

**TO:** James L. App, City Manager  
**FROM:** Doug Monn, Director of Public Works  
**SUBJECT:** Highway 46E Speed Survey and Speed Limits  
**DATE:** November 1, 2011

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**Needs:** That the City Council accept the recommendations of an Engineering and Traffic Survey conducted by Caltrans District 5 for speed limits on Highway 46 East.

**Facts:**

1. Caltrans District 5 has presented, for the City's review and comment, a draft report of recommendations for speed limits along a three mile stretch of Highway 46 East from its junction with Highway 101 to roughly 800 feet east of Mill Road.
2. It is Caltrans intention to update these surveys every seven to ten years.
3. Speed limit criteria begin with the measurement of the 85<sup>th</sup> percentile speed. Other factors, including collision history, may be used in recommendations for limits lower than those determined by the 85<sup>th</sup> percentile.
4. The speed surveys were conducted this last July. Accident history was reviewed over the last four years.
5. The City Police Department enforces speed limits on the highway within City limits.

**Analysis  
and**

**Conclusion:** Caltrans has presented their reporting in three one-mile sections. Beginning with the first mile east of Highway 101 Caltrans measured the 85<sup>th</sup> percentile speed to be 57 miles per hour (mph) west bound and 62 mph east bound. The report, however, recommends speed limits of 50 mph west bound and 55 mph east bound. Justifications include collision rates (primarily rear-end); presence of pedestrians and bikes; abrupt transition to the downtown core; the half-signal at Buena Vista and a high volume of truck traffic.

The second mile east of 101 begins roughly half way between Buena Vista Drive and Golden Hill Road and extends out just beyond Union Road. The 85<sup>th</sup> percentile speeds were determined to be approximately 60 mph. The report recommends a speed limit of 55 mph in each direction. Justifications include collision rates (again rear-end); presence of pedestrians and bikes; and high truck volumes.

The third mile extends from Union Road just beyond Mill Road. The 85<sup>th</sup> percentile speeds were measured at 65 mph or higher. The recommended speed limit is 60 mph in both directions. In the third mile the justifications are a little different. Collision rates are noted but the collisions are broad side caused by failure to yield. Barney Schwartz Park and the Ravine Water Park are noted as attractors for pedestrians and bikes. The proximity of numerous wineries and the presumption of driving under the influence are noted.

We support these recommendations and appreciate Caltrans research and documentation that allowed them to make recommendations for speed limits below those guided by the 85<sup>th</sup> percentile.

Comments regarding pedestrians and bikes are enlightening. They cite Cuesta College as the primary land use attracting the pedestrians and bikes. The City's Bike Master Plan includes a trail along North River Road that would serve as a connection between the College and downtown. The Plan also calls for an under-crossing of the highway near Buena Vista Drive. The Caltrans study supports the need for both of these facilities. The Bike Master Plan also calls for a connection between Barney Schwartz Park and the Ravine Water Park under the highway bridge. The City has acquired the land needed for that connection.

**Policy**

**Reference:** Municipal Code Section 11.40.010

**Fiscal**

**Impact:** None

**Options:**

- a. Endorse the recommendations of Caltrans District 5 Draft Engineering and Traffic Survey on State Highway 46E and authorize the City Engineer to respond to Caltrans accordingly.
- b. Amend, modify, or reject the above option.

Prepared by: John Falkenstien, City Engineer

**Attachments:**

Caltrans Letter to City Council 9-26-11

Caltrans Draft Report of Traffic and Engineering Survey 9-19-11

## DEPARTMENT OF TRANSPORTATION

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SEP 27 2011  
CITY OF PASO ROBLES



*Flex your power!  
Be energy efficient!*

September 26, 2011

City Council  
City of Paso Robles  
1000 Spring Street  
Paso Robles, CA 93446

Dear City Council:

This letter is notification that the California Department of Transportation (Caltrans) has conducted an Engineering and Traffic Survey (E&TS) on State Highway 46 East within the City of Paso Robles. Limits of the E&TS are for State Highway 46 East, beginning at post mile 29.761, a point approximately 269 feet west of the centerline of the Highway 101 northbound ramps, and extending to post mile 32.80, a point approximately 792 feet east of the centerline of Mill Road, a total distance of 3.039 miles. A draft copy of the survey has been included for your review. Results of the survey indicate the 65 mph maximum speed limit should be lowered as follows:

**1. For the 1.009 mile segment of State Route 46 East between post mile 29.761 and post mile 30.77, the recommendation is to:**

- (1) Reduce the speed limit from 65 mph to 50 mph in the westbound direction of travel. 50 mph is found most appropriate to facilitate the orderly movement of traffic.
- (2) Reduce the speed limit from 65 mph to 55 mph in the eastbound direction of travel. 55 mph is found most appropriate to facilitate the orderly movement of traffic.

