

San Joaquin Valley (SJV) Hot Spot Checklist for Interagency Consultation

The purpose of this form is to provide sufficient information to allow the IAC group to determine the evaluation if a project is exempt, non-exempt, and not POAQC, or non-exempt projects and POAQC (requires a quantitative project-level PM hot spot analysis).

It is the responsibility of the project sponsor to ensure that the form is filled out completely and provides a sufficient level of detail for the interagency consultation (IAC) to make an informed decision on whether or not a project requires further analysis. For example, the IAC group needs to consider the traffic impacts of the project, and thus part of the required information includes no build/build traffic data.

STEP 1: PROJECT IDENTIFICATION

A. Project Name and Number:

B. FTIP/CTIPS #Identification No¹:

C. City/County:

D. Project Description:

E. Type of Project:

- New state highway
- Change to existing state highway
- New regionally significant street
- Change to existing regionally significant street
- New interchange
- Reconfigure existing interchange
- Intersection channelization
- Intersection signalization
- Roadway realignment
- Bus, rail, or inter-modal facility/terminal/transfer point
- Truck weight/inspection station
- At or affects location identified in the SIP as a site of actual or possible violation of NAAQS
- Others, specify:

E. Hot-Spot Pollutant of Concern (*check both*): PM_{2.5} PM₁₀

F. Lead Agency:

a. Contact Person:

b. Phone #:

c. Email:

¹ FTIP: Federal Transportation Improvement Program; CTIPS: California Transportation Improvement Program System.

G. Federal Action for which Project-Level PM Conformity is Needed
*(check appropriate box)*²

	Categorical Exclusion (NEPA)		EA or Draft EIS		FONSI or Final EIS		PS&E or Construction		Other
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a. Include the scheduled date of Federal Action (if available):

H. NEPA Assignment – Project Type *(check appropriate box)*

	Exempt		Section 326 –Categorical Exclusion		Section 327 – Non-Categorical Exclusion
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I. Is this project in a conforming Plan and Transportation Improvement Program (TIP)?
 Yes No

a. If yes, indicate the federal approval date for the latest regional conformity analysis:

J. Current Programming Dates *(as appropriate)*³

	<i>PE/ Env</i>	ENG	ROW	CON
Start				
End				

K. Project Description (Summary, Use Additional Sheets as Needed):

Information should include, but is not limited to:

- a. Purpose and need of the project.*
- b. Route name, route number, project length, and mile point locations*
- c. Number of current and future lanes (clearly indicate if any lanes are “turn lane only”)*
- d. Identify as “Capacity Adding” or “Non-Capacity Adding” project*
- e. Identify intersecting roads that will be impacted.*
- f. Project impact on surrounding land use/ traffic generators (discuss especially effect on diesel traffic)*



² EA: Environmental Assessment; EIA: Environmental Impact Assessment; FONSI: Finding of No Significant Impact; PS&E: Planning, Specification and Estimate.

³ PE: Preliminary Engineering; ENG: Engineering; ROW: Right-of-Way; CON: Construction

STEP 2: EXEMPT PROJECTS

EXEMPT PROJECT

*No PM project-level conformity is required, and no further documentation is needed. **Go to STEP 6.***

Describe Type of Exempt Project:

NOT AN EXEMPT PROJECT. *Go to STEP 3.*

STEP 3: TRAFFIC INFORMATION

Fill out only relevant traffic information B through G. For example, fill out D and E if the project is an intersection, and fill out F and G if the project is a bus, rail, or intermodal facility/terminal/transfer point. Include additional tables, maps, and other graphical representations of the projects in separate sheets.

A. Year(s) Selected for the Proposed Facility:

a. Year(s) selected

	Years Selected
Existing Year	
Opening Year	
Analysis Year(s) ⁴	

b. Justification for Selection of Analysis Year(s):

B. Opening Year Traffic Information for No Build and Build Scenarios of the Proposed Facility

	No Build	Build
Annual Average Daily Traffic (AADT) ⁵		
Truck AADT		
% Trucks ⁶		

⁴ Section 93.116(a) of the conformity rule requires that PM hot-spot analyses consider either the full-time frame of an area's transportation plan or, in an isolated rural nonattainment or maintenance area, the 20-year regional emissions analysis. The project sponsor will need to choose an analysis year within the time frame of the transportation plan during which peak emissions from the project are expected, and new or worsened violations would most likely occur due to cumulative impacts of the project and background concentrations. In some cases, selecting only one analysis year, such as the last year of the transportation plan or the year of project completion, may not be sufficient to satisfy conformity requirements.

