INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

City of Selma, Fresno County

V-5 Mini-Storage and Commercial Center Project
Developer: Ememy Vlotho

City of Selma
1710 Tucker Street
Selma, CA 93662
559.891.2209

Prepared by:

Community Development Department
City of Selma
1710 Tucker Street
Selma, CA 93662

Contact: Bryant Hemby, Planner
(559) 891-2209
Bryanth@cityofselma.com

January 9, 2017
SCH No (SCH201510000283)

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SECTION A

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INITIAL STUDY
ENVIORNMENTAL CHECKLIST FORM

1. **Project Title:**

V-5 Dinuba Mini Storage & Commercial Project

2. **Lead Agency:**

   City of Selma
   1710 Tucker Street, Selma, CA, 93662
   559-891-2209

3. **Contact person and phone number:**

   Bryant Hemby, Planner
   559-891-2209, bryanth@cityofselma.com

4. **Project Location:**

   North East Corner of McCall Avenue and Dinuba Avenue
   (APN: 358-021-17)

5. **Project Representative name and address:**

   Ememy Vlotho
   525 W. 4th
   Hanford, CA 93230

6. **General Plan Designation & Zoning:**

CURRENT COUNTY ZONING AND GENERAL PLAN DESIGNATION

County Zoning: AE-20
County General Plan Designations: Agriculture Exclusive 20 acre minimum

PROPOSED ZONING AND GENERAL PLAN DESIGNATION

Proposed Zoning: Commercial Services C-3
General Plan Designations: Commercial Services

Figure 1 Regional Location Map

VICINITY MAP

No Scale

1. Description of the Project:

This Mitigated Negative Declaration was prepared for the V-5 Mini Storage & Commercial Center Project and is tiered from the certified Final EIR for the Selma General Plan Amendment EIR (No.2008081082) certified in October 2010.

The project proposes the following:

1. Divide the existing parcel into four separate parcels
2. Develop one parcel into a Mini Storage facility with a ponding basin
3. The remaining three parcels will be developed into a Commercial Shopping Center

The mini storage part of the project will be developed in phases as market demand. The first phase will be a Mini Storage facility with caretaker's home.

The second phase will be approximately 83,332 square feet of a commercial center. There are no tenants for the commercial center at this time. When developed the commercial center will mirror the shopping center to the south across Dinuba Avenue which is fully developed.

2. Setting and Surrounding Land Uses:

The City of Selma is located in the Central Portion of the San Joaquin Valley at an elevation of approximately 300 feet above sea level. The topography of the City is essentially flat with a gentle slope to the Southwest. The project site is located in the northeast quadrant of the City, north of Dinuba Avenue and East of McCall Avenue. The subject property has been heavily disturbed for agricultural uses.

Existing uses surrounding the site area are as follows:
West (across McCall Avenue) has been farmed extensively and is currently under grapes.
North has been farmed extensively and is currently under grapes.
East has been farmed extensively and is currently under grapes and residential units.
South (across Dinuba Avenue) is fully developed with a Commercial Shopping Center and a mobile home park.

3. Project Entitlements Requested:

The site must be annexed into the City and rezoned before project can move forward.

Annexation Reorganization the parcel must be annexed into the City of Selma, Selma Fire and Selma Kingsburg Fowler County Sanitation District.
General Plan Amendment the site's Land Use Designation of High Density Residential and Medium High Density Residential and will require an amendment to Community Services.

Specific Plan Amendment re-designating the McCall Specific Plan Land Use from to Community Commercial Vacant to Commercial Services.
Pre-Zoning the parcel will be prezone to C-3 Community Services.
Parcel Map the parcel will divide one parcel into four legal parcels.
Site Plan will develop the site into the Mini Storage & Commercial Center.

The environmental impacts were analyzed in the Initial Study that was circulated for comments on November 25, 2015 to January 6, 2016. The City received five comment letters that are attached. The project level environmental analysis and the mitigation measures were prepared to reduce any identified environmental impact to a less than significant level. A public copy of this Mitigated Negative Declaration is on file in the Selma's City Clerk Office, located at 1710 Tucker Street, Selma, California. A copy is also on the City of Selma's webpage: Cityofselma.com.

Figure 2 Project Site Location Map

North East corner of McCall & Dinuba
Commercial Project with a Mini Storage
2015-0005

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CITY OF SELMA
COMMUNITY DEVELOPMENT
DEPARTMENT

Figure 3 Project Parcel Map

TENTATIVE PARCEL MAP NO.

IN THE CITY OF SELMA, COUNTY OF FRESNO, STATE OF CALIFORNIA

LEGAL DESCRIPITION:

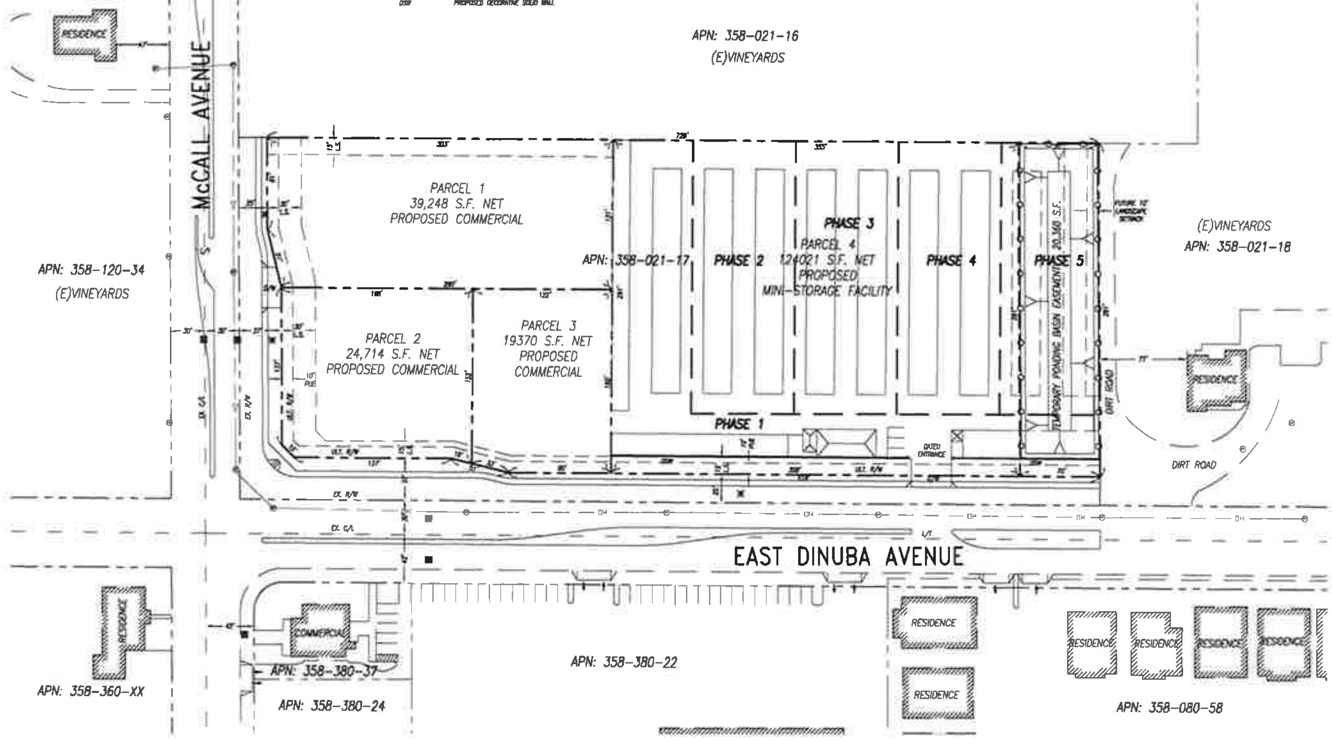
THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 22 EAST, MOUNT DIABLO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, DESCRIBED AS:

COMMENCING AT THE SOUTHWEST CORNER OF SECTION 29; THENCE EAST 48 RODS; THENCE AT A RIGHT ANGLE NORTH 20 RODS 15 FEET; THENCE AT A RIGHT ANGLE WEST 48 RODS; THENCE AT A RIGHT ANGLE SOUTH 20 RODS 15 FEET TO THE POINT OF COMMENCEMENT.

APN: 358-021-17

LEGEND

— OH —	EXISTING OVER HEAD POWER LINES
	EXISTING POWER POLES
	INDICATES AREA TO BE OFFERED FOR DEDICATION FOR PUBLIC STREET PURPOSES
PUE	INDICATES AREA TO BE OFFERED FOR DEDICATION FOR PUBLIC UTILITY EASEMENT PURPOSES
	INDICATES AREA PREVIOUSLY DEDICATED FOR PUBLIC STREET PURPOSES
(E)	EXISTING
ULT. R/W	ULTIMATE RIGHT OF WAY
EX. R/W	EXISTING RIGHT OF WAY
EX. C/L	EXISTING CENTERLINE
L.S.	PROPOSED LANDSCAPE EASEMENT / BUILDING SET BACK
D/W	PROPOSED DRIVEWAY
L/T	PROPOSED LEFT TURN LANE
DSW	PROPOSED DECORATIVE SOLID WALL



SUBDIVIDER

EMERY VLOTHO
V5 STORAGE, INC
525 W. 4TH STREET
HANFORD, CA 93230

APN: 358-021-17

SITE INFORMATION

SITE ADDRESS:	9917 S. McCALL AVENUE, SELMA, CA
ZONING:	FUTURE COMMUNITY COMMERCIAL C-2
SETBACKS:	McCALL AVENUE: PARALLEL TO AND 30' FROM THE ADOPTED ULTIMATE RIGHT-OF-WAY LINES.
	DINUBA AVENUE: PARALLEL TO AND 72' FROM THE ULTIMATE CENTERLINE.
BUILDING HEIGHT RESTRICTIONS:	MAXIMUM BUILDING HEIGHT LIMIT IS 75 FEET
AREA:	
	TOTAL NET AREA = 207,381 S.F. = 4.76 ACRES
	PARCEL 1 STREET DEDICATION = 3,574 S.F.
	PARCEL 2 STREET DEDICATION = 12,998 S.F.
	PARCEL 3 STREET DEDICATION = 3,187 S.F.
	PARCEL 4 STREET DEDICATION = 8,958 S.F.
	TEMP. BASIN STREET DEDICATION = 1,754 S.F.

NOTES

1. THE BOUNDARY SHOWN HEREON IS BASED ON RECORD INFORMATION.
2. THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS MAP ARE TO BE OFFERED FOR DEDICATION FOR PUBLIC PURPOSES.

UTILITY PROVIDERS

ELECTRICAL/ GAS:	PACIFIC GAS AND ELECTRIC PO Box 180 Selma, CA 93662 (559) 891-2138
CABLE:	COMCAST CABLE (559) 455-4267
TELEPHONE:	AT&T (559) 739-6439
SEWER:	SELMA-KINGSBURG-FOWLER COUNTY SANITATION DISTRICT (559) 897-6500
WATER:	CALIFORNIA WATER SERVICE COMPANY 2043 2nd St. Selma, CA 93662 (559) 896-4546
GARBAGE:	SELMA DISPOSAL AND RECYCLING, INC. (559) 891-7884
STREET SWEEPING:	PUBLIC WORKS CITY OF SELMA 1710 Tucker St. Selma, CA 93662 (559) 891-2215

DATE	APPRVL	REVISION

Tri City Engineering
Engineers Surveyors
4630 W. Jennifer Ave. #101
Fresno, CA 93722-6415
PH. 559-447-9075
FAX 559-447-9074
www.TriCityEngineering.com

TRI CITY engineering

TENTATIVE PARCEL MAP FOR:
V5 STORAGE, INC.
DINUBA AVENUE AND McCALL AVENUE
SELMA CALIFORNIA

Scale: 1"=50'
Date: 2013 Dec.10
Drwn: C.W
Chckd: O.J.

SHEET NO. 1
OF 1 SHEETS
JN# 2089

4. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.

- Local Agency Formation Commission for Annexation (LAFCO)
- Selma-Kingsburg-Fowler County Sanitation District for Sanitary Sewer (SKF)
- Consolidated Irrigation District for Irrigation Facilities Relocation (CID)
- California Regional Water Quality Control Board (RWQCB)
- Fresno County Public Works for road encroachment permit
- Fresno County Environmental Health Department (well abandonment)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- Fresno County Library
- Selma Unified School District
- Selma Cemetery District
- Selma Health Care
- West Fresno County Red Scale Protective
- State Center Community College
- Consolidated Mosquito Abatement District (CMAD)

ENVIRONMENTAL ANALYSIS

Environmental impacts are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less Than Significant Impact with Mitigation. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they would reduce the effect to a less than significant level.

Less Than Significant Impact. This category is identified when the project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards.

ENVIRONMENTAL FACTORS:

The following topical areas were analyzed in the initial study and this Mitigated Negative Declaration:

- Aesthetics, Light, and Glare
- Agricultural Resources
- Air Quality, including
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Mineral Resources
- Noise
- Population/Housing
- Public Services and Utilities
- Recreation
- Transportation
- Utilities/Service Systems
- Mandatory Findings of Significance

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

- Agricultural Resources
- Biological Resources
- Greenhouse Gas Emissions
- Public Services and Utilities
- Utilities/Service Systems
- Air Quality, including
- Cultural Resources
- Hydrology and Water Quality
- Transportation
- Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately, in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature　　　　　　　　　　　　　　　　　　　　　　　　　　Date

ENVIRONMENTAL EVALUATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				☑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				☑
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		☑		

Evaluation:

a) b)c) Review of the state scenic highways administered by Caltrans determined that none of the roadways (McCall & Dinuba Avenues) adjacent to the Project site are designated as state scenic highways. The project will not have any negative impacts on Scenic Resources or Scenic Vistas as none exist in the project area.

There are no scenic resources such as trees, rock outcroppings or historic buildings on the site or in the vicinity of the project site. Both McCall and Dinuba Avenues are designated as Arterial roadway in Selma's General Plan. The project will not significantly degrade the visual quality of the site or its surroundings. Currently, all views are uninterrupted except for low-level structures (under 35 feet. The proposed project is designed to accommodate a mini storage facility, retail commercial, the elevations for which must be reviewed for their architectural quality. The Project site currently has commercial uses to the south and the Project will conform to the Selma Zoning Code and Community Design Policies of the adopted General Plan.

Level of significance: No Impact.

d) Although the project would introduce new sources of lighting for commercial, said lighting would be conformance with Selma's design standards. Development standards in the Selma Zoning Code are intended to limit light spillage and mitigate adverse impact of urban growth through implementation of development standards for community design.

Level of significance: Less than significant with mitigation incorporation.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

II. AGRICULTURE RESOURCES,	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☑			
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Protection (as defined by Government Code section 51104(g))?				☑
d) Result in the loss of forestland or conversion of forestland to non-forest uses?				☑
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☑			

Evaluation

Conversion of agricultural land to urban uses is an important public policy issue in Fresno County. Since most of the county's 15 cities are at least partially surrounded by productive agricultural soils, new growth often brings about the conversion of agricultural land to urban uses. A common issue is the transitional nature of farmland on city fringes.

a) The City of Selma is surrounded by agricultural land and could not grow unless some farmland is taken out of production. The project site is adjacent to commercial development to the south and proposed residential development to the north, east and west. The removal of 6.57 acres of farmland from active production is therefore considered an unavoidable impact. One of the goals and policies of the Selma General Plan serve to partially mitigate impacts to agriculture lands from new growth and development. Under these goals and policies, adjacent and nearby agricultural lands within the Selma Sphere of Influence are preserved, while providing for logical growth of the City.

The City requires a "right to farm" covenant to be recorded for all development adjacent to producing agricultural lands, in order to provide notice to future owners and protect farming activities.

In 2010, the City of Selma determined that loss of prime farmland within Selma's Sphere of Influence was significant and unavoidable. Overriding findings were adopted for agricultural land conversions pursuant to CEQA Section 15093 for the certification of 2035 General Plan Final EIR Mitigation No. SCH2008081082.

Level of Significance after Mitigation: Even with incorporation of recommended mitigation, this impact remains Significant and Unavoidable. However, overriding findings to the loss of agricultural land were made with certification of the 2035 General Plan Final EIR No. SCH2008081082.

b) There are no lands subject to a Williamson Act Contract on the Project site and Project development would not lead directly to the cancellation of a contract. In the event development is proposed on other parcels under contract; the California Government Code allows for the removal of Williamson Act Contracts under certain specific conditions.
Compliance with Government Code provisions will reduce potential impacts of removal of lands from the Williamson Act Contracts to a less than significant level.

Level of Significance: No impact.

c), d) There is no conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Protection (as defined by Government Code section 51104(g)). No loss of forestland or conversion of forestland to non-forest uses

Level of Significance: No impact.

e) The presence of new urban development could influence the conversion of agricultural lands surrounding the Project site. Implementation of the Project would also lead to urban uses adjacent to existing agriculture. Potential conflicts are likely when urban areas encroach on farmland, including trespassing and theft, pesticide drift issues, and noise. Conflicts between farm operations and new urban development can be partially mitigated by using design elements that increase the distance between farmland and residential properties near urban limit lines.

Level of Significance after Mitigation: Even with incorporation of recommended mitigation, this impact remains significant and Unavoidable. However, overriding findings to the loss of agricultural land were made with certification of the 2035 General Plan Final EIR No. SCH2008081082.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?			☑	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		☑		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		☑		
d) Expose sensitive receptors to substantial pollutant concentrations?				

		☑		
e) Create objectionable odors affecting a substantial number of people?		☑		

Evaluation:

The Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM10 and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the air basin into attainment with all state and federal ambient air quality standards. Areas are classified under the Federal Clean Air Act as either "attainment", "non-attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB).

The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for 0 3, a State and Federal non-attainment area for PM2.5, a State non-attainment area for PM10, and Federal and State attainment area for CO, SO_2, NO_2, and Pb).

a) The proposed Project will not conflict with or obstruct the implementation of the air quality management standards. Standards set by the Air District, CARB, and Federal agencies relating to the proposed Project will continue to apply. A Fugitive Dust Control Plan will be submitted to the Air District to comply with Regulation VIII (Table 3-2) prior to the initiation of construction. An Indirect Source Review (ISR) application, a New and Modified Stationary Source Review, and Air Impact Analysis (AIA) will be has been filed with the Air District to address NOx emissions from construction. Therefore, the proposed Project will not conflict with the Air District plans and any impacts will be less than significant.

Level of Significance: Less than Significant Impact.

b)Typically, construction and operation of a project generates emissions of various air pollutants, including criteria pollutants such as carbon monoxide (CO), ozone precursors such as nitrous oxides (NOx) and reactive Organic gases (ROG) or Volatile Organic Compounds (VOC), particulate matter less than 10 million in diameter (PM10), and PM2.5, as well as sulfur oxides (SO_x). To assist in evaluating impacts of project-specific air quality emissions, the SJ APCD has adopted thresholds of significance for criteria pollutant emissions, expressed in units of tons per year (tons/yr), as presented in Table 1.

Construction-Related Emissions. The proposed Project includes construction of a 6.57 acre commercial center. Project construction equipment will include graders, compacters, trenchers, backhoes, forklifts, pile drivers, skid steers, front end loaders, water trucks, and materials and equipment hauling trucks. Construction will generally occur during daylight hours, Monday through Friday.

The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. The estimated construction period (four years) would generate air pollutant emissions intermittently within the site, and in the vicinity of the site. The proposed Project will comply with Air District Rule 8021 for construction and earthmoving activities.

The proposed Project's short-term construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (see Appendix "A"). The proposed Project's unmitigated construction-related emissions have been estimated using CalEEMod and are presented in Table 1. The emissions in tons/year are for the highest of the four construction years.

Table 1
Project Construction Emission

Summary Report	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Construction Emissions Per Year	3.68	4.26	1.96	0.01	0.43	0.31
SJVAPCD Level of Significance	100	10	10	27	15	15
Does the Project Exceed Standard?	No	No	No	No	No	No

Construction emissions would not exceed District thresholds and are less than significant

Long-Term Emissions

Long-Term emissions from the project are generated by mobile source (vehicle) emissions from the Project site and area sources such as water heaters and lawn maintenance equipment.

Table 1 shows the estimated construction emissions that would be generated from the proposed Project. Results of the analysis show that emissions generated from the construction phase of the Project will not exceed the SJVAPCD emission thresholds. The construction emissions are therefore considered less than significant with the implementation of Regulation VIII control measures.

Operational Emissions, Operational emissions included in the CalEEMod modeling process are area, energy, mobile, waste, and water emissions. Table 2 below shows the combined total operational emissions from the proposed Project.

Table 2
Project Operational Emissions

Summary Report	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$	$CO2_e$
Operational Emissions Per Year	21.40	5.25	3.10	0.04	2.12	0.62	3569.60
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod 2013.2.2

As shown in the Combined Maximum Unmitigated Project Operational Emissions table, the total operational emissions of the project does not exceed District thresholds for ROG, NOx, and CO and could result in a significant contribution to the region's nonattainment status of ozone.

Level of Significance: Less than Significant with mitigation Incorporated.

c) As discussed above, during construction, and Operational emissions, will not exceed the emissions thresholds for ROG, NOx and CO criteria pollutants. Air quality impacts would be less than SJVAPCD thresholds for non-attainment pollutants as shown in the Air Quality Impact Assessment report.

To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the project to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier II and above engine standards.

Project related impacts on air quality can be reduced through incorporation of design elements, for example, that increase energy efficiency, reduce vehicle miles traveled, and reduce construction exhaust related emissions. However, design elements and compliance with District rules and regulations may not be sufficient to reduce project related impacts on air quality to a less than significant level. Another example of a feasible mitigation measure is the mitigation of project emissions through a Voluntary Emission Reduction Agreement (VERA). The VERA is an instrument by which the project proponent provides monies to the District, which is used by the District to fund emission reduction projects that achieve the reductions required by the lead agency. District staff is available to meet with project proponents to discuss a VERA for specific projects.

Level of Significance: Less than Significant with mitigation incorporation.

d) Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). The location of sensitive receptors is needed to assess toxic impacts on public health. The project site is adjacent to a mobile home dwelling complex across Dinuba Avenue to the south. The project will incorporate mitigation measure set forth by SJVAPCD for commercial uses.

Level of Significance: Less than Significant with mitigation incorporation.

e)Common types of facilities that have been known to produce odors in the San Joaquin Valley within 1-2 miles of the receptor include wastewater treatment plants, landfills, refineries, chemical manufacturing, dairies and animal rendering. The proposed Project does not involve any of the aforementioned facilities, and there is limited potential to create objectionable odors.

No significant odor impacts related to project implementation are anticipated due to the nature and short-term extent of potential sources, as wen as the intervening distance to sensitive receptors.

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:
- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate,
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources. The proposed Project will not generate odorous emissions and is not a project that intends to attract people to an area where odor sources are present. As a result, the proposed Project will not be evaluated for its potential to place sensitive receptors near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. None of the facilities shown in Table 8 of VRPA Air Quality Impact Assessment (July 2016) fit the characteristics of the proposed Project.

Level of Significance: Less than Significant.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

IV. BIOLOGICAL RESOURCES -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		☑		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?			☑	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				☑
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				☑

Evaluation

The Project site is fallow but has been used in the past for vineyards. Adjacent lands include vineyards, fallow fields, rural residential residences, and a Commercial Shopping Center to the south. The present fallow nature of the Project site provides limited habitat for native wildlife. The annual/periodic disking for weed control reduces habitat for ground burrowing animals and the application of pesticides may reduce the invertebrate fauna that several types of wildlife depend upon for forage.

a) The property and land within surrounding the City have been extensively disturbed by farming. The proposed projects will not impact any threatened, endangered, or rare species or their habitats. Potential impacts to habitat and individual species in Selma are considered minor.

Level of Significance: Less than Significant with Mitigation incorporation.

b) There is no locally-designated plant or animal species in the City. No locally designated natural communities of any plant or animal species exist in Selma. There will be no new effects not already analyzed in the 2035 Final EIR for Selma's General Plan Update.

Level of Significance: Less than Significant Impact.

c) There is no area meeting the criteria for wetlands on the project site No water or rivers cross near or cross the project site.

Level of Significance: No Impact.

d) The project site is in close proximity to existing commercial and residential development and abuts major roads within the City (Dinuba & McCall Avenues). Significant wildlife corridors are not expected to be present. Therefore, development of the project site would not interfere with the movement of any species. The proposed project will not result in impacts to wildlife dispersal or migration corridor as identified in the analyzed in the 2035 Final EIR No. SCH2008081082 for Selma's General Plan Update.

Level of Significance: No Impact.

e) f) The proposed project will not result in conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The project will not conflict with the adopted Habitat Conservation Plan, or other regional or state habitat conservation plan.

Level of Significance: No Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

V. CULTURAL RESOURCES -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		☑		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		☑		
d) Disturb any human remains, including those interred outside of formal cemeteries?		☑		

Evaluation:

a) The project site has been farmed extensively and no structures are within the project area. It is unlikely that the commercial development will have an effect on significant or important archaeological or other cultural resources.

Level of Significance: No Impact

b)c)d) Due to the disturbances as a result of agricultural activities, archaeological deposits may have been removed or destroyed and soil deposition may have buried older living surfaces, obscuring surface evidence of archaeological remains. Since the presence or absence of archaeological/ historical/paleontological sites for areas that have not been adequately surveyed is unknown, it is difficult if not impossible to provide a quantitative discussion of cumulative negative impact on archaeological, historical, or paleontological resources.

Level of Significance: Less than Significant with Mitigation Incorporated

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

VI. GEOLOGY AND SOILS -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**

		Incorporation		
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			☑	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			☑	
ii) Strong seismic ground shaking?			☑	
iii) Seismic-related ground failure, including liquefaction?			☑	
iv) Landslides?				☑
b) Result in substantial soil erosion or the loss of topsoil?			☑	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			☑	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code creating substantial risks to life or property?			☑	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				☑

Evaluation

a), c), d) Although there are no fault lines on the project site or within close proximity, the site is located in an area of "High Seismic Hazards," specifically Seismic Zone D, which means that future buildings constructed on the site will most likely be subjected to excessive ground shaking in the event of an earthquake. Structures must be designed in compliance with seismic design criteria established in the California Building Code for Seismic Zone D. To minimize this potential impact, the California Building Code and City Codes require new structures be built to resist such shaking or to remain standing in an earthquake.

Prior to the issuance of building permits, project applicants would be required to demonstrate that the proposed development complies with all required regulations and standards pertaining to seismic hazards. The evaluation of potential seismic hazards and incorporation of appropriate design and construction features and effective land use planning is required by State law.

There are no significant constraints to development related to seismic hazards in the Selma area that cannot be mitigated through implementation of applicable regulations and codes and standard engineering practices. Although more people would be exposed to seismic hazards with development of the Project, compliance with all applicable regulations, standards, and codes would reduce potential impacts to a less-than-significant level.

Level of Significance: Less than Significant Impact

b) Impacts will be reduced to a less than significant level with proper grading and draining. The project will include an onsite ponding basin with future connection to Selma's Master Drainage facility.

Grading could result in erosion and sedimentation impacts. The City will require preparation of a grading plan which incorporates temporary stabilization measures to protect exposed areas during construction, watering to control dust, and soil erosion, and sedimentation control measures. Compliance with the City of Selma construction standards and the International Building Code would minimize potential erosion and sediment.

Level of Significance: Less Than Significant.

e) No septic system is proposed. All new development in the City of Selma will be served by wastewater treatment facilities of the Selma-Kingsburg-Fowler County Sanitation District.

Level of Significance: No impact

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

	Potentially Significant	**Less Than**	**Less Than**	**No**

VIII. GREENHOUSE GAS EMMISSION Would the project:	Impact	Significant with Mitigation Incorporation	Significant Impact	Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment:			☑	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			☑	

Evaluation

a) b) The proposed Project would generate Green House Gas (GHG) emissions through construction and operation activities. The period of construction would be short term, and construction-phase GHG emissions would occur directly from the off-road heavy-duty equipment and the Oil-road motor vehicles needed to mobilize crew, equipment, and materials, and to construct the Project.

GHG impacts are considered to be cumulative impacts by California Air Resources Board (CARB) since any increase in greenhouse gas emissions would add to the existing inventory of gases that could contribute to climate change.

Table 3, of VERPA Air Quality Impact Assessment done for the proposed Project shows the project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. BAU is referenced in ARB's AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002-2004 period grew to 2020 levels, without control. As a result, an estimate of the proposed Project's operational emissions in 2005 were compared to operational emissions in 2020 in order to determine if the Project meets the 29% emission reduction. The SJVAPCD has reviewed relevant scientific information related to GHG emissions and has determined that they are not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. As a result, the SJVAPCD has determined that Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

Table 3

V5 Mini Storage Commercial Project Greenhouse Gas Emissions

Summary Report	CO_2e
Operational Emissions Per Year (2005)	5,406.98 MT/yr
Operational Emissions Per Year (2020)	3,494.04 MT/yr
SJVAPCD Level of Significance	29% Reduction Compared to BAU
Does the Project Meet the Standard?	Yes

Since the combined amount of GHGs emitted from the Proposed Project is below 25,000 metric tons/year, no report is required to he submitted to the U.S. EPA and CARB.

According to the San Joaquin Valley Air Pollution Control District's Guidance for Valley Land use Agencies in Addressing GHG Emission impacts for New Projects under CEQA, projects implementing Best Performance Standards in accordance with District guidance are determined to have a less than significant individual and cumulative impact on global climate change and do not require project specific quantification of GHG emissions.

Level of Significance: Less Than Significant:

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

VIII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			☑	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			☑	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				☑
d) Be located on a site which is included on				

a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ☑

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ☑

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ☑

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☑

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ☑

Evaluation

a) The project is a commercial development and may involve the, storage, transportation, or use of hazardous materials. The current use of the property is a vineyard and the site had been in agricultural production for many years. No known hazards exist on the site that would require mitigation, but the fact that the site is and has been under agricultural production creates the possibility for site contamination from agricultural products such as pesticides and fertilizers. To address this possibility, a Phase I Environmental Site Assessment shall be conducted by the applicant/developer. This Phase I assessment shall evaluate the site to determine if and where storage, mixing, rinsing, and disposal of pesticides may have occurred and whether contamination exists. If pesticides have historically been used on the property these areas shall be tested for environmentally persistent pesticides such as organic pesticides and metals prior to development, and evaluated to determine if concentrations present in soils will be protective of residents and workers.

Level of Significance: Less than Significant Impact.

b) The project is not near any wildland areas, and would thus not expose persons or property to wildland fires. The project will be subject to all the applicable improvement standards of the City of Selma, including those designed to ensure adequate emergency access, and would not interfere with the implementation of an emergency response plan or emergency evacuation plan.

Level of Significance: Less than Significant Impact.

c) d) A search of the Hazardous and Superfund Sites completed on August 3, 2016 shows two sites in Selma , Selma Pressure Treating, and Selma Up-Right facilities, both over 2 mile from the site and are not associated with the project. The project will not result in the emission of hazardous substance.

Level of Significance: No Impact.

e) f) The proposed project site is located approximately 1.68 miles from the Selma Aerodrome – privately owned airstrip open to the public and approximately 1.24 miles from Quinn Caterpillar a privately owned airstrip. However, this runway is oriented in a north/south direction parallel to and in close proximity to the State Route 99 freeway. There will be no low altitude flights over the project site and no aircraft hazards to this commercial project.

Level of Significance: Less than significance.

g) The project would be subject to the requirements contained in the City's emergency response and evacuation plans. Therefore, impacts related to impaired implementation or physical interference with an adopted emergency response or evacuation plan are considered less than significant.

Level of Significance: No Impact.

h) The project site is not in a wild land interface zone and will not bring about or result in increased fire hazards in areas with flammable brush, grass or trees. The site is currently served by CAL Fire, and will be incorporated in the City Fire District upon annexation for fire protection.

Level of Significance: No Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

IX. HYDROLOGY AND WATER QUALITY	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact

-- Would the project:	Impact	Incorporation	Impact	
a) Violate any water quality standards or waste discharge requirements?				☑
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			☑	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			☑	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			☑	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			☑	
f) Otherwise substantially degrade water quality?				☑
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				☑
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				☑
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				☑
j) Inundation by seiche, tsunami, or mudflow?				☑

Evaluation

a, f) The City of Selma and this project receives potable water from the Kings River Basin underground aquifer through wells operated by California Water Service Company, a private water company. California Water Service Company completed an Urban Water Management Plan for the Selma district area on December 15, 2006. This project is a commercial development and will not violate any water quality standards or waste discharge requirements. The project will be fully provided with sanitary sewer services by the Selma-Kingsburg-Fowler County Sanitation District.

Level of Significance: No Impact.

b)Although the project will utilize groundwater according to the study prepared by California Water Service Company, (for the 2035 General Plan) Cal Water is able to meet the long term water demand in the Selma District with available underground water supplies, and no surface water will need to be imported. Since the single source of the water supply is groundwater, the supply will equal the demand. Groundwater supplies or interferes substantially with groundwater recharge. The City of Selma assisted by California Water Service has just completed a contractual agreement for payment of fees by all users to be used for a stormwater replenishment fee.

Level of Significance: Less than Significant Impact.

c) The project will not alter the course of any existing stream or river as none flows through the site. The project will create impervious surfaces due to construction of the new commercial uses, paved streets, and driveways. Therefore, the stormwater runoff from the site will be increased. However, the impacts from the stormwater runoff will be less than significant because the project will have an on-site drain system with appropriate catch basins and a retention basin that can accommodate a 100 year storm water event.

Level of Significance: Less than Significant Impact.

d) e) The project will not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. The project will not create or contribute runoff water which will be retained in an onsite basin until connection to the City of Selma's Storm Water Master Plan facilities. The basin will be monitor as part of Selma's Master Plan.

Level of Significance: Less than Significant Impact.

f) g) h), i), j) The project will not otherwise substantially degrade water quality. The project site is not located in a 100 year flood hazard area and will not expose persons or property to severe flooding. There are no dams or levees in the project area which if breached would expose people or property to a significant risk of flooding. The project site is not subject to a tsunami, seiche, or mudflow due to the flat topography of the site, and the fact that the site is more than 100 miles inland from the Pacific Ocean

Level of Significance: No Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

X. LAND USE AND PLANNING -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?				☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			☑	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				☑

Evaluation

a) c) The proposed project site is farmed and surrounded by other commercial and residential parcels. The proposed commercial project will not result in significant conflicts with existing development in the community, as the design of the project will include installation of accesses from existing roadways and will not interrupt the existing physical roadway arrangement. The project will not physically divide the City. In addition, the project is not within the boundaries of, and will not conflict with, any habitat conservation plan or natural community conservation plan.