**2. For the 1.02 mile segment of State Route 46 East between post mile 30.77 and post mile 31.79, the recommendation is to:**

- (1) Reduce the speed limit from 65 mph to 55 mph in both directions of travel. 55 mph is found most appropriate to facilitate the orderly movement of traffic.

**3. For the 1.01 mile segment of State Route 46 East between post mile 31.79 and post mile 32.80, the recommendation is to:**

- (1) Reduce the speed limit from 65 mph to 60 mph in both directions of travel. 60 mph is found most appropriate to facilitate the orderly movement of traffic.



As required by Section 22354.5 of the California Vehicle Code (CVC §22354.5), this letter serves as notice to allow you the opportunity to conduct a public hearing on the proposed speed limit decrease, if you so desire. If you choose to have a public hearing, we will be available to attend the meeting to answer any questions which may arise concerning the proposed speed limit changes. It is not our intent to make a formal presentation or run the hearing, if held. CVC §22354.5 states:

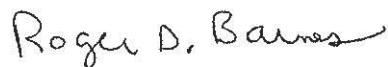
*(a) Whenever the Department of Transportation determines, upon the basis of an engineering and traffic survey, to increase or decrease the existing speed limit on a particular portion of a state highway pursuant to Section 22354, it shall, prior to increasing or decreasing that speed limit, consult with, and take into consideration the recommendations of, the Department of the California Highway Patrol.*

*(b) The city council or board of supervisors of a city or county through which any portion of a state highway subject to subdivision (a) extends may conduct a public hearing on the proposed increase or decrease at a convenient location as near as possible to that portion of state highway. The Department of Transportation shall take into consideration the results of the public hearing in determining whether to increase or decrease the speed limit.*

Please check to appropriate statement on the bottom of this page and sign, date, and return this letter to Caltrans by November 1, 2011. If we have not heard from you by November 1, 2011, we will assume no public hearing will take place and we will proceed with finalizing the E&TS. If a Public Hearing is held, please forward us a copy of the comments and any official recommendations or concerns.

If you have any questions, or would like to discuss the information gathered during the E&TS, we would be happy to meet with you at your convenience. You may contact me at (805) 748-2635.

Sincerely,



ROGER D. BARNES, C.E., T.E.  
Caltrans District 5  
Traffic Management Branch  
Engineering and Traffic Survey Coordinator  
Phone: (805) 748-2635  
Fax: (805) 549-3045  
E-Mail: roger\_d\_barnes@dot.ca.gov

\_\_\_\_\_ A public hearing is not necessary

\_\_\_\_\_ City of Paso Robles would like to conduct a public hearing

\_\_\_\_\_ Print Name

\_\_\_\_\_ Signature

\_\_\_\_\_ Date

## Memorandum

*Flex your power!  
Be energy efficient!*

To: RICHARD KRUMHOLZ  
District Director

Date: September 19, 2011  
File: SLO-46-PM 29.76/32.80

From: ROGER D. BARNES, R.C.E., T.E.  
Transportation Engineer  
District 5 Traffic Management Branch

Subject: Report of Traffic and Engineering Survey (E&TS)

This Traffic and Engineering and Survey (E&TS) has been prepared in accordance with the 2010 California Manual on Uniform Traffic Control Devices (California MUTCD) using established traffic engineering practices.

### Reason for Initiation of Speed Zone Survey

This study was initiated as part of the California Department of Transportation (Caltrans) program to periodically resurvey speed limit zones on State Highways in District 5 at seven (7) and ten (10) year intervals. The California Highway Patrol and local Police departments utilize radar for speed limit enforcement. This study will satisfy the requirements of California Vehicle Code Section 40802 (CVC §40802) when radar is utilized in the enforcement of speed limits. On multiple-lane highways with two or more separate roadways, different prima facie speed limits may be established for different roadways (CVC §22361). An E&TS shall include, among other requirements deemed necessary by the California Department of Transportation, consideration of:

- (1) Prevailing speeds as determined by traffic engineering measurements
- (2) Collision records
- (3) Highway, traffic, and roadside conditions not readily apparent to the driver

### Maximum Speed Limit

The California Vehicle Code governs the posting of speed limits on the State Highway System. The California statutes pertaining to expressways may be located in sections 22349, 22354, and 22406 of the California Vehicle Code, and are provided below.

#### (1) CVC §22349 - Maximum Speed Limit

- (a) Except as provided in Section 22356, no person may drive a vehicle upon a highway at a speed greater than 65 miles per hour.



