Ventura County Transportation Commission (VCTC) /

Ventura County Service Authority for Freeway Emergencies (SAFE)

Freeway Service Patrol (FSP) Application

For Submission By December 31st, 2019

Application Table of Contents

Attachment A

RESOLUTION NO. 2019-07

A RESOLUTION COMMITTING TO PROVIDING THE NECESSARY ANNUAL TWENTY-FIVE PERCENT (25%) LOCAL MATCHING FUNDS FOR STATE FREEWAY SERVICE PATROL FUNDING

WHEREAS, the Ventura County Transportation Commission, hereinafter referred to as VCTC, is the Service Authority for Freeway Emergencies for Ventura County; and

WHEREAS, following a benefit-cost (B/C) analysis of six (6) Freeway Service Patrol (FSP) beats in Ventura County, portions of SAFE's highway network meets the state's required 3:1 B/C ratio to be eligible to receive state Freeway Service Patrol funding; and

WHEREAS, VCTC has determined that deploying Freeway Service Patrol during peak commute hours may reduce peak commute hour congestion levels; and

WHEREAS, VCTC is required to submit a Freeway Service Patrol application and required backup documentation to the Chief of Traffic Operations at Caltrans' Headquarters for state Freeway Service Patrol funding consideration; and

WHEREAS, should VCTC's Freeway Service Patrol application to the Chief of Traffic Operations at Caltrans' Headquarters be accepted VCTC will be required to provide an annual twenty-five percent (25%) local match for any state Freeway Service Patrol funding it receives; and

WHEREAS, by adopting this resolution regarding future local match funding in no way obligates VCTC to accept state FSP funds.

NOW, THEREFORE, BE IT RESOLVED should VCTC acting as the Service Authority for Freeway Emergencies accept state Freeway Service Patrol funding VCTC will be required to provide the necessary annual twenty-five percent (25%) local matching funds.

PASSED, APPROVED AND ADOPTED this 6th day of December, 2019.

_____

MANUEL MINJARES,

Chairperson

ATTEST:

_____

DARREN KETTLE,

Executive Director

APPROVED AS TO FORM:

_____

STEVE MATTAS,

General Counsel

Attachment B

RE: Technical Support for a Freeway Service Patrol (FSP) Program in Ventura County

August 26, 2019

TECHNICAL MEMORANDUM

This technical memorandum describes the data sources, analysis methodologies, and findings related to developing a cost effective FSP program in Ventura County.

INTRODUCTION & PROBLEM STATEMENT

The Caltrans Freeway Service Patrol (FSP) program is an incident management measure designed to assist disabled vehicles along congested freeway segments and reduce non-recurring congestion through quick detection, response, and removal of accidents and other incidents on freeways. In California, the program is jointly administered by the California Department of Transportation (Caltrans), the California Highway Patrol (CHP) and regional transportation planning agencies. Currently, FSP operates on 186 freeway sites ("beats") across the State with 324 tow trucks over 1,700 centerline miles. California, having a large scale FSP program and performance driven decision making policies, developed an analysis tool to evaluate the performance of FSP service on selected freeway corridors (i.e., FSP beats).

The goals of the California FSP program are:

a. Congestion Relief – Through a system of roving patrols, the FSP Program reduces congestion by detecting, attending to and clearing freeway incidents as quickly and safely as possible.
b. Safety – To improve the safety of the freeways by reducing the amount of time that motorists and vehicles spend on the side of the road, reducing opportunities for secondary incidents.
c. Air Quality – By mitigating freeway incidents, reducing the time required to re-establish free flowing roadway conditions, thereby improving air quality through a reduction in fuel consumption.
d. Partnership – To be a model of governmental partnership by drawing upon the strengths of Caltrans, CHP, and the Local Agencies to provide a cost-effective FSP program that benefits the public.
e. Motorist Assistance – To provide motorist assistance, free at the time of service, to people who are stranded in dangerous situations on busy freeways.

The benefits of providing FSP service depend on the beat's geometric and traffic characteristics, and the frequency and type of assisted incidents. Incidents that occur in-lane tend to be more congestion causing than shoulder incidents. Likewise, incidents occurring on freeways with high traffic demand (relatively little excess capacity) tend to cause more congestion than incidents on freeways with lower volumes.

The Ventura County Transportation Commission (VCTC) management identified the need for technical support for evaluating the expected cost effectiveness of providing FSP service on US-101, SR-118 and SR-23 in Ventura County. The forecasting of the expected performance of the proposed FSP beats and the county-wide FSP program for Ventura County were performed to assure that the proposed Ventura County FSP program would be cost effective – and to meet the requirements specified in the FSP Statewide Guidelines. Page 1-3 of the FSP Statewide Guidelines states that:

> Assembly Bill 2498 (Longville). Enacted on September 21, 2004. Chapter 638, Statutes of 2004, amended Sections 2560.5, 2561.5, 2562.1, 2562.3, and 2565 of the Streets and Highways Code, relating to transportation. This bill designated the formula-based allocation as the baseline funding allocation. This bill restricted the allocation of the funding to not more than a designated percentage of the total amount of the allocation for 3 years. The bill also required a regional or local agency to demonstrate in its application for a baseline funding allocation submitted after July 1, 2003, an overall benefit-cost ratio of 3 to 1 pursuant to methodology determined by the department (Caltrans).