⁵ Combine directional traffic (southbound and northbound).

⁶ FHWA categorizes vehicles as Light Duty (Class 1-2) with Gross Vehicle Weight Rating (GVWR) < 10,000 lbs, Medium Duty (Class 3-6) with GVWR between 10,001 – 26,000 lbs, and Heavy Duty (Class 7-8) with GVWR > 26,001 lbs.

C. Analysis Year Traffic Information for No Build and Build Scenarios of the Proposed Facility

	No Build	Build
Annual Average Daily Traffic		
Truck AADT		
% Trucks		

D. Opening Year Traffic Information for No Build and Build Scenarios of the Proposed Facility *(If the facility is an intersection or interchange)*

	No Build	Build
Cross Street AADT		
Truck AADT		
% Trucks		
Level-of-Service (LOS)		
Control Delay (seconds)		

E. Analysis Year Traffic Information for No Build and Build Scenarios of the Proposed Facility *(If the facility is an intersection or interchange)*

	No Build	Build
Cross Street AADT		
Truck AADT		
% Trucks		
Level-of-Service (LOS)		
Control Delay (seconds)		

F. Opening Year Traffic Information for No Build and Build Scenarios of the Proposed Facility *(If the facility is a bus, rail, or intermodal facility/terminal/transfer point)*

	No Build	Build
Number of bus arrivals		
Number of bus arrivals that will be diesel buses		
Fraction (%) of bus arrivals that will be diesel buses		

G. Analysis Year Traffic Information for No Build and Build Scenarios of the Proposed Facility *(If the facility is a bus, rail, or intermodal facility/terminal/transfer point)*

	No Build	Build
Number of bus arrivals		
Number of bus arrivals that will be diesel buses		
Fraction (%) of bus arrivals that will be diesel buses		

H. Describe Traffic Impacts *(if appropriate)*⁷

I. Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

J. Is additional traffic information (tables, maps, and other graphical representations of the project (location, project details on additional lanes or ramps) presented in additional sheets at the end of the checklist?:

Yes No

⁷ Provide any justification if build % traffic > no-build, large changes in AADT and trucks % even if it is below EPA's criteria, etc.

STEP 4: POAQC DETERMINATION

NOT PROJECT OF AIR QUALITY CONCERN⁸. *Quantitate analysis is NOT required. IAC review, public participation, and concurrence are required. Provide the filled-out checklist to your MPO for the next steps⁹. Use the space to provide a detailed narrative and rationale for this conclusion.*

Go to STEP 6.

PROJECT OF AIR QUALITY CONCERN. *Check the following options to see if your project is one of the following options. If yes, the project could be of local air quality concern and requires quantitative hot-spot analysis based on interagency review.*

Examples of POAQC that are covered by 40 CFR 93.123(b)(1)(i) and (ii)

- *New or expanded highway projects with a significant number of, or increase in, diesel vehicles (e.g., 125,000 AADT and 10,000 (8%) diesel truck traffic) Note: These metrics are examples and should not be considered as threshold levels.*
- *Project affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.*
- *New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.*
- *Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.*
- *Projects in or affecting locations, areas, or categories of sites that are identified in the PM10 and PM2.5 applicable implementation plan or implementation plan submissions, as appropriate, as sites of violation or possible violation.*

Examples of POAQC that are covered by 40 CFR 93.123(b)(1)(iii) and (iv)

- *A major new bus or intermodal terminal that is considered to be a “regionally significant project” under 40 CFR 93.101.*
- *An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses increases by 50% or more, as measured by bus arrivals.*

⁸ Refer to EPA’s 2021 guidance, EPA-420-B-21-037, and FHWA’s FAQ document, for complete details.

⁹ Listed in Pg. 1 under “Instructions”

STEP 5: ANALYSIS AND DOCUMENTATION (for POAQC)

The following is a summary of documentation to be included for a quantitative PM hot-spot analysis. Please refer to the EPA Quantitative Hot-Spot Guidance for more information.¹⁰ IAC review and concurrence are required on the modeling protocol before the modeling begins. Contact your MPO representative and Air Quality Coordinator for additional guidance.