Level of Significance: No Impact.

b) The 2035 General Plan currently designates approximately 4 acres of the project site as High Density Residential and the additional 2.57 acres as Medium High Density. The applicant wants to change this land use to Commercial Services. The City of Selma will be re-designating 6.57 acres of Commercial land uses in Selma's Plan Area to High Density

Residential, to offset the loss of residential land use.

Level of Significance: Less than Significant Impact.

Mitigation

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

XI. MINERAL RESOURCES -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				☑
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				☑

Evaluation

a-b) There are no open pit mines, sand and gravel operations, or other mineral resources within the City of Selma. The project site is not identified in the General Plan or in any Specific Plan as a mineral resource area.

Level of Significance: No Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

XII. NOISE -- Would the project result in:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Exposure of persons to or generation of noise levels in excess of standards			☑	

established in the local general plan or noise ordinance, or applicable standards of other agencies?	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☑
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☑
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☑
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☑

Evaluation

a) b) c) d) The project is a commercial project and will not expose persons to noise levels in excess of the maximum noise limits as outlined in the General Plan. The project site is not located in close proximity to any other uses which would generate excessive noise and vibration off site and which would affect persons living within the project area. During construction activities involving heavy equipment such as jackhammers and generators, significant amounts of noise could be generated.

The project will increase the ambient existing noise levels in the area due to new development. During construction, the increase in ambient noise levels would not be significant and would be those noises that are normal with human activity in a commercial project.

Long-term operational activities associated with the proposed project would be commercial uses, which would not involve the use of any equipment or processes that would result in potentially significant levels of ground vibration.

Long-term operation of the project involves use, which is consistent with existing uses in the project vicinity. Commercial uses would not result in substantial changes to the existing noise environment. Operation of the project would be consistent with the existing uses in the vicinity of the project site and would not result in substantial changes to the existing noise environment. Other noise sensitive uses in the vicinity include other commercial uses and residential uses to the south, across Dinuba Avenue.

Level of Significance: Less than Significant Impact.

e, f) The project site is not located within an airport land use plan area or within 2 miles of a public use airport or private airstrip. Implementation of the proposed project would not expose individuals to excessive noise levels associated with aircraft operations.

Level of Significance: Less than Significant Impact

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

XIII. POPULATION AND HOUSING -- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			☑	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				☑

Evaluation

a) The proposed project will have a small increase the population in the project area due to the care taker's home (2.5 persons) in phase one, the remaining part of the project commercial nature. The project will not result in the destruction of housing units or the displacement of persons. In summary, there are no significant environmental impacts due to population and housing concerns.

Level of Significance: Less than Significant Impact.

b) The proposed project would not remove any existing residential units, as the subject property is vacant and uninhabited. As such, no mitigation has been identified as needed.

Level of Significance: No Impact.

c) There is one residential manager's unit attached to the mini storage facility proposed as part of the project.

Level of Significance: No Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

<u>**XIV. PUBLIC SERVICES**</u>	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			☑	
Police protection?			☑	
Schools?				☑
Parks?				☑
Other public facilities?			☑	

Evaluation

a) The proposed project site is served by CAL Fire and will be annexed into the City of Selma Fire Department for fire protection. Implementation of the proposed project would increase the intensity of use of the site and would marginally increase the demand for fire protection services over existing conditions. The project would be similar to the land uses on surrounding properties, and the site is already served by the City for fire protection. The developer will pay Fire Impact Fees per current impact study.

Level of Significance: Less than Significant Impact.

The project site is served by Fresno County Sherriff Department and will be annexed into the City of Selma Police Department for police protection services. The developer will pay Police Impact Fees to offset the project impact on current services.

Level of Significance: Less than Significant Impact.

The proposed project will be required to pay School and Park impact fees that would be directed toward maintaining adequate service levels, which include incremental increases in school capacities. Because the proposed project is commercial center there is no impact on recreational facilities.

Level of Significance: No Impact

These measures are established conditions of approval for all new commercial developments within the City of Selma, and are therefore part of the regulatory setting of the project.

Development of the project will result in the increased use of public facilities. Additional operating and capital improvement funds to meet increased demands on public facilities will be required. To assist in funding any additional facilities or equipment required to adequately service this project, it is required that new projects pay General Facilities, Community Center and Storm Drain impact fees as part of building permit fees.

Level of Significance: Less than Significant Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

Potentially	Less Than	Less Than	No

XV. RECREATION --	Significant Impact	Significant with Mitigation Incorporation	Significant Impact	Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				☑

Evaluation

a) The proposed project will not increase the use of existing neighborhood and regional parks or other recreational facility such that substantial physical deterioration of the facility would occur or be accelerated beyond that already analyzed by the 2035 General Plan Update.

Level of Significance: No impact.

b) The proposed project will not include the construction of recreational facilities or expansion of recreational facilities that might have adverse physical effects on the environment.

Level of Significance: No impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

XVI. TRANSPORTATION/TRAFFIC -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass		☑		

transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersection, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		☑		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				☑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			☑	
e) Result in inadequate emergency access?			☑	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facility, or otherwise decrease the performance or safety of such facilities?			☑	

A traffic impact study was completed by Peters Engineering in 2013. The City of Selma has not had any new development which was not analyzed in this study. Tables 11.1 & Table 11.2 of Peters Traffic Impact Study show Intersection Level of Service Summary Existing and Existing-Plus-Project Conditions and Existing and Near-Term Conditions. In both cases the intersection of McCall/Dinuba shows a LOS of E for A.M. and LOS of F for P.M. There was no analyzed in this study for traffic warrants for the intersection of McCall and Dinuba Avenues.

The intersection of McCall and Dinuba Avenues will be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane, one through lane, and one right-turn lane;
Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Construction of the tum lanes recommended in Mitigation E-1 mitigates the Project's share of this near-term cumulative impact. It should be noted that all-way stop control with widening of both McCall Avenue and Dinuba Avenue to four lanes in accordance with the arterial designation was investigated as mitigation. However, widening alone will not mitigate the cumulative impact.

Construction of dedicated left-turn lanes on the eastbound and westbound approaches of McCall Avenue while maintaining the existing all-way stop control will mitigate the Project's impacts. The Project would also be required to construct frontage improvements in accordance with City of Selma standards. With implementation of this mitigation the intersection would operate at LOS D with an average delay of 33.9 seconds per vehicle during the a.m. peak hour and LOS F with an average delay of 50.9 seconds per vehicle during the p.m. peak hour. These delays are less than the existing delays.

The Project is responsible for construction of this mitigation by opening day of the commercial portions of the Project. Construction of the mini-storage component of the Project creates a negligible volume of traffic that will not trigger the significant impact.

Evaluation

a), b) The project does not conflict with any applicable circulation system plans and does add to demand on the circulation system but does not conflict with any congestion management programs. The project will generate new vehicle trips on the adjacent street system. The project will also contribute to overall impact mitigation for transportation infrastructure by participating in the Citywide Transportation Impact Fee program.

Level of Significance: Less than Significant Impact with Mitigation Incorporation.

c) The project is not located in the vicinity of any public or private airports and will not result in any changes to air traffic patterns, nor does it conflict with any safety plans of the Airport Land Use Plan.

Level of Significance: No Impact.

d) The project would not increase hazards due to a design feature the Site Plan and off-side improvements will be approved by the City Engineer to accommodate the new traffic on intersections or roadways, including McCall and Dinuba Avenues. The project would improve the sidewalk along the McCall and Dinuba Avenues frontage. The project driveways would be consistent with City code requirements for ingress/egress to safely and adequately serve the commercial center. Because the project is a similar use to those in the immediate vicinity, the project would not introduce any incompatible uses.

Level of Significance: Less than Significant Impact.

e) The project has been reviewed by the City Fire Marshal to ensure adequate emergency access has been provided. As proposed, the project would not alter the existing travel flow of vehicles, bicyclists, or pedestrians or substantially increase traffic on local streets. Therefore, the proposed project would not have a negative effect on emergency access.

Level of Significance: Less than Significant Impact.

f) The project is consistent with policies supporting alternative transportation due to the site's location within the City's urban center, and its proximity to shopping, parks and services that allows public transportation services to the Downtown. City standards require provision of on-site bicycle storage.

Level of Significance: Less than Significant Impact.

A detailed traffic study was completed for this project and the study is attached as Appendix C to this Initial Study.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

XVII. UTILITIES AND SERVICE SYSTEMS-- Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?		☑		
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		☑		
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		☑		
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			☑	

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☑
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☑
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☑

Evaluation

a), b) e)The proposed project would result in an incremental increase in demand on City wastewater infrastructure however this site will be severed by a newly proposed waste water truck line in Dinuba Avenue. The City of Selma has recently formed a community Facility District to establish a Zone of Benefit for the construction of a new waste water lateral line to serve all of Selma North of Dinuba with Waste Water service. This project is part of that CFD and will contribute its fair share for the construction of this facility.

Level of Significance: Less than Significant Impact with Mitigation Incorporation.

c) This project will construct a temporary storm water retention basin as part of the project and will be required to connect to Selma's Master Stormwater master plan once a major retention basin is constructed east of the project site.

Level of Significance: Less than Significant Impact with Mitigation Incorporation.

d)The proposed project would result in an incremental increase in demand on water supplies, as anticipated by the General Plan. Potable water service will be provided to the project by the California Water Service Company (Cal Water), a private water company. Cal Water has the capacity to serve the project site according to the Urban Water Management Plan for the Selma District completed by Cal-Water on December 15, 2006.

Level of Significance: Less than Significant Impact.

f) g) The proposed project will be served by Western Waste, which maintains all the solid waste collection in the City. The WWM transfer station is the staging center where Selma's solid waste is process prior to being transported to a licensed waste facility. Western Waste has a permit to operate the transfer facility from the California Integrated Waste Management Board.

Level of Significance: Less than Significant Impact.

Mitigations: To assist Selma reaching our GREEN policy all Mitigations Measures are only listed in the Mitigation Monitoring Program attached.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE --	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			☑	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		☑		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			☑	

As discussed above, potential impacts to aesthetics, air quality, biological and cultural resources, and geology and soils will be less than significant with incorporation of recommended conditions on the site.

The impacts of the proposed project are individually limited and not considered "cumulatively considerable." Although incremental changes in certain issue areas can be expected as a result of the proposed project, all environmental impacts that could occur as a result of the proposed project would be reduced to a less than significant level through compliance with existing regulations discussed in this Initial Study.

MANDATORY FINDINGS

Based upon the information provided in this Initial Study, the proposed project could result in impacts related to air quality, biological resources, cultural resources, hazards and hazardous materials, and transportation. Recommended conditions would reduce these potential impacts to less than significant levels (see discussions throughout this Initial Study, incorporated by reference herein).

SUMMARY

A General Plan amendment is required to make the General Plan Land Use Designation of the project site consistent with its proposed zoning. The project will be pre-zoned C-3 prior to annexation by the City. The project will be annexed into the Selma-Kingsburg-Fowler County Sanitation District and this Special District will provide sanitary sewer service to the project. Potable water will be provided by the California Water Service Company, a private for profit Water Company, through area wells. The water system will be required to provide fire flow requirements as determined by the Selma Fire Department.

Air Quality impacts during construction will be mitigated by adherence to a Dust Control Plan approved by the San Joaquin Valley Air Pollution Control District (SJVAPCD), as well as compliance with all other applicable rules and regulations of the SJVAPCD.

Hazardous materials impacts related to the project site use as an agricultural property was assessed during a Phase I Environmental Site Assessment, which evaluated the site to determine if and where storage, mixing, rinsing, and disposal of pesticides may have occurred and whether contamination exists. No pesticides have historically been used on the property these areas shall be tested for environmentally persistent pesticides such as organic pesticides and metals prior to development, and evaluated to determine if concentrations present in soils will be protective of residents and workers.

Stormwater impacts will be mitigated by construction of an on-site stormwater collection system. A SWPPP (Stormwater Pollution Prevention Plan) will be prepared for the project by a qualified engineer and will be approved by the State Regional Water Quality Control Board. Stormwater will be disposed of in an approved on-site stormwater retention basin.

Impacts from project related traffic were analyzed in a project-specific traffic study. The developer will pay a traffic mitigation fees to mitigate traffic impacts related to the project. These impact fees will include the impacts to Caltrans State Facilities. The developer will be required to make street improvements to Dinuba and McCall Avenues along the frontage of the project. The improvements will include curb, gutter, sidewalk, and landscaping. In addition, the developer will be required to pay his fair share cost for the construction of traffic signals and other improvements at the intersections of Dinuba and McCall Avenues and Dockery and Dinuba Avenues.

SECTION B

Mitigation Monitoring and Reporting Program (MMRP)

Introduction

State and local agencies are required by *Section 21081.6* of the *California Public Resources Code* to establish a monitoring and reporting program for all projects which are approved and which require CEQA processing.

Local agencies are given broad latitude in developing programs to meet the requirements of *Public Resources Code Section 21081.6.* The mitigation monitoring program outlined in this document is based upon guidance issued by the Governor's Office of Planning and Research.

The mitigation monitoring and reporting program for the proposed Project corresponds to mitigation measures outlined in the Mitigated Negative Declaration. The Program summarizes the environmental issues identified in the Final Mitigated Negative Declaration the mitigation measures required to reduce each potentially significant impact to less than significant, the person or agency responsible for implementing the measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

The mitigation measures contained herein shall be included as conditions of approval for this project, to the extent permitted by law. The City of Selma and other state and county agencies, shall ensure that all constructions plans and project operations conform to the conditions of the mitigations set on the project. The Mitigations Monitoring and Reporting Program will be attached to the construction plans as conditions.

Compliance with local land use regulations is enforced by the City of Selma. Upon evidence of, or receipt of complaints of, noncompliance, the Code Compliance Officer and Building Inspector of the City of Selma conducts inspections for such noncompliance, the remedies for which are citations, fines, permit modifications, permit revocation, and even criminal charges.

Mitigations Monitoring and Reporting Program

Mitigation Number	Mitigation Measure	Implementation	Monitoring	Time Span
Aesthetics				
	AES1: Exterior lighting for projects shall be shielded to prevent line of sight visibility of the light source from abutting property planned for single-family residential. The City Site Plan Review process shall require development projects to ensure that no more than 0.25 foot-candles of errant light impacts adjacent properties. The Community Development Department shall require a photometric analysis of projects where necessary to demonstrate compliance with this requirement.	Developer(s)	City of Selma Community Development Department	Placed as a condition of the project.
Agriculture				
	AGR1: At the time of development of each phase, the project applicant shall preserve Important Farmland acreage (i.e., Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), as mapped by the California Department of Conservation Farmland Mapping and Monitoring Program, within Fresno County at a ratio of no less than 1:1 for each acre of Important Farmland converted to non-agricultural use by the proposed project. • The applicant shall pay fees to the City of Selma equivalent to the cost of preserving Important Farmland. The City shall use the fees to fund an irrevocable instrument (e.g., deed restriction or preservation easements) to permanently preserve farmland via	Developer(s)	City of Selma Community Development Department	Recorded at the time of annexation

	a Trust for Farmland Funds Disbursements. This option shall be pursued if the City of Selma has a farmland preservation program in place at the time permits are sought.			
	AG2: The developer and or successor in interest shall sign and record with the Fresno County Assessor a right-to-farm declaration against all parcels in the project.	Developer(s)	City of Selma Community Development Department	At time of construction
Air Quality				
	AQ1: All construction shall exceed the California Title 24 Energy Code.	Developer(s)	City of Selma Community Development Department	At time of construction
	AQ2: Passive solar cooling/heating design elements shall be included in building designs where feasible. Design elements that maximize the use of natural lighting shall be utilized where feasible.	Developer(s)	City of Selma Community Development & Building Department	Plan Submittal
	AQ3: Energy efficient technical and design features in new construction shall be required. New development must include provisions for the installation of energy efficient appliances and lighting.	Developer(s)	City of Selma Community Development Building Department	Plan Submittal
	AQ4: Installation of low nitrogen oxide emitting and/or high efficiency water heaters shall be required in new construction. Use of solar or low-emission water heaters (beyond Rule 4902) is recommended.	Developer(s)	City of Selma Community Development Building Department	Plan submittal
	AQ5: The proposed Project shall comply with all applicable Regulations and Rules established by the San Joaquin Valley Air Pollution Control District, including, but not limited to: Regulation IV: Prohibitions; Rule	Developer(s)	SJVAPCD City of Selma Community Development Department	Project Review Placed as a condition on the project

	4901; Regulation IV: Prohibitions; Rule 4902; and Regulation VIII: Fugitive PM_{10} Prohibitions; as well as the Indirect Source Review (ISR) (Rule 9510) and the Administrative ISR Fee Rule (Rule 3180).			
	AQ6: All material excavated, graded or otherwise disturbed shall be sufficiently watered to prevent fugitive dust emissions. Watering shall occur at least twice daily with complete coverage, preferably in the morning and after work is done for the day, or as necessary. The developer shall be responsible for watering in the event of high winds or watering needs after normal working hours.	Developer(s)	SJVAPCD City of Selma Engineering Department	Placed as a condition on the project Ongoing
	AQ7: A person or persons shall be designated by the contractor or builder to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Such monitoring responsibilities shall include holiday and weekend periods when work may not be in progress. The contractor shall provide the name and telephone number of such person to the SJVAPCD and the City Building Official prior to commencement of construction activities.	Developer(s)	SJVAPCD City of Selma Community Development Building Department	Placed as a condition on the project Ongoing
	AQ8: All disturbed areas on the site, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.	Developer(s)	SJVAPCD City of Selma Community Development Department	Placed as a condition on the project Ongoing
	AQ9: Cover all trucks hauling soil, sand and other loose materials or require all trucks to maintain at	Developer(s)	SJVAPCD City of Selma Code	Placed as a condition on the project

	least two feet of freeboard. Trucks transporting fill material/soil to and from the site shall be tarped from the point of origin. Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads. Utilize wheel washers for all exiting trucks, or wash off all trucks and equipment prior to leaving the site as needed.		Enforcement Engineering	Ongoing
	AQ11: On-site vehicles shall be limited to a speed (15 mph) that does not generate fugitive dust on unpaved roads. Land clearing, grading, earthmoving or excavation activities shall be suspended when winds exceed 20 miles per hour.	Developer(s)	SJVAPCD City of Selma Code Enforcement Engineering	Placed as a condition on the project Ongoing
	AQ12: Prior to approval of the final City discretionary approval for individual projects within the project, the applicant shall provide the Selma Planning Department with a copy of an approved Air Impact Assessment Application as evidence of compliance with Rule 9510 Indirect Source Review.	Developer(s)	SJVAPCD City of Selma Code Enforcement Engineering	Project Review Placed as a condition on the project Ongoing
	AQ13: Prior to approval of site plans the applicant shall provide a health risk assessment to determine if any units would be exposed to risks exceeding the SJVAPCD threshold of significance of 10 in a million, and if necessary, provide mitigation measures to reduce potentially significant impacts to less than significant levels. Such measures may include Heating, Ventilation, and Air Conditioning (HVAC) systems or use of tree species such as redwood, deodar, or live oak that can filter out particulate matter.	Developer(s)	SJVAPCD City of Selma Community Development Department	Placed as a condition on the project Ongoing
Biological Resources				
	BIO 1: Developers of projects on	Developer(s)	USFWS	Placed as a

	the Project site shall be required to contract with a qualified biologist to conduct a preconstruction survey approximately 30 days prior to ground disturbing activities in and around the project site. Measure1: If construction activities will occur during the nesting season of February through August, a preconstruction survey shall be conducted by a qualified biologist to determine the existence of Burrowing Owl. The survey shall be conducted within 30 days prior to construction activities. Results of the preconstruction survey shall be prepared in a letter given to CDFW for their review and approval prior to any construction activities. Measure 2: If nesting sites are found, the CDFW's (1995) guidelines for Burrowing Owl "Staff Rep0rt on Burrowing Owl Mitigation" shall be consulted and the Project proponent shall select one of the following measures for implementation by a qualified biologist: a. Destroy vacant burrows prior to March land/or after August 31. b. Redesign the Project temporarily or permanently to avoid occupied burrows or nest sites until after the nesting/fledgling season. c. Delay Project construction activities until after the nesting/fledgling season (March 1 through August 31). d. Install artificial burrows in open space areas of the Project site and wait for		City of Selma Community Development Department & Code Enforcement	condition on the project

	passive relocation of the Burrowing Owl. e. Active relocation of Burrowing Owl with conditions. The Project proponent shall fund relocation of Burrowing Owl to unoccupied, suitable habitat which is permanently preserved (up to 6.5 acres per nesting pair) in the open space on the Project site or off-site at a recognized Burrowing Owl mitigation bank. Measure 3: If construction activities will occur during the nesting season of February through August, including tree nest removal, a preconstruction survey shall be conducted by a qualified biologist for nesting birds (which includes migratory birds covered under the Migratory bird Treaty Act) on the Project site. Also, adjacent lands will be surveyed with emphasis on large trees which have the potential for nesting raptors. Results of the preconstruction survey shall be prepared in a letter and given to the CDFG for their review and approval prior to any construction activities. Measure 4: If any active nests are observed, the nests shall be designated as an Environmentally Sensitive Area and protected (while occupied) during construction activities. The CDFG shall be contacted, consulted, and avoidance measures, specific to each incident, shall be developed in cooperation with the Project			

	proponent, and a qualified biologist. No birds or their nests (including migratory birds covered tinder the Migratory Bird Treaty Act) will be impacted and no take will occur. Measure 5: A pre-construction survey shall be conducted if the project delays more than 30 days from the 27 January 2016 survey date to ensure no changes to resources or scope of project have occurred			
Cultural Resources				
	CUL1: In the event any as yet undetected historical resources are encountered in the Project area at a future time, the City of Selma will comply with the requirements of all local, state and federal regulations that protect important historical resources, and notify the Fresno County Planning Department to determine the nature and extent of such resources and the appropriate measures to mitigate potential adverse impacts.	Developer(s)	Fresno County Planning Department City of Selma Community Development Department & Code Enforcement	Ongoing
	CUL2: In the event any as yet undetected archaeological or paleontological resources are encountered in the Project area at a future time, the City' of Selma will comply with the requirements of all local, state and federal regulations that protect important historical resources.	Developer(s)	City of Selma Community Development Department	Ongoing
	CUL3: The following measures shall be implemented for cultural resources discovered during Project implementation activities: Measure 1: In the event that archaeological or paleontological resources are encountered during	Developer(s)	City of Selma Community Development Department	Ongoing

	construction, all activity in the specific construction area shall cease until the applicant retains a qualified archaeologist or paleontologist who shall examine the findings, assess their significance, and offer recommendations for procedures deemed appropriate to either further investigate or mitigate adverse impacts on those important archaeologist or paleontological test resources that have been encountered. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been completed. Project personnel shall not collect or retain artifacts found at the site. Measure 2: If human remains are found during any Project construction on the Project site, all work shall stop in the vicinity of the find and the Fresno County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission. The Native American Heritage Commission shall notify the person considered to be the most likely descendant. The most likely descendant will work with the Project applicant to develop a program for the re-interment of the human remains and any associated artifacts.			
Geology and Soils				
	GEO1: Developers shall prepare a grading plan for all proposed development in the	Developer(s)	City of Selma Community Development	Prior to issuance of Building Permits

	Project area that is in compliance with City of Selma construction standards and the International Building Code.		& Engineering Departments	
Greenhouse Gas Emission				
	GHG1: The Project applicant will require all construction contractors to implement the Best Management Practices (BMP) to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures: Use alternative-fueled (e.g. biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet. ▪ Recycle at least 50 percent of construction waste. ▪ Use at least 10 percent local building materials (from within 100 miles of the Project Site / Area of Potential Effect).	Developer(s)	City of Selma Community Development and Building Departments	Placed as a condition on the project
	GHG2: Landscape plans shall maximize the use of low-water demand species for ornamental purposes. Project conditions, covenants, and restrictions (CC&Rs) shall include information about drought tolerant plantings and encourage and facilitate use of water-saving species.	Developer(s)	City of Selma Community Development and Building Departments	Placed as a condition on the project.
	The Project shall, where feasible, utilize reclaimed water for all common area exterior landscaping. If not feasible, applicants shall provide documentation as to the efforts made to procure reclaimed	Developer(s)	City of Selma Community Development and Building Departments	Placed as a condition on the project.

	water. Indoor water use shall be reduced through re-circulating, point-of-use, or on-demand water heaters, low flow toilets, water saving fixtures, including low flow showerheads. Indoor water-conserving measures shall be implemented prior to certificate of occupancy.			
	GHG3: Prior to issuance of building permits for each building, the applicant shall prepare and submit plans to the City of Selma that demonstrate the use of light-colored "cool" roofs. The approved plans shall be incorporated into the proposed project.	Developer(s)	City of Selma Community Development and Building Departments	Placed as a condition on the project.
Hazards Material				
	HAZ1: Prior to occupancy, the owner/operator shall complete and submit a Hazardous Materials Business Plan form to the Fresno County Department of Public Health,	Developer(s)	FCALU City of Selma Community Development	Placed as a condition on the project.
	HAZ2: Environmental Health Division. A Phase I Environmental Site Assessment was conducted by the applicant/developer. • No wells that exist or that have been abandoned within the project area, not intended for use by the project, shall be properly destroyed under permit(s) from the Fresno County Department of Public Health, Environmental Health Division, prior to commencement of work. Should any underground storage tank(s) be found during construction, the applicant shall obtain an Underground Storage	Developer(s)	City of Selma Community Development	Placed as a condition on the project. Recorded prior to the Certificate of Occupancy

	Tank Removal Permit from the Fresno County Department of Public Health, Environmental Health Division.			
	HAZ3: If proposed, a spill prevention control and countermeasure plan (SPCC) is required for aboveground petroleum storage tanks with greater than or equal to 1320-gallons of storage capacity. (Storage capacity means the aggregate capacity of all aboveground tanks and containers at a tank facility.) The applicant should contact their local Fire Authority concerning construction and installation requirements for aboveground storage tanks.	Developer	Fresno County Environmental Health Division City of Selma Community Development , Building & Fire Departments	Placed as a condition on the project. Completed prior to issuance of building permits
Hydrology and Water Quality				
	HYD1: Developers in the Project area shall be required to comply with all local, state and Federal regulations with regards to surface water runoff from construction sites, surface water runoff from new urban development, erosion control, and the protection of domestic water quality. The City of Selma shall require Best Management Practices in construction contracts, consistent with NPDES General Construction Activity Storm Water Permit requirements.	Developer(s)	City of Selma Community Development and Engineering Departments	Placed as a condition on the project.
	HYD2: The project shall discharge all storm water into onsite ponding basin that shall be approved by the Selma Engineering Division.	Developer(s)	City of Selma Community Development and Engineering Departments	Placed as a condition on the project.
	HYD3: Indoor water use shall be reduced through re-	Developer(s)	City of Selma Community	Placed as a condition on the

	circulating, point-of-use, or on-demand water heaters, low flow toilets, water saving fixtures, including low flow showerheads. Indoor water-conserving measures shall be implemented prior to certificate of occupancy.		Development and Engineering Departments	project.
	HYD4: Landscape plans shall maximize the use of low-water demand species for ornamental purposes. Project conditions and restrictions shall include drought tolerant plantings and facilitate use of water-saving species.	Developer(s)	City of Selma Community Development and Engineering Departments	Placed as a condition on the project.
Land use				
	LUP1: Prior to annexation the Selma City Council must approve a General Plan Amendment (GPA) to change the present land use designation from High Density to Commercial Services. This will require the City to re-designate approximately 4 acres of Commercial acreages to High Density to offset the loss of High Density residential acreage.	Developer(s)	City of Selma Community Development	Approved at annexation.
Public Services				
	PUB1: The developer shall pay Public Facilities Impact Fees for proposed developments as established by the City of Selma in accordance with the requirements of State law.	Developer(s)	City of Selma Community Development & Building Departments	Placed as a condition on the project
	PUB2: To reduce potential service calls to the Project area, the City of Selma Police Department shall be consulted during site planning and design to ensure that adequate	Developer(s)	City of Selma Community Development & Building Departments	Placed as a condition on the project

	provisions for crime prevention are incorporated into the Project design.			
Transportation/Traffic				
	TRF1: The developer and or successor in interest will be required to pay traffic impact mitigation fees as outlined in the traffic impact mitigation section of the City's Impact Fee Ordinance, and enter into a "Traffic Mitigation Agreement". The developer and or successor in interest will be required to complete street improvements along the North side of Dinuba Avenue from the centerline to the property boundary of the commercial project and on the east side of McCall Avenue from the centerline to the property boundary. These improvements will include extensive landscaping that will be maintained by lighting and landscaping. In addition, the developer and or successor in interest will be required to pay the fair share for the traffic signal at the intersections of Dinuba and McCall Avenues. Prior to issuance of grading permits, a traffic plan to minimize traffic flow interference from construction activities shall be submitted for review and approved by the City Engineer.	Developer(s)	CALTRANS City of Selma Community Development & Engineering Division	Placed as a condition on the project.
	TRF2: The developer and or successor in interest shall work with the City Engineer to design the project entry and circulation patterns to minimize any potential impacts to the surrounding street system. The proposed commercial center is designed to include on-site parking. Therefore, no impact is anticipated relative to insufficient parking facilities, and	Developer(s)		

	no mitigation is necessary.			
	TRF3: The developer and or successor in interest will be responsible to construct left-turn lane on Dinuba eastbound at McCall and a left-turn lane on Dinuba westbound at McCall prior to opening day of Phase I (ministorage).	Developer(s)		
	TRF4: The developer and or successor in interest will be responsible to work with the City Engineer to dedicate and construct a right turn northbound lane at McCall Avenue prior to opening day of Phase I (ministorage).	Developer(s)		
	TRF5: The developer and or successor in interest will be responsible to pay their fair share of various intersections impacts as determined by the City Engineer and the Traffic report prepared for the project.	Developer(s)		
	TRF6: The Project shall be responsible for the following construction improvements: ▪ Site entry drive design and construction shall be built to City Standards and approved by the City Engineer. ▪ Project frontage (sidewalks, curb and gutter) along the entire parcel on Dinuba shall be constructed to City Standards and approved by the City Engineer prior to Certificate of Occupancy. ▪ McCall & Dinuba Avenues in front of the project site shall be designed and constructed	Developer(s)	City of Selma Community Development & Engineering Division	Placed as a condition on the project

	to City Standards and a Zone of Benefit established to compensation to phase I developer for these improvements.			
	TRF7: Prior to approval of the final improvement plans for each phase; the project applicant shall prepare and submit plans to the City of Selma depicting appropriate public transit facilities for review and approval. Such facilities shall adhere to the applicable policies contained in the City of Selma 2035 General Plan and the requirements of Selma Transit and Southeast Transit, and, and may consist of a centralized transit facility or enhanced stops that feature turnouts, shelters, seating, lighting, and other amenities, as appropriate. The approved public transit facilities shall be incorporated into the final improvement plans for each phase.	Developer(s)	City of Selma Community Development & Engineering Division	Placed as a condition on the project. Paid at building permits
	TRF8: Prior to issuance of the certificate of occupancy for each building, the project applicant shall install bicycle storage facilities in convenient locations near building entrances.	Developer(s)	City of Selma Community Development & Engineering Division	Placed as a condition on the project.
Utilities and Service Systems				
	UTL1: The developer will be required to pay the fair share to construct private sewer facilities to convey wastewater to the nearest public sewer. The project site will be provided with sanitary sewer service by the Selma-Kingsburg-Fowler County Sanitation District (SKF). S-K-F will provide a will serve letter for the project and has the treatment capacity at its wastewater treatment plant (WWTP) to serve the project.	Developer(s)		
	UTL2: FIRE POLICE			

	GENERALS			
	UTL3: The developer shall be required to contribute to the extension of necessary infrastructure to the Project site at developer's expense. Near term development projects in the Project area that are required to fund specific improvements beyond the Project's anticipated usage shall be reimbursed by subsequent development proponents that will fund their anticipated share and monies will be returned to the original development proponents who funded the initial improvements.	Developer(s)	SKF City of Selma Community Development & Engineering Division	Placed as a condition on the project. Paid at building permits
	UTL4: For each phase of the Project, a determination shall be required by SKF that there is sufficient capacity in the wastewater treatment plant to serve the proposed development. Concurrence should be obtained from the California Regional Water Quality Control Board (RWQCB). For more information, contact staff at (559) 445-5116.	Developer(s)	SKF City of Selma Community Development & Engineering Division	Placed as a condition on the project.
	UTL5: Developers in the Project area shall be responsible for required improvements to the domestic water system necessary to serve proposed projects. Capital costs for design and construction of the water distribution system, new wells and pumps, transmission lines, storage facilities, distribution system, SCADA, meters, storage and booster pump stations, and so on are the responsibility of the developer, who may also be responsible for per lot assessment fees to cover costs associated with development of new wells in	Developer(s)	California Water City of Selma Community Development & Engineering Division California Water	Placed as a condition on the project.

	accordance with California Public Utility Commission (CPUC) rules. Developers in the Project area shall be required to prepare a water piping plan for review and approval by Cal Water. • Construction permits for the proposed motel development should be subject to assurance that the City of Selma community water system has the capacity and quality to serve this project. • Concurrence should be obtained from the State Water Resources Control Board, Division of Drinking Water-Southern Branch. For more information call (559) 447-3300.			

Appendix A –Air Quality Impact Analysis - URBEMIS Print-Outs

Appendix B – Traffic Study

Appendix A –Air Quality Impact Analysis - URBEMIS Print-Outs

V5 Mini Storage Commercial Project

Air Quality Impact Assessment, City of Selma

Prepared for:
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VRPA TECHNOLOGIES, INC

July 2016

V5 Mini Storage Commercial Project

Study Team

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Executive Summary

This Air Quality Impact Assessment (AQIA) has been prepared for the purpose of analyzing potential air impacts related to the development of the V5 Mini Storage Commercial Project. The Project is located at the northeast corner of McCall Avenue and Dinuba Avenue in the City of Selma.