Additionally, the "FSP Statewide Performance and Operational Guidelines" section from Chapter 2 "OPERATIONAL ROLES AND RESPONSIBILITIES" of the FSP Statewide Guidelines report is included in Appendix A of this memorandum.

Table 1 lists the final selection of FSP beats that were evaluated for Ventura County.

Table 1: Proposed FSP Beats in Ventura County

FSP Beat	Freeway	Beat Length (miles)	Freeway Interchange (Beat End Points)
VC-101-1	US-101	7.19	S. Westlake Blvd (SR-23) to Camino Dos Rios/N. Wendy Dr.
VC-101-2	US-101	10.41	Camino Dos Rios/N. Wendy Dr. to Central Avenue
VC-101-3	US-101	10.15	Central Avenue to Seaward Avenue
VC-101-4	US-101	15.15	Seaward Avenue to Bates Road (Santa Barbara Co Line)
VC-23	SR-23	8.09	US-101 to SR-118
VC-118	SR-118	14.70	Route 23 to Los Angeles County Line (Rocky Peak)

The results presented in the next section were based on an annual performance evaluation of the proposed FSP beats shown in Table 1.

METHODOLOGY & RESULTS – FSP BEAT EVALUATION

To forecast demand for FSP service on proposed FSP beats, freeway volumes, vehicle-miles-of-travel (VMT) and freeway accident/collision data were used as predictors in assessing the demand for FSP service. Subsequently, the Caltrans Freeway Service Patrol Evaluation model (FSPE, FY 2018-19) model was used (with the forecasted demand for FSP service) to assess the cost effectiveness of the proposed changes to the FSP Beat structure.

Table 2 shows the 2017 Annual Average Daily Traffic (AADT) estimates and other key metrics from published Caltrans traffic counts for the four US-101 FSP beats in Santa Barbara County, and the two most relevant FSP beats in Los Angeles County – one on SR-118 adjacent to the Los Angeles / Ventura County border, and one on US-101 adjacent to the Los Angeles / Ventura County border.

The primary data sources for the FSP forecasting dataset are FSP Assist data and beat descriptions for the Caltrans District 5 (Santa Barbara) FSP Beats, Caltrans District 7 (Los Angeles) FSP Beats, Caltrans PeMS freeway traffic volumes, CHP freeway incident data, and published Caltrans truck and auto traffic count data. The Caltrans PeMS website was used to provide stationary point traffic volumes, and vehicular delay data (mainly from freeway loops) for the set of preselected Ventura County FSP beats and the existing Santa Barbara and Los Angeles FSP beats. The CHP incident data were summarized by Beat to aid in forecasting the demand of FSP services on the newly proposed FSP beats.

Table 3 lists the annual FSP assists for the same Los Angeles and Santa Barbara County FSP beats (for Caltrans Fiscal Year 2017-18) and the forecasted annual FSP assists for the new proposed beats in Ventura County. Single variant linear regression analysis was used to forecast the resulting Ventura County FSP assists that are displayed in Table 3. Two independent linear regressions were performed, one based on vehicle miles of travel (VMT) and one based on freeway collisions/incidents). The final FSP assist forecasting for the proposed Ventura County FSP beats was a weighted average of the results from the two independent linear regressions with an 80% weight for the VMT based results and a 20% weight based on the Collision based results.

Table 2: FSP Beat Descriptions & New Proposed FSP Beat Descriptions

FSP Beat Number	County	Freeway	FSP Beat Corridor (Post Mile & End Point Descriptions)	Corridor Length (Miles)	Corridor Average AADT	Corridor Average Weekday ADT	Percent Weekday ADT FSP-Served
SB-1	SB	101	Bates Road to N. Padaro	4.50	69,700	72,521	16.21%
SB-2	SB	101	Santa Claus Lane to Garden (Casitas Pass Road to Santa Claus Lane as dispatched)	8.00	69,275	72,078	19.31%
SB-3	SB	101	N. Padaro to Las Positas	8.00	89,011	92,613	16.85%
SB-4	SB	101	Garden to Fairview	9.00	123,778	128,787	19.25%
LA-29	LA	101	Lindero Canyon Rd. to De Soto Ave.	13.20	193,857	201,702	46.25%
LA-33	LA	118	Ventura County Line to East JCT St. 210	15.60	167,375	174,148	46.25%
VC-101-1	VEN	101	S. Westlake Blvd (SR-23) to Camino Dos Rios/N. Wendy Dr.	7.19	175,250	182,342	50.62%
VC-101-2	VEN	101	Camino Dos Rios/N. Wendy Dr. to Central Avenue	10.41	138,833	144,452	50.62%
VC-101-3	VEN	101	Central Avenue to Seaward Avenue	10.15	130,778	136,070	50.62%
VC-101-4	VEN	101	Seaward Avenue to Bates Road (Santa Barbara Co Line)	15.15	103,333	107,515	50.62%
VC-23	VEN	23	US-101 to SR-118	8.09	86,857	90,372	50.62%
VC-118	VEN	118	Route 23 to Los Angeles County Line (Rocky Peak)	14.70	105,077	109,329	50.62%