Documentation to Be Included for the Quantitative PM Hot-spot Analysis:

- Description of project
- Description of type of emissions considered in the analysis.
- Contributing Factors
 - Air Quality
 - Transportation and traffic conditions
 - Built and natural environment
 - Meteorology, climate and seasonal data
 - Adopted emissions control measures
- Consider the full-time frame of the area's LRTP
- Description of existing conditions
- Description of changes resulting from the project
- Description of models, methods, and assumptions
- Description of analysis years
- Types of emissions included in the analysis and the details of emissions modeling.
- Results of air dispersion modeling.
- Background concentration estimation methods and results.
- Design value calculation.
- Discussion of why the project will not cause a violation of either the annual or 24-hour standard.
- Discussion of any mitigation measures
- Conclusion on how the project meets conformity requirements.
- Documentation of any IAC decisions on the latest planning assumptions used in the analysis.
- Documentation of any public comment on the latest planning assumptions used in the analysis.

¹⁰ See EPA Quantitative PM Hotspot Analysis Guidance, EPA-420-B-21-037, October 2021; Accessed at <https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses#pmguidance>

STEP 6: PUBLIC AND IAC INVOLVEMENT

Fill out this section after the checklist is sent to the MPO and the project is presented at the SJV Project Level Conformity Group Meeting.

A. SJV Project Level Conformity Group Meeting Date:

B. Summary of IAC comments received and responses:

C. Summary of public comments received and responses:

D. IAC Concurrence Date(s):

Additional Information on Traffic Data

Attach traffic data tables, maps, and other graphical representations of the project to supplement information in Step 3.

