

**SANTA BARBARA COUNTY ASSOCIATION OF GOVERNMENTS  
ROUTE 166 SAFETY AND OPERATIONAL IMPROVEMENTS PROJECT**



**PROJECT DEVELOPMENT PLAN**

**JUNE 2012**

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### Registered Civil Engineer Stamp

This Project Development Plan has been prepared by Psomas under the direction of the noted registered civil engineer. The registered civil engineer attests to the accuracy of the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



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## **1. PROJECT BACKGROUND**

In November 2008, Santa Barbara County voters approved a dedicated sales tax measure for Road Repair, Traffic Relief and Transportation Safety program (referred to as Measure A), that will provide approximately \$1.0 billion for transportation needs within Santa Barbara County, from 2010-2040. Measure A, consisting of an ordinance and investment plan, will implement needed road repair, traffic relief, and transportation safety projects and programs in Santa Barbara County.

The Measure A ordinance required that Santa Barbara County Association of Governments (SBCAG) adopt a Strategic Plan that prioritizes the projects and establishes a time line for their implementation. This project, the State Route 166 Safety and Operational Improvements Project, received the second highest composite rating in the Strategic Plan, adopted October 21, 2010. Consequently, SBCAG has identified the State Route 166 Safety and Operational Improvements project as an early action project and work was initiated in early 2011.

The Safety Corridor was established in August 1998 at the request of State Senator Jack O'Connell to consider and evaluate fatal and injury collisions that have occurred along the route. The California Highway Patrol (CHP) has significantly increased enforcement along the corridor and established a daylight headlight section west and east of Santa Maria. Other improvements implemented along the SR 166 corridor that were attributed to the efforts of the safety task force included the installation of a traffic signal at the intersection with Bonita School Road and soft barrier installation along the western segment of the SR 166 corridor between Flower Street and Black Road.

### ***EXISTING CONDITIONS***

State Route 166 extends 75 miles through Caltrans District 5 and has been divided into two segments, with the western segment divided into two additional segments:

- Western Segment (State Route 1 to State Route 101)
  - Segment 1 – State Route 1 (PM 0.0) to Blosser Road (PM 6.52)
  - Segment 2 – Blosser Road (PM 6.52) to State Route 101 (PM 8.93)
- Eastern Segment (State Route 101 to State Route 33)
  - Segment 3 – State Route 101 (PM 8.93) to State Route 33 (PM74.72)

The western segments (1 & 2) carry regional traffic including commuters between the Cities of Guadalupe and Santa Maria with significant agricultural traffic. Segment 1 is generally a two-lane conventional highway with channelization at specific locations to accommodate left turn lanes. Segment 2 is located within the City of Santa Maria and generally comprises a four- to six-lane conventional highway with a two-way left-turn lane. This is a primary arterial in the City also known as Main Street and includes numerous traffic signals, curb, gutter and sidewalks and landscaped medians.

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Segment 3, east of Route 101, is a two-lane conventional highway and provides interregional access from the Central Coast to the Central Valley. This portion of the route is eligible for designation as a Scenic Highway under the State Scenic Highway Program. Segment 3 extends from Route 101 in San Luis Obispo County to Route 33 (also in San Luis Obispo County) and is lightly traveled. While the volume of truck traffic is less than the western segments, the percentage of trucks (16%)<sup>1</sup> is a significantly higher percentage of the traffic. The eastern section has long stretches of undeveloped land before reaching the farmlands surrounding the towns of Cuyama and New Cuyama.

The Average Daily Traffic (ADT) and other operating characteristics for each segment per the Route 166 Transportation Concept Report are shown in Table 1 below.

**TABLE 1. OPERATING CHARACTERISTICS**

Location	Segment	Post Miles	ADT		LOS		Peak Hour Truck %
			2000 YR	2020 YR	2000 YR	2020 YR	
Western	1	PM 0.0- PM 6.52	8,000	9,700	C	C	6.8
	2	PM 6.52- PM 8.93	16,900	20,800	B-E	B-E	4.0
Eastern	3	PM 8.93- PM 74.72	2,200	4,300	C	D	16.0

The primary concerns with the Route 166 Corridor are safety and operational issues. The three segments offer different and unique safety concerns. The first segment's safety and operational issues are largely due to local-traffic congestion. The third segment, which largely serves interregional traffic, has historically experienced safety concerns that led to the formation of a Highway 166 Safety Task Force.

Using record information provided by Caltrans, the accident history was determined for the three segments along State Route 166 (see Table 2 below).

For the western segments, the actual accident rates are significantly above the statewide average for similar facilities. On average, the fatality rate is not higher than the statewide average. For the eastern segment, the actual accident rates are average for this facility over the past 10 years and appear to have dropped slightly over the last 3 years. Fatality rates are slightly higher than the statewide average over the last 3 years.