The proposed Project lies within the central portion of the San Joaquin Valley in Fresno County. The Project area is located along the northern border of the City of Selma. The proposed Project is located on the Valley floor at an elevation of approximately 308 feet above sea level with the surrounding area mostly flat.

The Project proposes to do the following:

- ✓ Divide the existing parcel into four separate parcels,
- ✓ Develop one parcel into a Mini Storage facility with a ponding basin, and
- ✓ Develop the remaining three parcels into a Commercial Shopping Center

The proposed Project will be developed in phases with the first phase to include the construction of a 124,021 square foot Mini Storage facility with a caretaker's home. The second phase includes the development of an 83,332 square foot commercial center, which will mirror the uses in the shopping center to the south across Dinuba Avenue. Driveway access to the commercial center will be provided via McCall and Dinuba Avenues.

Air quality within the Project area is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs.

IMPACTS

Short-Term (Construction) Emissions

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture.

PM10 emissions can result from construction activities of the project. The San Joaquin Valley Air Pollution Control District (SJVAPCD) requires implementation of effective and comprehensive control measures, rather than a detailed quantification of emissions. The SJVAPCD has determined that compliance with Regulation VIII for all sites and other control measures will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than significant.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include: level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this project, construction emissions from equipment were estimated using the CalEEMod Model. Table E-1 shows the estimated construction emissions that would be generated from the proposed Project. Results of the analysis show that emissions generated from the construction phase of the Project will not exceed the SJVAPCD emission thresholds. The construction emissions are therefore considered less than significant with the implementation of Regulation VIII control measures.

Table E-1
Project Construction Emissions

Summary Report	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Construction Emissions Per Year	3.68	4.26	1.96	0.01	0.43	0.31
SJVAPCD Level of Significance	100	10	10	27	15	15
Does the Project Exceed Standard?	No	No	No	No	No	No

Source: CalEEMod 2013.2.2

Long Term Emissions

Long-Term emissions from the project are generated by mobile source (vehicle) emissions from the Project site and area sources such as water heaters and lawn maintenance equipment.

- *Toxic Air Contaminants (TAC)*

SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the V5 Mini Storage Commercial Project is a Type A Project because it may potentially place new emission sources in the vicinity of existing sensitive receptors.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. One type of screening tool is found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 7) with recommended buffer distances associated with various types of common sources. The V5 Mini Storage Commercial Project does not include land uses that are depicted in Table 7. Therefore, TAC's are not a concern based upon the uses provided in Table 7. Since An evaluation of nearby land uses shows that the proposed Project will not place new sensitive receptors in the vicinity of existing toxic sources. The proposed Project includes the development of an 83,332 square foot commercial center, which should consider prohibiting any dry cleaning businesses that use perchloroethylene since the site is within 300-500 feet of residential land uses.

✓ *Odors*

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and

- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The proposed Project will not generate odorous emissions and is not a project that intends to attract people to an area where odor sources are present. As a result, the proposed Project will not be evaluated for its potential to place sensitive receptors near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. None of the facilities shown in Table 8 fit the characteristics of the proposed Project.

- *Naturally Occurring Asbestos (NOA)*

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Asbestos is commonly found in ultramafic rock and near fault zones. The amount of asbestos that is typically present in these rocks ranges from less than 1% up to approximately 25% and sometimes more. It is released from ultramafic rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. Asbestos is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Asbestos is hazardous and can cause lung disease and cancer dependent upon the level of exposure. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem.

The proposed Project's construction phase may cause asbestos to become airborne due to the construction activities that will occur on site. In order to control naturally-occurring asbestos dust, the project can use some of the following control actions to reduce the release of airborne asbestos fibers:

- Water wetting of road surfaces
- Rinse vehicles and equipment
- Wet loads of excavated material, and
- Cover loads of excavated material

- *Green House Gas Emissions*

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities.

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring. Every nation emits GHGs; therefore, global cooperation will be required to reduce the rate of GHG emissions. There are currently no state regulations in California that establish ambient air quality standards for GHGs. However, the state of California has passed legislation directing CARB to develop actions to reduce GHG emissions.

- <u>Regional Regulations</u>

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions (GHG) on global climate change, the SJVAPCD has adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact.

As shown in Table E-2, the proposed Project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. BAU is referenced in ARB's AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002-2004 period grew to 2020 levels, without control. As a result, an estimate of the proposed Project's operational emissions in 2005 were compared to operational emissions in 2020 in order to determine if the Project meets the 29% emission reduction. The SJVAPCD has reviewed relevant scientific information related to GHG emissions and has determined that they are not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. As a result, the SJVAPCD has determined that Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

Table E-2
V5 Mini Storage Commercial Project Greenhouse Gas Emissions

Summary Report	CO_2e
Operational Emissions Per Year (2005)	5,406.98 MT/yr
Operational Emissions Per Year (2020)	3,494.04 MT/yr
SJVAPCD Level of Significance	29% Reduction Compared to BAU
Does the Project Meet the Standard?	Yes

Localized Mobile Source Emissions – Ozone/Particulate Matter

The Fresno County area is nonattainment for Federal and State air quality standards for ozone and nonattainment for Federal and State standards for PM2.5. Nitrogen oxides and reactive organic gases are regulated as ozone precursors. Significance criteria have been established for criteria pollutant emissions as documented in Section 3.2. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in the appendix of this report. Results of the CalEEMod analysis are shown in Table E-3. Results indicate that the annual operational emissions from the proposed Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants.

Table E-3
Project Operational Emissions

Summary Report	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$	CO2e
Operational Emissions Per Year	21.40	5.25	3.10	0.04	2.12	0.62	3569.60
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod 2013.2.2

CEQA Environmental Checklist

Air Quality

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The significance criteria established by the SJVAPCD is relied upon to make the following determinations. Would the project:

- Conflict with or obstruct implementation of the applicable air quality plan?

The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designates locations for land uses to regulate growth. Fresno COG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the project is the City of Selma Plan, which was adopted in 2010. The proposed Project is consistent with the currently adopted General Plan for the City of Selma and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the project is consistent with the growth assumptions used in the applicable AQPs. As a result, the proposed Project will not conflict with or obstruct implementation of any air quality plans.

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The annual emissions from construction of the project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants as shown in Table 10. The construction emissions are therefore considered less than significant with the implementation of Regulation VIII control measures.

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Fresno County is nonattainment for Ozone (1 hour and 8 hour) and PM10 (State standards) and PM2.5. The SJVAPCD has prepared the 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. The Fresno COG 2014 RTP was found to be in compliance with the 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan. Since the proposed V5 Mini Storage Commercial Project is consistent with the City of Selma General Plan, it will also be in compliance with the 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan. Therefore, the proposed Project will not conflict with or obstruct implementation of any air quality plans.

- Expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the V5 Mini Storage Commercial Project is a Type A Project because it may potentially place new emission sources in the vicinity of existing sensitive receptors.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the

Project is to perform a screening level analysis. One type of screening tool is found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 7) with recommended buffer distances associated with various types of common sources. The V5 Mini Storage Commercial Project does not include land uses that are depicted in Table 7. Therefore, TAC's are not a concern based upon the uses provided in Table 7. Since An evaluation of nearby land uses shows that the proposed Project will not place new sensitive receptors in the vicinity of existing toxic sources. The proposed Project includes the development of an 83,332 square foot commercial center, which should consider prohibiting any dry cleaning businesses that use perchloroethylene since the site is within 300-500 feet of residential land uses.

- Create objectionable odors affecting a substantial number of people?

The proposed Project will not generate odorous emissions and is not a project that intends to attract people to an area where odor sources are present. As a result, the proposed Project will not be evaluated for its potential to place sensitive receptors near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. None of the facilities shown in Table 8 fit the characteristics of the proposed Project.

✓ *Greenhouse Gas Emissions*

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The significance criteria established by the SJVAPCD is relied upon to make the following determinations. Would the project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As shown in Table 11, the proposed Project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. BAU is referenced in ARB's AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002-2004 period grew to 2020 levels, without control. As a result, an estimate of the proposed Project's operational emissions in 2005 were compared to operational emissions in 2020 in order to determine if the Project meets the 29% emission reduction. The SJVAPCD has reviewed relevant scientific information related to GHG emissions and has determined that they are not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. As a result, the SJVAPCD has determined that Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions (GHG) on global climate change, the SJVAPCD has adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact.

As shown in Table 11, the proposed Project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

1.0 Introduction

1.1 Description of the Region/Project

This Air Quality Impact Assessment (AQIA) has been prepared for the purpose of analyzing potential air impacts related to the development of the V5 Mini Storage Commercial Project. The Project is located at the northeast corner of McCall Avenue and Dinuba Avenue in the City of Selma.

The proposed Project lies within the central portion of the San Joaquin Valley in Fresno County. The Project area is located along the northern border of the City of Selma. Figures 1 and 2 show the location of the Project along with major roadways and highways. The proposed Project is located on the Valley floor at an elevation of approximately 308 feet above sea level with the surrounding area mostly flat.

The Project proposes to do the following:

- ✓ Divide the existing parcel into four separate parcels,
- ✓ Develop one parcel into a Mini Storage facility with a ponding basin, and
- ✓ Develop the remaining three parcels into a Commercial Shopping Center

The proposed Project will be developed in phases with the first phase to include the construction of a 124,021 square foot Mini Storage facility with a caretaker's home. The second phase includes the development of an 83,332 square foot commercial center, which will mirror the uses in the shopping center to the south across Dinuba Avenue. Driveway access to the commercial center will be provided via McCall and Dinuba Avenues.

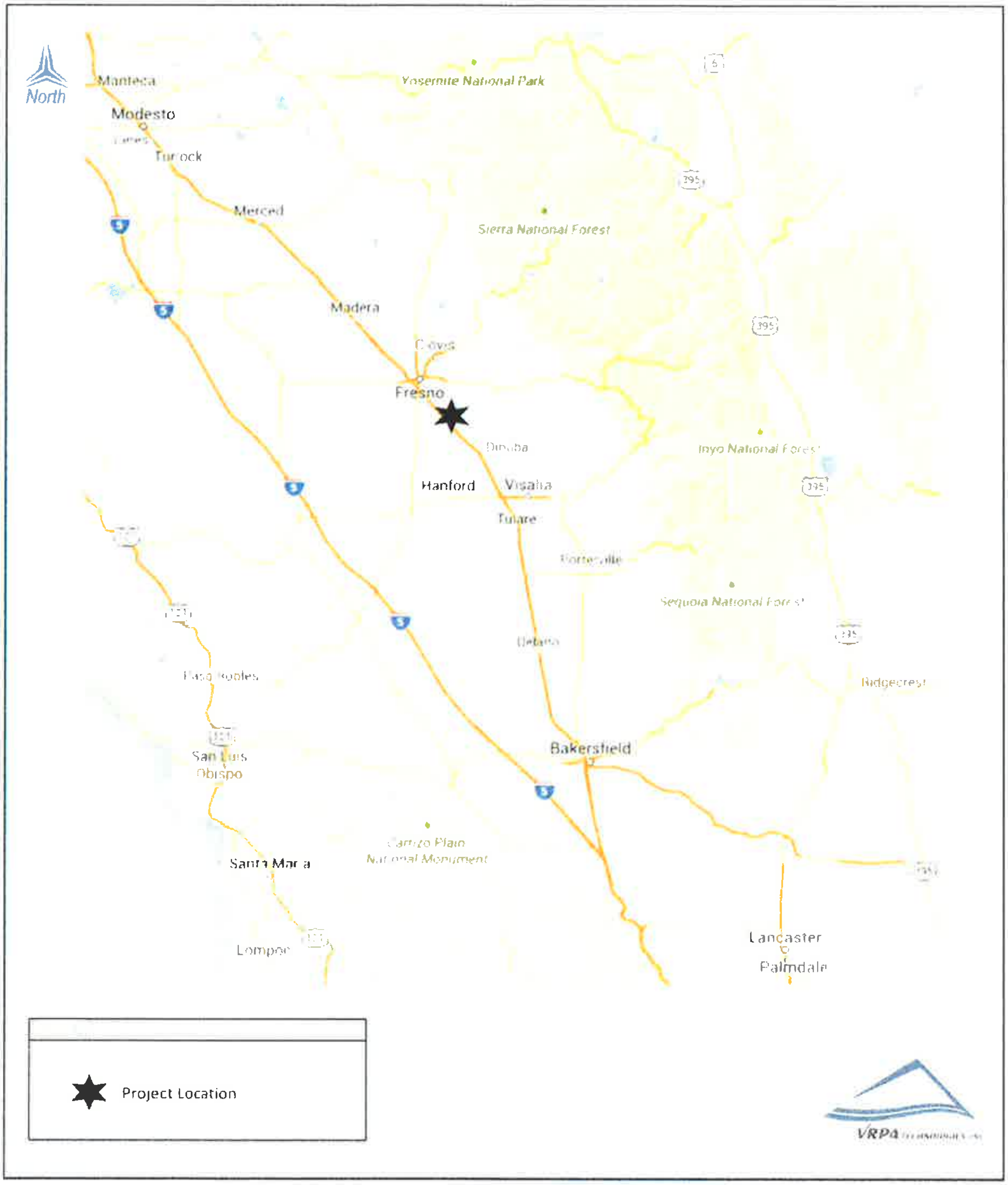
Fresno County is located in one of the most polluted air basins in the country – the San Joaquin Valley Air Basin (SJVAB). The surrounding topography includes foothills and mountains to the east and west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Fresno County is classified as Mediterranean, with moist cool winters and dry warm summers.

1.2 Regulatory

Air quality within the Project area is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality within Fresno County are discussed below along with their individual responsibilities.

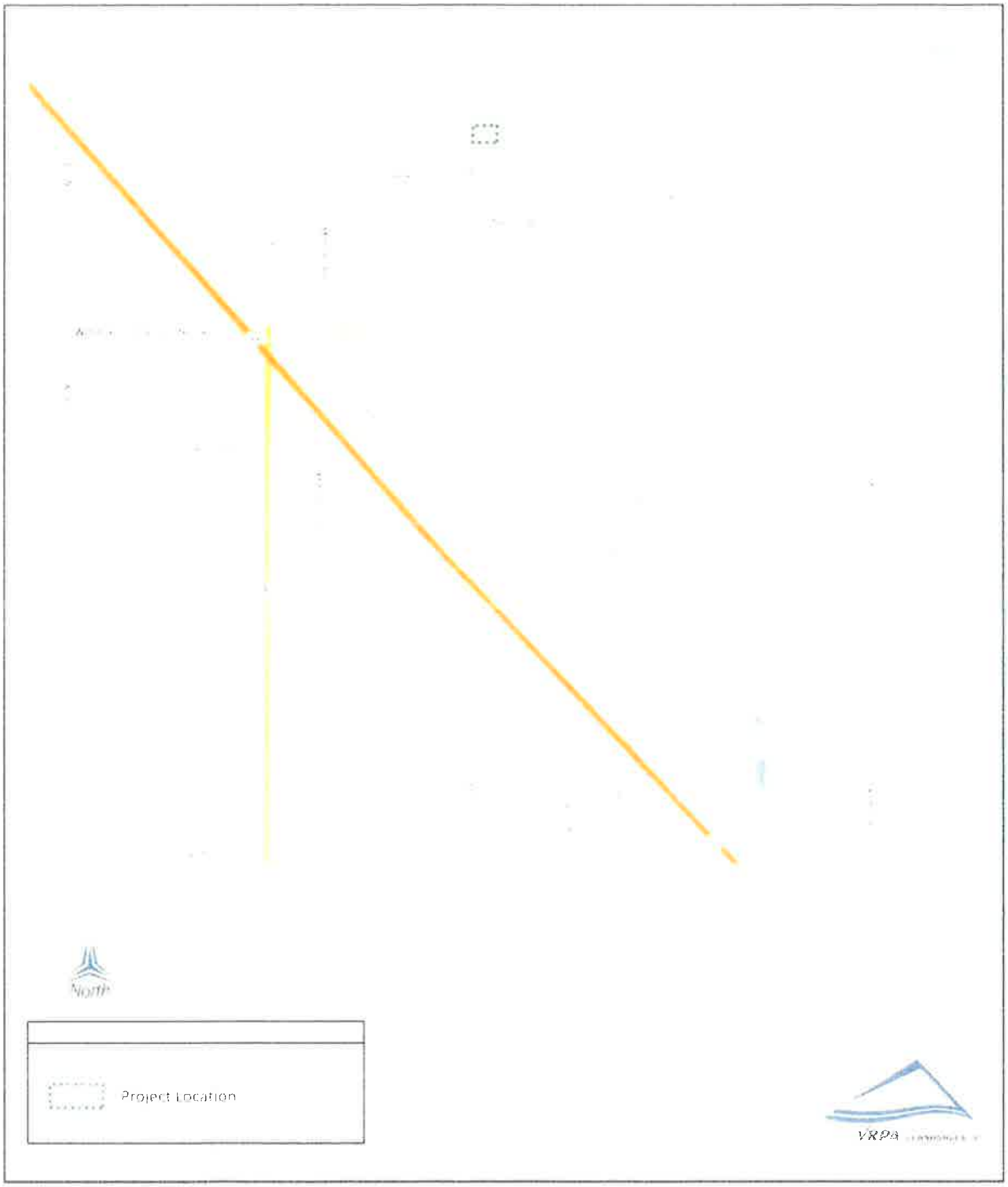
V5 Mini Storage Commercial Project
Regional Location

Figure 1



V5 Mini Storage Commercial Project
Project Location

Figure
2



1.2.1 *Federal Agencies*

- **U.S. Environmental Protection Agency (EPA)**

The Federal Clean Air Bill first adopted in 1967 and periodically amended since then, established federal ambient air quality standards. A 1987 amendment to the Bill set a deadline for the attainment of these standards. That deadline has since passed. The other federal Clean Air Bill Amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources. The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the 1990 amendments.

The Federal Clean Air Act (FCAA) and the national ambient air quality standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, particulate matter (PM), and lead.

The Clean Air Act Section 176(c) (42 U.S.C. 7506(c)) and EPA transportation conformity regulations (40 CFR 93 Subpart A) require that each new Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the Metropolitan Planning Organization (MPO) or accepted by the U.S. Department of Transportation (DOT). The conformity analysis is a federal requirement designed to demonstrate compliance with the national ambient air quality standards. However, because the San Joaquin Valley State Implementation Plan (SIP) for CO, PM10, PM2.5 and Ozone address attainment of both the state and federal standards, for these pollutants, demonstrating conformity to the federal standards is also an indication of progress toward attainment of the state standards. Compliance with the state air quality standards is provided on the pages following this federal conformity discussion.

The EPA approved San Joaquin Valley reclassification of the ozone (8-hour) designation to extreme nonattainment in the Federal Register on May 5, 2010, even though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The revised more-stringent primary standard for ozone was set at 0.075 parts per million (ppm) measured over an 8-hour period. EPA also revised the secondary standard, designed to protect welfare, at 0.075 ppm, making it identical to the primary standard. The existing ozone standard was set in 1997 at 0.08ppm.

1.2.2 Federal Regulations

National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA) provides general information on the effects of federally funded projects. The act was implemented by regulations included in the Code of Federal Regulations (40CFR6). The code requires careful consideration concerning environmental impacts of federal actions or plans, including projects that receive federal funds. The regulations address impacts on land uses and conflicts with state, regional, or local plans and policies, among others. They also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions and to restore and enhance environmental quality as much as possible.

Transportation Conformity Analysis

The Federal transportation conformity regulations (40 Code of Federal Regulations Parts 51 and 93) specify criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The Federal transportation conformity regulation was first promulgated in 1993 by the U.S. EPA, following the passage of amendments to the Federal Clean Air Act in 1990. The Federal transportation conformity regulation has been revised several times since its initial release to reflect both EPA rule changes and court opinions.

The conformity regulation applies nationwide to "all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan" (40 CFR 93.102). Currently, the San Joaquin Valley (or portions thereof) is designated as nonattainment with respect to Federal air quality standards for ozone, and particulate matter under 2.5 microns in diameter (PM2.5); and has a maintenance plan for particulate matter under 10 microns in diameter (PM10), as well as a maintenance plan for carbon monoxide (CO) for the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties.

Under the transportation conformity regulation, the principal criteria for a determination of conformity for transportation plans and programs are:

- The TIP and RTP must pass an emissions budget test using a budget that has been found to be adequate by EPA for transportation conformity purposes, or an interim emission test;
- The latest planning assumptions and emission models specified for use in conformity determinations must be employed;
- The TIP and RTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and
- Interagency and public consultation.

On March 14, 2012, EPA published the Transportation Conformity Rule Restructuring Amendments, effective April 13, 2012 (EPA, 2012). The amendments restructure several sections of the rule so that they apply to any new or revised National Ambient Air Quality Standards. In addition, several clarifications to improve implementation of the rule were finalized.

✓ **Transportation Control Measures**

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address mobile or transportation sources. These are known as Transportation Control Measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

1.2.3 *State Agencies*

✓ **California Air Resources Board (ARB)**

The California Air Resources Board (ARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. The ARB was created in 1967 from the merging of the California Motor Vehicle Pollution Control Board and the Bureau of Air Sanitation and its Laboratory.

The ARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the National Ambient Air Quality Standards (NAAQS) established by the EPA. Whereas the ARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. The ARB combines its data with all local district data and submits the completed SIP to the EPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by the ARB, and attainment plans adopted by the Air Pollution Control Districts (APCDs) and Air Quality Management District's (AQMDs) and approved by the ARB.

States may establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [§39606(b)] and its predecessor statutes.

The CH&SC [§39608] requires the ARB to "identify" and "classify" each air basin in the state on a pollutant-by-pollutant basis. Subsequently, the ARB designated areas in California as nonattainment based on violations of the CAAQSs. Designations and classifications specific to the SJVAB can be found in the next section of this document. Areas in the state were also classified based on severity of air pollution problems. For each nonattainment class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. In addition, air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA mandates.

Other ARB duties include monitoring air quality. The ARB has established and maintains, in conjunction with local APCDs and air quality management districts, a network of sampling stations (called the State and Local Air Monitoring [SLAMS] network), which monitor the present pollutant levels in the ambient air.

Fresno County is in the ARB-designated, SJVAB. A map of the SJVAB is provided in Figure 3. In addition to Fresno County, the SJVAB includes San Joaquin, Kings, Tulare, Madera, Merced, Stanislaus, and Kern Counties.

Federal and State standards for criteria pollutants are provided in Table 1.

1.2.4 *State Regulations*

- **ARB Mobile-Source Regulation**

The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the ARB's motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the ARB has adopted regulations, which required auto manufacturers to phase in less polluting vehicles.

- **California Clean Air Act**

The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CCAA establishes more stringent ambient air quality standards than those included in the FCAA. The ARB is the agency responsible for administering the CCAA. The ARB established ambient air quality standards pursuant to the CH&SC [§39606(b)], which are similar to the federal standards. The San

Joaquin Valley Air Pollution Control District (SJVAPCD) is one of 35 air quality management districts that have prepared air quality management plans to accomplish a five percent annual reduction in emissions documenting progress toward the state ambient air quality standards.

✓ **Tanner Air Toxics Act**

California regulates Toxic Air Contaminants (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Most recently, diesel PM was added to the ARB list of TACs. Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. The ARB adopted amendments to the public-transit bus-fleet rule in October 2003, as well as adopt interim certification procedures for hybrid-electric vehicles in the urban bus and heavy-duty vehicle classes.

All transit agencies are expected to be in compliance with all emission reduction requirements of the regulation since the ultimate phase-in date for all urban bus and transit fleet vehicles was December 31, 2010. Urban Bus (UB) fleets are required to exhibit an 85% reduction of PM from the 2002 baseline and a NOx fleet average of 4.8 g/bhp-hr. Transit Fleet Vehicles (TFVs) are required to exhibit an 80% reduction of PM from the 2005 baseline and a NOx fleet average of 2.4 g/bhp-hr.

These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

V5 Mini Storage Commercial Project
San Joaquin Valley Air Basin

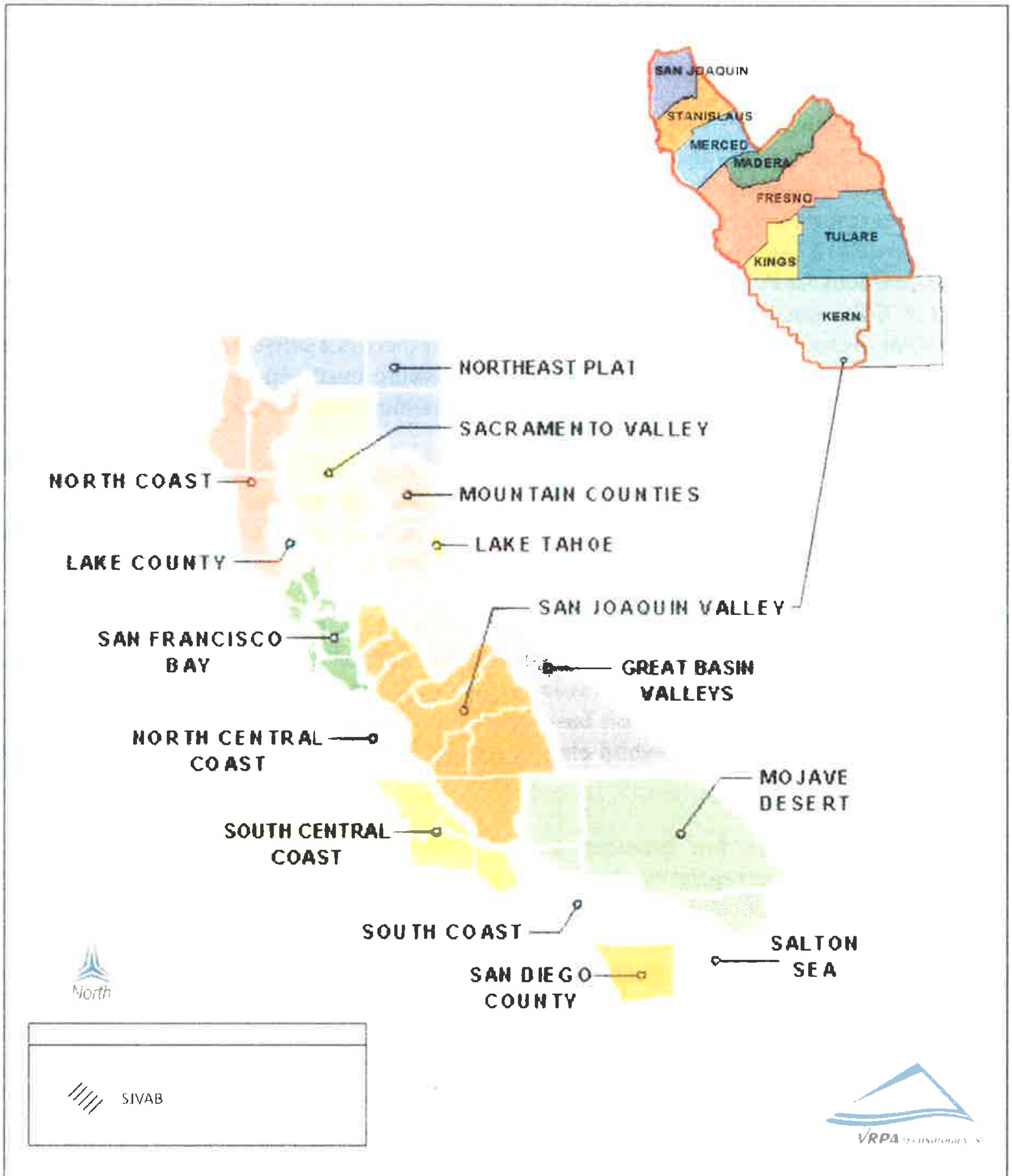


Table 1
Federal and State Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 μg/m³)		0.070 ppm (137 μg/m³)		
Respirable Particulate Matter (PM10)[8]	24 Hour	50 μg/m³	Gravimetric or Beta Attenuation	150 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m³	Gravimetric or Beta Attenuation	12.0 μg/m³	15 μg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 μg/m³)	Gas Phase Chemiluminescence	100 ppb (188 μg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)		0.053 ppm (100 μg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 μg/m³)	Ultraviolet Fluorescence	75 ppb (196 μg/m³)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 μg/m³)	
	24 Hour	0.04 ppm (105 μg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 μg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 μg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 μg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 μg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 μg/m³)	Gas Chromatography			

See footnotes on next page ...

Footnotes:

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

- **California Environmental Quality Act (CEQA)**

CEQA defines a significant impact on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the project. Land use is a required impact assessment category under CEQA. CEQA documents generally evaluate land use in terms of compatibility with the existing land uses and consistency with local general plans and other local land use controls (zoning, specific plans, etc.).

1.2.5 *Regional Agencies*

- **San Joaquin Valley Air Pollution Control District**

The SJVAPCD is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Fresno County and throughout the SJVAB. The District also has responsibility for monitoring air quality and setting and enforcing limits for source emissions. The ARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law.

The District was formed in mid-1991 and prepared and adopted the San Joaquin Valley Air Quality Attainment Plan (AQAP), dated January 30, 1992, in response to the requirements of the State CCAA. The CCAA requires each non-attainment district to reduce pertinent air contaminants by at least five percent (5%) per year until new, more stringent, 1988 State air quality standards are met.

Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

The SJVAPCD has prepared the 2007 Ozone Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone. The 2007 Ozone Plan provides a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the SJVAB.

The 2007 Ozone Plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution. The 2007 Ozone Plan calls for a 75-percent reduction in ozone-forming oxides of nitrogen emissions.

The SJVAPCD has also prepared the 2007 PM10 Maintenance Plan and Request for Redesignation (2007 PM10 Plan). On April 24, 2006, the SJVAPCD submitted a Request for Determination of PM10 Attainment for the Basin to the ARB. The ARB concurred with the request and submitted the request to the EPA on May 8, 2006. On October 30, 2006, the EPA issued a Final Rule determining that the Basin had attained the NAAQS for PM10. However, the EPA noted that the Final Rule did not constitute a redesignation to attainment until all of the FCAA requirements under Section 107(d)(3) were met.

The SJVAPCD has prepared the 2008 PM.2.5 Plan to achieve Federal and State standards for improved air quality in the SJVAB. The 2008 PM.2.5 Plan provides a comprehensive list of regulatory and incentive based measures to reduce PM2.5.

In addition to the 2007 Ozone Plan, the 2008 PM2.5 Plan, and the 2007 PM10 Plan, the SJVAPCD prepared the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI).

The GAMAQI is an advisory document that provides Lead Agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality impacts in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The SJVAPCD is currently in the process of updating the GAMAQI and was used as a guidance document for this analysis.

The SJVAPCD Plans identified above represent the SJVAPCD's plan to achieve both state and federal air quality standards. The regulations and incentives contained in these documents must be legally enforceable and permanent. These plans break emissions reductions and compliance into different emissions source categories.

Each of the SJVAPCD plans (2007 Ozone Plan, 2008 PM2.5 Plan, and 2007 PM10 Maintenance Plan, which relies on the 2003 PM10 Plan for emissions reductions measures) identifies a "budget" for measuring progress toward achieving attainment of the national air quality standard. A "budget" is, in effect, an emissions "threshold" or "not to exceed value" for specific years in which progress toward attainment of the standard must be measured. These specific years can also be described as "budget years" and are established to ensure achievement of the "budget" to demonstrate continued progress toward attainment of the national air quality standard.

The EPA defines specific years in which attainment of the federal standards must be reached, and therefore each of these SJVAPCD plans for which the SJVAB is nonattainment contains different "budget years" in which progress must be made toward achievement of the federal standards. These years are documented below. Again the emissions budgets in Tables 2 through 4 below reflect "thresholds" or "not to exceed" values in the "budget years" for the identified pollutant in order to achieve attainment.

The SJVAPCD has adopted numerous rules and regulations to implement its air quality plans. Following, are significant rules that will apply to the proposed project.

- **Regulation VIII – Fugitive PM10 Prohibitions**
  Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

- **Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities**
  District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the District if at any time the project involves non-residential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The proposed project will meet these criteria and will be required to submit a Dust Control Plan to the District in order to comply with this rule.

- **Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations**
  If asphalt paving will be used, then paving operations of the proposed project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Table 2
On-Road Motor Vehicle Budgets (Summer tons/day)

County	2017		2020		2023	
	ROG	NOx	ROG	NOx	ROG	NOx
Fresno	9.3	22.6	8.3	17.7	8.0	13.5

Table 3
On-Road Motor Vehicle PM-10 Emissions Budgets
(Tons per average annual day)

County	2020	
	PM10	NOx
Fresno	16.1	23.2

Table 4
On-Road Motor Vehicle PM-2.5 Emissions Budgets
(Tons per average annual day)

County	2012		2014	
	PM2.5	NOx	PM2.5	NOx
Fresno	1.5	35.7	1.1	31.4

2.0 Environmental Setting

This section describes existing air quality within the San Joaquin Valley Air Basin and in Fresno County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas.

2.1 Geographical Location

The SJVAB is comprised of eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

2.2 Topographic Conditions

Fresno County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided below. Air pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

2.3 Climatic Conditions

Fresno County is located in one of the most polluted air basins in the country; the San Joaquin Valley Air Basin. The surrounding topography includes foothills and mountains to the east and west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Fresno County is classified as Mediterranean, with moist cool winters and dry warm summers.

Ozone, classified as a "regional" pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Peak ozone levels tend to be higher in the southern portion of the Valley, as the prevailing summer winds sweep precursors downwind of northern source areas before concentrations peak. The separate designations reflect the fact that ozone precursor transport depends on daily meteorological conditions.

Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Fresno County experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high CO concentrations.