Traffic Counts

Prepared by National Data & Surveying Services

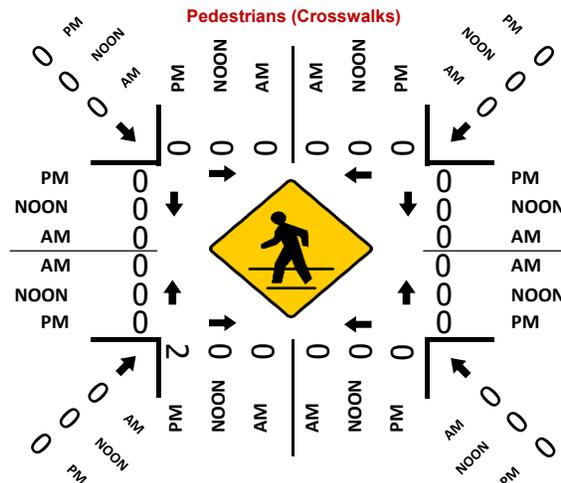
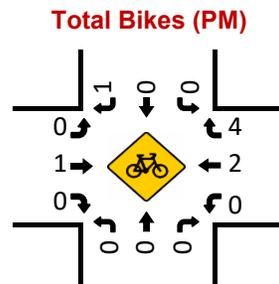
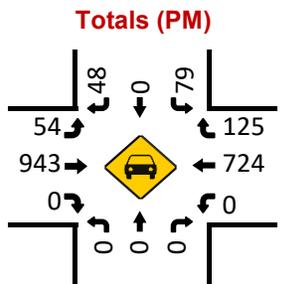
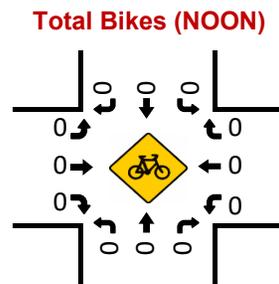
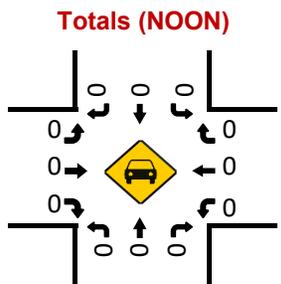
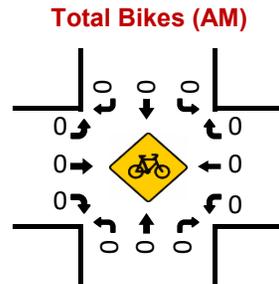
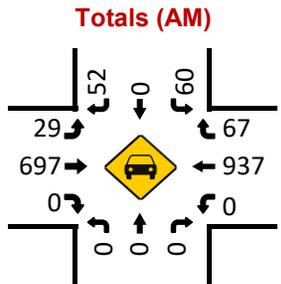
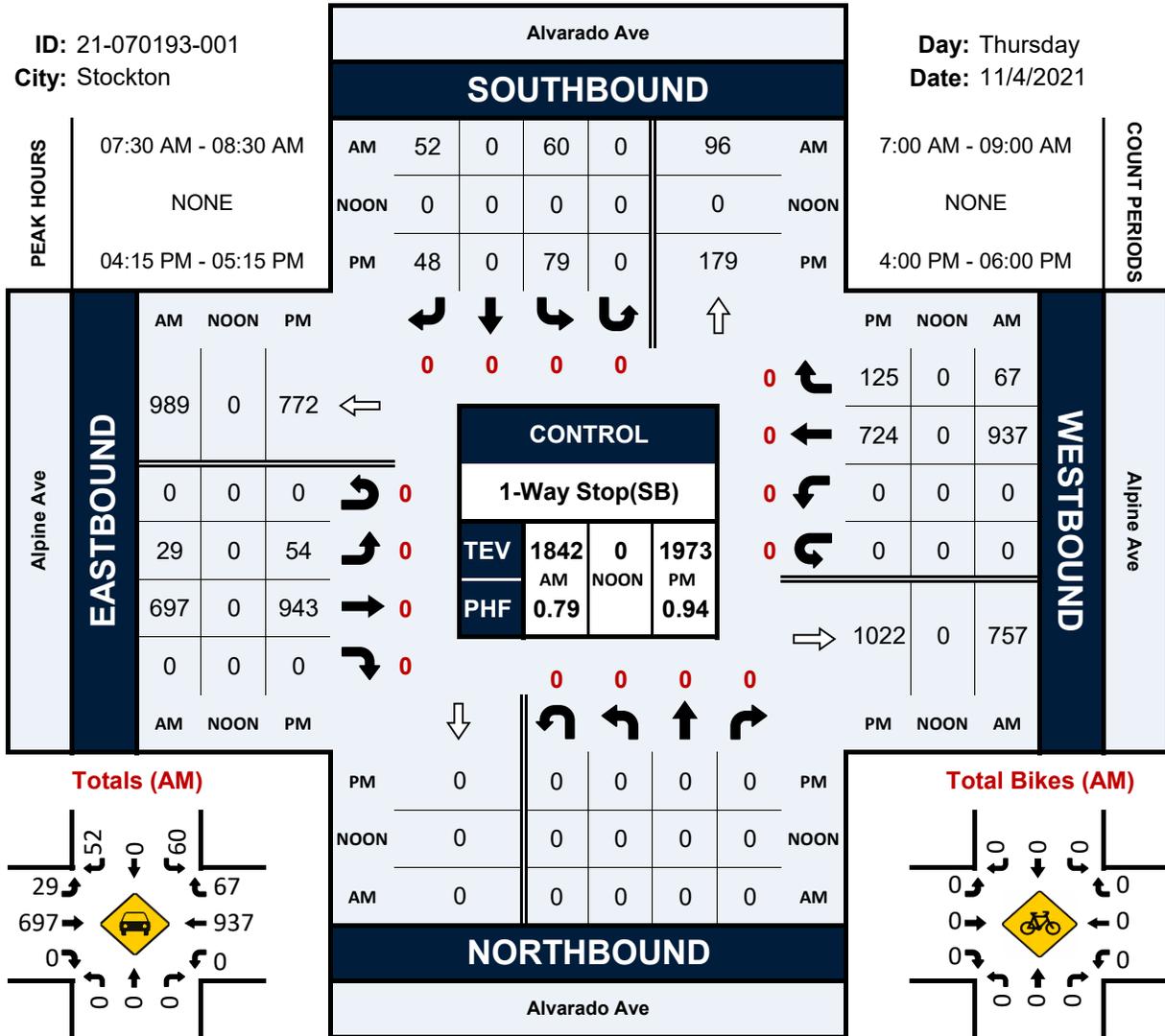
Count data for the existing year is presented in Pages 12 through 15 and are the same for both no-build and build case scenarios

Alvarado Ave & Alpine Ave

Peak Hour Turning Movement Count

ID: 21-070193-001
City: Stockton

Day: Thursday
Date: 11/4/2021



National Data & Surveying Services Intersection Turning Movement Count

Location: Alvarado Ave & Alpine Ave
 City: Stockton
 Control: 1-Way Stop(SB)