**TABLE 2. STATE ROUTE 166 ACCIDENT DATA**

3 Year Period - 2007/04/01 to 2010/03/31												
Location	Segment	Post Miles	No. of Accidents				Accident Rates					
			Total	Fatal	Injuries	F+I	Actual			State Average		
							Fatal	F+I	Total	Fatal	F+I	Total
Western	1	0.0-6.52	107	1	44	45	0.014	0.64	<b>1.52</b>	0.025	0.35	0.84
	2	6.52-8.93	267	0	100	100	0.000	2.06	<b>5.50</b>	0.018	0.70	1.72
Eastern	3	8.93-74.72	158	7	52	59	<b>0.036</b>	0.30	0.81	0.026	0.37	0.84

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10 Year Period - 2000/04/01 to 2010/03/31												
Location	Segment	Post Miles	No. of Accidents				Accident Rates					
							Actual			State Average		
			Total	Fatal	Injuries	F+I	Fatal	F+I	Total	Fatal	F+I	Total
Western	1	0.0-6.52	349	6	149	155	0.027	0.68	<b>1.54</b>	0.025	0.35	0.84
	2	6.52-8.93	797	7	284	291	<b>0.044</b>	1.82	<b>4.99</b>	0.018	0.70	1.72
Eastern	3	8.93-74.72	580	29	224	253	<b>0.048</b>	0.42	0.95	0.026	0.37	0.84

**2. PUBLIC AND STAKEHOLDER INPUT**

An extensive outreach program was implemented to obtain input from all the key stakeholders associated with State Route 166.

The key stakeholders identified included the following:

- Caltrans
- California Highway Patrol
- City of Guadalupe
- City of Santa Maria
- SR 166 Safety Task Force
- County of Santa Barbara
- San Luis Obispo Council of Governments (SLOCOG)

One-on-one meetings were held with all stakeholders and in some cases follow up meetings were held. At these meetings the stakeholders were asked to provide input regarding previous studies, current and planned projects, locations of existing deficiencies and where they believe improvements are required, and details regarding specific improvements. In addition, the stakeholders were asked to provide input regarding evaluation criteria to be used in the evaluation and ranking of the candidate projects.

Two public meetings were held in the towns of Cuyama and Ventucopa on December 13, 2011 where the project was presented to local residents, property owners, local businesses, and other interested parties. At these meetings, valuable input was obtained regarding candidate projects and other deficiencies which were incorporated into the candidate project list and passed through to Santa Barbara County Staff and Caltrans for their use. During a follow up meeting with the Cuyama Joint Unified School District input was received regarding a specific need for improvements to bus stops along SR 166.

**3. CANDIDATE PROJECT DESCRIPTION**

Following extensive research of available data and previous studies, detailed input received from stakeholders and public outreach, including several meetings, and field reviews of the entire corridor, a total of 26 candidate projects were identified. Sixteen (16) of these projects are located within Santa Barbara County and ten (10) are within San Luis Obispo County. The candidate projects are listed in Table 3 and illustrated in Figures 1 and 2 in Appendix B.

**TABLE 3. CANDIDATE PROJECTS**

SANTA BARBARA COUNTY PROJECTS									
Map ID Letter	Type	Post Mile	Location	Jurisdiction	Description	Purpose and Need (Summarized)	Status	Comment	Supported By
A	Int	0.0	State Route 1 Intersection	City of Guadalupe	Signalization of intersection as well as roadway and grade crossing improvements	Signalize stop controlled intersection and grade crossing to improve safety and operations and provide ADA compliant facility. Signal warrants met for 2006 traffic volumes.	PID: No document approved PA/ED: Not started PS&E: Not started Construction: Not started	The signalization of this intersection is traffic mitigation for a Unocal/ Chevron truck hauling operations project. Chevron agreed to a fee of \$250,000 to fund the signalization of the intersection. Conditioned on DJ Farms Specific Plan along with signalization of Obispo St and Flower Ave. 2006 traffic accident data do not warrant signals alone	G SBC CT indicated they are not supportive of the project (9/21/11)
B	Int	1.0	Simas Road	County of Santa Barbara	Signalization of intersection and associated roadway improvements	Signalize stop controlled intersection to improve safety and operations.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	Traffic volumes and accident history do not warrant signals alone. 2011 Eight Hour and Four Hour vehicular volume warrants are met.	G
C	Rdwy	0.9-2.4 and 3.8-4.8	Ditches project	County of Santa Barbara	Relocate existing drainage ditches 30 ft back from the ETW.	Move roadside ditches outside CRZ (30 ft from ETW) Traffic accident history along this segment higher than state average.	PID: Complete PA/ED: Complete PS&E: In progress Construction: Not started	This project is scheduled for construction in 2013.	CT G
D	Rdwy	0.9-2.4 and 3.8-4.8	Between Guadalupe and Santa Maria	County of Santa Barbara	Removal of soft barriers, rumble strips from the edge line.	Need for rumble strips somewhat reduced because of ditch relocation. Public have requested removal of edge line rumble strips.	Initial discussions with Caltrans indicate that they would not be in favor of this project.	The feasibility of this project needs to be discussed further with Caltrans	G
E	Int	4.8	Black Road	County of Santa Barbara City of Santa Maria Sphere of Influence	Signalization of intersection and associated roadway improvements	Signalize stop controlled intersection to improve safety and operations. Signal warrants met for 2006 traffic volumes and accident data.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	The signalization of the intersection is conditioned on Area 9 Specific Plan, which was reviewed by the City and Caltrans.	SBC G SM CT
F	Rdwy	0.0 to 6.9	Between Guadalupe and Santa Maria	County of Santa Barbara	Widening of SR 166 from two lanes to four lanes.	A controlled access highway agreement was executed in Jan 1971. The purpose and need would need to be re-evaluated from the old PSR.	PID: Completed PA/ED: On hold PS&E: Not started Construction: Not started	Project was not included in the Measure A Expenditure Plan	G
G	Int	6.9	S Hanson Way/Main St Signalization	City of Santa Maria	Signalization of the intersection and associated roadway improvements.	Signalize stop controlled intersection to improve safety and operations. Need is based on planned development.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	Signalization is included in the City of Santa Maria's CIP. 2011 Eight Hour and Four Hour vehicular volume warrants are met.	SM