Table 3: Forecasting FSP Assists for New Proposed FSP Beats in Ventura County

FSP Beat Number	Annual (Total) VMT	Annual CHP Collisions	Annual Peak-Period FSP Assists (FY 2017-18)	Forecasted Peak-Period Annual FSP Assists	Forecasted Peak Period FSP Assists based on VMT	Forecasted Peak Period FSP Assists based on Collisions
SB-1	52,888	167	91	289	253	434
SB-2	111,338	314	130	589	532	819
SB-3	124,819	467	139	720	596	1,216
SB-4	223,158	580	209	1,155	1,066	1,511
LA-29	1,231,278	733	6,559	5,088	5,882	1,909
LA-33	1,256,365	2,436	5,579	6,071	6,002	6,349
VC-101-1	709,613	823	n/a	3,141	3,390	2,145
VC-101-2	813,836	783	n/a	3,518	3,888	2,040
VC-101-3	747,540	766	n/a	3,256	3,571	1,997
VC-101-4	881,632	591	n/a	3,678	4,212	1,541
VC-23	395,867	446	n/a	1,746	1,891	1,163
VC-118	869,879	963	n/a	3,827	4,156	2,511

Next, the FSPE model was used for the performance evaluation of potential FSP beats in Ventura County. This provides the baseline FSP cost effectiveness (i.e., delay savings, fuel savings, and benefit to cost ratio), which can be used as a point of comparison for the proposed FSP beat's performance metrics.

The forecasted FSP assists (previously displayed in Table 3) were one of the primary inputs to the FSP beat performance evaluation process. Other key inputs were beat length, number of freeway lanes, hourly traffic volumes along the proposed FSP beats, proposed number of FSP tow trucks on each beat, the proposed FSP hours of operation, and the average costs of providing FSP service.

The effectiveness of the FSP Program is assessed by calculating the annual benefit/cost (B/C) ratio of each FSP beat. First the 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 ($21.79/vehicle-hour) and fuel consumption ($3.27/gallon).

The value of time for motorists was derived from value of time parameters from the Caltrans Office of State Planning, Economic Analysis Branch website:

- Auto/Truck Composite (Weighted-Average) = $18.95 (dollars per person hour)
- Average Peak Vehicle Occupancy Rate = 1.15 persons per vehicle

The resulting $21.79 per vehicle-hour cost parameter used in the FSP performance evaluation was derived from combining the ($18.95 /person-hour) and the (1.15 persons/vehicle).

The California statewide annual average fuel costs of $3.52/gallon of gasoline for FY 2018-19 was estimated from weekly California statewide average prices are compiled by the U.S. Department of Energy's Energy Information Administration (EIA) from a telephone survey that includes a sample of 38 California gasoline stations. These stations were sampled with a likelihood equal to the company's proportional size to the total annual volume of gasoline, by grade, sold in California. The annual FSP program costs include the annual capital, operating and administrative costs for providing FSP service.

The FSP beat evaluation was performed assuming that FSP service would be provided on all non-holiday weekdays during the AM peak period (6:00 to 10:00 AM) and PM peak period (3:00 to 7:00 PM).

The number of traffic lanes and the hourly traffic volumes were obtained from Caltrans PeMS.

The number of FSP tow trucks and the beat lengths were determined through an iterative performance evaluation iterative process.

The expected total costs for the new proposed FSP service was estimated to be $100.00 per truck hour. This includes the direct FSP tow provider (contractor costs), and VCTC management and overhead costs. These cost estimates are consistent with the cost for recently contracted FSP services by other FSP programs in California.

The performance measures used in the FSP performance evaluation are listed and described in Table 4. These performance measures are a direct output of the FSPE model.

Table 5 shows the results of the FSP cost effectiveness evaluation (using the performance measures listed in Table 4) for the new proposed Beats in Ventura County.