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water-soluble so precipitation and fog tends to "reduce" CO concentrations in the atmosphere. PM10 is somewhat "washed" from the atmosphere with precipitation. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast. In the winter, this high- pressure system moves southward, allowing Pacific storms to move through the San Joaquin Valley. These storms bring in moist, maritime air that produces considerable precipitation on the western, upslope side of the Coast Ranges. Significant precipitation also occurs on the western side of the Sierra Nevada. On the valley floor, however, there is some down slope flow from the Coast Ranges and the resultant evaporation of moisture from associated warming results in a minimum of precipitation. Nevertheless, the majority of the precipitation falling in the San Joaquin Valley is produced by those storms during the winter. Precipitation during the summer months is in the form of convective rain showers and is rare. It is usually associated with an influx of moisture into the San Joaquin Valley through the San Francisco area during an anomalous flow pattern in the lower layers of the atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

Precipitation on the San Joaquin Valley floor and in the Sierra Nevada decreases from north to south. Stockton in the north receives about 20 inches of precipitation per year, Fresno in the center, receives about 10 inches per year, and Bakersfield at the southern end of the valley receives less than 6 inches per year. This is primarily because the Pacific storm track often passes through the northern part of the state while the southern part of the state remains protected by the Pacific High. Precipitation in the San Joaquin Valley Air Basin (SJVAB) is confined primarily to the winter months with some also occurring in late summer and fall. Average annual rainfall for the entire San Joaquin Valley is approximately 5 to 16 inches. Snowstorms, hailstorms, and ice storms occur infrequently in the San Joaquin Valley and severe occurrences of any of these are very rare.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong low-level temperature inversions and very stable air conditions. This situation leads to the San Joaquin Valley's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NOx), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM10 and PM2.5 standards.

- **Other Air Quality Determinants**

In addition to climatic conditions (wind, lack of rain, etc.), air pollution can be caused by human/socioeconomic conditions. Air pollution in the SJVAB can be directly attributed to human activities, which cause air pollutant emissions. Human causes of air pollution in the Valley consist of population growth, urbanization (gas-fired appliances, residential wood heaters, etc.), mobile sources (i.e., cars, trucks, airplanes, trains, etc.), oil production, and agriculture. These are called anthropogenic, or human-caused, sources of emissions. The most significant factors, which are accelerating the decline of air quality in the SJVAB, are the Valley's rapid population growth and its associated increases in traffic, urbanization, and industrial activity.

Carbon monoxide emissions overwhelmingly come from mobile sources in the San Joaquin Valley; on-road vehicles contribute 65 percent, while other mobile vehicles, such as trains, planes, and off-road vehicles, contribute another 17 percent. Motor vehicles account for significant portions of regional gaseous and particulate emissions. Local large employers such as industrial plants can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Ozone is the result of a photochemical reaction between Oxides of nitrogen (NOx) and

Reactive Organic Gases (ROG). Mobile sources contribute 64 percent of all NOx emitted from anthropogenic sources. In addition, mobile sources contribute 53 percent of all the ROG emitted from sources within the San Joaquin Valley.

The principal factors that affect air quality in and around Fresno County are:

- The sink effect, climatic subsidence and temperature inversions and low wind speeds
- Automobile and truck travel
- Increases in mobile and stationary pollutants generated by local urban growth

Automobiles, trucks, buses and other vehicles using hydrocarbon fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters; animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Fresno County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities. Finally, industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Fresno County consist of agricultural production and processing operations, wine production, and marketing operations.

The primary contributors of PM10 emissions in the San Joaquin Valley are fugitive windblown dust from "open" fields (38%) and road dust, both paved and unpaved (38%). Farming activities only contribute 14 percent of the PM10.

✓ **Air Pollution Sources**

The four major sources of air pollutant emissions in the SJVAB include industrial plants, motor vehicles, construction activities, and agricultural activities. Industrial plants account for significant portions of regional gaseous and particulate emissions. Motor vehicles, including those from large employers, generate substantial regional gaseous and particulate emissions. Finally, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.). In addition to these primary sources of air pollution, urban areas upwind from Fresno County, including areas north and west of the San Joaquin Valley, can cause or generate emissions that are transported into Fresno County. All four of the major pollutant sources affect ambient air quality throughout the Air Basin.

- **Motor Vehicles**

  Automobiles, trucks, buses and other vehicles using hydrocarbon fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

- **Agricultural and Other Miscellaneous Activities**

  Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters, animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Fresno County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities.

- **Industrial Plants**

  Industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Fresno County consist of agricultural production and processing operations, wine production, and marketing operations.

2.4 San Joaquin Valley Air Basin Monitoring

The SJVAB consists of eight counties, from San Joaquin County in the north to Kern County in the south. SJVAPCD and the ARB maintain numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, PM2.5, and PM10. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. The closest monitoring station to the Project is located at Visalia's N Church Street Monitoring Station. The station monitors particulates, ozone, carbon monoxide, and nitrogen dioxide. Monitoring data for the past three years is summarized in Table 5.

Table 6 identifies the SJVAB's attainment status. As indicated, the SJVAB is nonattainment for Ozone (1 hour and 8 hour) and PM. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The FCAA contains provisions for changing the classifications using factors such as clean air progress rates and requests from States to move areas to a higher classification.

On April 16, 2004 EPA issued a final rule classifying the SJVAB as extreme nonattainment for Ozone, effective May 17, 2004 (69 FR 20550). The (federal) 1-hour ozone standard was revoked on June 6, 2005. However, many of the requirements in the 1-hour attainment plan (SIP) continue to apply to the SJVAB. The current ozone plan is the (federal) 8-hour ozone plan adopted in 2007. The SJVAB was reclassified from a "serious" nonattainment area for the 8-hour ozone standard to "extreme' effective June 4, 2010.

Table 5
Maximum Pollutant Levels at Parlier's Monitoring Station

Pollutant	Time Averaging	2013	2014	2015	Standards	
		Maximums	Maximums	Maximums	National	State
Ozone (O3)	1 hour	0.116 ppm	0.114 ppm	0.122 ppm	-	0.09 ppm
Ozone (O3)	8 hour	0.100 ppm	0.100 ppm	0.097 ppm	0.070 ppm	0.070 ppm
Nitrogen Dioxide (NO2)	1 hour	0.041 ppm	0.048 ppm	0.034 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO2)	Annual Average	0.011 ppm	0.012 ppm	**	0.053 ppm	0.030 ppm
Particulates (PM10)[a]	24 hour	138.1 µg/m3	102.9 µg/m3	120.7 µg/m3	150 µg/m3	50 µg/m3
Particulates (PM10)[a]	Federal Annual Arithmetic Mean	44.6 µg/m3	41.4 µg/m3	39.6 µg/m3	-	20 µg/m3
Particulates (PM2.5)[b]	24 hour	99.6 µg/m3	94.6 µg/m3	75.2 µg/m3	35 µg/m3	-
Particulates (PM2.5)[b]	Federal Annual Arithmetic Mean	16.7 µg/m3	15.1 µg/m3	14.3 µg/m3	12 µg/m3	12 µg/m3

a. Fresno's Drummond Street Monitoring Station
b. Fresno's Garland Monitoring Station
** There was insufficient data available to determine the value.
Source: CARB Website, 2016

Table 6

Fresno County Attainment Status

Pollutant	Designation/Classification: Federal Standards	Designation/Classification: State Standards
Ozone - 1 Hour	Revoked in 2005	Nonattainment/Severe
Ozone - 8 Hour	Nonattainment/Extreme [a]	No State Standard
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment
Lead (Particulate)	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: CARB Website, 2016

a. Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

Notes:

National Designation Categories

Non-Attainment Area: Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Unclassified/Attainment Area: Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant or meets the national primary or secondary ambient air quality standard for the pollutant.

State Designation Categories

Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.

Attainment: A pollutant is designated attainment if the State standard for that pollutant was not violated at any site in the area during a three-year period.

Non-attainment: A pollutant is designated non-attainment if there was at least one violation of a State standard for that pollutant in the area.

Non-Attainment/Transitional: A subcategory of the non-attainment designation. An area is designated non-attainment/transitional to signify that the area is close to attaining the standard for the pollutant.

2.5 Air Quality Standards

The FCAA, first adopted in 1963, and periodically amended since then, established National Ambient Air Quality Standards (NAAQS). A set of 1977 amendments determined a deadline for the attainment of these standards. That deadline has since passed. Other CAA amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources.

In 1988, the State of California passed the CCAA (State 1988 Statutes, Chapter 568), which set forth a program for achieving more stringent California Ambient Air Quality Standards. The ARB implements State ambient air quality standards, as required in the CCAA, and cooperates with the federal government in implementing pertinent sections of the FCAA Amendments (FCAAA). Further, CARB regulates vehicular emissions throughout the State. The SJVAPCD regulates stationary sources, as well as some mobile sources. Attainment of the more stringent State PM10 Air Quality Standards is not currently required.

The EPA uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called the NAAQS.

The SJVAPCD operates regional air quality monitoring networks that provide information on average concentrations of pollutants for which State or federal agencies have established ambient air quality standards. Descriptions of nine pollutants of importance in Fresno County follow.

- **Ozone (1-hour and 8-hour)**

  The most severe air quality problem in the Air Basin is the high level of ozone. Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. Here, ground level, or "bad" ozone, is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about 10 miles up, where it meets the second layer, the stratosphere. The stratospheric, or "good" ozone layer, extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

  "Bad" ozone is what is known as a photochemical pollutant. It needs reactive organic gases (ROG), NOx, and sunlight. ROG and NOx are emitted from various sources throughout Fresno County. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors.

  Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. Ozone, the primary constituent of smog, is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on other air pollutants (called precursors), specifically NOx and ROG. Sources of precursor gases to the photochemical reaction that form ozone number in the thousands. Common sources include consumer products, gasoline vapors, chemical solvents, and combustion products of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Approximately 50 million people lived in counties with air quality levels above the EPA's health-based national air quality standard in 1994. The highest levels of ozone were recorded in Los Angeles, closely followed by the San Joaquin Valley. High levels also persist in other heavily populated areas, including the Texas Gulf Coast and much of the Northeast.

While the ozone in the upper atmosphere absorbs harmful ultraviolet light, ground-level ozone is damaging to the tissues of plants, animals, and humans, as well as to a wide variety of inanimate materials such as plastics, metals, fabrics, rubber, and paints. Societal costs from ozone damage include increased medical costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

- ***Health Effects***

  While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as: forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

  People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults.

Teenagers spend at least twice as much time as adults in active sports and outdoor activities. In addition, children inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs.

The ARB found ozone standards in the SJVAB nonattainment of Federal and State standards.

✓ **Suspended PM (PM10 and PM2.5)**

Particulate matter pollution consists of very small liquid and solid particles that remain suspended in the air for long periods. Some particles are large or concentrated enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter is emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. PM10 refers to particles less than or equal to 10 microns in aerodynamic diameter. PM2.5 refers to particles less than or equal to 2.5 microns in aerodynamic diameter and are a subset of PM10. Particulates of concern are those that are 10 microns or less in diameter. These are small enough to be inhaled, pass through the respiratory system and lodge in the lungs, possibly leading to adverse health effects.

In the western United States, there are sources of PM10 in both urban and rural areas. Because particles originate from a variety of sources, their chemical and physical compositions vary widely. The composition of PM10 and PM2.5 can also vary greatly with time, location, the sources of the material and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen, smoke, mist, and acid fumes are the main components of PM10 and PM2.5. In addition to those listed previously, secondary particles can also be formed as precipitates from chemical and photochemical reactions of gaseous sulfur dioxide (SO2) and NOx in the atmosphere to create sulfates (SO4) and nitrates (NO3). Secondary particles are of greatest concern during the winter months where low inversion layers tend to trap the precursors of secondary particulates.

The ARB 2008 PM2.5 Plan builds upon the aggressive emission reduction strategy adopted in the 2007 Ozone Plan and strives to bring the valley into attainment status for the 1997 NAAQS for PM2.5. The 2008 PM2.5 Plan indicates that all planned reductions (from the 2007 Ozone Plan and state standard.

The following new controls considered in the 2008 PM2.5 Plan include:

- Tighter restrictions on residential wood burning and space heating
- More stringent limits on PM2.5, SO2, and NOx emissions from industrial sources
- Measures to reduce emissions from prescribed burning and agricultural burning
- More effective work practices to control PM2.5 in fugitive dust

The control strategy in this plan would also bring the valley closer to attainment status for the 2006 daily PM2.5 standard. The district presented the draft 2008 PM2.5 Plan to the District Governing Board on April 17, 2008, following a 30-day public comment period. This plan was delivered to the EPA in April 2008. The 2008 PM2.5 Plan for the 1997 PM2.5 standard (as revised in 2011) was approved by EPA on November 9, 2011, which contains motor vehicle emission budgets for PM2.5 and NOx established based on average annual daily emissions, as well as a trading mechanism. The motor vehicle emissions budget for PM2.5 includes directly emitted PM2.5 motor vehicle emissions from tailpipe, brake wear and tire wear. Volatile Organic Compounds (VOC), SOx, ammonia, and dust (from paved roads, unpaved roads, and road construction) were found to be insignificant and not included in the motor vehicle emission budgets for conformity purposes.

- ***Health Effects***

  PM10 and PM2.5 particles are small enough—about one-seventh the thickness of a human hair, or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings. PM10 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. PM10 and PM2.5 can aggravate respiratory disease and cause lung damage, cancer, and premature death.

  Although particulate matter can cause health problems for everyone, certain people are especially vulnerable to adverse health effects of PM10. These "sensitive populations" include children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis. Of greatest concern are recent studies that link

PM10 exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM10 can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States.

The ARB found PM10 standards in the SJVAB in attainment of Federal standards and nonattainment for State standards. The ARB found PM2.5 standards in the SJVAB nonattainment of Federal and State standards.

- **Carbon Monoxide (CO)**

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, contributes more than two thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO.

- ***Health Effects***

CO enters the bloodstream and binds more readily to hemoglobin than oxygen, reducing the oxygen-carrying capacity of blood and thus reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and in prolonged, enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin (COHb) in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome (SIDS); and increased daily mortality rate.

Most of the studies evaluating adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in symptoms ranging from common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death.

The ARB found CO standards in the SJVAB in unclassified/attainment of Federal standards and attainment for State standards.

Nitrogen Dioxide (NO2)

Nitrogen oxides (NOx) is a family of highly reactive gases that are primary precursors to the formation of ground-level ozone and react in the atmosphere to form acid rain. NOx is emitted from combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NOx is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates.

Health Effects

NOx is an ozone precursor that combines with Reactive Organic Gases (ROG) to form ozone. See the ozone section above for a discussion of the health effects of ozone.

Direct inhalation of NOx can also cause a wide range of health effects. NOx can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO2) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO2 may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NOx are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO2 may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NOx can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NOx can also impair visibility. NOx is a major component of acid deposition in California. NOx may affect both terrestrial and aquatic ecosystems. NOx in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters. Eutrophication occurs when a body of water suffers an increase in nutrients that reduce the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

NO2 is toxic to various animals as well as to humans. Its toxicity relates to its ability to combine with water to form nitric acid in the eye, lung, mucus membranes, and skin. Studies of the health impacts of NO2 include experimental studies on animals, controlled laboratory studies on humans, and observational studies.

In animals, long-term exposure to NOx increases susceptibility to respiratory infections, lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO2, can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes as well as hospital admissions for respiratory conditions.

NO_x contributes to a wide range of environmental effects both directly and when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication as discussed above. Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms.

The ARB found NO_2 standards in the SJVAB in unclassified/attainment of Federal standards and attainment for State standards.

- ✓ **Sulfur Dioxide (SO_2)**

The major source of sulfur dioxide (SO_2) is the combustion of high-sulfur fuels for electricity generation, petroleum refining and shipping. High concentrations of SO_2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO_2 levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO_2, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO_2 also is a major precursor to $PM_{2.5}$, which is a significant health concern and a main contributor to poor visibility. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain.

The ARB found SO_2 standards in the SJVAB as unclassified for Federal standards and attainment for State standards.

- ✓ **Lead (Pb)**

Lead, a naturally occurring metal, can be a constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in automobile fuel. Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since this has occurred the ambient concentrations of lead have dropped dramatically.

Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children. Effects on the nervous systems of children are one of the primary health risk concerns from lead. In high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

The ARB found Lead standards in the SJVAB in unclassified/attainment of Federal standards and attainment for State standards.

Toxic Air Contaminants (TACs)

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination. The ten TACs are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Caltrans' guidance for transportation studies references the Federal Highway Administration (FHWA) memorandum titled "Interim Guidance on Air Toxic Analysis in NEPA Documents" which discusses emissions quantification of six "priority" compounds of 21 Mobile Source Air Toxics (MSAT) identified by the United States Environmental Protection Agency (USEPA). The six diesel exhaust (particulate matter and organic gases), benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and acrolein.

Some studies indicate that diesel PM poses the greatest health risk among the TACs listed above. A 10-year research program (California Air Resources Board 1998) demonstrated that diesel PM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to diesel PM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Diesel PM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a diesel PM exposure method. This method uses the ARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. Table 7 depicts the ARB Handbook's recommended buffer distances associated with various types of common sources.

Existing air quality concerns within Fresno County and the entire SJVAB are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

- **Odors**

Typically odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor.

Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

TABLE 7

Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

*Notes:

- These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.
- Recommendations are based primarily on data showing that the air pollution exposures addressed here (i.e., localized) can be reduced as much as 80% with the recommended separation.
- The relative risk for these categories varies greatly (see Table 1-2). To determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.
- These recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists. The recommended distances take into account other factors in addition to available health risk data (see individual category descriptions).
- Site-specific project design improvements may help reduce air pollution exposures and should also be considered when siting new sensitive land uses.
- This table does not imply that mixed residential and commercial development in general is incompatible. Rather it focuses on known problems like dry cleaners using perchloroethylene that can be addressed with reasonable preventative actions.

Source: SJVAPCD 2016

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. Information presented in Table 8 will be used as a screening level of analysis for potential odor sources for the proposed project.

TABLE 8

Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: SJVAPCD 2016

Naturally Occurring Asbestos (NOA)

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Asbestos is commonly found in ultramafic rock and near fault zones. The amount of asbestos that is typically present in these rocks ranges from less than 1% up to approximately 25% and sometimes more. It is released from ultramafic rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. Asbestos is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Asbestos is hazardous and can cause lung disease and cancer dependent upon the level of exposure. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem.

The proposed Project's construction phase may cause asbestos to become airborne due to the construction activities that will occur on site. In order to control naturally-occurring asbestos dust, the project can use some of the following control actions to reduce the release of airborne asbestos fibers:

- Water wetting of road surfaces
- Rinse vehicles and equipment
- Wet loads of excavated material, and
- Cover loads of excavated material

Greenhouse Gas Emissions (GHG)

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- **Carbon Dioxide (CO_2):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement, asphalt paving, truck trips). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH_4):** Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **Nitrous Oxide (N_2O):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

- **Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring. Every nation emits GHGs; therefore, global cooperation will be required to reduce the rate of GHG emissions. There are currently no state regulations in California that establish ambient air quality standards for GHGs. However, the state of California has passed legislation directing CARB to develop actions to reduce GHG emissions.

- **Assembly Bill 32 (California Global Warming Solutions Act of 2006)**

  California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

  AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 emission cap by 2020.

- **Senate Bill 375**

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets.

This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

- **Regional Regulations**

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change, the SJVAPCD has adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy - Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

- **AB 32 and SB 375 Compliance**

State action on climate change is mandated by AB 32 and SB 375. The Fresno Council of Governments (Fresno COG), along with other regional planning agencies throughout the state, will be monitoring the progress of state agencies in developing approaches to address GHG emissions. As agreed-upon approaches for project-level CEQA analysis and for transportation planning are established, Fresno COG expects that climate change will be a key environmental consideration in future regional transportation planning. Both Fresno COG and responsible agencies will be required to adhere to any future applicable mandatory regulations regarding global warming resulting from the passage of AB 32 and SB 375, but the exact character of such future implementing strategies is not known at this time.

While the cumulative significance of climate change has been established, in absence of established project-level significance thresholds, it is speculative at this time to determine whether the GHG emissions related to the proposed Project represents a considerable contribution to a significant cumulative impact.

3.0 Air Quality Impacts with Significance Criteria

3.1 Methodology

The impact assessment for air quality focuses on potential effects the Project might have on air quality within the Fresno County region. The SJVAPCD has established thresholds of significance for determining environmental significance. These thresholds separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project, which are recognized to be short in duration. The long-term emissions are primarily related to the activities that will occur indefinitely as a result of project operations. Impacts will be evaluated both on the basis of CEQA Appendix G criteria and SJVAPCD significance criteria. The impacts to be evaluated will be those involving construction and operational emissions of criteria pollutants.

- **CalEEMod**

  CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

  The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The model can be used for a variety of situations where an air quality analysis is necessary or desirable such as California Environmental Quality Act (CEQA) documents, National Environmental Policy Act (NEPA) documents, pre-project planning, compliance with local air quality rules and regulations, etc.

3.2 Criteria for Significance

According to CEQA, a project will normally have a significant adverse impact on air quality if it will "violate any ambient air quality standard, conflict with or obstruct implementation of an applicable air quality plan, result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, create substantial objectionable odors, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations."

For regional pollutants such as ozone, PM10, sulfur dioxide, or nitrogen dioxide, the impact of new development cannot be predicted in terms of concentrations, but is addressed in terms of changes in the regional burden of emissions.

For localized pollutants, such as carbon monoxide, an increase in concentrations that would result in a predicted violation of the most stringent State or federal standard (20.0 PPM for 1-hour or 9.0 PPM for 8-hours) is considered to represent a significant impact. This assessment provides for two types of localized area pollutant impact analysis; street and highway improvements and traffic volumes and construction impacts.

For purposes of this environmental assessment, an impact is considered significant if one or more of the following conditions occur from implementation of the Project:

- ✓ Regional air quality emission exceed standards;
- ✓ Local air quality emission exceed standards;
- ✓ Conflict/obstruct implementation of an applicable air quality plan;
- ✓ Result in a cumulatively considerable net increase of any criteria pollutant in non-attainment area;
- ✓ Significant construction related air quality impacts occur; and/or
- ✓ The creation of objectionable odors.

The District has established thresholds for certain pollutants shown in Table 9.

Table 9
SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Short-term Effects (Construction)	100	10	10	27	15	15
Long-term Effects (Operation)	100	10	10	27	15	15

Source: SJVAPCD 2016

3.3 Short-Term (Construction) Emissions

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture.

Adverse effects of construction activities cause increased dust-fall and locally elevated levels of total suspended particulate. Dust-fall can be a nuisance to neighboring properties or previously completed developments surrounding or within the Project area and may require frequent washing during the construction period. Further, asphalt-paving materials used during construction will present temporary, minor sources of hydrocarbons that are precursors of ozone.

PM10 emissions can result from construction activities of the project. The SJVAPCD requires implementation of effective and comprehensive control measures, rather than a detailed quantification of emissions. The SJVAPCD has determined that compliance with Regulation VIII for all sites and other control measures will constitute sufficient mitigation to reduce PM10 impacts to a level considered less-than significant.

Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include: level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this project, construction emissions from equipment were estimated using the CalEEMod Model. Table 10 shows the estimated construction emissions that would be generated from the proposed Project. Results of the analysis show that emissions generated from the construction phase of the Project will not exceed the SJVAPCD emission thresholds. The construction emissions are therefore considered less than significant with the implementation of Regulation VIII control measures.

Table 10

Project Construction Emissions

Summary Report	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Construction Emissions Per Year	3.68	4.26	1.96	0.01	0.43	0.31
SJVAPCD Level of Significance	100	10	10	27	15	15
Does the Project Exceed Standard?	No	No	No	No	No	No

Source: CalEEMod 2013.2.2

3.3.1 Construction Measures

Compliance with Regulation VIII under the San Joaquin Valley Air District for all construction sites will constitute sufficient measures to reduce PM10 impacts to a level considered less-than significant.

The following measures from the GAMAQI are required to be implemented at all construction sites:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

- ✓ All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- ✓ All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- ✓ With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- ✓ When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- ✓ All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
- ✓ Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- ✓ Within urban areas, track out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

Additional enhanced control measures are desirable where feasible and include:

- ✓ Limit traffic speeds on unpaved roads to 15 mph; and
- ✓ Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.

Additional mitigation measures should be considered for reducing emissions from construction emissions. The District's GAMAQI suggests the following measures:

- ✓ Use of alternative fueled or catalyst equipped diesel construction equipment;
- ✓ Minimize idling time (e.g., 10-minute maximum);
- ✓ Limit the hours of operation of heavy duty equipment and/or the amount of equipment in use;
- ✓ Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set);
- ✓ Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways; and
- ✓ Implement activity management (e.g. rescheduling activities to reduce short-term impacts).

The use of Best Management Practices (BMPs) would reduce or eliminate environmental impacts from construction activities. The applicable BMPs for project construction include the following measures:

- Construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications. Low-sulfur fuel should be used in all construction equipment as provided in California Code of Regulations Title 17, Section 93114.
- Where available, use electricity from power poles rather than temporary diesel- or gasoline-powered generators.
- Construction activities that affect traffic flow on the arterial roadways shall be scheduled to off-peak hours to the extent possible. Additionally, construction trucks shall be directed away from congested streets or sensitive receptor areas.
- Where possible, enforce truck parking restrictions; provide onsite services to minimize truck traffic in or near residential areas, including services such as meal or cafeteria.
- Wash off trucks as they leave the right-of-way as necessary to control fugitive dust emissions.
- Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area.

3.4 Long-Term Emissions

Long-Term emissions from the project are generated by mobile source (vehicle) emissions from the project site and area sources such as water heaters and lawn maintenance equipment.

3.4.1 *Toxic Air Contaminants (TAC)*

SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts – 2015, identifies the need for projects to analyze the potential for adverse air quality impacts to sensitive receptors. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the V5 Mini Storage Commercial Project is a Type A Project because it may potentially place new emission sources in the vicinity of existing sensitive receptors.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. One type of screening tool is found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 7) with recommended buffer distances associated with various types of common sources. The V5 Mini Storage Commercial Project does not include land uses that are depicted in Table 7. Therefore, TAC's are not a concern based upon the uses provided in Table 7. Since An evaluation of nearby land uses shows that the proposed Project will not place new sensitive receptors in the vicinity of existing toxic sources. The proposed Project includes the development of an 83,332 square foot commercial center, which should consider prohibiting any dry cleaning businesses that use perchloroethylene since the site is within 300-500 feet of residential land uses.

3.4.2 *Odors*

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the District. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact. Because the project is a transit oriented development, it is not expected to generate significant odors.

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- ✓ Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and

- ✓ Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The proposed Project will not generate odorous emissions and is not a project that intends to attract people to an area where odor sources are present. As a result, the proposed Project will not be evaluated for its potential to place sensitive receptors near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. None of the facilities shown in Table 8 fit the characteristics of the proposed Project.

3.4.3 *Naturally Occurring Asbestos (NOA)*

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Asbestos is commonly found in ultramafic rock and near fault zones. The amount of asbestos that is typically present in these rocks ranges from less than 1% up to approximately 25% and sometimes more. It is released from ultramafic rock when it is broken or crushed. This can happen when cars drive over unpaved roads or driveways, which are surfaced with these rocks, when land is graded for building purposes, or at quarrying operations. Asbestos is also released naturally through weathering and erosion. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. Asbestos is hazardous and can cause lung disease and cancer dependent upon the level of exposure. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem.

The proposed Project's construction phase may cause asbestos to become airborne due to the construction activities that will occur on site. In order to control naturally-occurring asbestos dust, the project can use some of the following control actions to reduce the release of airborne asbestos fibers:

- Water wetting of road surfaces
- Rinse vehicles and equipment
- Wet loads of excavated material, and
- Cover loads of excavated material

3.4.4 *Greenhouse Gas Emissions*

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are:

- ✓ **Carbon Dioxide (CO_2):** Carbon dioxide enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement, asphalt paving, truck trips). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- ✓ **Methane (CH_4):** Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- ✓ **Nitrous Oxide (N_2O):** Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- ✓ **Fluorinated Gases:** Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (i.e., CFCs, HCFCs, and halons). These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases ("High GWP gases").

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring. Every nation emits GHGs; therefore, global cooperation will be required to reduce the rate of GHG emissions. There are currently no state regulations in California that establish ambient air quality standards for GHGs. However, the state of California has passed legislation directing CARB to develop actions to reduce GHG emissions.

✓ Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 emission cap by 2020.

Senate Bill 375

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable community's strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets.

This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

Regional Regulations

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions (GHG) on global climate change, the SJVAPCD has adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

✓ AB 32 and SB 375 Compliance

State action on climate change is mandated by AB 32 and SB 375. Fresno Council of Governments (Fresno COG), along with other regional planning agencies throughout the state, will be monitoring the progress of state agencies in developing approaches to address GHG emissions. As agreed-upon approaches for project-level CEQA analysis and for transportation planning are established, Fresno COG expects that climate change will be a key environmental consideration in future regional transportation planning. Both Fresno COG and responsible agencies will be required to adhere to any future applicable mandatory regulations regarding global warming resulting from the passage of AB 32 and SB 375, but the exact character of such future implementing strategies is not known at this time.

While the cumulative significance of climate change has been established, in absence of established project-level significance thresholds, it is speculative at this time to determine whether the GHG emissions related to the proposed Project represents a considerable contribution to a significant cumulative impact.

As shown in Table 11, the proposed Project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. BAU is referenced in ARB's AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002-2004 period grew to 2020 levels, without control. As a result, an estimate of the proposed Project's operational emissions in 2005 were compared to operational emissions in 2020 in order to determine if the Project meets the 29% emission reduction. The SJVAPCD has reviewed relevant scientific information related to GHG emissions and has determined that they are not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. As a result, the SJVAPCD has determined that Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

Table 11
V5 Mini Storage Commercial Project Greenhouse Gas Emissions

Summary Report	CO_2e
Operational Emissions Per Year (2005)	5,406.98 MT/yr
Operational Emissions Per Year (2020)	3,494.04 MT/yr
SJVAPCD Level of Significance	29% Reduction Compared to BAU
Does the Project Meet the Standard?	Yes

3.4.5 *Localized Mobile Source Emissions – Ozone/Particulate Matter*

The Fresno County area is nonattainment for Federal and State air quality standards for ozone and nonattainment for Federal and State standards for PM2.5. Nitrogen oxides and reactive organic gases are regulated as ozone precursors. Significance criteria have been established for criteria pollutant emissions as documented in Section 3.2. Operational emissions have been estimated for the Project using the CalEEMod Model and detailed results are included in the appendix of this report. Results of the CalEEMod analysis are shown in Table 12. Results indicate that the annual operational emissions from the proposed Project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants.

Table 12
Project Operational Emissions

Summary Report	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$	CO2e
Operational Emissions Per Year	21.40	5.25	3.10	0.04	2.12	0.62	3569.60
SJVAPCD Level of Significance	100	10	10	27	15	15	None
Does the Project Exceed Standard?	No	No	No	No	No	No	No

Source: CalEEMod 2013.2.2

3.4.6 *Indirect Source Review*

The V5 Mini Storage Commercial Project is subject to the SJVAPCD's Indirect Source Review (ISR) program, which is also known as Rule 9510. The ISR Rule (Rule 9510) and the Administrative ISR Fee Rule (Rule 3180) are the result of state requirements outlined in the California Health and Safety Code, Section 40604 and the State Implementation Plan (SIP). The purpose of the San Joaquin Valley Air Pollution Control District's Indirect Source Review (ISR) Program is to reduce emissions of NOx and PM10 from new projects. In general, new development contributes to the air-pollution problem in the Valley by increasing the number of vehicles and vehicle miles traveled.

Utilizing the ISR Fee Estimator calculator available on the SJVAPCD website, it was determined that the proposed Project's total cost for emission reductions is $166,142.08. The ISR Fee Estimator worksheets are included in the appendices.

4.0 CEQA Environmental Checklist

4.1 Air Quality

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The significance criteria established by the SJVAPCD is relied upon to make the following determinations. Would the project:

- ✓ Conflict with or obstruct implementation of the applicable air quality plan?

The primary way of determining consistency with the air quality plan's (AQP's) assumptions is determining consistency with the applicable General Plan to ensure that the Project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designates locations for land uses to regulate growth. Fresno COG uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. Existing and future pollutant emissions computed in the AQP are based on land uses from area general plans. AQPs detail the control measures and emission reductions required for reaching attainment of the air standards.

The applicable General Plan for the project is the City of Selma Plan, which was adopted in 2010. The proposed Project is consistent with the currently adopted General Plan for the City of Selma and is therefore consistent with the population growth and VMT applied in the plan. Therefore, the project is consistent with the growth assumptions used in the applicable AQPs. As a result, the proposed Project will not conflict with or obstruct implementation of any air quality plans.

- ✓ Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The annual emissions from construction of the project will be less than the applicable SJVAPCD emission thresholds for criteria pollutants as shown in Table 10. The construction emissions are therefore considered less than significant with the implementation of Regulation VIII control measures.

- ✓ Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Fresno County is nonattainment for Ozone (1 hour and 8 hour) and PM10 (State standards) and PM2.5. The SJVAPCD has prepared the 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone and PM. The Fresno COG 2014 RTP was found to be in compliance with the 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan. Since the proposed V5 Mini Storage Commercial Project is consistent with the City of Selma General Plan, it will also be in compliance with the 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and 2008 PM2.5 Plan. Therefore, the proposed Project will not conflict with or obstruct implementation of any air quality plans.

- Expose sensitive receptors to substantial pollutant concentrations?

Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities. From a health risk perspective, the V5 Mini Storage Commercial Project is a Type A Project because it may potentially place new emission sources in the vicinity of existing sensitive receptors.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis. One type of screening tool is found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Perspective. This handbook includes a table (depicted in Table 7) with recommended buffer distances associated with various types of common sources. The V5 Mini Storage Commercial Project does not include land uses that are depicted in Table 7. Therefore, TAC's are not a concern based upon the uses provided in Table 7. Since An evaluation of nearby land uses shows that the proposed Project will not place new sensitive receptors in the vicinity of existing toxic sources. The proposed Project includes the development of an 83,332 square foot commercial center, which should consider prohibiting any dry cleaning businesses that use perchloroethylene since the site is within 300-500 feet of residential land uses.

- Create objectionable odors affecting a substantial number of people?

The SJVAPCD requires that an analysis of potential odor impacts be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to be located near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

The proposed Project will not generate odorous emissions and is not a project that intends to attract people to an area where odor sources are present. As a result, the proposed Project will not be evaluated for its potential to place sensitive receptors near existing odor sources.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 8 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. None of the facilities shown in Table 8 fit the characteristics of the proposed Project.