**Legend:**

CHP – California Highway Patrol  
CT – Caltrans  
G – City of Guadalupe

Int – Intersection/Channelization Improvements  
ITS – Intelligent Transportation Systems  
Rdwy – Roadway/Highway Improvements

SBC – County of Santa Barbara  
SLO – San Luis Obispo Council of Governments  
SM – City of Santa Maria

**TABLE 3. CANDIDATE PROJECTS (Continued)**

<b>SANTA BARBARA COUNTY PROJECTS (CONTINUED)</b>									
<b>Map ID Letter</b>	<b>Type</b>	<b>Post mile</b>	<b>Location</b>	<b>Jurisdiction</b>	<b>Description</b>	<b>Purpose and Need (Summarized)</b>	<b>Status</b>	<b>Comment</b>	<b>Supported by</b>
H	Int	8.95	Route 101 SB off-ramp/Main Street intersection	City of Santa Maria	Channelization and intersection improvements to facilitate turning radius of STAA 50 trucks without crossing into two-way left turn lane.	Modify existing signalized intersection to better accommodate large truck turning movements.	PID: No document approved PA/ED: No document approved PS&E: Not started Construction: Not started	Accident data is currently being reviewed.	CHP SM
I	Int	9.0	Nicholson Avenue/Route 101 NB off-ramp/on-ramp Intersection	City of Santa Maria	Channelization improvements to provide two left turn lanes from Nicholson Avenue to E. Main Street.	Modify existing channelization to improve operations at the SR 166 traffic signals.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	Caltrans has started preliminary engineering on this project. Portions of this improvement may be outside the limits of SR 166.	CT SM
N	Rdwy	27.5-28.5	Passing Lane Project PM 27.5 to PM 28.5	County of Santa Barbara	Provides a passing lane of 0.65 miles. Average profile grade is 5%-7%.	Provide passing lane opportunity to improve safety.	PID: Complete PA/ED: In progress PS&E: Not started Construction: Not started	Caltrans has an approved PSR for this project. PA/ED on hold commenced in June 2011	CT CHP SBC
O	Rdwy	30.9-32.6	Passing Lane Project PM 30.9 to PM 32.6	County of Santa Barbara	Provides a passing lane of 1.3 miles. Average profile grade is 5%-7%.	Provide passing lane opportunity to improve safety. Accident history along this segment above the State average.	PID: August 2001 PSR (PDS) PA/ED: Not started PS&E: Not started Construction: Not started	This project was one of five segments identified in the 2001 PSR (Originally EA-05-0E920K).	CT CHP SBC
R	Rdwy	65-67	New Cuyama	County of Santa Barbara	SB County maintenance staff requested speed reduction from 55 mph to 45 mph.	Need and feasibility of this project being reviewed.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	Request may not be supported based on 85 <sup>th</sup> percentile speed surveys	SBC*
U	Rdwy	Eastern Segment	CHP enforcement pullout areas	County of San Luis Obispo and County of Santa Barbara	Construct pullout areas where existing shoulders are narrow.				CHP
V	Other	All	CHP enforcement	G, SB County, SLO County, SM	Provide additional funding to the CHP for additional enforcement				CHP

\*This project was suggested only by SB County Maintenance.