- (b) Notwithstanding any other provision of law, no person may drive a vehicle upon a two-lane, undivided highway at a speed greater than 55 miles per hour unless that highway, or portion thereof, has been posted for a higher speed by the Department of Transportation or appropriate local agency upon the basis of an engineering and traffic survey. For purposes of this subdivision, the following apply:
    - (1) A two-lane, undivided highway is a highway with not more than one through lane of travel in each direction.
    - (2) Passing lanes may not be considered when determining the number of through lanes.
  - (c) It is the intent of the Legislature that there be reasonable signing on affected two-lane, undivided highways described in subdivision (b) in continuing the 55 miles-per-hour speed limit, including placing signs at county boundaries to the extent possible, and at other appropriate locations.
- (2) CVC §22354 - Decrease of State Highway Speed Limits
- (a) Whenever the Department of Transportation determines upon the basis of an engineering and traffic survey that the limit of 65 miles per hour is more than is reasonable or safe upon any portion of a state highway where the limit of 65 miles is applicable, the department may determine and declare a prima facie speed limit of 60, 55, 50, 45, 40, 35, 30 or 25 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe, which declared prima facie speed limit shall be effective when appropriate signs giving notice thereof are erected upon the highway.
  - (b) This section shall become operative on the date specified in subdivision (c) of Section 22366.
- (3) CVC §22406 - Maximum Speed for Designated Vehicles
- No person may drive any of the following vehicles on a highway at a speed in excess of 55 miles per hour:
- (a) A motortruck or truck tractor having three or more axles or any motortruck or truck tractor drawing any other vehicle.
  - (b) A passenger vehicle or bus drawing any other vehicle.
  - (c) A school bus transporting any school pupil.
  - (d) A farm labor vehicle when transporting passengers.
  - (e) A vehicle transporting explosives.
  - (f) A trailer bus, as defined in Section 636.

### **Speed Limit Criteria**

When a speed limit is to be posted, it shall be established at the nearest 10 km/h (5 mph) increment of the 85th-percentile speed of free-flowing traffic. In compliance with CVC §627 and CVC §22358.5, the posted speed may be reduced by 10 km/h (5 mph) from the nearest 10 km/h or

(5 mph) increment of the 85th-percentile speed. If the speed limit to be posted has had the 10 km/h (5 mph) reduction applied, then an E&TS shall document in writing the conditions and justification for the lower speed limit and be approved by a registered Civil or Traffic Engineer. The reasons for the lower speed limit shall be in compliance with CVC Sections 627 and 22358.5. An example of the application of this speed limit criterion is as follows:

- (1) If the 85th percentile speed in a speed survey was 60 km/h (37 mph), then the speed limit would be posted at 35 mph or optionally reduced to 30 mph. However,
- (2) If the 85th percentile speed in a speed survey was 61 km/h (38 mph), then the speed limit would be posted at 40 mph or optionally reduced to 35 mph.

The declared prima facie speed limit shall be effective when appropriate signs giving notice thereof are erected upon the highway (CVC §22354).

### **Location 1**

#### **1. Limits of Survey**

The study was conducted in the County of San Luis Obispo, within the City of El Paso de Robles, along State Route 46 East from post mile 29.761 to post mile 30.77. Notable land use/landmarks within this 1.009 mile segment of State Route 46 East include:

- a) State Route 101/State Route 46 East Interchange
- b) Salinas River Bridge
- c) State Route 46 East/Buena Vista Drive Intersection
- d) Cuesta College North Campus (Education)
- e) La Quinta Inn and Suites (Lodging)
- f) San Antonio Winery (Hospitality)
- g) Multiple Residential Developments

#### **2. Prevailing speeds as determined by traffic engineering measurements**

A LIDAR vehicle speed survey was conducted on Friday July 22, 2011 at post mile 30.20. The data was collected under clear and sunny conditions between the hours of 7:30 AM to 5:00 PM. 100 eastbound vehicles and 100 westbound vehicles were surveyed at this location. The 85<sup>th</sup> percentile vehicle speed in the westbound direction was measured at 57 mph. The 85<sup>th</sup> percentile vehicle speed in the eastbound direction was measured at 62 mph. Vehicles defined under CVC §22406 were not included in the survey. A summary of the prevailing speeds is as follows:

LIDAR VEHICLE SPEED SURVEY					
Date	Vehicles Surveyed	Location (Post Mile)	Direction	85 <sup>th</sup> Percentile Speed	50 <sup>th</sup> Percentile Speed
07/22/2011	100	30.20	Westbound	57 mph	54 mph
07/22/2011	100	30.20	Eastbound	62 mph	58 mph



### 3. Collision Records

Analysis of the most recent three year collision history for State Route 46 East from post mile 29.761 to post mile 30.77 indicates the actual collision rate of 1.61 is higher than the statewide average collision rate of 1.05 for similar state highway facilities. Collision rates are reported in collisions per million vehicle miles traveled. The number of collisions reported between April 1, 2007 and March 31, 2010 were 48. Speeding was the primary collision factor in 32 (66.7%) of the 48 documented collisions. Rear end collisions were the primary type of collision and accounted for 37 (77.1%) of the 48 reported collisions. A summary of the collision history is provided below.