4.2 Greenhouse Gas Emissions

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The significance criteria established by the SJVAPCD is relied upon to make the following determinations. Would the project:

✓ Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As shown in Table 11, the proposed Project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. BAU is referenced in ARB's AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002-2004 period grew to 2020 levels, without control. As a result, an estimate of the proposed Project's operational emissions in 2005 were compared to operational emissions in 2020 in order to determine if the Project meets the 29% emission reduction. The SJVAPCD has reviewed relevant scientific information related to GHG emissions and has determined that they are not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. As a result, the SJVAPCD has determined that Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

✓ Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions (GHG) on global climate change, the SJVAPCD has adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual (BAU), is required to determine that a project would have a less than cumulatively significant impact.

As shown in Table 11, the proposed Project would generate 5,406.98 Metric Tons of Carbon Dioxide Equivalent per year (MTCO2eq./year) using an operational year of 2005, which includes area, energy, mobile, waste, and water sources. Results of the analysis show that the proposed Project's GHG emissions in the year 2020 is 3,494.04 MTCO2eq./year. This represents an achievement of 35% GHG emission reduction compared to BAU, which meets the 29% GHG emission reduction target. As a result, the proposed Project, under District standards, will not exceed applicable thresholds of significance for GHG emissions.

APPENDIX A
CalEEMod Worksheets

V-5 Mini Storage Commercial Project

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	124.02	1000sqft	2.85	124,021.00	0
Regional Shopping Center	83.33	1000sqft	1.91	83,332.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Demolition -

Vehicle Trips - Trip Rates were adjusted to reflect the 9th Edition of the ITE Trip Generation Manual

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	124,020.00	124,021.00
tblLandUse	LandUseSquareFeet	83,330.00	83,332.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblVehicleTrips	ST_TR	2.59	1.17
tblVehicleTrips	SU_TR	2.59	0.76
tblVehicleTrips	WD_TR	42.94	42.70
tblVehicleTrips	WD_TR	2.59	2.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.4933	4.0766	3.5045	5.4300e-003	0.1702	0.2446	0.4148	0.0651	0.2292	0.2943	0.0000	471.9105	471.9105	0.0869	0.0000	473.7353
2018	1.4628	0.1875	0.1759	2.9000e-004	3.8700e-003	0.0111	0.0150	1.0400e-003	0.0104	0.0115	0.0000	24.8252	24.8252	5.8000e-003	0.0000	24.9469
Total	**1.9561**	**4.2642**	**3.6804**	**5.7200e-003**	**0.1741**	**0.2558**	**0.4298**	**0.0661**	**0.2396**	**0.3057**	**0.0000**	**496.7356**	**496.7356**	**0.0927**	**0.0000**	**498.6822**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.4933	4.0766	3.5045	5.4300e-003	0.1702	0.2446	0.4148	0.0651	0.2292	0.2943	0.0000	471.9101	471.9101	0.0869	0.0000	473.7350
2018	1.4628	0.1875	0.1759	2.9000e-004	3.8700e-003	0.0111	0.0150	1.0400e-003	0.0104	0.0115	0.0000	24.8252	24.8252	5.8000e-003	0.0000	24.9468
Total	**1.9561**	**4.2642**	**3.6804**	**5.7200e-003**	**0.1741**	**0.2558**	**0.4298**	**0.0661**	**0.2396**	**0.3057**	**0.0000**	**496.7352**	**496.7352**	**0.0927**	**0.0000**	**498.6818**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9542	2.0000e-005	1.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7100e-003	3.7100e-003	1.0000e-005	0.0000	3.9200e-003
Energy	0.0177	0.1609	0.1351	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	759.7794	759.7794	0.0298	8.6800e-003	763.0959
Mobile	2.2399	6.0079	23.3686	0.0434	2.5662	0.0848	2.6510	0.6886	0.0781	0.7667	0.0000	3,242.3564	3,242.3564	0.1045	0.0000	3,244.5517
Waste						0.0000	0.0000		0.0000	0.0000	41.4264	0.0000	41.4264	2.4482	0.0000	92.8392
Water						0.0000	0.0000		0.0000	0.0000	11.0570	58.7134	69.7703	1.1383	0.0274	102.1579
Total	**3.2118**	**6.1688**	**23.5057**	**0.0444**	**2.5662**	**0.0971**	**2.6633**	**0.6886**	**0.0903**	**0.7790**	**52.4834**	**4,060.8529**	**4,113.3362**	**3.7209**	**0.0360**	**4,202.6486**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.9542	2.0000e-005	1.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7100e-003	3.7100e-003	1.0000e-005	0.0000	3.9200e-003
Energy	0.0177	0.1609	0.1351	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	759.7794	759.7794	0.0298	8.6800e-003	763.0959
Mobile	2.1291	5.0890	21.2610	0.0349	2.0384	0.0689	2.1072	0.5470	0.0634	0.6104	0.0000	2,609.7037	2,609.7037	0.0866	0.0000	2,611.5222
Waste						0.0000	0.0000		0.0000	0.0000	41.4264	0.0000	41.4264	2.4482	0.0000	92.8392
Water						0.0000	0.0000		0.0000	0.0000	11.0570	58.7134	69.7703	1.1381	0.0273	102.1402
Total	**3.1010**	**5.2499**	**21.3981**	**0.0359**	**2.0384**	**0.0811**	**2.1194**	**0.5470**	**0.0756**	**0.6226**	**52.4834**	**3,428.2002**	**3,480.6836**	**3.7027**	**0.0360**	**3,569.6016**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.45**	**14.90**	**8.97**	**19.03**	**20.57**	**16.45**	**20.42**	**20.57**	**16.28**	**20.07**	**0.00**	**15.58**	**15.38**	**0.49**	**0.11**	**15.06**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/15/2017	5	8	
4	Building Construction	Building Construction	2/16/2017	1/3/2018	5	230	
5	Paving	Paving	1/4/2018	1/29/2018	5	18	
6	Architectural Coating	Architectural Coating	1/30/2018	2/22/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 311,030; Non-Residential Outdoor: 103,677 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	79.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0405	0.4270	0.3389	4.0000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.6182	36.6182	0.0101	0.0000	36.8292
Total	**0.0405**	**0.4270**	**0.3389**	**4.0000e-004**		**0.0213**	**0.0213**		**0.0198**	**0.0198**	**0.0000**	**36.6182**	**36.6182**	**0.0101**	**0.0000**	**36.8292**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	6.3000e-004	6.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9996	0.9996	5.0000e-005	0.0000	1.0006
Total	**4.9000e-004**	**6.3000e-004**	**6.1700e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9996**	**0.9996**	**5.0000e-005**	**0.0000**	**1.0006**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0405	0.4270	0.3389	4.0000e-004		0.0213	0.0213		0.0198	0.0198	0.0000	36.6182	36.6182	0.0101	0.0000	36.8291
Total	**0.0405**	**0.4270**	**0.3389**	**4.0000e-004**		**0.0213**	**0.0213**		**0.0198**	**0.0198**	**0.0000**	**36.6182**	**36.6182**	**0.0101**	**0.0000**	**36.8291**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	6.3000e-004	6.1700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9996	0.9996	5.0000e-005	0.0000	1.0006
Total	**4.9000e-004**	**6.3000e-004**	**6.1700e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9996**	**0.9996**	**5.0000e-005**	**0.0000**	**1.0006**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.1294	0.0985	1.0000e-004		6.8900e-003	6.8900e-003		6.3300e-003	6.3300e-003	0.0000	9.0789	9.0789	2.7800e-003	0.0000	9.1373
Total	**0.0121**	**0.1294**	**0.0985**	**1.0000e-004**	**0.0452**	**6.8900e-003**	**0.0521**	**0.0248**	**6.3300e-003**	**0.0312**	**0.0000**	**9.0789**	**9.0789**	**2.7800e-003**	**0.0000**	**9.1373**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.9000e-004	1.8500e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2999	0.2999	2.0000e-005	0.0000	0.3002
Total	**1.5000e-004**	**1.9000e-004**	**1.8500e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2999**	**0.2999**	**2.0000e-005**	**0.0000**	**0.3002**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.1294	0.0985	1.0000e-004		6.8900e-003	6.8900e-003		6.3300e-003	6.3300e-003	0.0000	9.0788	9.0788	2.7800e-003	0.0000	9.1373
Total	**0.0121**	**0.1294**	**0.0985**	**1.0000e-004**	**0.0452**	**6.8900e-003**	**0.0521**	**0.0248**	**6.3300e-003**	**0.0312**	**0.0000**	**9.0788**	**9.0788**	**2.7800e-003**	**0.0000**	**9.1373**

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.9000e-004	1.8500e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2999	0.2999	2.0000e-005	0.0000	0.3002
Total	**1.5000e-004**	**1.9000e-004**	**1.8500e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2999**	**0.2999**	**2.0000e-005**	**0.0000**	**0.3002**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1439	0.1015	1.2000e-004		8.1600e-003	8.1600e-003		7.5000e-003	7.5000e-003	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157
Total	**0.0138**	**0.1439**	**0.1015**	**1.2000e-004**	**0.0262**	**8.1600e-003**	**0.0344**	**0.0135**	**7.5000e-003**	**0.0210**	**0.0000**	**11.0447**	**11.0447**	**3.3800e-003**	**0.0000**	**11.1157**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4700e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3998	0.3998	2.0000e-005	0.0000	0.4002
Total	**1.9000e-004**	**2.5000e-004**	**2.4700e-003**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3998**	**0.3998**	**2.0000e-005**	**0.0000**	**0.4002**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1439	0.1015	1.2000e-004		8.1600e-003	8.1600e-003		7.5000e-003	7.5000e-003	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157
Total	**0.0138**	**0.1439**	**0.1015**	**1.2000e-004**	**0.0262**	**8.1600e-003**	**0.0344**	**0.0135**	**7.5000e-003**	**0.0210**	**0.0000**	**11.0447**	**11.0447**	**3.3800e-003**	**0.0000**	**11.1157**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	2.5000e-004	2.4700e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3998	0.3998	2.0000e-005	0.0000	0.4002
Total	**1.9000e-004**	**2.5000e-004**	**2.4700e-003**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3998**	**0.3998**	**2.0000e-005**	**0.0000**	**0.4002**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3521	2.9970	2.0577	3.0400e-003		0.2022	0.2022		0.1899	0.1899	0.0000	271.8088	271.8088	0.0669	0.0000	273.2136
Total	**0.3521**	**2.9970**	**2.0577**	**3.0400e-003**		**0.2022**	**0.2022**		**0.1899**	**0.1899**	**0.0000**	**271.8088**	**271.8088**	**0.0669**	**0.0000**	**273.2136**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0450	0.3404	0.5288	9.2000e-004	0.0251	5.6500e-003	0.0308	7.1900e-003	5.2000e-003	0.0124	0.0000	81.9111	81.9111	6.8000e-004	0.0000	81.9253
Worker	0.0290	0.0378	0.3687	8.4000e-004	0.0717	5.0000e-004	0.0722	0.0191	4.6000e-004	0.0195	0.0000	59.7496	59.7496	3.0300e-003	0.0000	59.8132
Total	**0.0740**	**0.3782**	**0.8974**	**1.7600e-003**	**0.0968**	**6.1500e-003**	**0.1029**	**0.0262**	**5.6600e-003**	**0.0319**	**0.0000**	**141.6607**	**141.6607**	**3.7100e-003**	**0.0000**	**141.7385**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3521	2.9970	2.0577	3.0400e-003		0.2022	0.2022		0.1899	0.1899	0.0000	271.8085	271.8085	0.0669	0.0000	273.2133
Total	**0.3521**	**2.9970**	**2.0577**	**3.0400e-003**		**0.2022**	**0.2022**		**0.1899**	**0.1899**	**0.0000**	**271.8085**	**271.8085**	**0.0669**	**0.0000**	**273.2133**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0450	0.3404	0.5288	9.2000e-004	0.0251	5.6500e-003	0.0308	7.1900e-003	5.2000e-003	0.0124	0.0000	81.9111	81.9111	6.8000e-004	0.0000	81.9253
Worker	0.0290	0.0378	0.3687	8.4000e-004	0.0717	5.0000e-004	0.0722	0.0191	4.6000e-004	0.0195	0.0000	59.7496	59.7496	3.0300e-003	0.0000	59.8132
Total	**0.0740**	**0.3782**	**0.8974**	**1.7600e-003**	**0.0968**	**6.1500e-003**	**0.1029**	**0.0262**	**5.6600e-003**	**0.0319**	**0.0000**	**141.6607**	**141.6607**	**3.7100e-003**	**0.0000**	**141.7385**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.0000e-003	0.0349	0.0263	4.0000e-005		2.2400e-003	2.2400e-003		2.1100e-003	2.1100e-003	0.0000	3.5516	3.5516	8.7000e-004	0.0000	3.5698
Total	**4.0000e-003**	**0.0349**	**0.0263**	**4.0000e-005**		**2.2400e-003**	**2.2400e-003**		**2.1100e-003**	**2.1100e-003**	**0.0000**	**3.5516**	**3.5516**	**8.7000e-004**	**0.0000**	**3.5698**

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	4.0400e-003	6.3500e-003	1.0000e-005	3.3000e-004	7.0000e-005	4.0000e-004	9.0000e-005	6.0000e-005	1.6000e-004	0.0000	1.0634	1.0634	1.0000e-005	0.0000	1.0636
Worker	3.4000e-004	4.5000e-004	4.3400e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7627	0.7627	4.0000e-005	0.0000	0.7635
Total	**8.5000e-004**	**4.4900e-003**	**0.0107**	**2.0000e-005**	**1.2800e-003**	**8.0000e-005**	**1.3500e-003**	**3.4000e-004**	**7.0000e-005**	**4.2000e-004**	**0.0000**	**1.8261**	**1.8261**	**5.0000e-005**	**0.0000**	**1.8271**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.0000e-003	0.0349	0.0263	4.0000e-005		2.2400e-003	2.2400e-003		2.1100e-003	2.1100e-003	0.0000	3.5515	3.5515	8.7000e-004	0.0000	3.5698
Total	**4.0000e-003**	**0.0349**	**0.0263**	**4.0000e-005**		**2.2400e-003**	**2.2400e-003**		**2.1100e-003**	**2.1100e-003**	**0.0000**	**3.5515**	**3.5515**	**8.7000e-004**	**0.0000**	**3.5698**

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	4.0400e-003	6.3500e-003	1.0000e-005	3.3000e-004	7.0000e-005	4.0000e-004	9.0000e-005	6.0000e-005	1.6000e-004	0.0000	1.0634	1.0634	1.0000e-005	0.0000	1.0636
Worker	3.4000e-004	4.5000e-004	4.3400e-003	1.0000e-005	9.5000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7627	0.7627	4.0000e-005	0.0000	0.7635
Total	**8.5000e-004**	**4.4900e-003**	**0.0107**	**2.0000e-005**	**1.2800e-003**	**8.0000e-005**	**1.3500e-003**	**3.4000e-004**	**7.0000e-005**	**4.2000e-004**	**0.0000**	**1.8261**	**1.8261**	**5.0000e-005**	**0.0000**	**1.8271**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0127	0.1289	0.1104	1.7000e-004		7.4500e-003	7.4500e-003		6.8700e-003	6.8700e-003	0.0000	15.0641	15.0641	4.5600e-003	0.0000	15.1599
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0127**	**0.1289**	**0.1104**	**1.7000e-004**		**7.4500e-003**	**7.4500e-003**		**6.8700e-003**	**6.8700e-003**	**0.0000**	**15.0641**	**15.0641**	**4.5600e-003**	**0.0000**	**15.1599**

3.6 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	6.8000e-004	6.5900e-003	2.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1586	1.1586	6.0000e-005	0.0000	1.1598
Total	**5.2000e-004**	**6.8000e-004**	**6.5900e-003**	**2.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1586**	**1.1586**	**6.0000e-005**	**0.0000**	**1.1598**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0127	0.1289	0.1104	1.7000e-004		7.4500e-003	7.4500e-003		6.8700e-003	6.8700e-003	0.0000	15.0641	15.0641	4.5600e-003	0.0000	15.1599
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0127**	**0.1289**	**0.1104**	**1.7000e-004**		**7.4500e-003**	**7.4500e-003**		**6.8700e-003**	**6.8700e-003**	**0.0000**	**15.0641**	**15.0641**	**4.5600e-003**	**0.0000**	**15.1599**

3.6 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	6.8000e-004	6.5900e-003	2.0000e-005	1.4400e-003	1.0000e-005	1.4500e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1586	1.1586	6.0000e-005	0.0000	1.1598
Total	**5.2000e-004**	**6.8000e-004**	**6.5900e-003**	**2.0000e-005**	**1.4400e-003**	**1.0000e-005**	**1.4500e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1586**	**1.1586**	**6.0000e-005**	**0.0000**	**1.1598**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	**1.4443**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3025**

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	5.4000e-004	5.2700e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9269	0.9269	4.0000e-005	0.0000	0.9278
Total	**4.1000e-004**	**5.4000e-004**	**5.2700e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9269**	**0.9269**	**4.0000e-005**	**0.0000**	**0.9278**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.4416					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	**1.4443**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3025**

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	5.4000e-004	5.2700e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9269	0.9269	4.0000e-005	0.0000	0.9278
Total	**4.1000e-004**	**5.4000e-004**	**5.2700e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9269**	**0.9269**	**4.0000e-005**	**0.0000**	**0.9278**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1291	5.0890	21.2610	0.0349	2.0384	0.0689	2.1072	0.5470	0.0634	0.6104	0.0000	2,609.7037	2,609.7037	0.0866	0.0000	2,611.5222
Unmitigated	2.2399	6.0079	23.3686	0.0434	2.5662	0.0848	2.6510	0.6886	0.0781	0.7667	0.0000	3,242.3564	3,242.3564	0.1045	0.0000	3,244.5517

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Regional Shopping Center	3,558.19	4,164.00	2103.25	6,025,909	4,786,440
Unrefrigerated Warehouse-No Rail	310.05	145.10	94.26	746,397	592,871
Total	3,868.24	4,309.10	2,197.50	6,772,307	5,379,311

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.438302	0.063917	0.163234	0.169914	0.042886	0.007084	0.019490	0.082149	0.002063	0.001756	0.006579	0.000764	0.001861

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	584.6485	584.6485	0.0264	5.4700e-003	586.8992
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	584.6485	584.6485	0.0264	5.4700e-003	586.8992
NaturalGas Mitigated	0.0177	0.1609	0.1351	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.1310	175.1310	3.3600e-003	3.2100e-003	176.1968
NaturalGas Unmitigated	0.0177	0.1609	0.1351	9.7000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	175.1310	175.1310	3.3600e-003	3.2100e-003	176.1968

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	929152	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	49.5831	49.5831	9.5000e-004	9.1000e-004	49.8848
Unrefrigerated Warehouse-No Rail	2.35268e+006	0.0127	0.1153	0.0969	6.9000e-004		8.7600e-003	8.7600e-003		8.7600e-003	8.7600e-003	0.0000	125.5479	125.5479	2.4100e-003	2.3000e-003	126.3119
Total		**0.0177**	**0.1609**	**0.1351**	**9.6000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**175.1310**	**175.1310**	**3.3600e-003**	**3.2100e-003**	**176.1968**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	2.35268e+006	0.0127	0.1153	0.0969	6.9000e-004		8.7600e-003	8.7600e-003		8.7600e-003	8.7600e-003	0.0000	125.5479	125.5479	2.4100e-003	2.3000e-003	126.3119
Regional Shopping Center	929152	5.0100e-003	0.0456	0.0383	2.7000e-004		3.4600e-003	3.4600e-003		3.4600e-003	3.4600e-003	0.0000	49.5831	49.5831	9.5000e-004	9.1000e-004	49.8848
Total		**0.0177**	**0.1609**	**0.1351**	**9.6000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**175.1310**	**175.1310**	**3.3600e-003**	**3.2100e-003**	**176.1968**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regiona Shopping Center	760821	221.3316	0.0100	2.0700e-003	222.1837
Unrefrigerated Warehouse-No Rail	1.24889e+006	363.3169	0.0164	3.4000e-003	364.7155
Total		**584.6485**	**0.0264**	**5.4700e-003**	**586.8992**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regional Shopping Center	760821	221.3316	0.0100	2.0700e-003	222.1837
Unrefrigerated Warehouse-No Rail	1.24889e+006	363.3169	0.0164	3.4000e-003	364.7155
Total		**584.6485**	**0.0264**	**5.4700e-003**	**586.8992**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9542	2.0000e-005	1.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7100e-003	3.7100e-003	1.0000e-005	0.0000	3.9200e-003
Unmitigated	0.9542	2.0000e-005	1.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7100e-003	3.7100e-003	1.0000e-005	0.0000	3.9200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7100e-003	3.7100e-003	1.0000e-005	0.0000	3.9200e-003
Total	**0.9542**	**2.0000e-005**	**1.9200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7100e-003**	**3.7100e-003**	**1.0000e-005**	**0.0000**	**3.9200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8000e-004	2.0000e-005	1.9200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.7100e-003	3.7100e-003	1.0000e-005	0.0000	3.9200e-003
Total	**0.9542**	**2.0000e-005**	**1.9200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.7100e-003**	**3.7100e-003**	**1.0000e-005**	**0.0000**	**3.9200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	69.7703	1.1381	0.0273	102.1402
Unmitigated	69.7703	1.1383	0.0274	102.1579

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regiona Shopping Center	6.17246 / 3.78312	15.5264	0.2017	4.8800e-003	21.2746
Unrefrigerated Warehouse-No Rail	28.6796 / 0	54.2440	0.9366	0.0225	80.8833
Total		**69.7703**	**1.1383**	**0.0274**	**102.1579**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	6.17246 / 3.78312	15.5264	0.2017	4.8700e-003	21.2714
Unrefrigerated Warehouse-No Rail	28.6796 / 0	54.2440	0.9364	0.0225	80.8688
Total		**69.7703**	**1.1381**	**0.0273**	**102.1402**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	41.4264	2.4482	0.0000	92.8392
Unmitigated	41.4264	2.4482	0.0000	92.8392

10.0 Vegetation

V-5 Mini Storage Commercial Project 2005 Operational Year

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	124.02	1000sqft	2.85	124,021.00	0
Regional Shopping Center	83.33	1000sqft	1.91	83,332.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Demolition -

Vehicle Trips - Trip Rates were adjusted to reflect the 9th Edition of the ITE Trip Generation Manual

Construction Phase - GHG Emission 2005 Operational Year

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150
tblConstructionPhase	NumDays	18.00	16.00
tblConstructionPhase	NumDays	20.00	19.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	18.00	19.00
tblGrading	AcresOfGrading	4.50	4.00
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleTrips	ST_TR	2.59	1.17
tblVehicleTrips	SU_TR	2.59	0.76
tblVehicleTrips	WD_TR	42.94	42.70
tblVehicleTrips	WD_TR	2.59	2.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2003																546.3591
2004																27.5909
Total																**573.9500**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2003																546.3587
2004																27.5908
Total																**573.9495**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																4.0700e-003
Energy																763.0959
Mobile																4,448.8828
Waste																92.8392
Water																102.1579
Total																5,406.9799

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																4.0700e-003
Energy																763.0959
Mobile																4,448.8628
Waste																92.8392
Water																102.1402
Total																**5,406.9623**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2003	1/27/2003	5	19	
2	Site Preparation	Site Preparation	1/28/2003	2/3/2003	5	5	
3	Grading	Grading	2/4/2003	2/14/2003	5	9	
4	Building Construction	Building Construction	2/15/2003	1/2/2004	5	230	
5	Paving	Paving	1/3/2004	1/29/2004	5	19	
6	Architectural Coating	Architectural Coating	1/30/2004	2/20/2004	5	16	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 311,030; Non-Residential Outdoor: 103,677 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	79.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2003

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																38.8438
Total																38.8438

3.2 Demolition - 2003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.3157
Total																**1.3157**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																38.8437
Total																**38.8437**

3.2 Demolition - 2003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.3157
Total																1.3157

3.3 Site Preparation - 2003

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																10.2649
Total																10.2649

3.3 Site Preparation - 2003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.4155
Total																**0.4155**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																10.2649
Total																**10.2649**

3.3 Site Preparation - 2003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons/yr								MT/yr			
Hauling																0.0000
Vendor																0.0000
Worker																0.4155
Total																**0.4155**

3.4 Grading - 2003

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					tons/yr								MT/yr			
Fugitive Dust																0.0000
Off-Road																14.0811
Total																**14.0811**

3.4 Grading - 2003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.6232
Total																**0.6232**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																14.0811
Total																**14.0811**

3.4 Grading - 2003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.6232
Total																**0.6232**

3.5 Building Construction - 2003

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																300.0426
Total																**300.0426**

3.5 Building Construction - 2003

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																97.6226
Worker																83.1498
Total																**180.7725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																300.0422
Total																**300.0422**

3.5 Building Construction - 2003

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																97.6226
Worker																83.1498
Total																180.7725

3.5 Building Construction - 2004

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																2.6320
Total																2.6320

3.5 Building Construction - 2004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.8563
Worker																0.7294
Total																**1.5857**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																2.6320
Total																**2.6320**

3.5 Building Construction - 2004

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.8563
Worker																0.7294
Total																1.5857

3.6 Paving - 2004

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																18.3826
Paving																0.0000
Total																18.3826

3.6 Paving - 2004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.7542
Total																**1.7542**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																18.3826
Paving																0.0000
Total																**18.3826**

3.6 Paving - 2004

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.7542
Total																**1.7542**

3.7 Architectural Coating - 2004

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																2.0546
Total																**2.0546**

3.7 Architectural Coating - 2004

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.1818
Total																**1.1818**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																2.0546
Total																**2.0546**

3.7 Architectural Coating - 2004

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.1818
Total																1.1818

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																4,448.8828
Unmitigated																4,448.8828

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Regional Shopping Center	3,558.28	4,164.10	2103.30	6,026,054	6,026,054
Unrefrigerated Warehouse-No Rail	310.05	145.10	94.26	746,403	746,403
Total	3,868.33	4,309.20	2,197.56	6,772,457	6,772,457

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.416085	0.101970	0.201335	0.116997	0.021820	0.007923	0.018483	0.100808	0.001247	0.001503	0.007826	0.001672	0.002331

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																586.8992
Electricity Unmitigated																586.8992
NaturalGas Mitigated																176.1968
NaturalGas Unmitigated																176.1968

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	929152																49.8848
Unrefrigerated Warehouse-No Rail	2.35268e+006																126.3119
Total																	176.1968

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	2.35268e +006																126.3119
Regional Shopping Center	929152																49.8848
Total																	176.1968

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regional Shopping Center	760821				222.1837
Unrefrigerated Warehouse-No Rail	1.24889e +006				364.7155
Total					586.8992

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regional Shopping Center	760821				222.1837
Unrefrigerated Warehouse-No Rail	1.24889e +006				364.7155
Total					586.8992

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																4.0700e-003
Unmitigated																4.0700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																4.0700e-003
Total																**4.0700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																4.0700e-003
Total																**4.0700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				102.1402
Unmitigated				102.1579

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	6.17246 / 3.78312				21.2746
Unrefrigerated Warehouse-No Rail	28.6796 / 0				80.8833
Total					102.1579

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	6.17246 / 3.78312				21.2714
Unrefrigerated Warehouse-No Rail	28.6796 / 0				80.8688
Total					102.1402

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				92.8392
Unmitigated				92.8392

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Regional Shopping Center	87.5				39.8051
Unrefrigerated Warehouse-No Rail	116.58				53.0341
Total					**92.8392**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Regional Shopping Center	87.5				39.8051
Unrefrigerated Warehouse-No Rail	116.58				53.0341
Total					**92.8392**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

V-5 Mini Storage Commercial Project 2020 Operational Year

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	124.02	1000sqft	2.85	124,021.00	0
Regional Shopping Center	83.33	1000sqft	1.91	83,332.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Demolition -

Vehicle Trips - Trip Rates were adjusted to reflect the 9th Edition of the ITE Trip Generation Manual

Construction Phase - GHG Emission 2020 Operational Year

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	16.00
tblConstructionPhase	NumDays	8.00	7.00
tblConstructionPhase	NumDays	18.00	19.00
tblGrading	AcresOfGrading	3.50	4.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	2.59	1.17
tblVehicleTrips	SU_TR	2.59	0.76
tblVehicleTrips	WD_TR	42.94	42.70
tblVehicleTrips	WD_TR	2.59	2.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017																474.1238
2018																23.6956
Total																**497.8195**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017																474.1234
2018																23.6956
Total																**497.8190**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																3.9100e-003
Energy																763.0959
Mobile																3,148.5779
Waste																92.8392
Water																102.1579
Total																**4,106.6749**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area																3.9100e-003
Energy																763.0959
Mobile																2,535.9639
Waste																92.8392
Water																102.1402
Total																**3,494.0432**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.92

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Site Preparation	Site Preparation	1/28/2017	2/3/2017	5	5	
3	Grading	Grading	2/4/2017	2/14/2017	5	7	
4	Building Construction	Building Construction	2/15/2017	1/2/2018	5	230	
5	Paving	Paving	1/3/2018	1/29/2018	5	19	
6	Architectural Coating	Architectural Coating	1/30/2018	2/20/2018	5	16	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 311,030; Non-Residential Outdoor: 103,677 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	79.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2017

<u>Unmitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																36.8292
Total																**36.8292**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.0006
Total																**1.0006**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																36.8291
Total																**36.8291**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.0006
Total																**1.0006**

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																9.1373
Total																**9.1373**

3.3 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.3002
Total																0.3002

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																9.1373
Total																9.1373

3.3 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.3002
Total																**0.3002**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																9.7263
Total																**9.7263**

3.4 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.3502
Total																**0.3502**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust																0.0000
Off-Road																9.7263
Total																**9.7263**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	2.35268e +006																126.3119
Regional Shopping Center	929152																49.8848
Total																	176.1968

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regional Shopping Center	760821				222.1837
Unrefrigerated Warehouse-No Rail	1.24889e +006				364.7155
Total					586.8992

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated																586.8992
Electricity Unmitigated																586.8992
NaturalGas Mitigated																176.1968
NaturalGas Unmitigated																176.1968

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	929152																49.8848
Unrefrigerated Warehouse-No Rail	2.35268e+006																126.3119
Total																	**176.1968**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																2,535.9639
Unmitigated																3,148.5779

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Regional Shopping Center	3,558.28	4,164.10	2103.30	6,026,054	4,789,906
Unrefrigerated Warehouse-No Rail	310.05	145.10	94.26	746,403	593,291
Total	3,868.33	4,309.20	2,197.56	6,772,457	5,383,196

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.437499	0.063819	0.163172	0.170048	0.042873	0.007078	0.019723	0.082707	0.002066	0.001762	0.006633	0.000756	0.001865

5.0 Energy Detail

Historical Energy Use: N

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.8247
Total																**0.8247**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Transit Accessibility

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.8247
Total																**0.8247**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																2.0467
Total																**2.0467**

3.6 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.2242
Total																**1.2242**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating																0.0000
Off-Road																2.0467
Total																**2.0467**

3.6 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																1.2242
Total																**1.2242**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																16.0021
Paving																0.0000
Total																**16.0021**

3.5 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.7091
Worker																0.5090
Total																**1.2181**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																16.0021
Paving																0.0000
Total																**16.0021**

3.5 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.7091
Worker																0.5090
Total																**1.2181**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																2.3799
Total																**2.3799**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																82.2862
Worker																60.0767
Total																**142.3629**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																2.3799
Total																**2.3799**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																82.2862
Worker																60.0767
Total																**142.3629**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																274.4169
Total																**274.4169**

3.4 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling																0.0000
Vendor																0.0000
Worker																0.3502
Total																**0.3502**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road																274.4172
Total																**274.4172**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regional Shopping Center	760821				222.1837
Unrefrigerated Warehouse-No Rail	1.24889e+006				364.7155
Total					**586.8992**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated																3.9100e-003
Unmitigated																3.9100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																3.9100e-003
Total																**3.9100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating																0.0000
Consumer Products																0.0000
Landscaping																3.9100e-003
Total																**3.9100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				102.1402
Unmitigated				102.1579

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	6.17246 / 3.78312				21.2746
Unrefrigerated Warehouse-No Rail	28.6796 / 0				80.8833
Total					**102.1579**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	6.17246 / 3.78312				21.2714
Unrefrigerated Warehouse-No Rail	28.6796 / 0				80.8688
Total					**102.1402**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				92.8392
Unmitigated				92.8392

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Regiona Shopping Center	87.5				39.8051
Unrefrigerated Warehouse-No Rail	116.58				53.0341
Total					**92.8392**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Regional Shopping Center	87.5				39.8051
Unrefrigerated Warehouse-No Rail	116.58				53.0341
Total					**92.8392**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

APPENDIX B

Off-Site Emissions Estimator Worksheets

Off-site Emissions Estimator Worksheet

7/12/2016

Applicant/Business Name:	Emery Vlotho / V-5 Storage Inc.
Project Name:	V-5 Mini Storage Commercial Project
Project Location:	City of Selma
District Project ID No.:	

Project Construction Emissions			NOx				PM10			
Project Phase Name	ISR Phase	Construction Start Date	Unmitigated Baseline (TPY)	Mitigated Baseline (TPY)	Achieved Onsite Reductions (tons)	Required Offsite Reductions (tons)	Unmitigated Baseline (TPY)	Mitigated Baseline (TPY)	Achieved Onsite Reductions (tons)	Required Offsite Reductions (tons)
V-5 Project	1	1/1/2017	4.2642	4.2642	0.0000	0.8528	0.2558	0.2558	0.0000	0.1151
	2				0.0000	0.0000			0.0000	0.0000
	3				0.0000	0.0000			0.0000	0.0000
	4				0.0000	0.0000			0.0000	0.0000
	5				0.0000	0.0000			0.0000	0.0000
	6				0.0000	0.0000			0.0000	0.0000
	7				0.0000	0.0000			0.0000	0.0000
	8				0.0000	0.0000			0.0000	0.0000
	9				0.0000	0.0000			0.0000	0.0000
	10				0.0000	0.0000			0.0000	0.0000
		Total	4.2642	4.2642	0.0000	0.8528	0.2558	0.2558	0.0000	0.1151

Total Achieved On-Site Reductions (tons)		
ISR Phase	NOx	PM10
1	6.8918	5.4390
2	0.0000	0.0000
3	0.0000	0.0000
4	0.0000	0.0000
5	0.0000	0.0000
6	0.0000	0.0000
7	0.0000	0.0000
8	0.0000	0.0000
9	0.0000	0.0000
10	0.0000	0.0000
Total	6.8918	5.4390

Project Operations Emissions (Area + Mobile)			NOx				PM10			
Project Phase Name	ISR Phase	Operation Start Date	Unmitigated Baseline (TPY)	Mitigated Baseline (TPY)	Achieved Onsite Reductions (tons)	Required Offsite Reductions (tons)	Unmitigated Baseline (TPY)	Mitigated Baseline (TPY)	Achieved Onsite Reductions (tons)	Required Offsite Reductions (tons)
V-5 Project	1	1/1/2019	6.1688	5.2499	6.8918	8.5303	2.6633	2.1194	5.4390	7.8775
	2				0.0000	0.0000			0.0000	0.0000
	3				0.0000	0.0000			0.0000	0.0000
	4				0.0000	0.0000			0.0000	0.0000
	5				0.0000	0.0000			0.0000	0.0000
	6				0.0000	0.0000			0.0000	0.0000
	7				0.0000	0.0000			0.0000	0.0000
	8				0.0000	0.0000			0.0000	0.0000
	9				0.0000	0.0000			0.0000	0.0000
	10				0.0000	0.0000			0.0000	0.0000
		Total	6.1688	5.2499	6.8918	8.5303	2.6633	2.1194	5.4390	7.8775

Total Required Off-Site Reductions (tons)		
ISR Phase	NOx	PM10
1	9.3831	7.9926
2	0.0000	0.0000
3	0.0000	0.0000
4	0.0000	0.0000
5	0.0000	0.0000
6	0.0000	0.0000
7	0.0000	0.0000
8	0.0000	0.0000
9	0.0000	0.0000
10	0.0000	0.0000
Total	9.3831	7.9926

Note: TPY = Tons Per Year

7/12/2016

Fee Estimator Worksheet

Applicant/Business Name:	Emery Viotho / V-5 Storage Inc.
Project Name:	V-5 Mini Storage Commercial Project
Project Location:	City of Selma
District Project ID No.:	

NOTES:

(1) The start date for each ISR phase is shown in TABLE 1.