**Legend:**

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SM – City of Santa Maria



**TABLE 3. CANDIDATE PROJECTS (Continued)**

SAN LUIS OBISPO COUNTY									
Map ID Letter	Type	Post mile	Location	Jurisdiction	Description	Purpose and Need (Summarized)	Status	Comment	Supported by
W	Other		Cuyama/ New Cuyama	County of Santa Barbara	Provide bus stop signage at approximately 13 locations on SR 166.	Provide bus stop signage to improve driver awareness of multiple bus stops, and enhance safety.		Request made by the Superintendent of the Cuyama Elementary and High School.	SBC
X	Rdwy		New Cuyama	County of Santa Barbara	Provide extension of two way left turn lane on the east side of New Cuyama.	There is a portion of 1000 ft where the TWLTL was not included. There are several driveways along this portion that would benefit.	Not yet reviewed by Caltrans	Request made by the Cuyama residents at meeting held in December 2011.	SBC
J	Other	9.0	Route 166 I/C Park and Ride at Route 101 interchange.	County of San Luis Obispo	Construct a park and ride lot on the west or east side of Route 101 adjacent to the on/off-ramp intersection.	Construct park and ride facility to promote alternative modes of transportation and ride sharing.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	A study to evaluate the feasibility of this is currently being completed. SLO - 2010 RTP unconstrained project.t	SLO County
K1	ITS	9.0	Route 101 SB off-ramp and NB off-ramp at SR 166 eastern segment.	County of San Luis Obispo	Install ITS signs along Route 101 before the off ramps.	Provide ITS signage to improve driver awareness, provide information and enhance safety.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started		CHP CT
K2	ITS	9.0	Route 101 SB off-ramp and NB off-ramp at SR 166 eastern segment.	County of San Luis Obispo	Install small ITS signs on the off-ramps (relocated from SR 154/Route 101).	Provide ITS signage to improve driver awareness, provide information and enhance safety.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	The signs at SR 154/Route101 are redundant because full overhead signs have been placed on Route 101.	CHP CT
L1	Int	12.2	Channelization improvements at Bull Canyon Road.	County of San Luis Obispo	Channelization improvements, including left turn pocket at Bull Canyon Road. Est. 2005 constr. cost was \$1,179k or \$1,55M (2012).	Provide channelization and intersection improvements to improve safety and operations.	PID: Part of previous PSR PA/ED: Part of EA-0660 PS&E: RTL in 2005 Construction: Not started	Included as location 2 of PSR dated June 2000 (EA 06227-OC660K) Passing Lane & Intersection Improvements.	CT

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**TABLE 3. CANDIDATE PROJECTS (Continued)**

SAN LUIS OBISPO COUNTY (CONTINUED)									
Map ID Letter	Type	Post mile	Location	Jurisdiction	Description	Purpose and Need (Summarized)	Status	Comment	Supported by
L2	Int	17.5	Channelization improvements at Alamo Creek Road	County of San Luis Obispo	Channelization improvements, including left turn pocket at Alamo Road	Provide channelization and intersection improvements to improve safety and operations. Improvement is part of Chevron oilfield project (SLO County)	PID: Part of previous PSR PA/ED: Approved as part of EA-0660 PS&E: RTL in 2005 Construction: Not started	Included in draft PSR dated June 2000 (EA 06227-0C660K) Passing Lane & Intersection Improvements	CT
M	Rdwy	15.0-25.0	Passing lane project (PM 15.0-25.0)	County of San Luis Obispo	Construct passing lanes between PM 15.0 to PM 25.0	Provide passing lane opportunities to improve safety	PID: Previous PSR not approved PA/ED: Not started PS&E: Not started Construction: Not started	SLO - 2010 RTP unconstrained project	SLO COG
P	Rdwy	36.0-40.5	Gifford Creek Bridge Replacement and Curve Correction	County of San Luis Obispo	The existing curve has a tight radius curve with limited sight distance and a 40/45mph posted warning speed.	Modify horizontal alignment to improve safety.	PID: Complete PA/ED: Complete PS&E: In progress Construction: Not started	In final design. Project to be funded through SHOPP and is scheduled to begin construction in Sept 2012	SBC CT
Q	Rdwy	42.5 – 48.9	Soft barrier projects between mileposts 42.5 and 48.9	County of San Luis Obispo	Provides centerline and edge line rumble strips	Install rumble strips to alert drivers and improve safety	PID: Complete PA/ED: Complete PS&E: In progress Construction: Not started	Scheduled to start construction in September 2012. Accident rates between PM 44.3-47.8 are way above state average.	CT
S	Int	74.7	State Route 33 Intersection	County of San Luis Obispo	Intersection improvements to improve visibility and sight distance. Est. 2005 constr. costs \$772k or \$1.1M (2012)	Provide intersection improvements to improve safety and traffic operations at the intersection	PID: Part of previous PSR PA/ED: Part of EA-0660 PS&E: RTL in 2005 Construction: Not started	Includes changing intersection from a Y- to T- configuration, left turn channelization and acceleration/ deceleration lanes.	SLO COG CT CHP
T	ITS	74.7	East of SR33/SR166 Intersection	County of San Luis Obispo	Install permanent ITS sign along SR 166/SR33.	Provide ITS signage to improve driver awareness, provide information and enhance safety.	PID: Not started PA/ED: Not started PS&E: Not started Construction: Not started	These signs would be permanent replacing the portable changeable message sign currently used.	CT

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Several of these projects were eliminated from further considerations for a variety of reasons as shown in Table 4 below. These include projects that have already been funded or programmed for construction and projects that are entirely within San Luis Obispo County.