Project ID: 21-070193-001
 Date: 11/4/2021

Data - Totals

NS/EW Streets:	Alvarado Ave				Alvarado Ave				Alpine Ave				Alpine Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	15	0	6	0	7	93	0	0	0	132	12	0	265
7:15 AM	0	0	0	0	19	0	24	0	4	145	0	0	0	154	12	0	358
7:30 AM	0	0	0	0	16	0	11	0	6	182	0	0	0	244	11	0	470
7:45 AM	0	0	0	0	18	0	16	0	8	195	0	0	0	323	23	0	583
8:00 AM	0	0	0	0	13	0	10	0	8	175	0	0	0	181	19	0	406
8:15 AM	0	0	0	0	13	0	15	0	7	145	0	0	0	189	14	0	383
8:30 AM	0	0	0	0	10	0	8	0	9	103	0	1	0	181	14	0	326
8:45 AM	0	0	0	0	12	0	9	0	1	107	0	0	0	184	23	0	336
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	116	0	99	0	50	1145	0	1	0	1588	128	0	3127
					53.95%	0.00%	46.05%	0.00%	4.18%	95.74%	0.00%	0.08%	0.00%	92.54%	7.46%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	60	0	52	0	29	697	0	0	0	937	67	0	1842
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.833	0.000	0.813	0.000	0.906	0.894	0.000	0.000	0.000	0.725	0.728	0.000	0.790
					0.824				0.894				0.725				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	21	0	8	0	8	236	0	0	0	197	37	0	507
4:15 PM	0	0	0	0	20	0	13	0	10	205	0	0	0	203	27	0	478
4:30 PM	0	0	0	0	17	0	15	0	12	245	0	0	0	175	37	0	501
4:45 PM	0	0	0	0	24	0	7	0	17	222	0	0	0	166	33	0	469
5:00 PM	0	0	0	0	18	0	13	0	15	271	0	0	0	180	28	0	525
5:15 PM	0	0	0	0	14	0	21	0	17	186	0	0	0	180	24	0	442
5:30 PM	0	0	0	0	27	0	10	0	15	168	0	0	0	148	35	0	403
5:45 PM	0	0	0	0	30	0	19	0	14	147	0	0	0	138	23	0	371
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	171	0	106	0	108	1680	0	0	0	1387	244	0	3696
					61.73%	0.00%	38.27%	0.00%	6.04%	93.96%	0.00%	0.00%	0.00%	85.04%	14.96%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	79	0	48	0	54	943	0	0	0	724	125	0	1973
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.823	0.000	0.800	0.000	0.794	0.870	0.000	0.000	0.000	0.892	0.845	0.000	0.940
					0.962				0.872				0.923				

National Data & Surveying Services Intersection Turning Movement Count

Location: Alvarado Ave & Alpine Ave
 City: Stockton
 Control: 1-Way Stop(SB)

Project ID: 21-070193-001
 Date: 11/4/2021

Data - Bikes

NS/EW Streets:	Alvarado Ave				Alvarado Ave				Alpine Ave				Alpine Ave					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL	
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

NS/EW Streets:	Alvarado Ave				Alvarado Ave				Alpine Ave				Alpine Ave					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	0	0	0	0	75.00%	0.00%	25.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	28.57%	71.43%	0.00%	12	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL	
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	1	0	0	0	2	4	0	8	
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.500	0.000	0.500	

National Data & Surveying Services Intersection Turning Movement Count

Location: Alvarado Ave & Alpine Ave
City: Stockton

Project ID: 21-070193-001
Date: 11/4/2021

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Alvarado Ave		Alvarado Ave		Alpine Ave		Alpine Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	1	0	0	0	0	0	0	1
	0.00%	100.00%							
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	2	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	2	1	0	0	0	0	3
			66.67%	33.33%					
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	2
PEAK HR FACTOR :			0.250	0.250					0.250

Traffic Volume

Table 1: Build/No Build AADT and Truck AADT on Alpine Avenue

<i>Build Scenario</i>	<i>AADT</i>	<i>Truck AADT (2%)</i>
2023 Existing	21,036	420
2025 Opening – Build	21,456	429
2025 Opening – No Build	21,456	429
2045 Design - Build	25,243	505
2045 Design – No Build	25,243	505

Table 2: Build/No Build AADT and Truck AADT on Alvarado Avenue

<i>Build Scenario</i>	<i>AADT</i>	<i>Truck AADT (2%)</i>
2025 Opening – Build	1,195	24
2025 Opening – No Build	1,195	24
2045 Design - Build	1,434	29
2045 Design – No Build	1,434	29