(2) If you have chosen a **ONE-TIME** payment for the project, then the total amount due for ALL PHASES is shown under TABLE 2.

(3) If you have chosen a **DEFERRED** payment schedule for the project, then the total amount due for a specific year is shown in TABLE 3 according to the schedule in TABLE 1.

* If you have not provided a proposed payment date, the District sets a default invoice date of 60 days prior to start of the ISR phase.

TABLE 1 - PROJECT INFORMATION / TABLE 2 - NO FDS

Project Phase name	ISR Phase	Start Date per Phase	Scheduled Payment Date*	Pollutant	Required Reductions (tons)	Project Reductions (tons)	TABLE 2 - NO FDS 2015
0	1	1/1/17		NOx	9.3831	9.3831	9.3831
				PM10	7.9926	7.9926	7.9926
	2			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	3			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	4			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	5			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	6			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	7			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	8			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	9			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
	10			NOx	0.0000	0.0000	0.0000
				PM10	0.0000	0.0000	0.0000
TOTAL (tons)				NOx	9.3831	9.3831	9.3831
				PM10	7.9926	7.9926	7.9926

Rule 9510 Fee Schedule ($/ton)

Year	NOx	PM10
2015 and beyond	$9,350	$9,011

		TABLE 2 - NO FDS 2015
Offsite Fee by Pollutant by Year ($)	NOx	$87,731
	PM10	$72,021
Administrative Fee by Year ($)		$6,390.08
Offsite Mitigation Fee by Year ($)		$166,142.08
Total Project Offsite Fee ($)		$166,142.08

TABLE 3 - APPROVED FEE DEFERRAL SCHEDULE (FDS) BY PAYMENT YEAR

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Phase 1 NOx			9.3831						
Phase 1 PM10			7.9926						
Total NOx	0.0000	0.0000	9.3831	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total PM10	0.0000	0.0000	7.9926	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Offsite Fee NOx	$0	$0	$87,731	$0	$0	$0	$0	$0	$0
Offsite Fee PM10	$0	$0	$72,021	$0	$0	$0	$0	$0	$0
Administrative Fee	$0.00	$0.0C	$6,390.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Offsite Mitigation Fee	$0.00	$0.0C	$166,142.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Project Offsite Fee				$166,142.08					

Appendix B – Traffic Study

Traffic Impact Study

Proposed Commercial Center

Northeast of the Intersection of McCall and Dinuba Avenues

Selma, California

Prepared For:
V-5 Storage
525 West 4th Street
Hanford, California 93230

Date:
November 8, 2013

Job No.:
13-042.01

PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

Mr. Emery Vlotho
V-5 Storage
525 West 4th Street
Hanford, California 93230

November 8, 2013

Subject: Traffic Impact Study
Proposed Commercial Center
Northeast of the Intersection of McCall and Dinuba Avenues
Selma, California

1.0 INTRODUCTION

This report presents the results of a traffic impact study for a proposed commercial center in Selma, California. This analysis focuses on the anticipated effect of vehicle traffic resulting from the project.

2.0 PROJECT DESCRIPTION

The proposed Commercial Center (Project) is located northeast of the intersection of McCall and Dinuba Avenues in Selma, California. The net site area is 4.76 acres, including a 2.85-acre mini storage facility and 1.91 acres of commercial uses. Site access to the commercial sites is expected via driveways on both McCall and Dinuba Avenues. The mini storage facility will have access only to Dinuba Avenue. The Project site location is presented in the attached Figure 1, Site Vicinity Map, and a Project site plan is presented in the attached Figure 2, Site Plan.

The property is located in the McCall Specific Plan. Currently the property is in Fresno County and is zoned exclusive agriculture. Annexation to the City of Selma will change the zoning to R-2 (as part of the McCall Specific Plan). The Project proposes to amend the City of Selma General Plan and McCall Specific Plan to allow a proposed zoning change to C-2.

3.0 STUDY AREA AND TIME PERIOD

The study intersections were established by City of Selma staff in a letter dated August 8, 2013. The following intersections are included in the study:

1. McCall and Dinuba Avenues (City of Selma sphere of influence (SOI))
2. Highland and Dinuba Avenues (City of Selma SOI)
3. Golden State Boulevard and Dinuba Avenue (City of Selma SOI)
4. Dockery and Dinuba Avenues (City of Selma SOI)
5. McCall and Floral Avenues (City of Selma)
6. McCall and Manning Avenues (City of Selma SOI)
7. McCall and Parlier Avenues (County of Fresno)
8. Golden State Boulevard and Manning Avenue (City of Fowler jurisdiction)

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. on a typical weekday. The peak hours are analyzed for the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;
- Near-Term Conditions (Existing Plus Approved and Pending Project Plus Project);
- Cumulative (Year 2035) Conditions Without Project (assumes the site is vacant); and
- Cumulative (Year 2035) Conditions With Project.

4.0 LANE CONFIGURATIONS AND INTERSECTION CONTROL

The lane configurations and intersection control at the study intersections are illustrated in Figure 3, Existing Lane Configurations.

5.0 EXISTING TRAFFIC VOLUMES

Existing traffic volumes were determined by performing manual turning movement counts at the study intersections between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The counts also included determination of truck percentages. The data sheets are attached in Appendix A and include the dates the counts were performed. The existing peak hour turning movement volumes are presented in Figure 4, Existing Peak Hour Traffic Volumes.

6.0 PROJECT TRAFFIC

6.1 Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*, is typically used to estimate the number of trips anticipated to be generated by proposed projects. Table 6.1 presents the trip generation estimates for the Project assuming 25-percent floor area ratio for the commercial uses.

Table 6.1
Project Trip Generation

Land Use	Size	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Mini-Warehouse 151	2.85 acres	35.43	102	2.58	45:55	4	4	8	3.57	50:50	6	5	11
Shopping Center 820	20,833 sq. ft.	FC1	2,450	FC2	62:38	37	23	60	FC3	48:52	101	109	210
TOTALS		-	**2,552**	-	-	**41**	**27**	**68**	-	-	**107**	**114**	**221**

Reference: *Trip Generation Manual, 9th Edition*, Institute of Transportation Engineers 2012
Rates are reported in trips per acre.
In:Out are percentages of the total.
FC1: Fitted curve: $Ln(T) = 0.65Ln(X) + 5.83$ FC2: Fitted curve: $Ln(T) = 0.61Ln(X) + 2.24$
FC3: Fitted curve: $Ln(T) = 0.67Ln(X) + 3.31$
T = Number of trips X = 1,000 square feet of building area

6.2 Internal Capture

Internally captured trips are not applicable to the proposed Project and captured-trip reductions were not applied in the analyses.

6.3 Pass-By and Diverted Linked Trips

The ITE *Trip Generation Handbook* dated June 2004 (TGH) presents information suggesting that the trips generated by the Project will include pass-by trips. The TGH states: "There are instances, however, when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. For example, retail-oriented developments such as shopping centers…are often located adjacent to busy streets in order to attract the motorists already on the street. These sites attract a portion of their trips from traffic passing the site… These retail trips may not add new traffic to the adjacent street system."

The TGH states: "Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trips are not diverted from another roadway."

Data provided in Chapter 5 of the TGH suggest that pass-by trips will be generated by the shopping center portion of the Project.

Available data in the TGH indicate that at least 15 percent of the weekday p.m. peak hour trips generated by shopping centers are pass-by trips. Therefore, a pass-by reduction of 15 percent applied to the shopping center traffic volumes is considered appropriate, conservative, and feasible during the weekday p.m. peak hour, provided that the volumes on the adjacent streets are great enough to generate those volumes. The TGH does not present pass-by trip information for weekday a.m. peak hours.

Table 6.2 presents the pass-by trips for the project.

Table 6.2
Project P.M. Peak Hour Pass-By Trips

Trips Entering Site	Trips Exiting Site
15	15

The calculated pass-by trip volumes can be generated only if the baseline traffic volumes on the adjacent roadways are great enough to accommodate the calculated volumes. The existing traffic volumes on McCall Avenue and Dinuba Avenue are great enough to supply to the calculated pass-by trip volumes.

Table 6.3 resents the primary project traffic volumes (that is, the total number of new trips generated by the project within the study area).

Table 6.3
Project Primary Trips

Time Period	Trips Entering Site	Trips Exiting Site	Total Trips
Weekday	1,276	1,276	2,552
Weekday A.M. Peak Hour	41	27	68
Weekday P.M. Peak Hour	92	99	191

6.4 Project Trip Distribution

The Project trips were distributed to the adjacent road network using engineering judgment considering the distribution of existing traffic volumes and complementary land uses in the

Project vicinity. The anticipated percentage distribution of Project traffic volumes is presented in Figure 5, Project Trip Distribution Percentages. New Project traffic volumes at the study intersections are presented in Figure 6, Peak-Hour Primary Project Traffic Volumes.

6.5 Comparison of Project Trips to Current General Plan

The current land use designations on the Project site will allow R-2 zoning (multiple-family dwelling units) with a maximum residential lot size of 6,000 square feet for the first unit, 3,000 square feet for the second unit, and 5,700 square feet for all subsequent units. It is estimated that the site would yield 34 residential units. Table 6.4 presents the trip generation estimates associated with development of 34 apartment units at the site.

Table 6.4
Residential Trip Generation

Land Use	Size	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Low-Rise Apartment 221	34	6.59	224	0.46	21:79	3	13	16	0.58	65:35	13	7	20

Reference: *Trip Generation Manual, 9th Edition*, Institute of Transportation Engineers 2012
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

A comparison of the values in Table 6.4 with the values in Table 6.3 indicates that the proposed Project is expected to generate more trips than would be likely to occur if the site were developed in accordance with the current General Plan.

7.0 EXISTING-PLUS-PROJECT TRAFFIC VOLUMES

Peak hour existing-plus-Project traffic volumes are presented in Figure 7, Existing-Plus-Project Peak Hour Traffic Volumes. These values are obtained by adding the values in Figures 4 and 6.

8.0 PENDING PROJECTS

The land uses associated with known pending projects were included in the analyses and are summarized in Table 8.1. Peak hour near-term traffic volumes (existing plus approved and pending projects plus Project) are presented in Figure 8, Near-Term Peak Hour Traffic Volumes.

Table 8.1
Pending Projects

Project	Location
Selma Crossings	Mountain View Avenue / SR 99
Gill Motel and Commercial	North of Floral, west of SR 99 SB off ramp
Bratton single-family residential	South of Rose, west of Highland
Comfort Suites	West of Whitson, north of Stillman
Raven Map 5296	South of Dinuba, east of Dockery
Valley View Map 5303	South of Valley View between Thompson and McCall
Canales Map 5217	East of Highland, south of Nebraska
Eye Q II	West of Whitson, north of Stillman
Graham Commercial	North of Rose, west of SR 99
Raven Commercial	Manning east of McCall
Amberwood Commercial	East of Orange Avenue between Floral and Dinuba
3-MD Industrial Park	Nebraska Avenue east of Dockery
Golden State Industrial Park	Park Street east of SR 99
Rockwell Pond	North side of Floral, west of SR 99
Brandywine	Southwest of Manning and McCall
Other Residential	Various locations – Cambridge, Country Rose, Heritage, Synergy, R.J. Hill, Amberwood, Hinesley, Merigian

9.0 CUMULATIVE TRAFFIC VOLUMES (YEAR 2035)

The Council of Fresno County Governments (COG) maintains a travel model that is typically used to forecast traffic volumes. The travel model assumptions utilized for the City of Selma General Plan Update were utilized in these analyses. The baseline traffic volumes for the year 2035 no-Project conditions were determined using the travel model data obtained from the COG and using the COG Increment Method, which is described in a document available from the COG entitled "*Model Steering Committee Recommended Procedures for Using Traffic Projections from the Fresno COG Travel Model*" dated December 2002. The Increment Method forecasts future traffic volumes by determining the growth projected by the model between the base year and the horizon year. This growth is then added to the existing traffic volumes.

Future turning movements were forecast based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled "*Highway Traffic Data for Urbanized Area Project Planning and Design*." The baseline 2035 no-Project traffic volumes are presented in Figure 9, 2035 No-Project Peak Hour Traffic Volumes. The 2035 with-Project traffic volumes are presented in Figure 10, 2035 With-Project Peak Hour Traffic Volumes.

10.0 SIGNIFICANCE CRITERIA

The Transportation Research Board *Highway Capacity Manual*, 2010, (HCM2010) defines level of service (LOS) as, "A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 10.1 and 10.2.

Table 10.1
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Table 10.2
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is low. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is low. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

The City of Selma General Plan Update requires LOS D at City intersections. The County of Fresno typically require that LOS C or better be maintained, however, within the sphere of influence of Selma it is assumed that LOS D is acceptable per the City of Selma General Plan. The City of Fowler requires LOS C.

A Project traffic impact will be recognized if the proposed Project will decrease the LOS below the target LOS compared to the no-Project condition. A Project traffic impact will also be recognized if the Project will exacerbate an intersection already operating below the target LOS by increasing the average delay at the intersection by 5.0 seconds or more.

Queues will be considered in the analyses, particularly to determine if excessive queues at signalized intersections are expected to block through lanes or adjacent intersections. Blocking typically results in congested conditions that may cause worse conditions at the blocked location than those identified by the LOS analyses alone.

11.0 INTERSECTION ANALYSES

11.1 Level of Service

The intersection levels of service (LOS) were determined using the computer program Synchro 8, which is based on *Highway Capacity Manual* procedures for calculating levels of service. The intersection analysis sheets are presented in Appendix B.

Tables 11.1 through 11.3 present the results of the intersection analyses. For signalized intersections and all-way-stop-controlled intersections, the overall intersection level of service and the average delay per vehicle are presented. For one-way and two-way stop-controlled intersections, an overall intersection level of service is not defined by the *Highway Capacity Manual*. Therefore, for one-way and two-way stop-controlled intersections the level of service and average delay per vehicle for the approach with the greatest delay is reported. For no-Project conditions, levels of service below the target level of service are presented in bold type. For Project scenarios, Project impacts are presented in bold type. For cumulative scenarios, cumulative impacts are shown in italics. Impacts shown in bold italics are cumulative impacts for which the project is partially responsible.

Table 11.1
Intersection Level of Service Summary
Existing and Existing-Plus-Project Conditions

Intersection	Control	Existing				Existing Plus Project			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
McCall / Parlier	OWS	10.7	B	11.0	B	10.7	B	11.0	B
Golden State / Manning	Signal	22.8	C	18.3	B	22.8	C	18.4	B
McCall / Manning	Signal	24.0	C	23.4	C	24.1	C	25.0	C
Golden State / Dinuba	TWS	16.4	C	20.3	C	16.5	C	20.5	C
Highland / Dinuba	OWS	12.2	B	14.3	B	12.3	B	14.6	B
McCall / Dinuba	AWS	**48.3**	**E**	**52.9**	**F**	**61.1**	**F**	**91.4**	**F**
Dockery / Dinuba	TWS	14.0	B	12.4	B	14.3	B	12.8	B
McCall / Floral	Signal	23.5	C	24.4	C	23.5	C	24.5	C

AWS: All-way stop   OWS: One-way stop   TWS: Two-way stop

Table 11.2
Intersection Level of Service Summary
Existing and Near-Term Conditions

Intersection	Control	Existing				Near-Term			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
McCall / Parlier	OWS	10.7	B	11.0	B	11.3	B	11.8	B
Golden State / Manning	Signal	22.8	C	18.3	B	32.1	C	22.5	C
McCall / Manning	Signal	24.0	C	23.4	C	30.6	C	29.2	C
Golden State / Dinuba	TWS	16.4	C	20.3	C	25.4	D	*37.3*	*E*
Highland / Dinuba	OWS	12.2	B	14.3	B	18.0	C	27.9	D
McCall / Dinuba	AWS	**48.3**	**E**	**52.9**	**F**	***199.8***	***F***	***368.0***	***F***
Dockery / Dinuba	TWS	14.0	B	12.4	B	*39.5*	*E*	*97.5*	*F*
McCall / Floral	Signal	23.5	C	24.4	C	44.8	D	46.4	D

AWS: All-way stop OWS: One-way stop TWS: Two-way stop

Table 11.3 presents the results of the intersection analyses based on year 2035 projections. Levels of service below the target level of service are presented in italic type, which signifies a cumulative impact as compared to existing conditions. For the with-Project scenario, cumulative impacts for which the project is partially responsible are presented in bold type.

Table 11.3
Intersection Level of Service Summary - Year 2035 Conditions

Intersection	Control	2035 No-Project				2035 With-Project			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
McCall / Parlier	OWS	12.7	B	16.4	C	12.7	B	16.5	C
Golden State / Manning	Signal	*52.6*	*D*	*63.3*	*E*	*52.8*	*D*	*64.2*	*E*
McCall / Manning	Signal	*36.6*	*D*	*59.6*	*E*	*36.9*	*D*	*61.0*	*E*
Golden State / Dinuba	TWS	*	*F*	*	*F*	*	*F*	*	*F*
Highland / Dinuba	OWS	*205.1*	*F*	*599.1*	*F*	***210.6***	***F***	***629.9***	***F***
McCall / Dinuba	AWS	*344.0*	*F*	*469.8*	*F*	***357.9***	***F***	***520.6***	***F***
Dockery / Dinuba	TWS	34.1	D	*68.2*	*F*	***35.6***	***E***	***79.6***	***F***
McCall / Floral	Signal	35.2	D	*67.5*	*E*	35.3	D	*68.8*	*E*

AWS: All-way stop OWS: One-way stop TWS: Two-way stop
* Delay exceeds calculable range.

11.2 Queuing

The 95th-percentile queues at signalized intersections were determined using Synchro 8. The queue analyses are included on the intersection analysis sheets presented in Appendix B. Queue lengths are reported only for signalized intersections to reveal possible deficiencies that would not be apparent based only on LOS results. For example, if a left-turn lane is not long enough to contain a queue, then the vehicles waiting to turn left will back up into the through traffic lanes and potentially block through traffic while the through traffic signal phase is being served with green time. This type of deficiency would not be apparent based on LOS calculations alone for signalized intersections. On the other hand, at stop-sign-controlled intersections a queuing analysis would not reveal any additional deficiencies that are not already revealed in the LOS analysis. Therefore, queuing analyses are not presented for unsignalized intersections.

The queuing analysis results are presented in Tables 11.4 through 11.8. Calculated queues exceeding the storage length by 25 feet or more are indicated in bold type.

Table 11.4
Queuing Analysis Summary – Existing Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	61	101	19	10	225	-	189	71	0	51	48	4
	P.M.	62	175	35	14	150	-	134	58	0	84	84	20
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	25	137	-	81	234	-	123	74	32	40	128	-
	P.M.	45	235	-	164	133	-	63	99	24	37	108	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	125	138	-	42	137	17	63	137	-	80	173	37
	P.M.	**224**	166	-	28	107	0	54	292	-	49	145	37

\+ Greater than 1,000 feet S: Shared movement, there is no separate lane at this location

Table 11.5
Queuing Analysis Summary – Existing-Plus-Project Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	61	101	19	10	226	-	189	71	0	53	48	4
	P.M.	62	175	35	14	151	-	134	59	0	91	85	20
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	25	138	-	83	234	-	124	74	32	40	129	-
	P.M.	46	250	-	169	133	-	67	102	27	37	111	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	128	138	-	42	137	18	63	139	-	80	173	37
	P.M.	**230**	166	-	28	107	0	54	296	-	54	148	37

\+ Greater than 1,000 feet S: Shared movement, there is no separate lane at this location

Table 11.6
Queuing Analysis Summary – Near-Term Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	62	107	20	10	247	-	**314**	90	0	72	50	4
	P.M.	62	182	39	14	156	-	210	78	0	188	88	20
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	25	151	-	104	291	-	**205**	82	34	53	130	-
	P.M.	46	312	-	193	148	-	121	103	36	68	119	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	128	271	-	42	369	27	63	140	-	115	178	40
	P.M.	**230**	532	-	28	356	27	54	304	-	127	150	39

\+ Greater than 1,000 feet S: Shared movement, there is no separate lane at this location

Table 11.7
Queuing Analysis Summary – 2035 No-Project Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	**275**	168	39	16	663	-	**380**	258	0	230	272	**262**
	P.M.	**317**	423	68	28	510	-	**337**	626	29	**549**	403	114
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	35	251	-	**211**	513	-	**236**	125	**102**	99	372	-
	P.M.	117	738	-	**476**	332	-	**211**	452	**196**	**181**	326	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	**222**	263	-	72	405	48	85	196	-	**190**	414	60
	P.M.	**598**	602	-	51	557	59	**101**	739	-	**255**	300	64

\+ Greater than 1,000 feet S: Shared movement, there is no separate lane at this location

Table 11.8
Queuing Analysis Summary – 2035 With-Project Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	**275**	168	39	16	664	-	**380**	259	0	236	272	**262**
	P.M.	**317**	423	68	28	515	-	**337**	628	29	**557**	403	**114**
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	35	252	-	**215**	513	-	**239**	126	**103**	99	376	-
	P.M.	117	741	-	**484**	332	-	**220**	463	**203**	**184**	332	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	**225**	263	-	72	405	49	85	198	-	**192**	416	60
	P.M.	**605**	607	-	51	557	60	**101**	749	-	**265**	307	64

\+ Greater than 1,000 feet S: Shared movement, there is no separate lane at this location

11.3 Traffic Signal Warrants

The California Department of Transportation *California Manual on Uniform Traffic Control Devices for Streets and Highways, 2012 Edition* (CMUTCD) presents various warrant analyses to assist in evaluating the need for traffic signals at an intersection. Traffic signal warrants are a series of standards that provide guidelines for determining whether a traffic signal is appropriate at a given intersection. If one or more of the signal warrants are met, signalization of the intersection may be appropriate. However, a signal likely should not be installed if none or few of the warrants are met since the installation of signals may increase delays on the previously uncontrolled major street and may contribute to an increase in accidents.

The potential need for a traffic signal is evaluated as a potential mitigation when a significant impact is identified at an unsignalized intersection. Since the analyses presented herein are based on peak hour traffic volumes, Figure 4C-4, Warrant 3, Peak Hour (70% Factor) as presented in the CMUTCD is utilized. For purposes of this study, traffic signals are not considered to be a feasible mitigation if the peak-hour traffic signal warrant is not met.

Caltrans typically utilizes other warrants, such as Warrant 1, Eight-Hour Vehicular Volume, and Warrant 2, Four-Hour Vehicular Volume, to determine whether traffic signals should be installed. However, these warrants are based on observation of existing conditions for several hours per day and are not useful with respect to future peak-hour conditions, including the conditions likely to occur after construction of the project. Therefore, other warrants, including Warrants 1 and 2, were not analyzed in this study.

12.0 DISCUSSION OF ANALYSES

12.1 Existing Conditions

The results of the Existing Conditions intersection analyses indicate that the study intersections are currently operating at acceptable levels of service, with the exception of the intersection of McCall and Dinuba Avenues. The intersection of McCall and Dinuba Avenues is currently operating at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour.

The queue analyses at signalized intersections suggest that the 95th-percentile queues in the eastbound left-turn lane at the intersection of McCall and Floral Avenues exceed the storage capacity during the p.m. peak hour.

12.2 Existing-Plus-Project Conditions

The results of the Existing-Plus-Project Conditions intersection analyses indicate that the Project will exacerbate the existing substandard levels of service at the intersection of McCall and Dinuba Avenues by causing the LOS to drop from LOS E to LOS F during the a.m. peak hour and by increasing the delay by more than 5.0 seconds during the p.m. peak hour. This is a significant impact.

The other study intersections are expected to continue to operate at acceptable levels of service.

The queue analyses at signalized intersections suggest that the 95th-percentile queues will be similar to the existing conditions.

The significant impact and recommended mitigation are described below. Mitigated intersection analysis sheets are presented in Appendix C.

Impact E-1

The Project will cause a substandard LOS F at the intersection of McCall and Dinuba Avenues during the a.m. peak hour and will exacerbate a substandard LOS F during the p.m. peak hour.

Mitigation E-1

The California Environmental Quality Act (CEQA) requires that the Project mitigate its impacts such that the intersection will continue to operate no worse than the existing conditions.

Construction of dedicated left-turn lanes on the eastbound and westbound approaches of McCall Avenue while maintaining the existing all-way stop control will mitigate the Project's impacts. The Project would also be required to construct frontage improvements in accordance with City of Selma standards. With implementation of this mitigation the intersection would operate at LOS D with an average delay of 33.9 seconds per vehicle during the a.m. peak hour and LOS F with an average delay of 50.9 seconds per vehicle during the p.m. peak hour. These delays are less than the existing delays as presented in Table 11.1.

The Project is responsible for construction of this mitigation by opening day of the commercial portions of the Project. Construction of the mini-storage component of the Project creates a negligible volume of traffic that will not trigger the significant impact.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the cost of the improvements to be constructed by the Project may be credited against payment of the Project's development fees.

Table 12.1
Mitigated Intersection Level of Service Summary
Existing-Plus-Project Conditions

Intersection	Mitigation	Control	A.M.		P.M.	
			Delay (sec)	LOS	Delay (sec)	LOS
McCall / Dinuba	E-1	All-way stop	33.9*	D	50.9*	F

* Delay is less than the existing condition.

12.3 Near-Term Conditions

The results of the Near-Term Conditions intersection analyses, which assume that all of the pending projects plus the proposed Project have been constructed, indicate that cumulative impacts are expected to occur at the following locations:

- Golden State Boulevard / Dinuba Avenue (the cumulative projects cause a substandard LOS E during the p.m. peak hour)
- McCall Avenue / Dinuba Avenue (the cumulative projects cause a substandard LOS F during the a.m. peak hour and exacerbate a substandard LOS F during the p.m. peak hour)
- Dockery Avenue / Dinuba Avenue (the cumulative projects cause a substandard LOS E during the a.m. peak hour and a substandard LOS F during the p.m. peak hour)

Cumulative traffic impacts are not solely caused by the proposed Project, but are also the cumulative result of other new developments within the City of Selma and in the surrounding area over time.

Based on the results of the Existing-Plus-Project Conditions intersection analyses, the Project contributes significantly to the cumulative impact at the intersection of McCall and Dinuba Avenues, but the Project's portion of the cumulative impact at the other locations is less than significant.

The queue analyses at signalized intersections suggest that the 95th-percentile queues will exceed the storage capacity at the following locations:

- Golden State Boulevard / Manning Avenue (northbound left-turn lane during the a.m. peak hour)
- McCall Avenue / Manning Avenue (northbound left-turn lane during the a.m. peak hour)
- McCall Avenue / Floral Avenue (eastbound left-turn lane during the p.m. peak hour)

Based on the results of the Existing-Plus-Project Conditions intersection analyses, the Project's portion of the cumulative impact at these locations is less than significant.

The significant impact and recommended mitigation are described below. Mitigated intersection analysis sheets are presented in Appendix C.

Impact NT-1

The Project will contribute to a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation NT-1

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: onc left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane, one through lane, and one right-turn lane;
Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues indentified in Tables 12.3 and 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Construction of the turn lanes recommended in Mitigation E-1 mitigates the Project's share of this near-term cumulative impact.

It should be noted that all-way stop control with widening of both McCall Avenue and Dinuba Avenue to four lanes in accordance with the arterial designation was investigated as a mitigation. However, widening alone will not mitigate the cumulative impact.

Table 12.2
Mitigated Intersection Level of Service Summary
Near-Term Conditions

Intersection	Mitigation	Control	A.M.		P.M.	
			Delay (sec)	LOS	Delay (sec)	LOS
McCall / Dinuba	NT-1	Signals	34.4	C	42.7	D

Table 12.3
Mitigated Queuing Analysis Summary – Near-Term Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
McCall / Dinuba	A.M.	70	241	S	243	125	47	78	165	34	137	204	S
	P.M.	90	387	S	241	265	43	88	232	58	290	273	S

S: Shared movement
Note: New lanes to be constructed long enough to accommodate queues for all applicable scenarios

12.4 Year 2035 No-Project Conditions

The results of the Year 2035 No-Project Conditions analyses indicate that the following intersections are expected experience cumulative impacts even if the proposed Project is not constructed:

- Golden State Boulevard and Manning Avenue (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- McCall and Manning Avenues (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- Golden State Boulevard and Dinuba Avenue (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- Highland and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- McCall and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. peak hour and exacerbate a substandard LOS F during the p.m. peak hour)
- Dockery and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the p.m. peak hour)
- McCall and Floral Avenues (the cumulative projects cause a substandard LOS E during the p.m. peak hour)

The queue analyses at signalized intersections suggest that the 95th-percentile queues will exceed the storage capacity at the following locations:

- Golden State Boulevard and Manning Avenue (eastbound left, northbound left, southbound left, and southbound right)
- McCall and Manning Avenues (westbound left, northbound left, northbound right, and southbound left)
- McCall and Floral Avenues (eastbound left, northbound left, and southbound left)

12.5 Year 2035 With-Project Conditions

The results of the Year 2035 With-Project Conditions intersection analyses indicate that cumulative impacts are expected to occur at the following locations:

- Golden State Boulevard and Manning Avenue (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- McCall and Manning Avenues (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- Golden State Boulevard and Dinuba Avenue (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- Highland and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- McCall and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. peak hour and exacerbate a substandard LOS F during the p.m. peak hour)
- Dockery and Dinuba Avenues (the cumulative projects cause a substandard LOS E during the a.m. peak hour and LOS F during the p.m. peak hour)
- McCall and Floral Avenues (the cumulative projects cause a substandard LOS E during the p.m. peak hour)

Cumulative traffic impacts are not solely caused by the proposed Project, but are also the cumulative result of other new developments within the City of Selma and in the surrounding area over time.

Based on a comparison with the 2035 No-Project Conditions analyses, the Project contributes significantly to the cumulative impact at the following intersections by increasing the average delay by at least 5.0 seconds per vehicle:

- Highland and Dinuba Avenues
- McCall and Dinuba Avenues
- Dockery and Dinuba Avenues

The Project's portion of the cumulative impact at the other locations is less than significant.

The queue analyses at signalized intersections suggest that the 95th-percentile queues will exceed the storage capacity at the following locations:

- Golden State Boulevard and Manning Avenue (eastbound left, northbound left, southbound left, and southbound right)
- McCall and Manning Avenues (westbound left, northbound left, northbound right, and southbound left)
- McCall and Floral Avenues (eastbound left, northbound left, and southbound left)

The queue analyses indicate that the 95th-percentile queues will be similar to the 2035 No-Project conditions and will not be exacerbated by the proposed Project.

The significant impacts and recommended mitigations are described below. Mitigated intersection analysis sheets are presented in Appendix C.

Impact 2035-1

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of Highland and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-1

The intersection of Highland and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound: two through lane with a shared right turn;
Westbound: one left-turn lane and two through lanes;
Northbound: one left-turn lane and one right-turn lane;
Southbound: does not exist.

New turn lanes shall be designed to accommodate the queues indentified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-2

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-2

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

New turn lanes shall be designed to accommodate the queues indentified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of*

Development Impact Fees for Circulation System (Streets, Signals and Bridges) dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-3

The Project and the cumulative projects will contribute to a cumulative substandard LOS E during the a.m. peak hour and a cumulative substandard LOS F during the p.m. peak hour at the intersection of Dockery and Dinuba Avenues.

Mitigation 2035-3

The intersection of Dockery and Dinuba Avenues will require signalization with protected left-turn phasing and the following minimum lane configurations:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues indentified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. In addition, the intersection of Dockery and Dinuba Avenues is programmed for signalization (Project ST-29). Therefore, payment of the City's fees will constitute mitigation of the Project's equitable share of the impact.