**TABLE 4. CANDIDATE PROJECT ELIMINATED**

Location	Segment	Project ID	Project Description	Reason for Elimination
Western	1	C	Ditches Project	Safety project currently being designed by Caltrans and scheduled for construction in 2013
	2	I	Channelization of Nicholson Avenue/Route 101 NB off-ramp/on-ramp Intersection	Since the project is located outside the project limits, it is not eligible for funding through Measure A.
Eastern	3	M	Passing lane project (PM 15.0-25.0)	There were two other passing lane projects that were evaluated and considered better candidate projects in SB County. This project is located in SLO County
		P	Gifford Creek Bridge Replacement and Curve Correction	Safety project currently being designed by Caltrans and scheduled for construction in Sept 2012. Located in SLO County
		Q	Soft barrier projects between mileposts 42.5 and 48.9	Scheduled for construction in Sept 2012. Located in SLO County
		R	Speed reduction along SR166 through New Cuyama	Request was only supported by SB County Maintenance

**4. EVALUATION CRITERIA**

Based on input received from key stakeholders and our experience on similar projects, we developed evaluation criteria for the project. The criteria initially focused on two key components safety and operations which were clearly defined as the overall goal of the project. Other criteria were added to evaluate impacts, consider support, and capture cost and funding.

The following criteria were established for the project evaluation:

- Traffic Operations
  - Level of Service
  - Corridor Delay
  - Queue Length

- Safety
  - Conflicting Movements
  - Potential for Accident Reduction
  - Pedestrian Safety
  
- Support
  - Stakeholders Group
  - Local Population and Traffic
  - Regional Traffic
  
- Impacts
  - Right of Way
  - Environmental
  - Utilities
  
- Cost
  - Project Initiation Document (PID), Project Approval/Environmental Document (PA/ED), Plans/Specifications/Estimate (PS&E), Administrative
  - Construction Costs
  - Funding Leverage
  
- Schedule
  - PID and PA/ED
  - PS&E
  - Construction

## **5. ANALYSIS METHODOLOGY**

The candidate projects were evaluated using a matrix to rank and score each based on their ability to meet the project goals and objectives as well as criteria identified. The matrix was used to compare benefits, constraints, advantages and disadvantages of each candidate project, including potential impacts and assess the relative significance of these impacts. Each evaluation criteria was scored for each candidate project on a qualitative scale of “Good,” “Moderate,” or “Poor.” To further differentiate between the candidate projects, a weighting system was assigned to the various criteria. The two main criteria Safety and Operations were assigned double the weight of other criteria since these are the primary objectives of the project.

## **6. EVALUATION OF CANDIDATE PROJECTS**

After the evaluation results were totaled, the candidate projects were ranked into Tier 1, Tier 2 and Tier 3 projects. Tier 1 projects were considered the most beneficial and feasible, while Tier 3 projects were considered least beneficial based on the evaluation scoring. A summary of the results of the evaluation are shown in Table 5 below. For a full detailed evaluation see Appendix C.

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Of the 16 candidate projects located within Santa Barbara County, four projects were considered Tier 1 projects, five Tier 2 and three Tier 3. As discussed earlier, four projects within Santa Barbara County were eliminated from further evaluation because they have already been funded or programmed for implementation (by Caltrans)

Of the 10 candidate projects located within San Luis Obispo County, two projects were considered Tier 1 projects, five Tier 2 and none Tier 3. As discussed earlier, three projects within San Luis Obispo County were eliminated from further evaluation.

**TABLE 5. SUMMARY OF PROJECT EVALUATION**

County	Segment	Project ID	Project Name
Santa Barbara	Tier 1	A	SR1/SR166 Signalization and Intersection Improvements <sup>1</sup>
		E	Black Road/SR166 Signalization <sup>2</sup> and Intersection Improvements <sup>1</sup>
		V	Enhanced CHP Enforcement
		W	Bus Stop Signage and Improvements
	Tier 2	B	Simas Road/SR166 Signalization <sup>2</sup> and Intersection Improvements
		H	SB Rte 101 Off-Ramp/SR 166 Intersection Improvements
		G	S Hanson Way/SR166 Signalization and Intersection Improvements
		N	Passing Lane Project (PM 27.5 – PM 28.5)
		X	Two-Way Left Turn Lane east of New Cuyama <sup>3</sup>
	Tier 3	F	Widen SR 166 from 2 to 4 lanes (PM 0.0 – PM 6.7)
O		Passing Lane Project (PM 30.9 - PM 32.6)	
San Luis Obispo	Tier 1	U	CHP Enforcement Pullout Areas
		K1	ITS Signs on Rte 101 near SR 166 Interchange (eastern segment)
		K2	ITS Signs on Rte 101 off-ramps at SR 166 I/C (eastern segment)
	Tier 2	J	Park and Ride Facility at Rte 101/SR 166 Interchange
		L1	Channelization Improvements at Bull Canyon Road
		L1	Channelization Improvements at Alamo Creek Road
		S	SR166/SR 33 Intersection Improvements
	Tier 3	T	ITS Signage east of SR 33
		U	CHP Enforcement Pullout Areas

<sup>1</sup> Caltrans supported intersection improvement projects at intersections with Hwy 1 and Black Road provided Measure A or STIP funds were not used to supplement developer funds or required improvements as a result of development.