Table 4: Performance Measures Used in the FSP Beat Performance Evaluation

Performance Metric	Description
Average Assist Rate (assists per FSP truck hour)	Annual (total) number of FSP assists performed divided by the number of FSP truck-hours of service provided on the beat
Delay Savings (veh-hrs/yr)	The estimated vehicular delay savings in units of vehicle hours of delay per year; delay savings are a measure of non-recurrent congestion relieving benefit to motorist because directly attributable to the provided FSP services.
Fuel Savings (gallons/yr)	The estimated (annual) fuel savings to motorists is a measure of the direct benefit of the provided FSP service, in units of gallons of fuel saved per year.
CO2 Savings (kg/yr)	The CO2 savings is a measure of the mobile source emission reductions (or improvements in air quality) that are directly attributable to the provided FSP services, in units of kilograms of carbon dioxide equivalents per year.
Annual Benefit ($/year)	The annual benefits monetized annual delay savings and monetized annual fuel savings benefits. Delay savings cost parameter was $21.79 per vehicle-hour. Fuel savings cost parameter was $3.27 per gallon of fuel.
Annual Cost ($/year)	The annual costs is a direct measure of the total costs of providing the proposed FSP service, including direct costs from the tow providers, and the agency overhead costs – in units of dollars per truck-hour of service.
Annual Benefit To Cost Ratio (unit-less ratio)	The annual benefit to cost ratio is the annual (monetized) benefits divided by the annual costs of the proposed FSP service. It is a unit-less measure since both benefits and costs are measured in units of dollars ($). A FSP beat with a B/C ratio of 3.0 will return $3.00 in delay and fuel savings to the motoring public for every dollar that it costs in tax payer dollars to provide the FSP service.

Table 5: FSP Beat Performance Metrics – Results from Ventura County Cost Effectiveness Analysis

FSP Beat Number	Number of Weekday Peak Period FSP Tow Trucks	Average Assist Rate (assists per FSP truck hour)	Delay Savings (veh-hrs/yr)	Fuel Savings (gallons/yr)	CO2 Savings (kg/yr)	Annual Benefit ($/year)	Annual Cost ($/year)	Annual Benefit To Cost Ratio
VC-101-1	2	0.78	100,834	173,333	1,525,330	2,807,297	403,200	7.0
VC-101-2	2	0.87	139,177	239,245	2,105,353	3,874,800	403,200	10.0
VC-101-3	2	0.81	67,701	116,378	1,024,130	1,884,861	403,200	5.0
VC-101-4	2	0.91	74,784	128,554	1,131,272	2,082,051	403,200	5.0
VC-23	2	0.87	39,641	68,143	599,661	1,103,647	403,200	3.0
VC-118	2	0.95	137,312	236,039	2,077,139	3,822,874	403,200	9.0
VCTC - Totals	**12**	**0.86**	**559,448**	**961,691**	**8,462,885**	**15,575,530**	**2,419,200**	**6.0**

KEY FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

Probably the most notable finding is – the FSP performance evaluation and results described in this memorandum document that the proposed VCTC FSP program can demonstrate in its application for a baseline funding allocation that an overall benefit-cost ratio of 3 to 1 can be obtained pursuant to methodology determined by the department (Caltrans).

From a policy perspective, the Annual Average Assist Rate for each of the proposed Ventura County FSP beats is above the 0.75 threshold referenced in the FSP Operational Guidelines. However, it is a bit lower than the 1.0 assist per truck per hour referenced for heavily congested corridors (urban-areas).

Additionally, the above described iterative FSP beat development and cost effectiveness evaluation process found that a set of two-truck beats with a beat length in the 7 to 15 mile range will provide cost effective FSP service in Ventura County. This finding is consistent with the suggested guidelines in the FSP Operational Guidelines "*In general, a beat length of approximately ten miles will require the assignment of two to five trucks.*"

For comparative purposes, Appendix B contains Table 1 from the Executive Summary of the FY2017-18 FSP Statewide Annual Report. The forecasted county-wide average assist rate of 0.86 assists per truck hour is in line with the annual average assist rates for other urban FSP programs in California. For Fiscal Year 2017-18 the Statewide FSP assist rate was 0.94 assists per truck-hour of service.

Likewise, the forecasted B/C ratios displayed in Table 4 for the proposed Ventura County FSP beats are comparable to the B/C ratios for other California FSP programs (see Appendix B).

In this FSP forecasting and performance evaluation for Ventura County, the cost effectiveness of midday and/or weekend FSP service was not evaluated. Given the results of the weekday peak period FSP performance evaluation, VCTC may want to keep in mind that it might make sense to evaluate and consider weekend and midday FSP service at some future date.

Appendix A: FSP Statewide Performance and Operational Guidelines

Source: FSP STATEWIDE GUIDELINES November 2007
(2007-FSPguidelines-adopted-November.pdf)

3. FSP STATEWIDE PERFORMANCE/OPERATIONAL GUIDELINES.

a. Mandatory Contractor Licensing, Registration and Insurance Requirement. The FSP is operated by contracted tow services. In order to ensure compliance with state requirements, each FSP contractor must possess the following required items during the term of the contract:

1) A current and valid Motor Carrier Permit issued by the State of California for each of the contractor's FSP trucks.

2) A current and valid Department of Motor Vehicle (DMV) vehicle registration certificate and sticker for each of the contractor's FSP trucks.

3) A current and valid business license to operate a tow business.

4) Current vehicle and personal liability insurance coverage.

5) Current DMV Tow Truck Driver Certificate (DL 64) for each FSP driver.