Table 12.4
Mitigated Intersection Level of Service Summary
2035 With-Project Conditions

Intersection	Mitigation	Control	A.M.		P.M.	
			Delay (sec)	LOS	Delay (sec)	LOS
Highland / Dinuba	2035-1	Signal	12.1	B	16.0	B
McCall / Dinuba	2035-2	Signal	23.7	C	40.2	D
Dockery / Dinuba	2035-3	Signal	13.1	B	12.9	B

Table 12.5
Mitigated Queuing Analysis Summary – 2035 With-Project Conditions

Intersection		Storage and 95th-Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Highland / Dinuba	A.M.		57	S	178	46		68		43			
	P.M.		158	S	227	37		64		62			
McCall / Dinuba	A.M.	90	90	S	213	97	S	112	104	S	118	184	S
	P.M.	241	166	S	229	156	S	149	291	S	292	178	S
Dockery / Dinuba	A.M.	9	108	S	27	118	S	63	24	S	13	15	S
	P.M.	15	182	S	25	103	S	66	21	S	10	7	S

S: Shared movement Shaded cells indicate movements that do not exist
Note: New lanes to be constructed long enough to accommodate queues for all applicable scenarios

13.0 EQUITABLE SHARE CALCULATIONS

Where required cumulative mitigations are not included in a traffic impact fee, the Project's financial responsibility for the mitigations can be determined based on equitable share calculations as presented in the Caltrans *Guide for the Preparation of Traffic Impact Studies* dated December 2002. Caltrans recommends the following equation to determine a project's equitable share of the cost of improvements:

$$P = \frac{T}{T_B - T_E}$$

where:

P = The equitable share of the project's traffic impact;
T = The project trips generated during the peak hour of the adjacent facility;
T_B = The forecasted (future with project) traffic volume on the impacted facility;
T_E = The existing traffic on the facility plus approved projects traffic (cumulative).

Table 13.1 presents equitable share responsibility calculations for the 2035 mitigations. These equitable shares would not be applicable if the mitigation is included in, or added to, a transportation impact fee paid by the Project. The equitable shares presented for Mitigations 2035-1 and 2035-2 apply only to the traffic signals; the lane widening improvements are included in the City's development fees. Mitigation 2035-3 is not included in the table because road widening and signalization improvements are covered in the City's development fees.

Table 13.1
Equitable Share Responsibility Calculations – Weekday P.M. Peak Hour

Location	Mitigation	Project Trips	Existing Traffic Volume	Future Traffic Volume	Equitable Share (Percent)
Highland / Dinuba	2035-1	18	791	1,767	1.84
McCall / Dinuba	2035-2	153	1,320	3,170	8.27

14.0 CONCLUSIONS

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the Project, and to analyze the traffic conditions expected to occur in the future.

The traffic impact study concludes that deficiencies are expected to occur at several of the study intersections and road segments without the Project as development progresses in the Selma area.

The Project is expected to generate more trips than would be likely to occur if the site were developed in accordance with the current General Plan land uses.

The Project is expected to cause an opening-day significant impact and contribute to cumulative long-term significant impacts at some of the intersections studied. The Project will be required to mitigate the significant impacts as described herein. A summary of the significant impacts and the recommended mitigations is presented below.

15.0 SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATIONS

Impact E-1

The Project will cause a substandard LOS F at the intersection of McCall and Dinuba Avenues during the a.m. peak hour and will exacerbate a substandard LOS F during the p.m. peak hour.

Mitigation E-1

The California Environmental Quality Act (CEQA) requires that the Project mitigate its impacts such that the intersection will continue to operate no worse than the existing conditions.

Construction of dedicated left-turn lanes on the eastbound and westbound approaches of McCall Avenue while maintaining the existing all-way stop control will mitigate the Project's impacts. The Project would also be required to construct frontage improvements in accordance with City of Selma standards. With implementation of this mitigation the intersection would operate at LOS D with an average delay of 33.9 seconds per vehicle during the a.m. peak hour and LOS F with an average delay of 50.9 seconds per vehicle during the p.m. peak hour. These delays are less than the existing delays as presented in Table 11.1.

The Project is responsible for construction of this mitigation by opening day of the commercial portions of the Project. Construction of the mini-storage component of the Project creates a negligible volume of traffic that will not trigger the significant impact.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the cost of the improvements to be constructed by the Project may be credited against payment of the Project's development fees.

Impact NT-1

The Project will contribute to a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation NT-1

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound:	one left-turn lane and one through lane with a shared right turn;
Westbound:	one left-turn lane, one through lane, and one right-turn lane;
Northbound:	one left-turn lane, one through lane, and one right-turn lane;
Southbound:	one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues indentified in Tables 12.3 and 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Construction of the turn lanes recommended in Mitigation E-1 mitigates the Project's share of this near-term cumulative impact.

It should be noted that all-way stop control with widening of both McCall Avenue and Dinuba Avenue to four lanes in accordance with the arterial designation was investigated as a mitigation. However, widening alone will not mitigate the cumulative impact.

Impact 2035-1

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of Highland and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-1

The intersection of Highland and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound:	two through lane with a shared right turn;
Westbound:	one left-turn lane and two through lanes;
Northbound:	one left-turn lane and one right-turn lane;
Southbound:	does not exist.

New turn lanes shall be designed to accommodate the queues indentified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-2

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-2

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

New turn lanes shall be designed to accommodate the queues indentified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-3

The Project and the cumulative projects will contribute to a cumulative substandard LOS E during the a.m. peak hour and a cumulative substandard LOS F during the p.m. peak hour at the intersection of Dockery and Dinuba Avenues.

Mitigation 2035-3

The intersection of Dockery and Dinuba Avenues will require signalization with protected left-turn phasing and the following minimum lane configurations:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues indentified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. In addition, the intersection of Dockery and Dinuba Avenues is programmed for signalization (Project ST-29). Therefore, payment of the City's fees will constitute mitigation of the Project's equitable share of the impact.

Thank you for the opportunity to perform this traffic impact study. Please feel free to call our office if you have any questions.

PETERS ENGINEERING GROUP

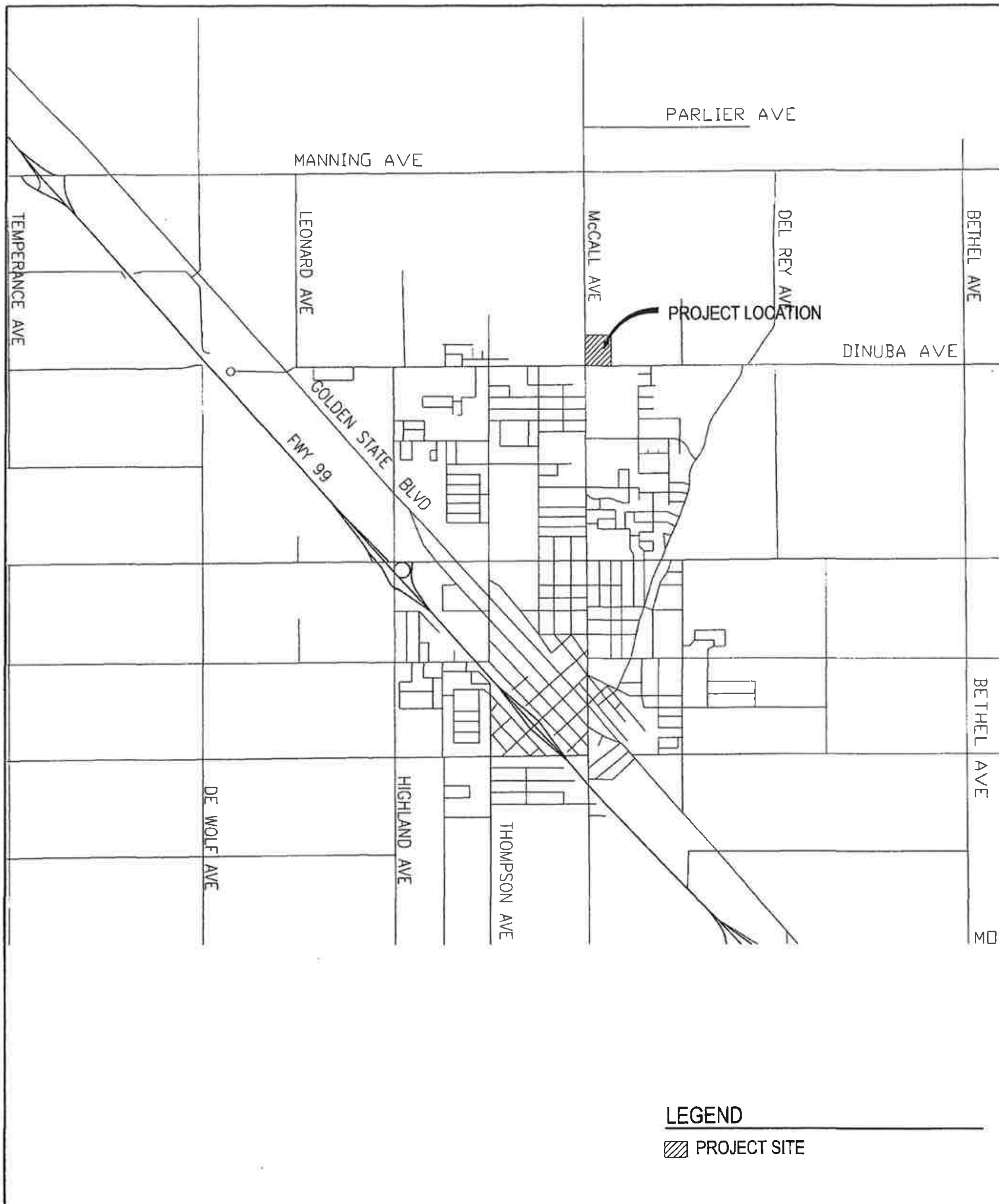
John Rowland, PE, TE

REGISTERED PROFESSIONAL ENGINEER
JOHN ROWLAND
No. 2484
Exp 6-30-14
TRAFFIC
STATE OF CALIFORNIA

Signed: November 21, 2013

Attachments: Figures 1 through 10
Appendix A - Traffic Count Data Sheets
Appendix B - Intersection Analysis Sheets
Appendix C - Mitigated Intersection Analyses

FIGURES



VICINITY MAP

Proposed Commercial Center
Selma, California

Not to Scale

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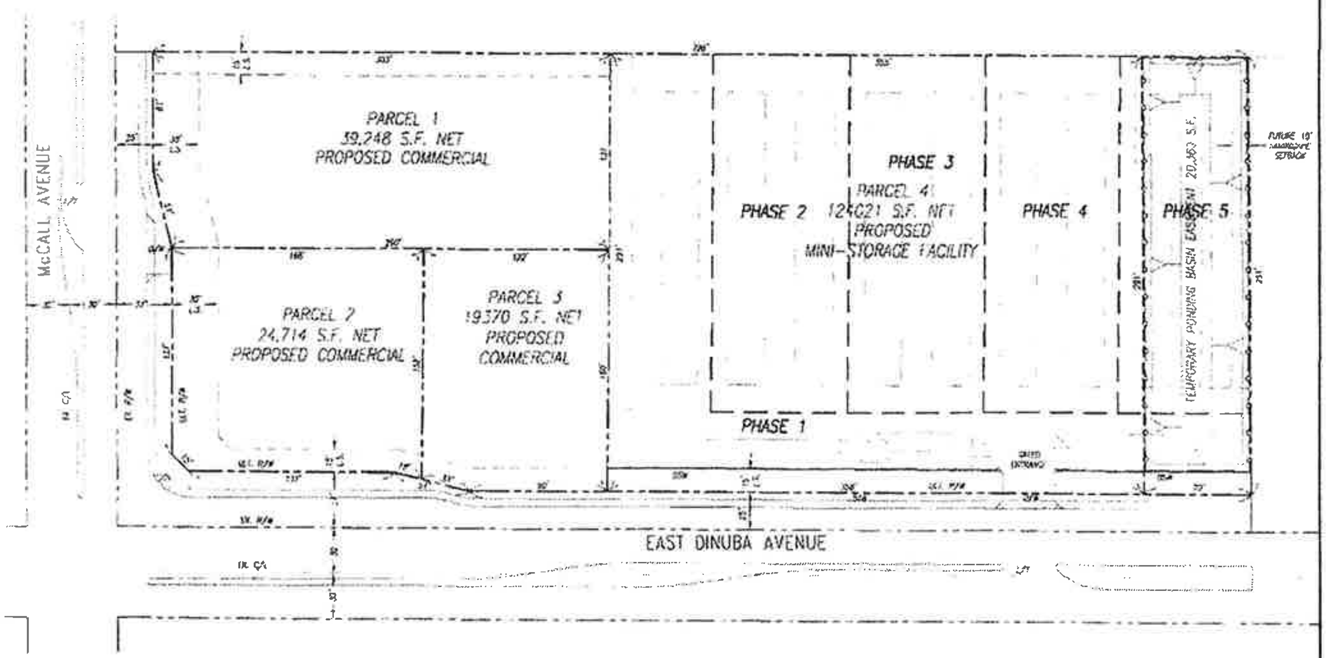
Figure 1



SITE PLAN

Proposed Commercial Center
Selma, California

Not to Scale

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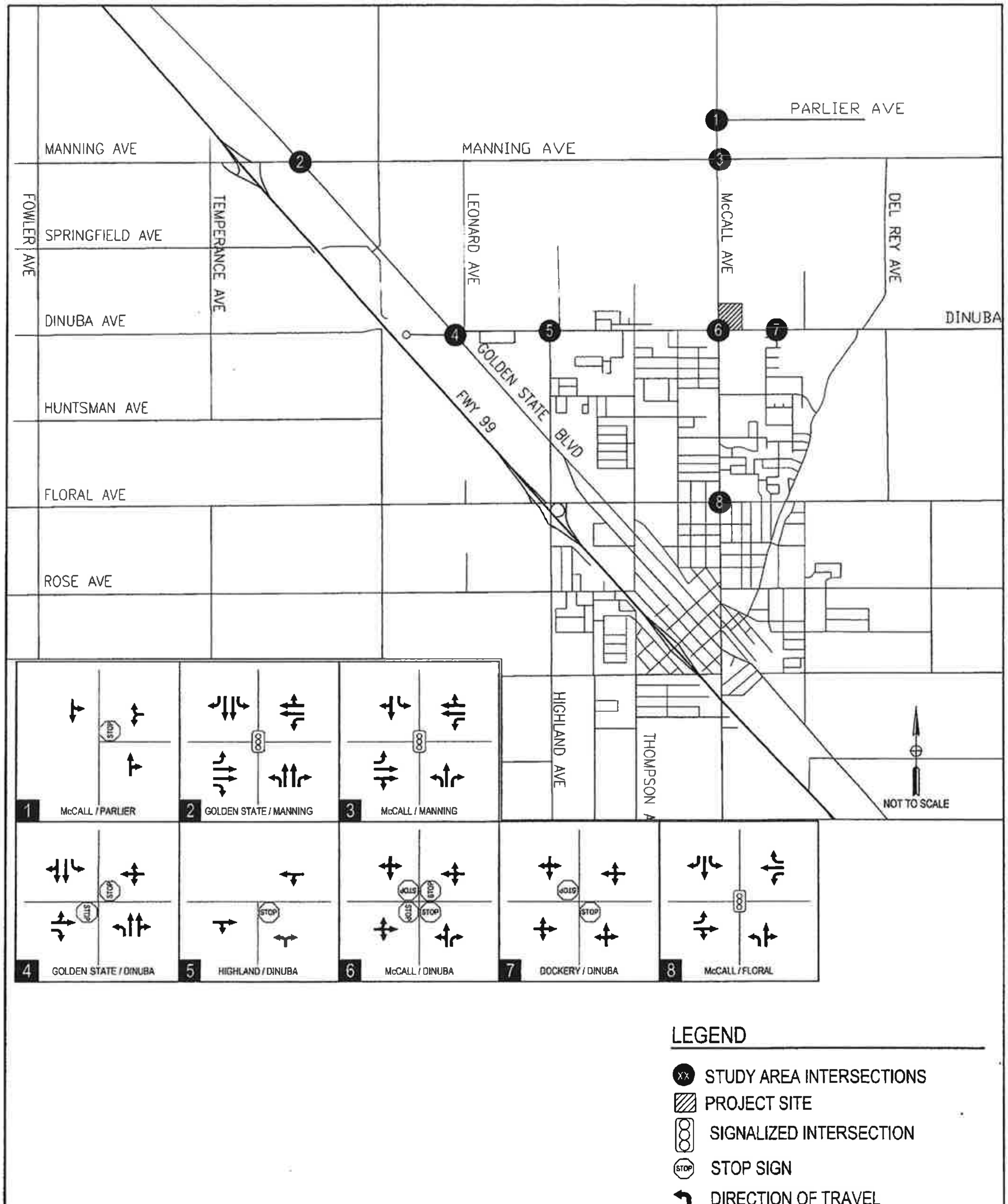
Figure 2



Proposed Commercial Center
Selma, California

EXISTING LANE CONFIGURATIONS AND INTERSECTION CONTROL

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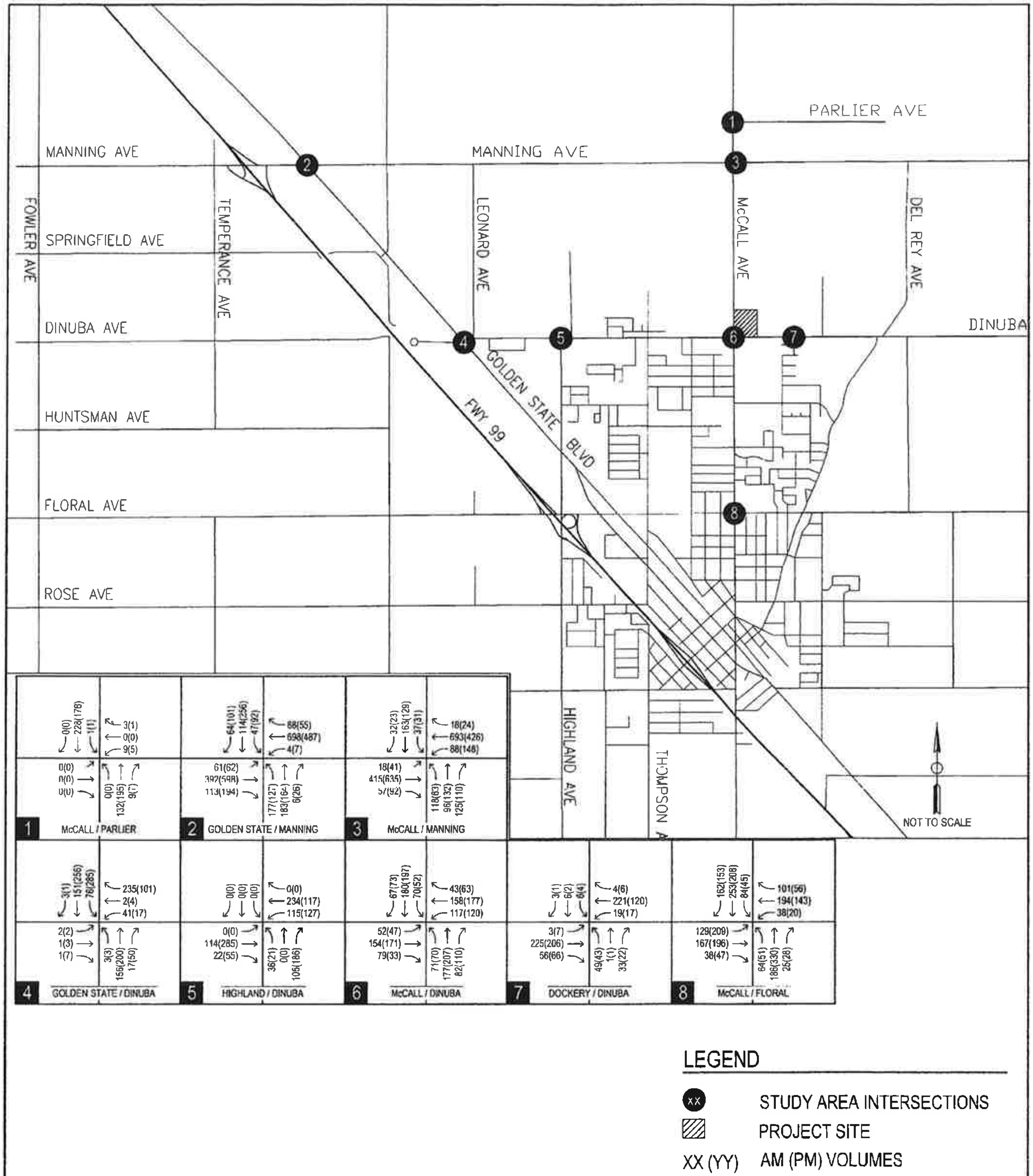
Figure 3



Proposed Commercial Center
Selma, California

EXISTING PEAK HOUR TRAFFIC VOLUMES

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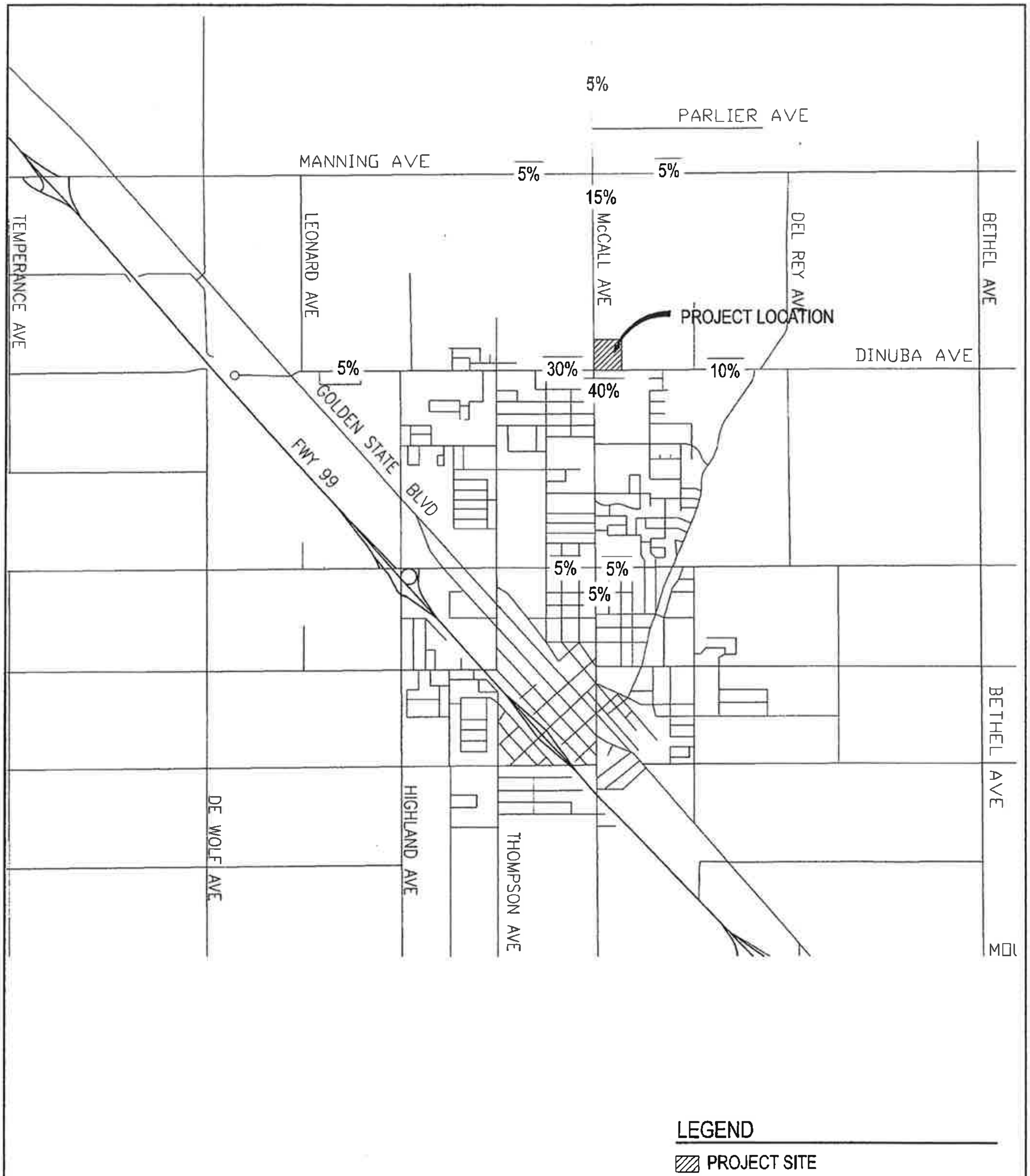
Figure 4

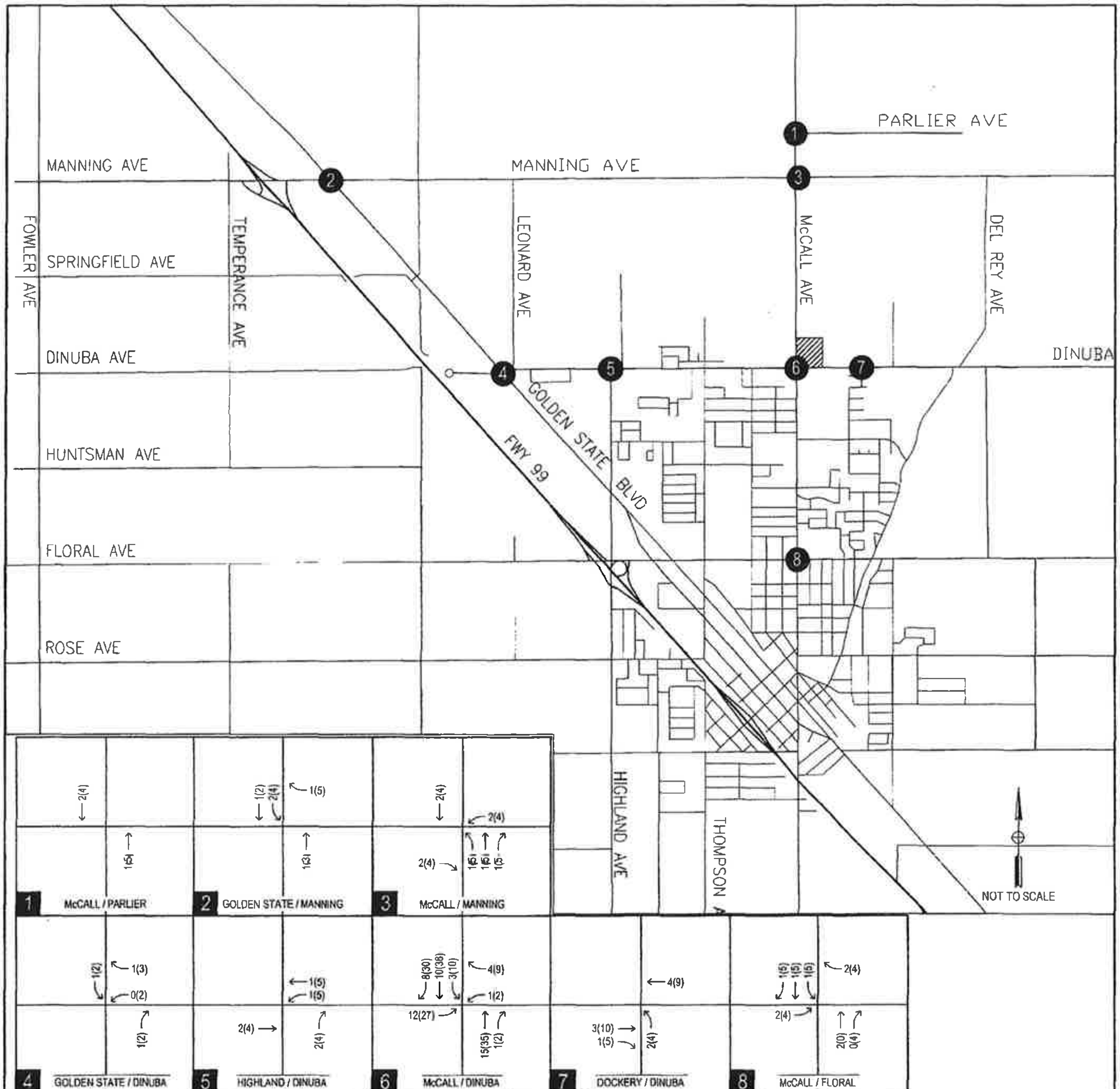


PROJECT TRAFFIC DISTRIBUTION PERCENTAGES

Proposed Commercial Center
Selma, California

PETERS ENGINEERING GROUP

Figure 5



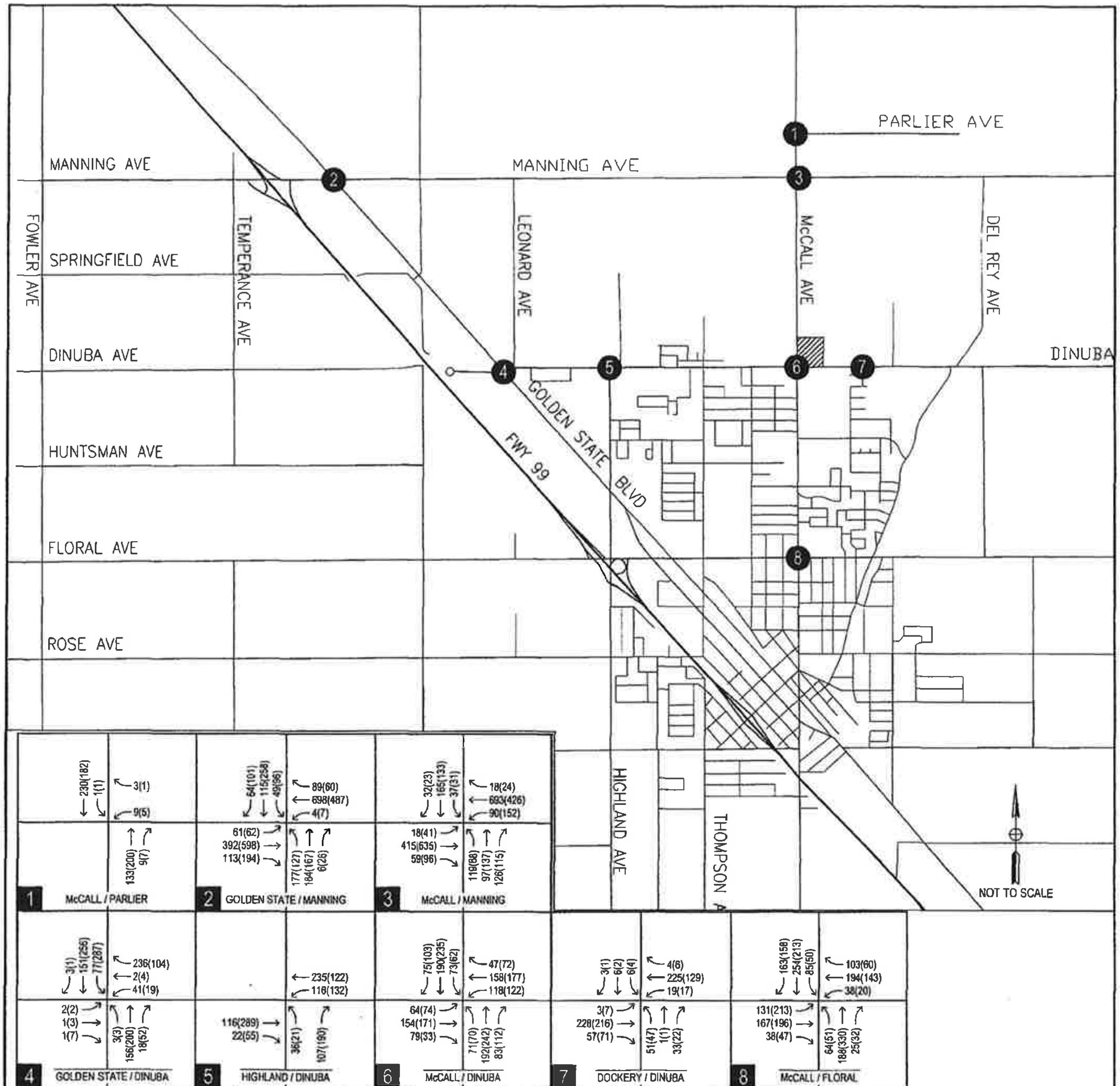
LEGEND

- STUDY AREA INTERSECTIONS
- PROJECT SITE
- XX (YY) AM (PM) VOLUMES

Proposed Commercial Center
Selma, California

PEAK HOUR PROJECT TRAFFIC VOLUMES

PETERS ENGINEERING GROUP Figure 6



LEGEND

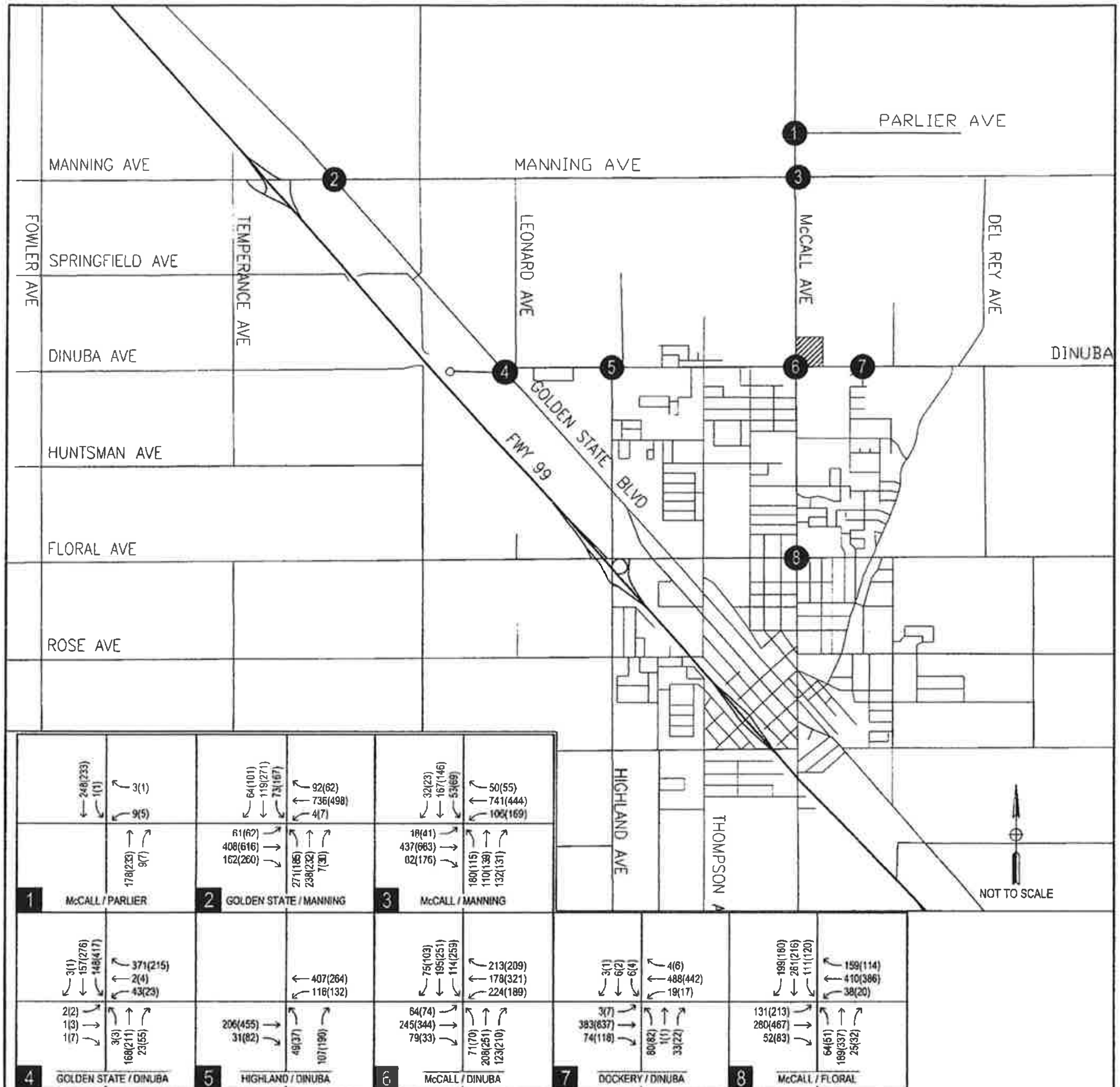
XX	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