<sup>2</sup> The intersection improvements currently include traffic signal installation. Per Caltrans design guidelines an Intersection Control Evaluation (ICE) will be completed during preliminary design to consider roundabouts as an alternative option.

<sup>3</sup> NCSC Committee chose to drop funding for the two-way left turn lane (1/2 mile long) and put funding back into the Measure A contingency for projects to be implemented in Group 2

The results of the evaluation were presented to the SBCAG North County Subregional Committee (NCSC) in December 2011 and January 2012. The committee provided input regarding the prioritization of the top ranked projects.

A preference for the committee was to focus on the western segment where traffic volumes are significantly higher, higher growth is anticipated and a majority of the population resides.

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Although considered beneficial to regional traffic, the Tier 1 ITS projects (K1 and K2) both located in San Luis Obispo County, were not included in the recommended projects because alternative funding sources, such as SAFE funding will be considered to potentially fund one of these projects.

**7. CONCLUSIONS AND RECOMMENDATIONS**

Based on the results of the evaluation and the direction received from the North Sub-regional Committee, the following projects are recommended to be continued forward into Environmental Approval, Design and Construction:

- Project A - SR1/SR166 Signalization and Intersection Improvements
- Project E - Black Road/SR166 Signalization and Intersection Improvements
- Project B - Simas Road/SR166 Signalization and Intersection Improvements
- Project H - Rte 101 SB Off-Ramp/SR 166 Intersection Improvements
- Project W - Bus Stop Signage and Improvements
- Project V - Enhanced CHP Enforcement

Conceptual layouts for these projects were developed and are shown in Appendix D.

Project W is recommended for further consideration to move forward into the next phase, however the North County Subregional Committee requested that the Cuyama Unified School District seek Safe Routes to Schools (S2RS) funding under the State program. The application was completed and submitted in March 2012.

Preliminary cost estimates were completed for each of the recommended projects and summarized in Table 6 below. Detailed estimates are included in Appendix E.

**TABLE 6. CAPITAL COSTS FOR RECOMMENDED PROJECTS**

Project ID	Project Name	Item	2012 Costs \$ (1,000s)
A	SR1/SR166 Intersection	Construction	986
		Right of Way	50
		Utility Relocation	100
		Total	1,136
E	Black Road/SR166 Intersection (Near Term Improvements)	Construction	685
		Right of Way	100
		Utility Relocation	50
		Total	835
B	Simas Road/SR166 Intersection (Near Term Improvements)	Construction	965
		Right of Way	100
		Utility Relocation	50
		Total	1,115

**TABLE 6. CAPITAL COSTS FOR RECOMMENDED PROJECTS (CONTINUED)**

Project ID	Project Name	Item	2012 Costs \$ (1,000s)
H	Rte 101 SB Off-Ramp/SR166 Intersection	Construction	300
		Right of Way	50
		Utility Relocation	20
		Total	370
W	Bus Stop Signage and Improvements (6 priority locations)	Construction (6 sites)	354
		Right of Way	0
		Utility Relocation	0
		Total	354
V	CHP Enforcement	Additional Enforcement Program	150
		Total	150

## 8. PRIORITIZATION OF RECOMMENDED PROJECTS

It is recommended that the projects be prioritized in the following order:

1. Project A - SR1/SR166 Signalization and Intersection Improvements
2. Project E - Black Road/SR166 Signalization and Intersection Improvements
3. Project B - Simas Road/SR166 Signalization and Intersection Improvements
4. Project H – Rte 101 SB Off-Ramp/SR166 Intersection Improvements
5. Project W - Bus Stop Signage and Improvements

Although SR1/SR166 is the highest priority project it is recommended that the other projects proceed simultaneously. It is anticipated that some projects will obtain environmental clearance and project approval more easily than other more complex projects where multiple stakeholders are involved.

Project V- Enhanced CHP Enforcement, will be implemented through a separate agreement to program funding program to be used by the CHP. SBCAG will prepare the required agreements necessary to implement this project.

## 9. PURPOSE AND NEED STATEMENT FOR RECOMMENDED PROJECTS

### Project A: SR1/SR166 Signalization and Intersection Improvements

Description:

Signalize stop controlled intersection and possibly modify the at-grade crossing to improve safety and operations and provide ADA compliant facility.