COLLISION RECORDS - SEGMENT							
3 Year Period	Total No. of Collisions	Actual Rates			Statewide Average Rates		
		F*	F+I**	Total***	F*	F+I**	Total***
04/01/07 to 03/31/10	48	0.000	0.43	1.61	0.011	0.43	1.05

\* Fatalities    \*\* Fatalities plus Injuries    \*\*\* All Reported Collisions

### 4. Highway, traffic, and roadside conditions not readily apparent to the driver

State Route 46 is a major interregional route that connects the Central Coast with the San Joaquin Valley and accommodates interregional, regional, rural, and urban traffic. State Route 46 East is also a major goods movement facility. This segment functions as a transition zone into/out of the El Paso de Robles downtown core business district which consists of the Mid State Fairgrounds, service stations, restaurants, and lodging facilities. This segment is a four lane divided expressway with a 3% downhill grade as you travel westbound approaching the State Route 101 interchange. This 1.009 mile segment of State Route 46 East carries 30,000 Average Annual Daily Trips (AADT). 2,595 (8.65%) of these trips are trucks.

State Route 46 East is classified as a Terminal Access Route on the Truck Network Map In 1982; the federal government passed the Surface Transportation Assistance Act (STAA). This act requires states to allow certain longer trucks on a network of federal highways, referred to as the "National Network" (NN)." A "STAA" truck is, in many cases, longer than a "California Legal" truck, and may operate only on specific highways in California. Federal law requires that states allow STAA trucks reasonable access to terminals. These are called Terminal Access (TA) routes. The purpose of TA routes is to allow STAA trucks to (1) travel between NN routes, (2) reach a truck's operating facility, or (3) reach a facility where freight originates, terminates, or is handled in the transportation process. Terminal Access routes have a greater ratio of trucks to passenger cars than typical state highway facilities.

The official traffic control device at the intersection of State Route 46 East and Buena Vista Drive is a half signal. Under a half signal configuration, eastbound vehicles traveling through the intersection are under free flow conditions. All other moments are under signal control. From a stop condition, the Buena Vista Drive southbound to State Route 46 East left turn movement has to merge with eastbound State Route 46 East vehicles traveling at free flow conditions.

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Pedestrian facilities are available in many parts of the community. However, some areas lack sidewalks, while other pedestrian connections are discontinuous. This segment lacks sidewalks and pedestrian connections. As a result, pedestrian and bicyclists are using the State Route 46 East shoulder as the east/west connector. In addition, pedestrian and bicyclist facilities are not provided to facilitate the crossing of Highway 46 East from the south-side to the north-side, and vice versa. Due to the lack of north/south facilities, pedestrians and bicyclists are crossing Highway 46 East at random locations. Cuesta College North Campus is the primary land use attracting pedestrians and bicyclists within this segment.

## 5. Analysis

The 85th-percentile speed of free-flowing traffic is 57 mph in the westbound direction and 62 mph in the eastbound direction. The nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic is established at 55 mph in the westbound direction and 60 mph in the eastbound directions. In compliance with CVC §627 and CVC §22358.5, the speed limit may be reduced by an additional 5 mph increment if justification is provided for in the Engineering and Traffic Survey by a licensed Civil or Traffic Engineer. As a registered Civil and Traffic Engineer in the State of California, it is my engineering judgment that an additional 5 mph reduction is warranted in both directions to facilitate the orderly movement of traffic and is reasonable and safe. Thus, the posted speed limit is to be set at 50 mph in the westbound direction and 55 mph in the eastbound direction on State Highway 46 East between post mile 29.761 and post mile 30.77. The justifications for the additional 5 mph reduction are as follows.

- (1) The collision rates for State Route 46 East within this 1.009 mile segment are above the statewide average for similar state highway facilities. Speeding is the primary collision factor in 32 (66.7%) of the 48 documented collisions.
- (2) Pedestrian facilities are available in many parts of the community. However, some areas lack sidewalks, while other pedestrian connections are discontinuous. This segment lacks sidewalks and pedestrian connections. As a result, pedestrian and bicyclists are using the State Route 46 East shoulder as the east/west connector. In addition, pedestrian and bicyclist facilities are not provided to facilitate the crossing of Highway 46 East from the south-side to the north-side, and vice versa. Due to the lack of north/south facilities, pedestrians and bicyclists are crossing Highway 46 East at random locations. The Cuesta College North Campus is primary land use attracting pedestrians and bicyclists within this segment.
- (3) This segment functions as a transition zone into/out of the El Paso de Robles downtown core business district. The El Paso de Robles downtown core business district has a posted speed limit of 25 miles per hour.
- (4) The official traffic control device at the intersection of State Route 46 East and Buena Vista Drive is a half signal. Under a half signal configuration, eastbound vehicles traveling through the intersection are under free flow conditions. All other moments are under signal control. From a stop condition, the Buena Vista Drive southbound to State Route 46 East left turn movement has to merge with eastbound State Route 46 East vehicles traveling at free flow conditions. This condition results in increased conflict points and larger speed differentials that typical highway users are not accustomed to.