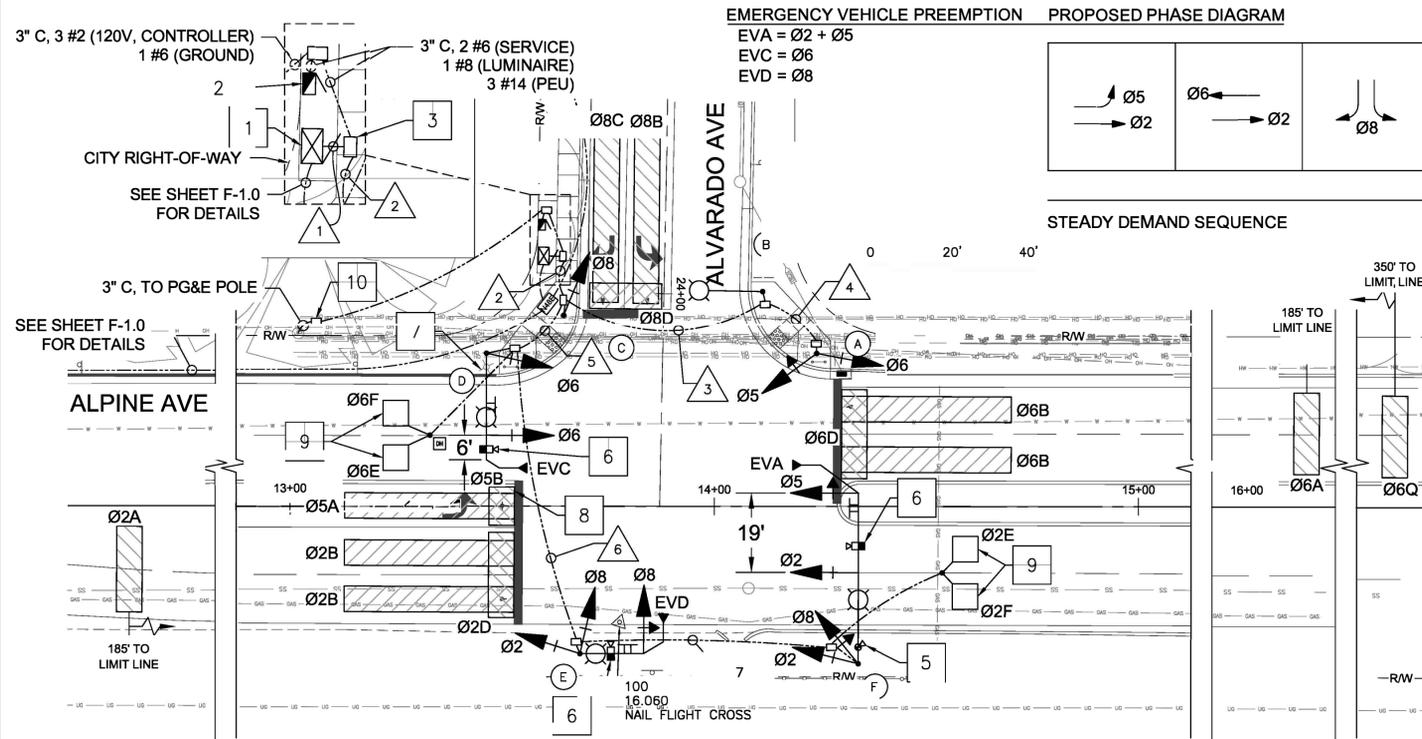
Level of Service (LOS) and Delay Analysis

Table 3: Build vs. No Build Intersection LOS and Delay Analysis

Alternative	AM Peak		PM Peak	
	Delay (sec)	LOS	Delay (sec)	LOS
2023 Existing Condition	264.0	F	161.5	F
2025 Opening Year – No Build Condition	264.0	F	161.5	F
2025 Opening Year – Build Condition	8.0	A	8.0	A
2045 Design Year – No Build Condition	1025	F	892	F
2045 Design Year – Build Condition	10.5	B	10.2	B

Note: Highway Capacity Manual (HCM), 2010 Edition LOS Methodology was utilized for analysis.

Site Plan Design



GENERAL NOTES (THIS SHEET ONLY):

- CALTRANS STANDARD PLAN ES-4C "A" AND "B" DIMENSIONS INCLUDED IN EQUIPMENT SCHEDULE ON THIS SHEET.
- ALL PULL BOXES SHALL BE NO. 6 PER CITY OF STOCKTON DRAWING R87, UNLESS OTHERWISE NOTED.
- ALL CONDUITS DIRECTLY BETWEEN PULL BOXES AND POLES SHALL BE 3" SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL INSTALL CONDUITS A MINIMUM OF 3 FEET AWAY FROM ALL UTILITIES AND POTHOLE AT LATERALS BEFORE INSTALLATION.
- SIGNAL POLES SHALL BE INSTALLED WITH HANDHOLD ACCESS ON THE SIDE OF THE POLE SUCH THAT SERVICE PERSONNEL WILL BE FACING ONCOMING TRAFFIC.
- THE CONTRACTOR SHALL ENSURE THAT PULL BOXES ARE NOT INSTALLED ON PRIVATE PROPERTY.
- CONTRACTOR SHALL COORDINATE WITH PG&E TO ENSURE SERVICE POINT IS PREPARED FOR BEGINNING OF SERVICE, AND PG&E STAFF TO PERFORM POWER CONNECTION AT SERVICE POINT.
- VIDEO DETECTION ZONES AT INTERSECTION APPROACHES SHALL BE 6'x40' UNLESS OTHERWISE NOTED.
- ADVANCED AND BIKE LIMIT LINE VIDEO DETECTION ZONES SHALL BE 6'x20' UNLESS OTHERWISE NOTED.
- ALL VIDEO DETECTION ZONES SHALL BE PLACED 2' FROM LIMIT LINE UNLESS OTHERWISE NOTED.