Need:

The existing stop controlled at-grade intersection results in inefficient operations. Signal warrants completed in 2006 indicated the need for traffic signals at this location for traffic volumes. The railroad grade crossing is located approximately 60 ft from the stop limit line at SR1 and may result in queuing through the grade crossing raising potential safety concerns. The existing intersection and grade crossing located close to nearby schools and residences, does not currently provide ADA compliant path of travel for pedestrians.

Purpose:

Signalization of the intersection and pre-emption of grade crossing signal will improve operations and safety of this intersection. Intersection improvements will provide ADA compliant sidewalks and path of travel. The need for a pre-signal is to be further investigated during the preliminary design phase.

### Project E: Black Road/SR166 Signalization and Intersection Improvements

Description:

Signalize the existing stop controlled intersection and provide intersection improvements to provide standard channelization and intersection geometry. Per Caltrans design guidelines an Intersection Control Evaluation (ICE) will be completed during preliminary design to consider roundabouts as an alternative option. at this location in place of a signalized intersection.

Need:

The existing stop controlled at-grade intersection results in significant delay for traffic on the minor road (Black Road) during peak hours. The stop controlled intersection results in conflicting movements and a large number of slow moving agricultural vehicles add to safety concerns at this location. Signal warrants indicate the need for traffic signals at this location for both traffic volumes and accident.

Purpose:

Signalization of this intersection will improve traffic operations and safety of this intersection.



Project B: Simas Road/SR166 Signalization and Intersection Improvements

Description:

Signalize the existing stop controlled intersection and provide intersection improvements to provide standard channelization and intersection geometry. Caltrans design guidelines an Intersection Control Evaluation (ICE) will be completed during preliminary design to consider roundabouts as an alternative option. in place of a signalized intersection.

Need:

The existing stop controlled at-grade intersection results in significant delay for traffic on the minor road (Simas Road) during peak hours. The stop controlled intersection results in conflicting movements and a large number of slow moving agricultural vehicles add to safety concerns at this location. Signal warrants indicate the need for traffic signals at this location for traffic volumes.

Purpose:

Signalization of this intersection will improve traffic operations and safety of this intersection.

Project H: Rte 101 SB Off-Ramp/SR166 Intersection Improvements

Description:

Revise the intersection geometry to accommodate turning movements for the STAA trucks (50 ft vehicles).

Need:

The existing intersection geometry does not adequately accommodate the turning movements for STAA trucks vehicles making a right turn from the Rte 101 SB Off-ramp to westbound Main Street resulting in large trucks entering the two way left turn lane and access area to the adjacent businesses.

Purpose:

Improvements to the intersection geometry will improve traffic operations and safety by reducing the potential for conflicting movements.

Project W: Bus Stop Signage and Improvements

Description:

Provide paved bus turnout areas and bus stop signage to improve facilities for bus operators and users, enhance driver awareness of multiple bus stops, and enhance safety.

**Route 166 Safety and Operational Improvements Project  
Project Development Plan**

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**Need:**

There are no paved bus stop turnouts along State Route 166 in the area served by the Cuyama Joint Unified School District. Existing signage does not include advanced warning signs to improve driver awareness. Existing bus stops are informal and safety can be improved for students and traffic on SR 166.

**Purpose:**

Additional signage, and paved bus stop turnouts will improve safety for both bus users, scholars and through traffic.

**Project V: Enhanced CHP Enforcement**

**Description:**

Provide additional funding to the CHP for additional enforcement during peak seasons, special events, and holidays.

**Need:**

Speed along the eastern segment has been shown to reduce safety. Enhanced enforcement also reduces unsafe passing and other moving violations.

**Purpose:**

Enhanced enforcement will improve safety by controlling speed of motorists specifically along the eastern segment and reducing unsafe passing and other moving violations.

**10. MILESTONE SCHEDULE AND IMPLEMENTATION STRATEGY**

The following milestone schedule has been developed for the projects.

**TABLE 7. MILESTONE SCHEDULE**

Project ID	Project Name	Milestone/Task	Begin Date	End Date
A	SR1/SR166 Signalization and Intersection Improvements	Notice to Proceed	Jul 2012	Jul 2012
		Advanced Preliminary Engineering	Jul 2012	Dec 2012
		PA/ED	Jan 2013	Oct 2013
		Final Design/RTL	Nov 2013	Oct 2014
		Advertise/Award	Nov 2014	Jan 2015
		Construction	Feb 2015	Sep 2015
E	Black Rd/SR166 Signalization & Intersection Improvements (Near Term Improvements)	Notice to Proceed	Jul 2012	Jul 2012
		Advanced Preliminary Engineering	Jul 2012	Sep 2012
		PA/ED Includes PEER	Oct 2012	Apr 2013
		Final Design/RTL	May 2013	Nov 2013
		Advertise/Award	Dec 2013	Feb 2014
		Construction	Mar 2014	Oct 2014

TABLE 7. MILESTONE SCHEDULE (CONTINUED)