- (5) State Route 46 East is classified as a Terminal Access route. Terminal Access routes are truck routes. Terminal Access routes have a greater ratio of trucks to passenger cars than typical state highway facilities. This condition results in increased conflict points and larger speed differentials that typical highway users are not accustomed to.

## 6. Recommendation

For the 1.009 mile segment of State Route 46 East between post mile 29.761 and post mile 30.77, the recommendation is to:

- (1) Reduce the speed limit from 65 mph to 50 mph in the westbound direction of travel. 50 mph is found most appropriate to facilitate the orderly movement of traffic.
- (2) Reduce the speed limit from 65 mph to 55 mph in the eastbound direction of travel. 55 mph is found most appropriate to facilitate the orderly movement of traffic.

## Location 2

### 1. Limits of Survey

The study was conducted in the County of San Luis Obispo, within the City of El Paso de Robles, along State Route 46 East from post mile 30.77 to post mile 31.79. Notable land use/landmarks within this 1.02 mile segment of State Route 46 East include:

- a) State Route 46 East/Golden Hill Road Intersection
- b) State Route 46 East/Union Road Intersection
- c) Regional Shopping Center (Anchor - Lowe's Home Improvement Store)
- d) Paso Robles Ford Lincoln Mercury
- e) Paso Robles Truck Stop
- f) Golden Hills Auto Center
- g) Service stations, fast food restaurants, and residential developments

### 2. Prevailing speeds as determined by traffic engineering measurements

A LIDAR vehicle speed survey was conducted on Friday July 22, 2011 at post mile 30.80. The data was collected under clear and sunny conditions between the hours of 7:30 AM to 5:00 PM. 100 eastbound vehicles and 100 westbound vehicles were surveyed at this location. The 85<sup>th</sup> percentile vehicle speed in the westbound direction was measured at 59 mph. The 85<sup>th</sup> percentile vehicle speed in the eastbound direction was measured at 62 mph. Vehicles defined under CVC §22406 were not included in the survey. A summary of the prevailing speeds is as follows:

LIDAR VEHICLE SPEED SURVEY					
Date	Vehicles Surveyed	Location (Post Mile)	Direction	85 <sup>th</sup> Percentile Speed	50 <sup>th</sup> Percentile Speed
07/22/2011	100	30.80	Westbound	59 mph	53 mph
07/22/2011	100	30.80	Eastbound	62 mph	57 mph



### 3. Collision Records

Analysis of the most recent three year collision history for State Route 46 East from post mile 30.77 to post mile 31.79 indicates the actual collision rate of 1.14 is higher than the statewide average collision rate of 1.05 for similar state highway facilities. Collision rates are reported in collisions per million vehicle miles traveled. The number of collisions reported between April 1, 2007 and March 31, 2010 were 31. Speeding was the primary collision factor in 20 (64.5%) of the 31 documented collisions. Rear end collisions were the primary type of collision and accounted for 22 (71.0%) of the 31 reported collisions. A summary of the collision history is provided below.

COLLISION RECORDS - SEGMENT							
3 Year Period	Total No. of Collisions	Actual Rates			Statewide Average Rates		
		F*	F+I**	Total***	F*	F+I**	Total***
04/01/07 to 03/31/10	31	0.000	0.33	1.14	0.011	0.43	1.05

\* Fatalities    \*\* Fatalities plus Injuries    \*\*\* All Reported Collisions

### 4. Highway, traffic, and roadside conditions not readily apparent to the driver

State Route 46 is a major interregional route that connects the Central Coast with the San Joaquin Valley and accommodates interregional, regional, rural, and urban traffic. State Route 46 East is also a major goods movement facility. This segment is a four lane divided expressway. Notable land use include a Regional Shopping Center anchored by Lowe's Home Improvement Store, Golden Hills Auto Center, Paso Robles Truck Center, Paso Robles Ford Lincoln Mercury Dealership, multiple service stations with convenience stores, and several fast food restaurants. This 1.02 mile segment of State Route 46 East carries 24,200 Average Annual Daily Trips (AADT). 2,403 (9.93%) of these trips are trucks.

State Route 46 East is classified as a Terminal Access Route on the Truck Network Map In 1982; the federal government passed the Surface Transportation Assistance Act (STAA). This act requires states to allow certain longer trucks on a network of federal highways, referred to as the "National Network" (NN). A "STAA" truck is, in many cases, longer than a "California Legal" truck, and may operate only on specific highways in California. Federal law requires that states allow STAA trucks reasonable access to terminals. These are called Terminal Access (TA) routes. The purpose of TA routes is to allow STAA trucks to (1) travel between NN routes, (2) reach a truck's operating facility, or (3) reach a facility where freight originates, terminates, or is handled in the transportation process. Terminal Access routes have a greater ratio of trucks to passenger cars than typical state highway facilities.