PROJECT NOTES (THIS SHEET ONLY):

- FURNISH AND INSTALL TS2-2 TYPE P CABINET ASSEMBLY AND FOUNDATION (SEE DETAIL 1 ON SHEET D-1.0), CITY STANDARD TRAFFIC SIGNAL CONTROLLER, AND CITY STANDARD MANAGED ETHERNET SWITCH. CONTRACTOR TO INSTALL ALL EQUIPMENT AND MAKE ALL WIRE CONNECTIONS AS DIRECTED BY THE ENGINEER FOR A FULLY FUNCTIONING TRAFFIC SIGNAL. INSTALL CITY-FURNISHED 4-CHANNEL PHASE SELECTOR AND HARNESS IN THE CABINET. CONTROLLER CABINET DOOR SHALL OPEN TO THE SOUTHEAST. TERMINATE 12-STRAND FIBER IN LIU.
- FURNISH AND INSTALL TYPE III-AF SERVICE CABINET AND FOUNDATION PER CALTRANS STANDARD PLAN ES-2D.
- FURNISH AND INSTALL NO. 6E PULL BOX
- FURNISH AND INSTALL NO. 5 PULL BOX
- FURNISH AND INSTALL IP PTZ CAMERA ON LUMINAIRE MAST ARM PER DETAIL 3 ON SHEET D-1.0
- FURNISH AND INSTALL HYBRID VIDEO/RADAR DETECTION CAMERA ON SIGNAL MAST ARM PER DETAIL 2 ON SHEET D-1.0
- REMOVE AND SALVAGE EXISTING STREET LIGHT. EXISTING FOUNDATION TO BE ADJUSTED BY CONTRACTOR TO 6" BELOW GRADE. SEE SHEET S-1.2 FOR EXISTING SIGN RELOCATION.
- 6'x10' BIKE LIMIT LINE VIDEO DETECTION ZONE
- 6'x6' SAMPLER LOOP DETECTOR
- FURNISH AND INSTALL NO. 2 PULL BOX FOR PG&E POINT OF CONNECTION

CONDUCTOR SCHEDULE								
AWG	CIRCUIT	RUNS						
		1	2	3	4	5	6	7
No. 14	Ø2 SIGNALS	3				3	3	3
	Ø5 SIGNALS	6	3	3	3	3	3	3
	Ø6 SIGNALS	6	3	3	3	3		
	Ø8 SIGNALS	6	3			3	3	3
	SPARES	6	6	3	3	3	3	3
	TOTAL No. 14	27	15	9	9	15	12	12
No. 8	SIG. COMMON	2	1	1	1	1	1	1
	LUMINAIRE	4	2			2	2	2
	TOTAL No. 8	2	5	3	1	3	3	3
	VIDEO DETECTION CABLES	3				3	2	1
	LOOP DETECTOR CABLES	4	4			4	2	2
EVP	EVA	1				1	1	1
	EVC	1				1	1	
	EVD	1				1		
	TOTAL CABLES	3				3	2	1
	IP PTZ CAMERA (CAT5E)	1				1	1	1
	CONDUIT SIZE	2-4"	4"	4"	4"	4"	2-4"	4"
	PROPOSED CONDUIT FILL (%)	6%	7%	3%	2%	11%	4%	7%

SENSOR TABLE		
DETECTOR NO.	LOOP DETECTORS	TYPE
1		
2	2A	ADV RADAR
3-4		
5	5A	CALL
6	6A	ADV RADAR
7-8		
9	2B	STOP A
10-12		
13	6B	STOP A
14		
15	8B	STOP A
16	8C	DELAY
17	2E	SAMPLER
18	2F	SAMPLER
19-24		
25	6E	SAMPLER
26	6F	SAMPLER
27-33		
34	2D	BIKE
35-36		
37	5B	BIKE
38	6D	BIKE
39		
40	8D	BIKE
41	6Q	QUEUE CUTTER
42		

SENSOR TABLE NOTES (THIS SHEET ONLY):

- CONTRACTOR SHALL VERIFY SENSOR DESIGNATION AND CHANNELS IN THE FIELD WITH CITY STAFF.
- SEE CITY OF STOCKTON DRAWING R-96 FOR DETECTOR LOOP PLACEMENT AND R-97 FOR LOOP INSTALLATION DETAILS.