Project ID	Project Name	Milestone/Task	Begin Date	End Date
B	Simas Road/SR166 Signalization & Intersection Improvements (Near Term Improvements)	Notice to Proceed	July 2012	July 2012
		PSR/PDS	Aug 2012	Mar 2013
		RTP Program PA/ED	Apr 2013	Dec 2013
		PA/ED	Jul 2014	Jun 2015
		Final Design/RTL	Jul 2015	Jun 2016
		Advertise/Award	Jul 2016	Sept 2016
		Construction	Oct 2016	Mar 2017
H	Rte 101 SB Off-Ramp/SR166 Intersection Improvements	Notice to Proceed	July 2012	July 2012
		PSR/PDS	Aug 2012	Mar 2013
		RTP Program PA/ED	Apr 2013	Dec 2013
		PA/ED	Jul 2014	Dec 2014
		Final Design/RTL	Jan 2015	Dec 2015
		Advertise/Award	Jan 2016	Mar 2016
		Construction	Apr 2016	Jul 2016
W	Bus Stop Signage and Improvements (6 priority locations)	Notice to Proceed	July 2012	July 2012
		PA/ED Includes PEER	Aug 2012	Dec 2012
		Final Design/RTL (Enc. Permit)	Jan 2013	Jun 2013
		Advertise/Award	Jul 2013	Sept 2013
		Construction	Oct 2013	Dec 2014
V	Enhanced CHP Enforcement	Develop Agreement with CHP for annual implementation		July 2012
		SBCAG Board Approves Agreement		July 2012
		Implement Initial Period	July 2012	June 2013
		Report to SBCAG Board		May 2013

The proposed implementation strategy for each of the recommended projects is summarized in Table 8 below.

**Route 166 Safety and Operational Improvements Project  
Project Development Plan**

**TABLE 8. IMPLEMENTATION STRATEGY**

CATEGORY	PROJECT					
	CHP Enforcement	Bus Turnouts	SR 101/SR 166 Intersection	Black Road Intersection	Simas Rd/SR 166 Intersection	SR 1/166 Intersection
Local Agency	N/A	County of SB	City of SM	City of SM/County of SB	County of SB	City of Guadalupe
Lead for PID	N/A	SBCAG	Caltrans	SBCAG	Caltrans	SBCAG
Project Initiation Document (PID)	N/A	N/A	PSR-PDS (State Hwy Acct)	PSR-PR	PSR-PDS (State Hwy Acct)	PSR-PR
Agreements	MOU between SBCAG and CHP	1.Cooperative Agreement between SBCAG and Caltrans 2.Contract with Psomas, part of first task order	1. None for PSR phase 2. TBD for PA&ED depending on lead	1. Cooperative Agreement between SBCAG and Caltrans 2. Contract with Psomas, part of first task order	1. None for PSR phase 2. TBD for PA&ED depending on lead	1. Cooperative Agreement between SBCAG and Caltrans (and City?) 2. Contract with Psomas, not included in first task order at this time
Lead for Environmental	N/A	SBC AG (Caltrans Oversight)	TBD	SBC AG (Caltrans Oversight)	TBD)	SBC AG (Caltrans Oversight)
Project Approval Mechanism	SBCAG Board and MOU	Envr Document (CE) and Project Engineering Evaluation Report (PEER)		Envr Document (CE) and Project Engineering Evaluation Report (PEER)		Envr Document and Project Report
Programming Action	None	Identify in FTIP (Do we specifically describe or generally describe)	In 2014 RTIP, program PA&ED funds from STIP coming back for 166	Identify in FTIP (Do we specifically describe or generally describe)	In 2014 RTIP, program PA&ED funds from STIP coming back for 166	Identify in FTIP (Do we specifically describe or generally describe)
Design Considerations	N/A	Use Maintenance Vehicle Pullout (MVP) as guide. Identify project features that are fundable from SR2S funds if received.	Needs for Right of way and Utility Relocations. Channelization.	Consideration for Intersection Control Evaluation (ICE) process. Initial engineering feasibility study required.	Consideration for Intersection Control Evaluation (ICE) process. Initial engineering feasibility study required.	Queuing Analysis to be reviewed. Scope then determined.
Permit Action	None	Encroachment Permit from Caltrans	TBD	Encroachment Permit from Caltrans	TBD	Encroachment Permit from Caltrans
Funding	Measure A	Measure A/Safe Routes to Schools	Measure A/STIP	Measure A/Minor	Measure A/STIP	Measure A/In Kind

## **11. APPENDICES**

- A Vicinity Map
- B Candidate Projects Exhibits
- C Evaluation Matrix of Candidate Projects
- D Conceptual Layout Plans (Recommended Projects)
- E Preliminary Cost Estimate (Recommended Projects)

## **APPENDIX A**

### Vicinity Map

## APPENDIX B

### Candidate Projects Exhibits

**APPENDIX C**

Evaluation Matrix of Candidate Projects



## **APPENDIX D**

### Conceptual Layout Plans (Recommended Projects)

## **APPENDIX E**

### Preliminary Cost Estimate (Recommended Projects)