Pedestrian facilities are available in many parts of the community. However, some areas lack sidewalks, while other pedestrian connections are discontinuous. This segment lacks sidewalks. As a result, pedestrian and bicyclists are using the State Route 46 East shoulder as the east/west connector. In addition, pedestrian and bicyclist facilities are provided at a single location along this 1.02 mile segment. The intersection of State Route 46 East and Golden Hill Road is

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controlled by a fully actuated traffic signal which assigns the right of way to motor vehicles, pedestrians, and bicyclists. Due to the limited number of north/south facilities, pedestrians and bicyclists are crossing Highway 46 East at random locations. The Regional Shopping Center is the primary land use attracting pedestrians and bicyclists within this segment.

## 5. Analysis

The 85th-percentile speed of free-flowing traffic is 59 mph in the westbound direction and 62 mph in the eastbound direction. The nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic is established at 60 mph for both directions. In compliance with CVC §627 and CVC §22358.5, the speed limit may be reduced by an additional 5 mph increment if justification is provided for in the Engineering and Traffic Survey by a licensed Civil or Traffic Engineer. As a registered Civil and Traffic Engineer in the State of California, it is my engineering judgment that an additional 5 mph reduction is warranted in both directions to facilitate the orderly movement of traffic and is reasonable and safe. Thus, the posted speed limit is to be set at 55 mph in the westbound direction and 55 mph in the eastbound direction on State Highway 46 East between post mile 30.77 and post mile 31.79. The justifications for the additional 5 mph reduction are as follows.

- (1) The collision rates for State Route 46 East within this 1.02 mile segment are above the statewide average for similar state highway facilities. Speeding is the primary collision factor in 20 (64.5%) of the 31 documented collisions.
- (2) Pedestrian facilities are available in many parts of the community. However, some areas lack sidewalks, while other pedestrian connections are discontinuous. This segment lacks sidewalks. As a result, pedestrian and bicyclists are using the State Route 46 East shoulder as the east/west connector. In addition, pedestrian and bicyclist facilities are provided at a single location along this 1.02 mile segment. The intersection of State Route 46 East and Golden Hill Road is controlled by a fully actuated traffic signal which assigns the right of way to motor vehicles, pedestrians, and bicyclists. Due to the limited number of north/south facilities, pedestrians and bicyclists are crossing Highway 46 East at random locations. The Regional Shopping Center is the primary land use attracting pedestrians and bicyclists within this segment.
- (3) State Route 46 East is classified as a Terminal Access route. Terminal Access routes are truck routes. Terminal Access routes have a greater ratio of trucks to passenger cars than typical state highway facilities. This condition results in increased conflict points and larger speed differentials that typical highway users are not accustomed to.

## 6. Recommendation

For the 1.02 mile segment of State Route 46 East between post mile 30.77 and post mile 31.79, the recommendation is to:

- (1) Reduce the speed limit from 65 mph to 55 mph in both directions of travel. 55 mph is found most appropriate to facilitate the orderly movement of traffic.



### Location 3

#### 1. Limits of Survey

The study was conducted in the County of San Luis Obispo, within the City of El Paso de Robles, along State Route 46 East from post mile 31.79 to post mile 32.80. Notable land use/landmarks within this 1.01 mile segment of State Route 46 East include:

- a) State Route 46 East/Airport Road Intersection
- b) State Route 46 East/Mill Road Intersection
- c) Ravine Water Park
- d) Wine Country RV Park
- e) EOS Winery
- f) Robert Hall Winery
- g) Vina Robles Winery
- h) Paso Robles Airport
- i) Barney Schwartz Park

#### 2. Prevailing speeds as determined by traffic engineering measurements

This segment is a transition zone from a rural area to an urbanized area. To establish the rural and urban boundaries between location 2 and location 3, a LIDAR vehicle speed survey was conducted at two locations on Friday July 22, 2011. Vehicle speed data was collected at post mile 31.80 and post mile 32.80. The data was collected under clear and sunny conditions between the hours of 7:30 AM to 5:00 PM. 100 eastbound vehicles and 100 westbound vehicles were surveyed at each location. The 85<sup>th</sup> percentile vehicle speed in the westbound direction was measured at 62 mph for post mile 31.80 and 65 mph for post mile 32.80. The 85<sup>th</sup> percentile vehicle speed in the eastbound direction was measured at 65 mph for post mile 31.80 and 67 mph for post mile 32.80. Vehicles defined under CVC §22406 were not included in the survey. A summary of the prevailing speeds is provided in the following table:

LIDAR VEHICLE SPEED SURVEY					
Date	Vehicles Surveyed	Location (Post Mile)	Direction	85 <sup>th</sup> Percentile Speed	50 <sup>th</sup> Percentile Speed
07/22/2011	100	31.80	Westbound	62 mph	57 mph
07/22/2011	100	31.80	Eastbound	65 mph	61 mph
07/22/2011	100	32.80	Westbound	65 mph	61 mph
07/22/2011	100	32.80	Eastbound	67 mph	62 mph

#### 3. Collision Records

Analysis of the most recent three year collision history for State Route 46 East from post mile 31.79 to post mile 32.80 indicates the actual collision rate of 1.08 is higher than the statewide average collision rate of 0.72 for similar state highway facilities. Collision rates are reported in collisions per million vehicle miles traveled. The number of collisions reported between April 1, 2007 and March 31, 2010 were 24, including one (1) fatality. Failure to yield was the primary collision factor in 10 (41.7%) of the 24 documented collisions. Broadside collisions were the

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primary type of collision and accounted for 9 (37.5%) of the 24 reported collisions. A summary of the collision history is provided in the following table.

COLLISION RECORDS - SEGMENT							
3 Year Period	Total No. of Collisions	Actual Rates			Statewide Average Rates		
		F*	F+I**	Total***	F*	F+I**	Total***
04/01/07 to 03/31/10	24	0.045	0.54	1.08	0.019	0.31	0.72

\* Fatalities    \*\* Fatalities plus Injuries    \*\*\* All Reported Collisions

#### 4. Highway, traffic, and roadside conditions not readily apparent to the driver

State Route 46 is a major interregional route that connects the Central Coast with the San Joaquin Valley and accommodates interregional, regional, rural, and urban traffic. State Route 46 East is also a major goods movement facility. This segment is a four lane divided expressway. The section of State Route 46 East from approximately post mile 32.40 to post mile 32.80 was recently upgraded from a two lane undivided highway to a four lane divided expressway. Construction was completed in June 2011. Notable land use within the area includes Barney Schwartz Park, Wine Country RV Resort, Paso Robles Airport, Ravine Water Park, EOS Winery, Robert Hall Winery, Vina Robles Winery, and residential development. This 1.01 mile segment of State Route 46 East carries 18,400 Average Annual Daily Trips (AADT). 2,214 (12.03%) of these trips are trucks.

State Route 46 East is classified as a Terminal Access Route on the Truck Network Map In 1982; the federal government passed the Surface Transportation Assistance Act (STAA). This act requires states to allow certain longer trucks on a network of federal highways, referred to as the "National Network" (NN). A "STAA" truck is, in many cases, longer than a "California Legal" truck, and may operate only on specific highways in California. Federal law requires that states allow STAA trucks reasonable access to terminals. These are called Terminal Access (TA) routes. The purpose of TA routes is to allow STAA trucks to (1) travel between NN routes, (2) reach a truck's operating facility, or (3) reach a facility where freight originates, terminates, or is handled in the transportation process. Terminal Access routes have a greater ratio of trucks to passenger cars than typical state highway facilities.

Pedestrian facilities are available in many parts of the community. However, some areas lack sidewalks, while other pedestrian connections are discontinuous. This segment lacks sidewalks and pedestrian connections. As a result, pedestrian and bicyclists are using the State Route 46 East shoulder as the east/west connector. In addition, pedestrian and bicyclist facilities are not provided to facilitate the crossing of Highway 46 East from the south-side to the north-side, and vice versa. Due to the lack of north/south facilities, pedestrians and bicyclists are crossing Highway 46 East at random locations. Barney Schwartz Park and Ravine Water Park are the primary land use attractors for pedestrians and bicyclists within this segment.

This segment of State Route 46 East contains numerous wineries and wine tasting facilities. Assembly Bill 2004 (effective January 1, 2009) and Assembly Bill 1470 (effective January 1,



2010) allows wineries and off-site tasting rooms to sell wine by the glass or bottle for consumption on the premises. In addition, these bills allow a person who has purchased and partially consumed a bottle of wine to remove the partially consumed bottle from the premises upon departure. The number of wineries and tasting rooms located within this segment increases the risk to public safety along the State Route 46 East corridor due to the hazards associated with driving under the influence of alcohol.

## 5. Analysis

The 85th-percentile speed of free-flowing traffic is 65 mph in the westbound direction and 67 mph in the eastbound direction. The nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic is established at 65 mph for both directions. In compliance with CVC §627 and CVC §22358.5, the speed limit may be reduced by an additional 5 mph increment if justification is provided for in the Engineering and Traffic Survey by a licensed Civil or Traffic Engineer. As a registered Civil and Traffic Engineer in the State of California, it is my engineering judgment that an additional 5 mph reduction is warranted in both directions to facilitate the orderly movement of traffic and is reasonable and safe. Thus, the posted speed limit is to be set at 60 mph in the westbound direction and 60 mph in the eastbound direction on State Highway 46 East between post mile 31.79 and post mile 32.80. The justifications for the additional 5 mph reduction are as follows.