6) Current DMV Medical Certificate (DL 51) for each FSP driver, as of September 1, 2008.

b. FSP Operational Guidelines. It is the intent of the FSP Program that contracted services provided are of the highest quality and are operating at the maximum feasible level of performance. The following are suggested factors that can be used to monitor the efficiency of service and to identify areas that might indicate a significant change in productivity or quality. (Refer to Appendixes C and D for examples of the FSP Operational Performance Measures Format and the FSP Historical Data Format.)

1) Benefit/Cost Ratio of Region-wide FSP Operation.

a) Based upon studies conducted in regions where FSP-type services have operated, this congestion-relief program results in a proven benefit/cost ratio advantage. For example, every dollar expended upon the program results in significantly more than one dollar benefit in terms of reduced travel times to affected motorists, as well as reductions in the amount of fuel used and improvements to air quality.

b) A computer model has been developed for the FSP Program which is to be used by Caltrans to calculate the benefit/cost ratio of individual FSP beats.

c) These ratios shall constitute the baseline for each regional FSP operation. Caltrans, shall conduct benefit/cost ratio evaluations, either in-house or through consultant services, at a minimum of every two years and will compare the resulting ratios to the baseline figures.

d) Should the subsequent ratio for a region show a 25 percent reduction in benefit/cost or a benefit/cost ration fall below 3:1, the Caltrans

District and Local Agency shall provide the Statewide Oversight Committee an explanation for the reduction. In addition, the Local Agency and Caltrans District shall provide an action plan and schedule to raise productivity, or a justification as to why changes are not needed.

2) Performance Effectiveness of FSP Operation. The FSP statewide Program receives state funds and, therefore, is expected to operate at the most effective level feasible. Within this criterion, several performance measures are recommended to be used by the Local Agency to evaluate the quantity and quality of the services provided. They are: assists per truck per service hour and average response time.

   a) Assists Per Truck Per Service Hour.
   This measure indicates the amount of service FSP trucks provide on their respective beats. The guideline measure used is each FSP beat should strive towards one assist per truck per hour in heavily congested corridors (urban-areas). In some instances, FSP is placed in non-urban areas with lower traffic volumes. In these areas, FSP should strive for .75 assists per truck hour. The Local Agency should attempt to manage their respective operation in a manner which ensures that this minimum threshold can be maintained, if not on an individual beat level, then on a region-wide average.

   b) Average Response Time.

      1. This is an indicator of the quality of the service being provided. It measures how quickly a truck responds to a need for assistance. The average response time, as stated in the FSP legislation, should not exceed ten minutes per assist, measured on a region-wide basis.

      2. Caltrans HQ shall collect this information from the Local Agency and transmit these data to the Statewide Committee as part of the FSP annual report.

3) System Characteristics.

   a) Beat Length & Running Time Per Truck.

      1. Beat length is defined as the number of one-way centerline freeway miles an FSP truck must travel on its designated route. The running time per truck is defined as the average period of time in minutes required for an FSP truck to complete a round trip of its designated beat, during the time period it will be operating, and without stopping to assist a motorist. It therefore reflects the average baseline beat traffic conditions during which the FSP truck is to operate.

2. The beat length, running time and average response time, as discussed above, enable the determination of the number of FSP trucks needed to be assigned to a beat. In general, a beat length of approximately ten miles will require the assignment of two to five trucks.

3. The Local Agency will consult with Caltrans, CHP and other regional FSP programs to assist them in determining the beat length and number of trucks to be operated on that beat to ensure compliance with the average ten minute response time described above.

b) FSP Fleet Vehicles.

1. The FSP Program assists in reducing traffic congestion on freeways by either making a disabled car operational (providing gas, water, making minor mechanical repairs, etc.) or by towing the vehicle off the freeway. For this reason, most local FSP operations require a uniform fleet comprised entirely of tow trucks (minimum 14,000 pounds gross vehicle weight rating) capable of towing up to a six ton vehicle. This classification of tow truck is considered by tow industry standards as the minimum size required for towing most passenger vehicles. The advantage of using this type of vehicle is it can either tow or service most disabled vehicles.

2. A number of local FSP operations are including a limited number of pick-up trucks in their mix of vehicles. This type of vehicle is less expensive than a tow truck and is extremely well-suited to handle every FSP assist except towing. However, these pick-up trucks are equipped for, and are required to, push vehicles out of traffic under specified conditions. Aside from the lower acquisition and operating cost for this type vehicle, pick-up trucks can provide service to approximately 75-80 percent of all the assists rendered by FSP operations. A Local Agency shall consult with Caltrans, CHP and other regional FSP programs to determine the most effective fleet composition.

3. Several types of FSP trucks may be included in the fleet composition. A flat-bed trailer truck may be needed to tow the growing number of all-wheel drive vehicles, such as Sports Utility Vehicles. A large commercial truck tractor, with support capabilities, may be needed in regions with a high volume of truck traffic.

c) Hours of Operation.

1. FSP operations are focused upon covering those time periods of the day or week when congestion is at its worst. In all FSP

regions, this encompasses the weekday morning and afternoon peak commute hours.