POLE AND EQUIPMENT SCHEDULE											
POLE No.	STANDARD		MAST ARM		VEHICLE SIGNAL MOUNTING		PLACEMENT DIMENSIONS PER CALTRANS STANDARD ES-4C		LED LUM.	STREET 1 NAME SIGN	SPECIAL REQUIREMENTS
	TYPE	HGT	SIGNAL	LUM.	MAST ARM	POLE	"A" DIMENSION	"B" DIMENSION			
(A)	1-B	10'	-	-	-	TV-2-T	3.11'	3.76'	-		
(B)	15TS	30'	-	-	-	-	1.50'	3.37'	-		
(C)	1-B	10'	-	-	-	TV-1-T	1.81'	3.45'	-		
(D)	19-4-100	30'	25'	15'	MAS MAS	SV-1-T	-2.36'	5.50'	85 W	Alvarado Ave	FURNISH AND INSTALL R3-18 SIGN AND HYBRID VIDEO DETECTION CAMERA ON SIGNAL MAST ARM. FURNISH AND INSTALL PEU ON TOP OF TRAFFIC SIGNAL POLE. FURNISH AND INSTALL EVP CHANNEL "C" ON END OF MAST ARM PER DETAIL 4 ON SHEET D-1.0.
(E) ²	16-3-100	30'	15'	15'	MAS	SV-2-T	-	4.86'	85 W	Alpine Ave	FURNISH AND INSTALL R61-19 (CA) SIGN AND HYBRID VIDEO DETECTION CAMERA ON SIGNAL MAST ARM. FURNISH AND INSTALL EVP CHANNEL "D" ON END OF MAST ARM PER DETAIL 4 ON SHEET D-1.0.
	26-4-100	30'	40'	15'	MAS MAS	SV-1-T	-	7.95'	85 W	Alvarado Ave	FURNISH AND INSTALL R73-3 (CA) SIGN AND HYBRID VIDEO DETECTION CAMERA ON SIGNAL MAST ARM. FURNISH AND INSTALL EVP CHANNEL "A" ON END OF MAST ARM PER DETAIL 4 ON SHEET D-1.0.

EQUIPMENT TABLE NOTES (THIS SHEET ONLY):

- STREET NAME SIGNS SHALL BE INSTALLED ON MAST ARM POLES COS STANDARD DRAWING R-94.
- SIGNAL MAST ARM POLE E SHALL BE INSTALLED WITH BASE OF POLE AT ELEVATION 16.31.

NOTES:

- ALL EXISTING UTILITIES WERE PLOTTED FROM RECORD INFORMATION AND FIELD TOPOGRAPHY. ACTUAL LOCATIONS MAY VARY AND ADDITIONAL CROSSINGS MAY EXIST IN THE FIELD. IT IS IMPERATIVE THAT U.S.A. LOCATING SERVICES' LOCATE AND MARK EXISTING UTILITIES PRIOR TO THE START OF EXCAVATION.
- THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXPOSING EXISTING UTILITY CROSSINGS AND SERVICES.
- ANY DAMAGE TO EXISTING UTILITIES WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



THIS SHEET ACCURATE FOR ELECTRICAL WORK ONLY

REVISION NO.	DESCRIPTION	DATE	BY	APPRVD. BY



ADVANCED MOBILITY GROUP
3003 OAK ROAD, SUITE 100
WALNUT CREEK, CA 94597

ALPINE & ALVARADO CONVERSION TO 3-WAY TRAFFIC SIGNAL

TRAFFIC SIGNAL PLAN
DEPARTMENT OF PUBLIC WORKS
CITY OF STOCKTON, CALIFORNIA

SCALE: 1:20	APPROVED BY: DATE: _____	SHEET NO. T-1.0
DESIGNED BY: C. HIGBEE	CITY ENGINEER STOCKTON, CALIF.	OF 11 SHTS
DRAWN BY: C. HIGBEE		PROJECT NO. WT21012
CHECKED BY: J. BHATTACHARYA		
RECORD DWG.: _____		