- (1) The collision rates for State Route 46 East within this 1.01 mile segment are above the statewide average for similar state highway facilities. Failure To Yield is the primary collision factor in 10 (41.7%) of the 24 documented collisions.
- (2) Pedestrian facilities are available in many parts of the community. However, some areas lack sidewalks, while other pedestrian connections are discontinuous. This segment lacks sidewalks and pedestrian connections. As a result, pedestrian and bicyclists are using the State Route 46 East shoulder as the east/west connector. In addition, pedestrian and bicyclist facilities are not provided to facilitate the crossing of Highway 46 East from the south-side to the north-side, and vice versa. Due to the lack of north/south facilities, pedestrians and bicyclists are crossing Highway 46 East at random locations. Barney Schwartz Park and Ravine Water Park are the primary land use attractors for pedestrians and bicyclists within this segment.
- (3) State Route 46 East is classified as a Terminal Access route. Terminal Access routes are truck routes. Terminal Access routes have a greater ratio of trucks to passenger cars than typical state highway facilities. This condition results in increased conflict points and larger speed differentials that typical highway users are not accustomed to.
- (4) This segment of State Route 46 East contains numerous wineries and wine tasting facilities. Assembly Bill 2004 (effective January 1, 2009) and Assembly Bill 1470 (effective January 1, 2010) allows wineries and off-site tasting rooms to sell wine by the glass or bottle for consumption on the premises. In addition, these bills allow a person who has purchased and partially consumed a bottle of wine to remove the partially consumed bottle from the premises upon departure. The number of wineries and tasting rooms located within this segment increases the risk to public safety along the State Route 46 East corridor due to the



hazards associated with driving under the influence of alcohol. This is a condition not readily apparent to the typical driver.

6. Recommendation

For the 1.01 mile segment of State Route 46 East between post mile 31.79 and post mile 32.80, the recommendation is to:

- (1) Reduce the speed limit from 65 mph to 60 mph in both directions of travel. 60 mph is found most appropriate to facilitate the orderly movement of traffic.

**Enforcement Jurisdiction**

Whenever Caltrans determines, upon the basis of an engineering and traffic survey, to increase or decrease the existing speed limit on a particular portion of a state highway, it shall, consult with the Department of the California Highway Patrol. In addition, the local jurisdiction may conduct a public hearing on the proposed increase or decrease. Caltrans shall take into consideration the results of the public hearing and the recommendations of the California Highway Patrol in determining whether to increase or decrease the speed limit (CVC §22354.5).

Per the consultation and consideration requirements of CVC §22354.5(a), Caltrans consulted with the California Highway Patrol and City of El Paso de Robles Police Department. After reviewing the proposed speed limit changes, the California Highway Patrol and City of El Paso de Robles Police Department are in/not in support of the speed limit change. Note: E&TS is currently under review by law Enforcement Agencies

Per the consultation and consideration requirements of CVC §22354.5(b), the City of El Paso de Robles City Council were notified of the proposed speed limit changes and conducted/declined to conduct a public hearing on this matter. Note E&TS is currently under review by City Staff

**Recommendation**

1. For the 1.009 mile segment of State Route 46 East between post mile 29.761 and post mile 30.77, the recommendation is to:
  - (1) Reduce the speed limit from 65 mph to 50 mph in the westbound direction of travel. 50 mph is found most appropriate to facilitate the orderly movement of traffic.
  - (2) Reduce the speed limit from 65 mph to 55 mph in the eastbound direction of travel. 55 mph is found most appropriate to facilitate the orderly movement of traffic.
2. For the 1.02 mile segment of State Route 46 East between post mile 30.77 and post mile 31.79, the recommendation is to:
  - (1) Reduce the speed limit from 65 mph to 55 mph in both directions of travel. 55 mph is found most appropriate to facilitate the orderly movement of traffic.



3. For the 1.01 mile segment of State Route 46 East between post mile 31.79 and post mile 32.80, the recommendation is to:
  - (1) Reduce the speed limit from 65 mph to 60 mph in both directions of travel. 60 mph is found most appropriate to facilitate the orderly movement of traffic.

**Recommended:**

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**Jacques Van Zeverter, P.E.**  
**Senior Transportation Engineer**  
**District Traffic Engineer**

**Approved:**

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**Steven N. Price, P.E.**  
**Deputy-Director**  
**Maintenance and Operations**

Enclosure – Speed Zone Survey Sheet, Collision Records, Field Talley Sheets  
c: File

This engineering and traffic survey (E&TS) has been prepared under the direction of the following registered engineer. The registered engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

September 19, 2011

**ROGER D. BARNES, R.C.E., T.E.**

Transportation Engineer  
Office of Traffic Management

**DATE**