2. In a growing number of regions, congestion has increased to such an extent that FSP services are being provided on weekdays, in the midday portion between commute peak periods and on weekends. The Local Agency should consult with Caltrans, the CHP and other regional FSP programs to determine the most efficient deployment schedule.
3. Several regions include provisions for seasonal or special event adjustments to address predictable increases in demand. Examples include New Year's Day support around the Rose Bowl in Los Angeles and weekend service on State Route 17 between Santa Cruz and San Jose.
4. FSP is also used to provide support for Caltrans construction projects. FSP is a transportation mitigation strategy and should be considered on all construction projects. Hours of support for this type of activity vary with the project and traffic flows. Any request for additional FSP services not covered during normal deployment shall be negotiated with the requesting entity and Caltrans, the CHP and the Local Agency.

Appendix B: FSP Annual Report FY 2017-18
Table 1-a: Statewide FSP Annual Summary

Source: CALIFORNIA'S FREEWAY SERVICE PATROL PROGRAM
Management Information System Annual Report
Fiscal Year 2017-18 (June 2019)

(FSP 1718 Annual Report (final report).pdf)

FSP Annual Report FY 2017-18 Table 1-a: Statewide FSP Annual Summary (Combined Weekday and Weekend Service)

Caltrans District	County or Region	Number of Weekday Beats	Number of Peak Period Trucks	Weekday Center-line Miles	Total Truck Hours	Total FSP Assists	Average Assist Duration (min.)	Average Assist Rate [1]	Average B/C Ratio
3	Sacramento / Yolo	15	15	143	26,278	36,693	9.4	1.40	8.0
3	Placer	3	3	25	3,660	2,160	13.4	0.59	3.0
3	El Dorado	1	1	11	1,342	915	10.1	0.68	3.0
4	Bay Area Counties	29	63	445	115,710	79,876	9.4	0.69	6.0
5	Monterey	2	2	22	3,332	3,426	11.5	1.03	9.0
5	Santa Cruz	2	2	16	3,782	1,351	15.6	0.36	5.0
5	Santa Barbara	4	2	22	2,928	569	16.0	0.19	2.0
6	Fresno	4	4	30	5,040	4,923	10.1	0.98	6.0
7	Los Angeles	39	123	474	337,253	345,147	15.9	1.02	12.0
8	Riverside	9	20	89	38,480	42,602	10.3	1.11	10.0
8	San Bernardino	8	17	84	50,071	52,255	10.3	1.04	10.0
10	San Joaquin	1	2	13	5,356	3,399	14.7	0.63	3.0
11	San Diego	30	30	221	55,188	59,478	9.3	1.08	8.0
12	Orange	34	34	132	78,628	53,417	17.0	0.68	8.0
Total or Average		**181**	**318**	**1,725**	**727,048**	**686,211**	**13.2**	**0.94**	**10.0**

Notes: 1 – Assist Rate = Total Assists divided by Total Truck Hours.

Attachment C
Letters of Support and Willingness to Participate in the Program from FSP Partner Agencies

State of California-Transportation Agency GAVIN NEWSOM, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
4656 Valentine Road
Ventura, CA 93003
(805) 662-2640
(800) 735-2922 (Voice)

October 17, 2019

File No.: 765.13909

Ventura County Transportation Commission
Attn: Mr. Darren Kettle, Executive Director
950 County Square Drive, Suite 207
Ventura, CA 93003

Subject: Letter of Support, Freeway Service Patrol Application

Dear Mr. Kettle:

The purpose of this letter is to provide support to the Ventura County Service Authority for Freeway Emergencies (SAFE) for their upcoming application to implement the Freeway Service Patrol (FSP) program within the CHP Ventura Area. The Ventura Area has determined the FSP would provide a benefit to the Area, the data SAFE has compiled on congestion is valid, and we are committed to partner with SAFE on this project.

CHP Ventura Area has further determined through discussions with the CHP's Research and Planning Section, that there is sufficient funding and personnel to support the implementation of the FSP program.

If you have any questions or require further information, please contact Lieutenant Derek Moulton at (805) 662-2640.

Sincerely,

A. R. GOULDING, Captain
Commander
Ventura Area

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
610 Spring Road
Moorpark, CA 93021
(805) 553-0800
(800) 735-2922 (Voice)

October 17, 2019

File No.:770.17349

Ventura County Service Authority for Freeway Emergencies
Mr. Darren Kettle
950 County Square Drive, Suite 207
Ventura, CA 93003

Subject: Letter of Support, Freeway Service Patrol Application

Dear Mr. Kettle,

The purpose of this letter is to provide support to the Ventura County Service Authority for Freeway Emergencies (SAFE) for their upcoming application to implement the Freeway Service Patrol (FSP) program within the CHP Moorpark Area. The Moorpark Area has determined the FSP would provide a benefit to the Area, the data SAFE has compiled on congestion is valid, and we are committed to partner with SAFE on this project.

