM1.9 to R2.0)	Construct Accessible Pathway	Spring 2022	\$3.4 million	SHOPP	Mike Lew	PA&ED	
22.	Crosswalks and Pedestrian Safety Enhancements (1G760)	Various Locations: Highways 1, 9, 129, and 152	Install Electrical / Signs / Markings / Pavement	Fall 2020	\$690,000	SHOPP	Ken Dostalek	PA&ED	Project is in preliminary Design and Environmental phase. SCR 1 @ PM 18.8 (Laurent Street) SCR 9 @ PM 9.51 (Main Street) SCR 129 @ PM 0.23 (near SR1) SCR 152 @ PM T3.161 (Marchant Street)
23.	Pedestrian Signal Upgrades (1G160)	Various Locations: Highways 1, 9, 17, 129, and 152	Install Accessible Pedestrian Signal (APS)	January 2019	\$ 1.8 million	SHOPP	Mike Lew	PS&E/RW	
24.	Santa Cruz 1 CAPM and Bridge Rails (1C85U)	In and near Santa Cruz from North Aptos up to Jct. Route 9 PM (10.2 to 17.5)	Pavement Rehabilitation, ADA Curb Ramps, Guardrail/Barrier rail/Bridge	January 2019 - June 2023	\$19 million	SHOPP	Luis Duazo	PS&E/RW	1C85U combines two projects 1C850 and 1F520 for construction. Ten Accessible Pedestrian Signal (APS) locations also added to 1C85U. These APS locations are being removed from 1G160



PROJECT UPDATE – SANTA CRUZ COUNTY

PREPARED FOR THE MARCH 7, 2019 SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION MEETING

ACRONYMS USED IN THIS REPORT:

ADA	Americans with Disabilities Act
CEQA	California Environmental Quality Act
CMAQ	Congestion Mitigation Air Quality
CMIA	Corridor Mobility Improvement Account
CTC	California Transportation Commission
ED	Environmental Document
EIR	Environmental Impact Report
PA&ED	Project Approval and Environmental Document
PM	Post Mile
PS&E	Plans, Specifications, and Estimates
RW	Right of Way
SB1	Senate Bill 1, the Road Repair and Accountability Act of 2017
SCL	Santa Clara County Line
SHOPP	State Highway Operation and Protection Program
SR	State Route
STIP	State Transportation Improvement Program
TMS	Traffic Management System