CHP Moorpark Area has further determined through discussions with the CHP's Research and Planning Section, that there is sufficient funding and personnel to support the implementation of the FSP program.

If you have any questions or require further information, please contact Lieutenant Michael Logie at (805) 553-0800.

Sincerely,

Michael J. Logie

M. J. LOGIE, Lieutenant
Acting Commander
Moorpark Area

From: Fahrtash, Morteza@DOT
To: Davies, Lisa H@DOT
Cc: Steve DeGeorge; Vergara, Daisy D@DOT; Wong, Deborah M@DOT; Andrew Kent
Subject: RE: VCTC FSP: Letter of Support from Caltrans D7
Date: Thursday, August 29, 2019 4:16:24 PM
Attachments: image001.png

Hi Lisa,
This is to express our support to VCTC's proposed FSP program. We have reviewed their Beat Map and concur with the plan.
We are looking forward to working with VCTC in deploying FSP program in Ventura County.
Please feel free to contact myself or Ms. Daisy Vergara of my Senior Staff for any questions.
Kindly,
Mort

Mort Fahrtash, PhD, PE, PMP
Chief, Office of District Traffic Manager
Division of Traffic Operations
Caltrans District 7
2901 W. Broadway
Los Angeles, CA 90041
(323) 259-1764

Attachment D

Proposed Budget and Schedule of Implementation

With a proposed start date of July 1, 2020, Beats VC-101-1, VC-101-2, and VC-118 will operate 8 hours per day (6:00-10:00am and 3:00-7:00pm) with two trucks, 5 days per week, for 52 weeks of FY2020/21.

The proposed budget for initial start-up costs and three beats under said conditions for the first year of FSP operations is estimated to be $1,249,600.00.

Also note that per the current protocol/procedures, the proposed costs/budget does not include annual costs for CHP dispatch.

Proposed schedule for implementation, assuming a Caltrans allocation on or before July 1, 2020:

- Formalize Caltrans/CHP/VCTC Local Memorandum of Understanding for program implementation/roles and responsibilities by March 1, 2020
- Execute funding contract with Caltrans Local Assistance by March 1, 2020
- Finalize operations plan for telecommunications by May 1, 2020
- Procure FSP tow services for Beats VC-101-1, VC-101-2, and VC-118 from March 1, 2020 through June 30, 2020
- Procure necessary equipment from March 1, 2020 through June 30, 2020
- FSP tow vendor preparation for Beats VC-101-1, VC-101-2, VC-118 from July 1, 2020 through August 31, 2020
- Implement service for FSP Beats VC-101-1, VC-101-2, and VC-118 on September 1, 2020

Proposed Schedule of Implementation

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.
Formalize Caltrans/CHP/VCTC MOU									
Execute Funding Fontract with Caltrans Local Assistance									
Finalize Operations Plan for Telecommunications									
Procure FSP Tow Services for Beats VC-101-1, VC-101-2 and VC-118									
Procure Necessary Equipment from March 1, 2020 through June 30, 2020									
FSP Tow Vendor Preparation & CHP training									
Implement Service for Patrol Beats									

Proposed Program Fiscal Estimate

Program Costs	FY20/21	FY21/22	FY22/23
Program Start-Up Costs	$ 40,000.00	$ -	$ -
VC-101-1	$ 403,200.00	$ 403,200.00	$ 403,200.00
VC-101-2	$ 403,200.00	$ 403,200.00	$ 403,200.00
VC-118	$ 403,200.00	$ 403,200.00	$ 403,200.00
Total Program Cost	**$ 1,249,600.00**	**$ 1,209,600.00**	**$ 1,209,600.00**
Program Funding	**FY20/21***	**FY21/22**	**FY22/23**
State Grant	$ 800,000.00	$ 907,200.00	$ 907,200.00
Total SAFE Funding**	$ 449,600.00	$ 302,400.00	$ 302,400.00
SAFE Match - From Annual Revenues	$ 250,000.00	$ 250,000.00	$ 250,000.00
SAFE Match - From Fund Balance	$ 199,600.00	$ 52,400.00	$ 52,400.00
Total Program Funding	**$ 1,249,600.00**	**$ 1,209,600.00**	**$ 1,209,600.00**

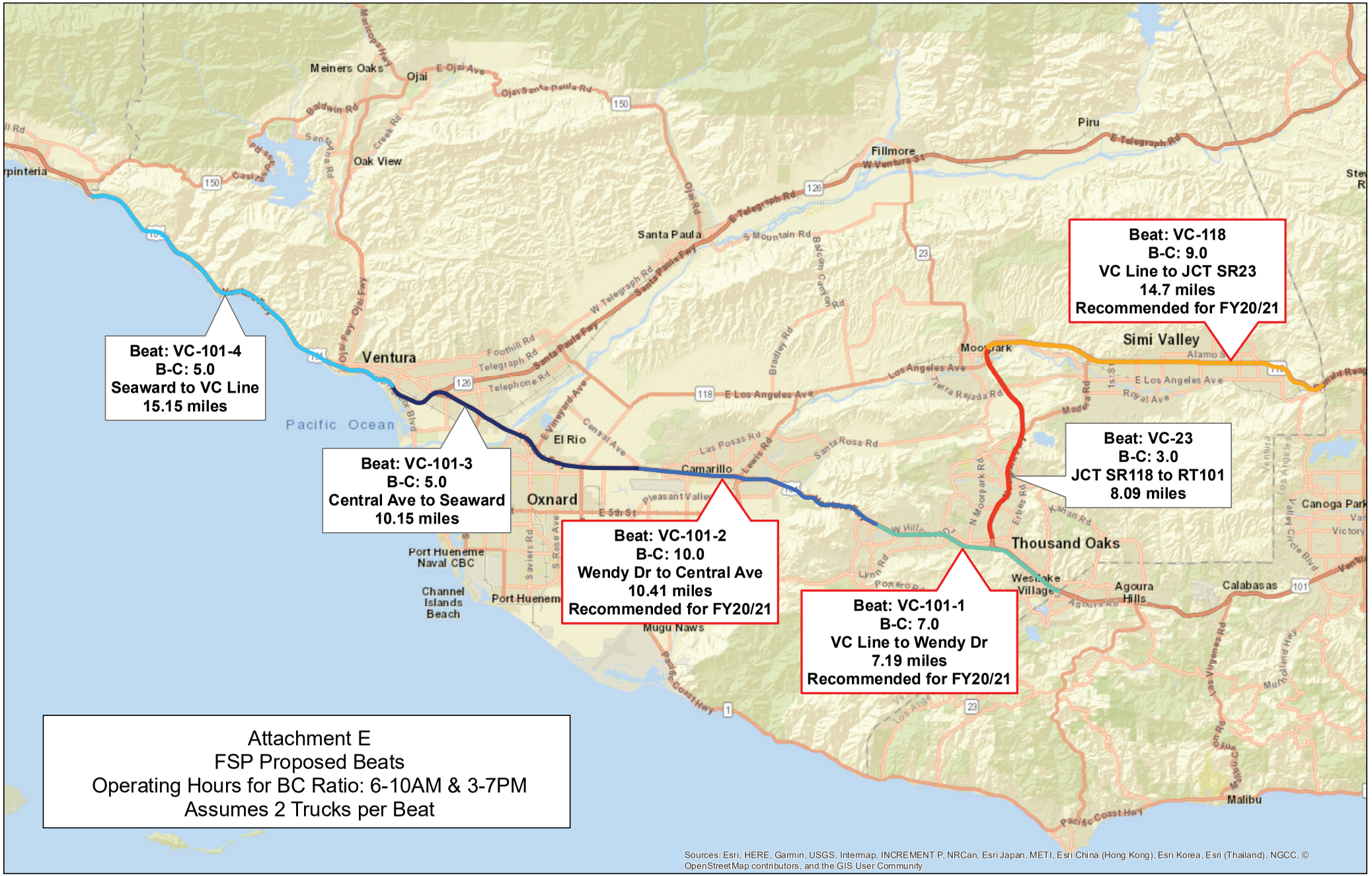
* State funding varys each year with 1st year capped at $800,000

** SAFE is required to provide 25% match funding for program costs and is responsible for costs exceeding State funding allocation

Estimated Available State Funds for Ventura County

State FSP Accounts	FY20/21	FY21/22	FY22/23
State Highway Account (SHA)*	$ 200,000.00	$ 400,000.00	$ 600,000.00
Senate Bill 1 (SB1)	$ 600,000.00	$ 600,000.00	$ 600,000.00
Total Estimated Allocation	**$ 800,000.00**	**$ 1,000,000.00**	**$ 1,200,000.00**

* SHA Funds are phased in 33% increaments over first 3 years of program startup


Beat: VC-101-4
B-C: 5.0
Seaward to VC Line
15.15 miles
Beat: VC-101-3
B-C: 5.0
Central Ave to Seaward
10.15 miles
Beat: VC-101-2
B-C: 10.0
Wendy Dr to Central Ave
10.41 miles
Recommended for FY20/21
Beat: VC-101-1
B-C: 7.0
VC Line to Wendy Dr
7.19 miles
Recommended for FY20/21
Beat: VC-118
B-C: 9.0
VC Line to JCT SR23
14.7 miles
Recommended for FY20/21
Beat: VC-23
B-C: 3.0
JCT SR118 to RT101
8.09 miles
Attachment E
FSP Proposed Beats
Operating Hours for BC Ratio: 6-10AM & 3-7PM
Assumes 2 Trucks per Beat
Pacific Ocean
Ventura
Oxnard
El Rio
Camarillo
Santa Paula
Fillmore
Piru
Simi Valley
Moorpark
Thousand Oaks
Westlake Village
Agoura Hills
Calabasas
Malibu
Meiners Oaks
Ojai
Oak View
Port Hueneme Naval CBC
Channel Islands Beach
Port Hueneme
Mugu Naws
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community