Proposed Commercial Center
Selma, California

EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

PETERS ENGINEERING GROUP

Figure 7



LEGEND

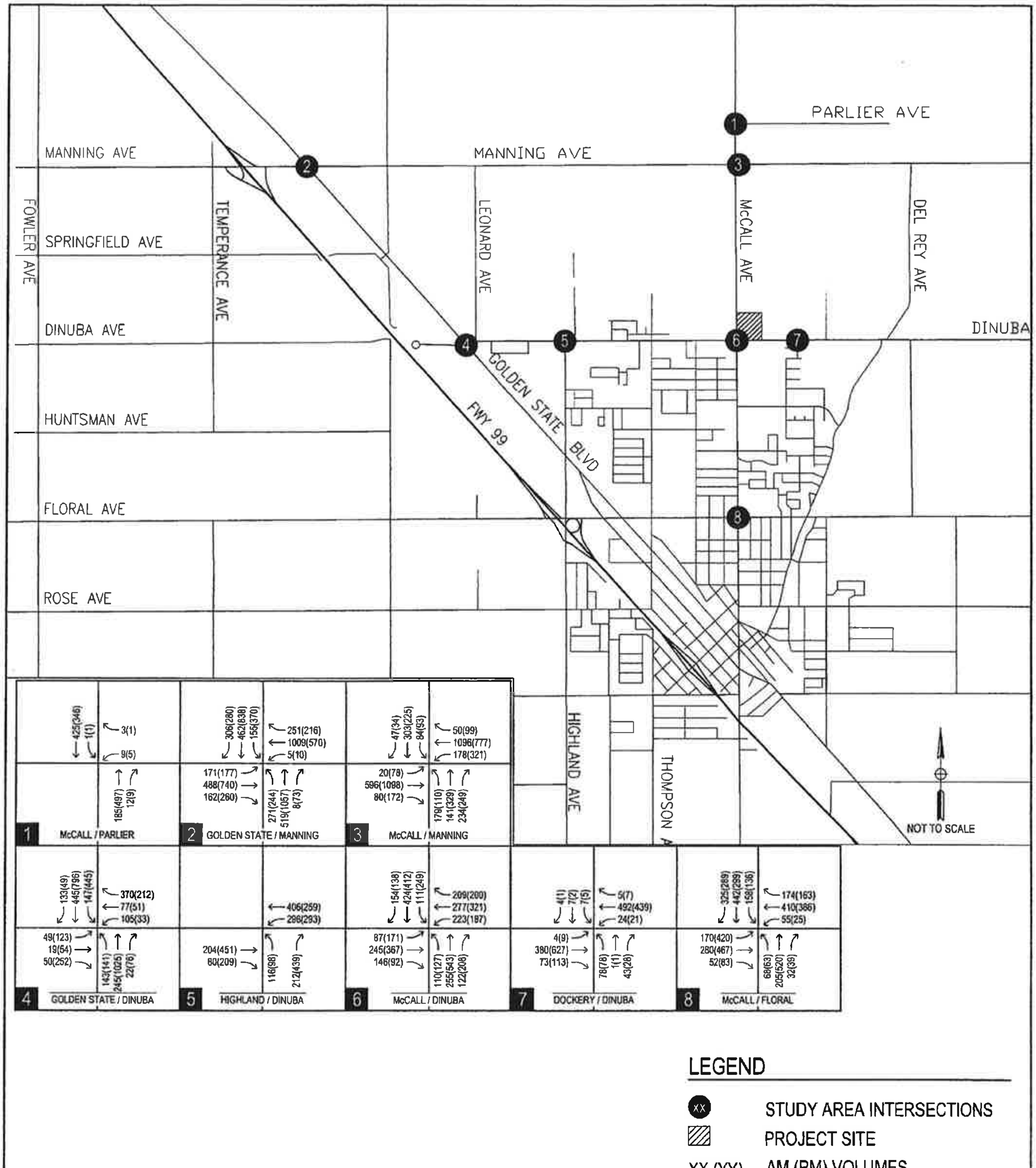
XX	STUDY AREA INTERSECTIONS
	PROJECT SITE
XX (YY)	AM (PM) VOLUMES

Proposed Commercial Center
Selma, California

NEAR-TERM WITH PROJECT PEAK HOUR TRAFFIC VOLUMES

PETERS ENGINEERING GROUP

Figure 8

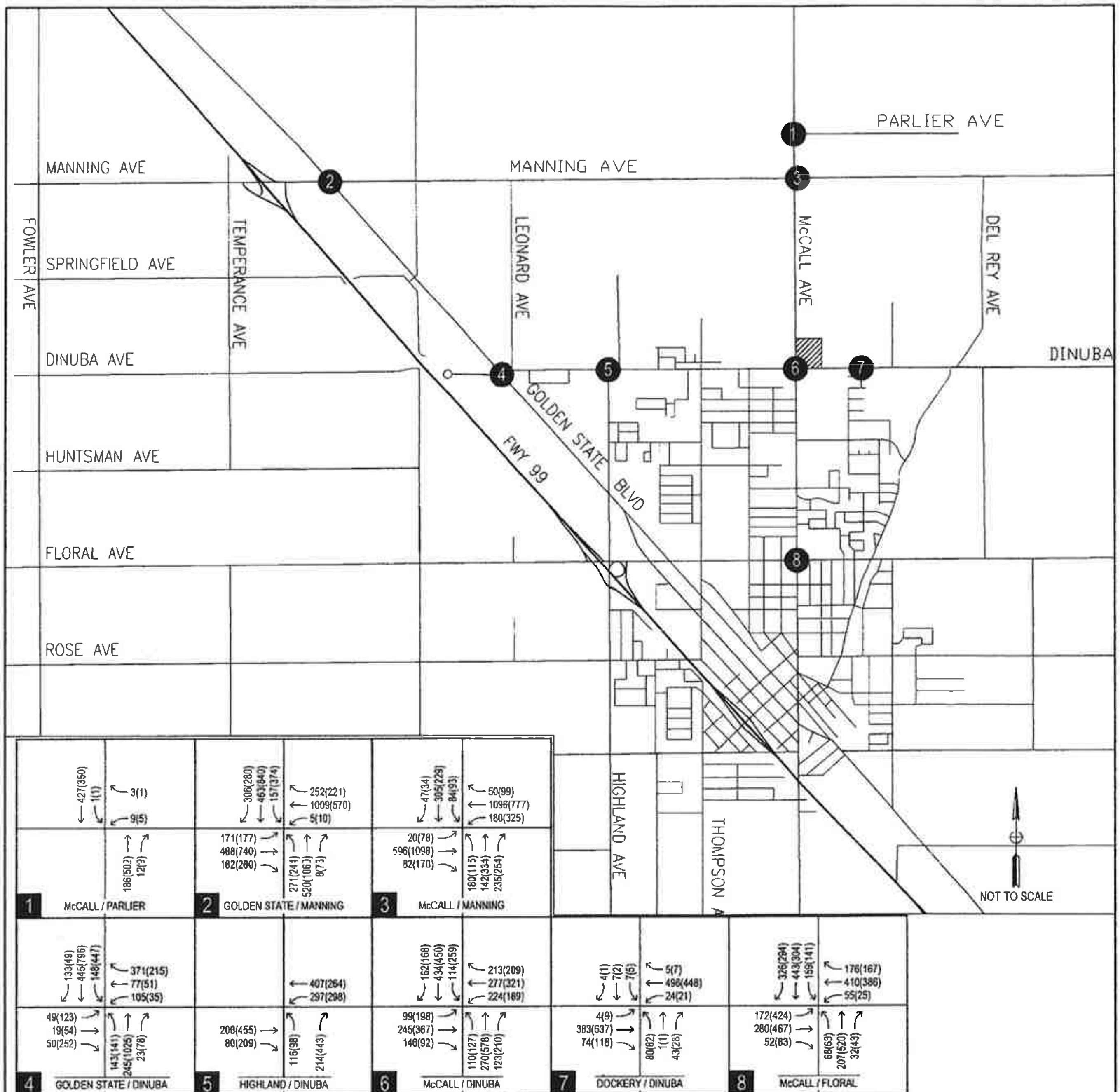


Proposed Commercial Center
Selma, California

CUMULATIVE 2035 NO PROJECT PEAK HOUR TRAFFIC VOLUMES

PETERS ENGINEERING GROUP

Figure 9



LEGEND

- STUDY AREA INTERSECTIONS
- PROJECT SITE
- XX (YY) AM (PM) VOLUMES

Proposed Commercial Center
Selma, California

CUMULATIVE 2035 NO PROJECT PEAK HOUR TRAFFIC VOLUMES

PETERS ENGINEERING GROUP — Figure 10

APPENDIX A
TRAFFIC COUNT DATA SHEETS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-001 **Day:** Tuesday

TOTALS

City: Selma **Date:** 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	0	1	0	0	1	0	0	1	0	
7:00 AM	11	22	18	8	41	9	4	28	17	15	28	5	206
7:15 AM	9	36	21	12	37	11	7	20	17	29	26	8	233
7:30 AM	22	47	21	14	48	12	14	38	22	37	35	14	324
7:45 AM	25	57	19	19	43	22	23	52	15	31	48	6	360
8:00 AM	15	37	21	25	52	22	8	44	25	20	49	15	333
8:15 AM	5	32	21	9	29	5	12	20	15	12	40	7	207
8:30 AM	6	30	16	9	29	5	7	18	11	21	13	10	175
8:45 AM	5	24	22	5	17	11	6	15	7	14	12	10	148

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	98	285	159	101	296	97	81	235	129	179	251	75	1986
APPROACH %'s :	18.08%	52.58%	29.34%	20.45%	59.92%	19.64%	18.20%	52.81%	28.99%	35.45%	49.70%	14.85%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	71	177	87	70	180	67	52	154	79	117	158	43	1250
PEAK HR FACTOR :		0.817			0.801			0.792			0.924		0.868

CONTROL : 4-Way Stop (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-001

Day: Tuesday

TOTALS

City: Selma

Date: 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	1	0	1	0	0	1	0	0	1	0	
4:00 PM	10	45	28	17	49	14	17	33	17	17	19	15	281
4:15 PM	12	50	22	9	41	11	10	20	11	22	42	10	260
4:30 PM	13	37	20	13	42	17	6	28	10	31	33	12	262
4:45 PM	13	49	28	9	43	17	8	35	7	24	40	10	283
5:00 PM	18	51	38	11	66	22	12	41	11	30	34	16	350
5:15 PM	22	62	21	19	45	23	12	45	5	29	51	20	354
5:30 PM	17	45	23	13	43	11	15	50	10	37	52	17	333
5:45 PM	17	28	27	9	43	12	10	24	7	24	51	9	261

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	122	367	207	100	372	127	90	276	78	214	322	109	2384
APPROACH %'s :	17.53%	52.73%	29.74%	16.69%	62.10%	21.20%	20.27%	62.16%	17.57%	33.18%	49.92%	16.90%	

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	70	207	110	52	197	73	47	171	33	120	177	63	1320
PEAK HR FACTOR :		0.904			0.813			0.837			0.849		0.932

CONTROL : 4-Way Stop (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-002 **Day:** Tuesday

TOTALS

City: Selma **Date:** 8/27/2013

AM

NS/EW Streets:	Highland Ave			Highland Ave			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	0	0	1	0	
7:00 AM	2	0	11	0	0	0	0	21	2	27	56	0	119
7:15 AM	9	0	21	0	0	0	0	25	3	28	41	0	127
7:30 AM	14	0	24	0	0	0	0	34	6	22	63	0	163
7:45 AM	8	0	33	0	0	0	0	33	5	35	66	0	180
8:00 AM	5	0	27	0	0	0	0	22	8	30	64	0	156
8:15 AM	4	0	15	0	0	0	0	13	6	31	42	0	111
8:30 AM	5	0	17	0	0	0	0	9	1	24	23	0	79
8:45 AM	5	0	13	0	0	0	0	13	3	23	24	0	81
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	52	0	161	0	0	0	0	170	34	220	379	0	1016
APPROACH %'s :	24.41%	0.00%	75.59%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	83.33%	16.67%	36.73%	63.27%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	36	0	105	0	0	0	0	114	22	115	234	0	626
PEAK HR FACTOR :		0.860			0.000			0.850			0.864		0.869

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-002 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

PM

NS/EW Streets:	Highland Ave			Highland Ave			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	0	0	1	0	
4:00 PM	7	0	33	0	0	0	0	48	12	35	22	0	157
4:15 PM	8	0	40	0	0	0	0	53	14	27	28	0	170
4:30 PM	10	0	42	0	0	0	1	58	18	33	27	0	189
4:45 PM	8	0	42	0	0	0	0	65	15	33	30	0	193
5:00 PM	7	0	52	0	0	0	0	66	13	35	28	0	201
5:15 PM	1	0	43	0	0	0	0	79	19	27	26	0	195
5:30 PM	5	0	49	0	0	0	0	75	8	32	33	0	202
5:45 PM	7	0	45	0	0	0	0	55	15	30	34	0	186

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	53	0	346	0	0	0	1	499	114	252	228	0	1493
APPROACH %'s :	13.28%	0.00%	86.72%	#DIV/0!	#DIV/0!	#DIV/0!	0.16%	81.27%	18.57%	52.50%	47.50%	0.00%	

PEAK HR START TIME :	4:45 PM												TOTAL
PEAK HR VOL :	21	0	186	0	0	0	0	285	55	127	117	0	791
PEAK HR FACTOR :		0.877			0.000			0.867			0.938		0.979

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-003 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

AM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
7:00 AM	1	28	3	13	21	0	1	1	1	4	1	54	128
7:15 AM	1	31	4	17	19	0	1	1	0	11	1	43	129
7:30 AM	0	41	3	25	21	0	0	0	0	10	0	73	173
7:45 AM	1	45	6	17	53	1	1	0	1	15	1	66	207
8:00 AM	2	39	3	18	45	0	0	1	0	8	0	58	174
8:15 AM	0	31	5	16	32	2	1	0	0	8	1	38	134
8:30 AM	1	21	6	8	29	2	0	0	2	8	1	30	108
8:45 AM	1	26	4	11	38	2	0	0	1	4	1	27	115

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	7	262	34	125	258	7	4	3	5	68	6	389	1168
APPROACH %'s :	2.31%	86.47%	11.22%	32.05%	66.15%	1.79%	33.33%	25.00%	41.67%	14.69%	1.30%	84.02%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	3	156	17	76	151	3	2	1	1	41	2	235	688
PEAK HR FACTOR :		0.846			0.810			0.500			0.837		0.831

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-003 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

PM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
4:00 PM	1	33	6	49	73	1	0	1	1	11	0	19	195
4:15 PM	4	35	8	56	60	0	2	0	0	6	1	32	204
4:30 PM	0	51	11	59	63	0	0	1	2	2	3	24	216
4:45 PM	1	54	13	77	76	0	1	1	4	2	0	31	260
5:00 PM	2	48	18	62	61	0	1	0	1	9	0	22	224
5:15 PM	0	47	8	87	56	0	0	1	0	4	1	24	228
5:30 PM	0	40	11	70	39	0	0	1	0	8	0	25	194
5:45 PM	0	23	12	54	47	0	0	1	0	8	1	30	176

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	8	331	87	514	475	1	4	6	8	50	6	207	1697
APPROACH %'s :	1.88%	77.70%	20.42%	51.92%	47.98%	0.10%	22.22%	33.33%	44.44%	19.01%	2.28%	78.71%	

PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	3	200	50	285	256	0	2	3	7	17	4	101	928
PEAK HR FACTOR :		0.930			0.884			0.500			0.924		0.892

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-004 **Day:** Tuesday

TOTALS

City: Selma **Date:** 8/27/2013

AM

NS/EW Streets:	Dockery Ave			Dockery Ave			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	17	0	7	3	0	0	1	17	6	3	13	0	67
7:15 AM	4	0	5	2	0	1	0	38	11	1	19	0	81
7:30 AM	22	0	7	2	2	1	1	49	25	3	48	2	162
7:45 AM	10	1	13	2	3	0	0	73	13	5	77	1	198
8:00 AM	13	0	8	0	1	1	2	65	7	10	77	1	185
8:15 AM	5	0	4	2	0	0	0	23	3	1	35	0	73
8:30 AM	5	0	3	0	1	0	0	22	2	0	19	2	54
8:45 AM	5	1	5	0	0	0	0	22	4	0	11	0	48

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	81	2	52	11	7	3	4	309	71	23	299	6	868
APPROACH %'s :	60.00%	1.48%	38.52%	52.38%	33.33%	14.29%	1.04%	80.47%	18.49%	7.01%	91.16%	1.83%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	49	1	33	6	6	3	3	225	56	19	221	4	626
PEAK HR FACTOR :		0.716			0.750			0.826			0.693		0.790

CONTROL : 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-004 **Day:** Tuesday

TOTALS

City: Selma **Date:** 8/27/2013

PM

NS/EW Streets:	Dockery Ave			Dockery Ave			Dinuba Ave			Dinuba Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	14	1	3	1	1	0	0	34	15	3	42	2	116
4:15 PM	7	2	1	1	1	0	1	32	13	3	28	1	90
4:30 PM	10	0	0	0	0	1	1	55	6	3	28	2	106
4:45 PM	8	0	5	0	0	0	0	46	14	3	32	1	109
5:00 PM	9	0	3	1	0	0	2	45	9	7	30	1	107
5:15 PM	9	0	6	1	1	1	1	50	14	10	25	1	119
5:30 PM	15	1	8	1	0	0	2	56	23	0	34	1	141
5:45 PM	10	0	5	1	1	0	2	55	20	0	31	3	128
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	82	4	31	6	4	2	9	373	114	29	250	12	916
APPROACH %'s :	70.09%	3.42%	26.50%	50.00%	33.33%	16.67%	1.81%	75.20%	22.98%	9.97%	85.91%	4.12%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	43	1	22	4	2	1	7	206	66	17	120	6	495
PEAK HR FACTOR :		0.688			0.583			0.861			0.941		0.878

CONTROL : 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-005 **Day:** Tuesday

TOTALS

City: Selma **Date:** 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Floral Ave			Floral Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	1	1	0.5	0.5	1	1	1	
7:00 AM	1	19	0	6	31	29	9	12	5	0	27	5	144
7:15 AM	5	38	2	7	35	19	21	24	5	4	41	6	207
7:30 AM	19	57	10	17	58	35	20	55	12	6	38	17	344
7:45 AM	20	60	6	33	60	53	43	51	8	10	54	37	435
8:00 AM	15	40	8	31	65	41	32	45	13	15	63	33	401
8:15 AM	10	29	1	3	70	33	34	16	5	7	39	14	261
8:30 AM	4	32	5	4	47	27	19	11	12	6	27	5	199
8:45 AM	10	28	4	4	42	27	21	23	10	5	16	3	193

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	84	303	36	105	408	264	199	237	70	53	305	120	2184
APPROACH %'s :	19.86%	71.63%	8.51%	13.51%	52.51%	33.98%	39.33%	46.84%	13.83%	11.09%	63.81%	25.10%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	64	186	25	84	253	162	129	167	38	38	194	101	1441
PEAK HR FACTOR :		0.799			0.854			0.819			0.750		0.828

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-005 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Floral Ave			Floral Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	1	1	0.5	0.5	1	1	1	
4:00 PM	14	66	7	10	53	40	51	42	8	6	29	12	338
4:15 PM	12	70	7	15	54	33	33	32	5	10	36	21	328
4:30 PM	15	50	8	12	61	45	34	41	5	10	41	15	337
4:45 PM	7	83	7	5	54	46	44	53	12	3	38	12	364
5:00 PM	16	87	8	17	55	47	57	56	13	6	27	17	406
5:15 PM	15	77	8	11	66	37	58	40	11	6	32	14	375
5:30 PM	13	83	5	12	33	23	50	47	11	5	46	13	341
5:45 PM	14	65	7	10	53	34	32	62	11	7	37	9	341

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	106	581	57	92	429	305	359	373	76	53	286	113	2830
APPROACH %'s :	14.25%	78.09%	7.66%	11.14%	51.94%	36.92%	44.43%	46.16%	9.41%	11.73%	63.27%	25.00%	

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	51	330	28	45	208	153	209	196	47	20	143	56	1486
PEAK HR FACTOR :		0.921			0.853			0.897			0.855		0.915

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-006 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Manning Ave			Manning Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	31	25	18	5	32	6	4	102	7	13	148	3	394
7:15 AM	19	22	36	9	31	9	4	100	12	22	155	2	421
7:30 AM	36	24	42	15	58	8	4	133	23	19	227	7	596
7:45 AM	32	25	29	8	42	9	6	80	15	34	163	6	449
8:00 AM	40	25	27	5	35	5	8	61	9	14	136	5	370
8:15 AM	25	14	20	5	27	4	4	79	9	20	134	2	343
8:30 AM	17	9	29	8	21	5	4	81	8	21	109	4	316
8:45 AM	8	18	17	1	22	9	7	87	6	18	89	6	288

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	208	162	218	56	268	55	41	723	89	161	1161	35	3177
APPROACH %'s :	35.37%	27.55%	37.07%	14.78%	70.71%	14.51%	4.81%	84.76%	10.43%	11.86%	85.56%	2.58%	

PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	118	96	125	37	163	32	18	415	57	88	693	18	1860
PEAK HR FACTOR :		0.831			0.716			0.766			0.790		0.780

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-006 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Manning Ave			Manning Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
4:00 PM	16	42	22	11	33	8	8	144	13	38	98	2	435
4:15 PM	23	32	20	6	30	8	8	169	22	24	136	7	485
4:30 PM	19	18	31	7	33	7	15	166	16	28	112	9	461
4:45 PM	14	33	30	7	29	4	2	137	23	38	95	3	415
5:00 PM	20	50	19	9	35	8	16	150	21	53	104	8	493
5:15 PM	10	31	30	8	32	4	8	182	32	29	115	4	485
5:30 PM	12	37	40	3	24	3	10	167	27	24	85	10	442
5:45 PM	11	29	28	4	30	1	2	137	14	26	91	6	379
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	125	272	220	55	246	43	69	1252	168	260	836	49	3595
APPROACH %'s :	20.26%	44.08%	35.66%	15.99%	71.51%	12.50%	4.63%	84.08%	11.28%	22.71%	73.01%	4.28%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	63	132	110	31	129	23	41	635	92	148	426	24	1854
PEAK HR FACTOR :		0.857			0.880			0.865			0.906		0.940

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-007 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Parlier Ave			Parlier Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	28	3	0	39	0	0	0	0	3	0	0	73
7:15 AM	0	27	2	0	47	0	0	0	0	3	0	1	80
7:30 AM	0	33	1	0	75	0	0	0	0	4	0	1	114
7:45 AM	0	33	4	0	60	0	0	0	0	1	0	0	98
8:00 AM	0	39	2	0	46	0	0	0	0	1	0	1	89
8:15 AM	0	20	0	0	32	0	0	0	0	2	0	1	55
8:30 AM	0	13	1	0	32	0	0	0	0	1	0	0	47
8:45 AM	0	29	1	0	35	0	0	0	0	0	0	0	65

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	222	14	0	366	0	0	0	0	15	0	4	621
APPROACH %'s :	0.00%	94.07%	5.93%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	78.95%	0.00%	21.05%	

PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	132	9	0	228	0	0	0	0	9	0	3	381
PEAK HR FACTOR :		0.860			0.760			0.000			0.600		0.836

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-007 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Parlier Ave			Parlier Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	50	1	0	49	0	0	0	0	2	0	0	102
4:15 PM	0	45	4	1	44	0	0	0	0	0	0	0	94
4:30 PM	0	39	1	0	46	0	0	0	0	2	0	0	88
4:45 PM	0	39	1	0	38	0	0	0	0	3	0	0	81
5:00 PM	0	72	1	0	50	0	0	0	0	0	0	1	124
5:15 PM	0	45	1	0	45	0	0	0	0	2	0	0	93
5:30 PM	0	54	1	1	26	0	0	0	0	3	0	0	85
5:45 PM	0	33	2	0	32	0	0	0	0	0	0	0	67

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	377	12	2	330	0	0	0	0	12	0	1	734
APPROACH %'s :	0.00%	96.92%	3.08%	0.60%	99.40%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	92.31%	0.00%	7.69%	

PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	195	7	1	178	0	0	0	0	5	0	1	387
PEAK HR FACTOR :		0.692			0.895			0.000			0.500		0.780

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-008 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

AM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Manning Ave			Manning Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	2	1	
7:00 AM	47	25	2	6	13	15	14	102	17	2	155	22	420
7:15 AM	38	37	0	14	14	19	16	103	22	1	155	15	434
7:30 AM	46	47	1	13	20	11	14	142	35	1	227	26	583
7:45 AM	42	55	4	11	46	16	11	82	31	1	155	29	483
8:00 AM	51	44	1	9	34	18	20	65	25	1	161	18	447
8:15 AM	46	26	0	8	23	14	8	88	32	2	159	8	414
8:30 AM	28	19	3	11	25	17	8	78	14	3	117	13	336
8:45 AM	23	21	1	7	26	9	9	87	24	3	96	9	315

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	321	274	12	79	201	119	100	747	200	14	1225	140	3432
APPROACH %'s :	52.88%	45.14%	1.98%	19.80%	50.38%	29.82%	9.55%	71.35%	19.10%	1.02%	88.83%	10.15%	

PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL :	177	183	6	47	114	64	61	392	113	4	698	88	1947
PEAK HR FACTOR :		0.906			0.771			0.741			0.778		0.835

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-008 | **Day:** Tuesday

TOTALS

City: Selma | **Date:** 8/27/2013

PM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Manning Ave			Manning Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	1	1	2	1	
4:00 PM	20	32	0	8	63	28	18	156	34	4	104	9	476
4:15 PM	32	30	2	22	56	18	15	161	53	3	147	11	550
4:30 PM	36	45	7	21	53	17	11	138	48	3	119	16	514
4:45 PM	28	38	13	27	76	27	15	127	49	1	108	17	526
5:00 PM	35	42	4	21	64	36	14	146	50	1	128	14	555
5:15 PM	28	39	2	23	63	21	22	187	47	2	132	8	574
5:30 PM	22	37	0	16	46	22	14	173	45	2	98	9	484
5:45 PM	23	24	2	12	49	22	6	135	38	0	102	10	423

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	224	287	30	150	470	191	115	1223	364	16	938	94	4102
APPROACH %'s :	41.40%	53.05%	5.55%	18.50%	57.95%	23.55%	6.76%	71.86%	21.39%	1.53%	89.50%	8.97%	

PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	127	164	26	92	256	101	62	598	194	7	487	55	2169
PEAK HR FACTOR :		0.901			0.863			0.834			0.960		0.945

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

APPENDIX B
INTERSECTION ANALYSIS SHEETS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	132	9	1	228
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	3	150	10	1	259
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	416	155			160	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	416	155			160	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	592	891			1419	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	160	260
Volume Left	10	0	1
Volume Right	3	10	0
cSH	646	1700	1419
Volume to Capacity	0.02	0.09	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	10.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	22.8%	ICU Level of Service	A
Analysis Period (min)	15		

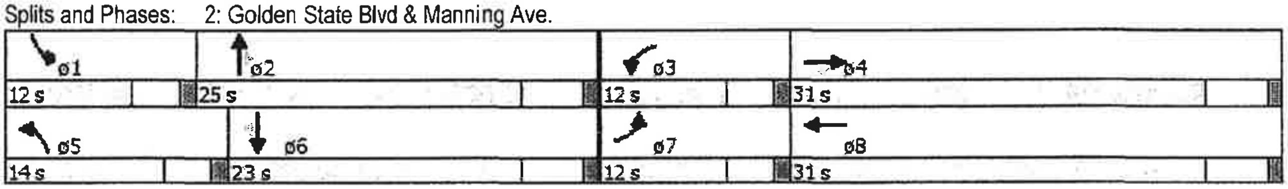
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	392	113	4	698	88	177	183	6	47	114	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153		18				135			135
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.74	0.74	0.74	0.78	0.78	0.78	0.91	0.91	0.91	0.77	0.77	0.77
Heavy Vehicles (%)	15%	11%	6%	2%	4%	3%	2%	2%	2%	6%	2%	20%
Adj. Flow (vph)	82	530	153	5	895	113	195	201	7	61	148	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	530	153	5	1008	0	195	201	7	61	148	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	31.0	31.0	12.0	31.0		14.0	25.0	25.0	12.0	23.0	23.0
Total Split (%)	15.0%	38.8%	38.8%	15.0%	38.8%		17.5%	31.3%	31.3%	15.0%	28.8%	28.8%
Maximum Green (s)	8.0	26.1	26.1	8.0	26.1		10.0	20.1	20.1	8.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.5	30.9	30.9	5.9	24.0		10.2	16.0	16.0	7.3	8.3	8.3
Actuated g/C Ratio	0.11	0.47	0.47	0.09	0.37		0.16	0.24	0.24	0.11	0.13	0.13
v/c Ratio	0.46	0.35	0.19	0.03	0.80		0.71	0.23	0.01	0.32	0.33	0.29
Control Delay	38.6	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.3	30.2	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.3	30.2	4.5
LOS	D	B	A	C	C		D	C	A	C	C	A
Approach Delay		13.2			25.0			34.9			23.8	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	34	60	0	2	195		83	42	0	25	31	0
Queue Length 95th (ft)	61	101	19	10	225		#189	71	0	51	48	4
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	197	1670	857	222	1412		278	1132	598	214	1007	479
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.32	0.18	0.02	0.71		0.70	0.18	0.01	0.29	0.15	0.17

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 65.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 53.5% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↱	
Volume (vph)	18	415	57	88	693	18	118	96	125	37	163	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.996				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3525	0	1770	1863	1583	1770	1818	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3525	0	1770	1863	1583	1770	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			4				154		13	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.83	0.83	0.83	0.72	0.72	0.72
Adj. Flow (vph)	23	539	74	111	877	23	142	116	151	51	226	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	613	0	111	900	0	142	116	151	51	270	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.0		12.0	24.0		12.0	22.0	22.0	12.0	22.0	
Total Split (%)	17.1%	34.3%		17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	
Maximum Green (s)	8.0	19.1		8.0	19.1		8.0	17.1	17.1	8.0	17.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.8	17.9		7.8	22.7		8.2	16.2	16.2	7.3	13.7	
Actuated g/C Ratio	0.11	0.30		0.13	0.38		0.14	0.27	0.27	0.12	0.23	
v/c Ratio	0.11	0.58		0.48	0.67		0.58	0.23	0.28	0.24	0.63	
Control Delay	29.4	22.3		36.0	22.4		41.0	21.5	5.8	30.7	29.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.4	22.3		36.0	22.4		41.0	21.5	5.8	30.7	29.2	
LOS	C	C		D	C		D	C	A	C	C	
Approach Delay		22.6			23.9			22.5			29.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	9	110		42	132		55	38	0	19	93	
Queue Length 95th (ft)	25	137		81	#234		#123	74	32	40	128	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	256	1217		256	1416		256	619	628	256	572	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.09	0.50		0.43	0.64		0.55	0.19	0.24	0.20	0.47	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 59.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 24.0 Intersection LOS: C
Intersection Capacity Utilization 55.0% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue

ø1	ø2	ø3	ø4
12 s	22 s	12 s	24 s
ø5	ø6	ø7	ø8
12 s	22 s	12 s	24 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	1	41	2	235	3	156	17	76	151	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.85	0.85	0.85	0.81	0.81	0.81
Hourly flow rate (vph)	2	1	1	49	2	280	4	184	20	94	186	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	756	587	95	482	578	102	190			204		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	756	587	95	482	578	102	190			204		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	89	99	70	100			93		
cM capacity (veh/h)	196	391	943	440	395	934	1381			1365		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	331	4	122	81	94	124	66
Volume Left	2	49	4	0	0	94	0	0
Volume Right	1	280	0	0	20	0	0	4
cSH	348	795	1381	1700	1700	1365	1700	1700
Volume to Capacity	0.01	0.42	0.00	0.07	0.05	0.07	0.07	0.04
Queue Length 95th (ft)	1	52	0	0	0	6	0	0
Control Delay (s)	16.4	12.7	7.6	0.0	0.0	7.8	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	16.4	12.7	0.1			2.6		
Approach LOS	C	B						

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	114	22	115	234	36	105
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	134	26	134	272	42	122
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			160		687	147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			160		687	147
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		89	86
cM capacity (veh/h)			1419		374	900

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	160	406	164
Volume Left	0	134	42
Volume Right	26	0	122
cSH	1700	1419	662
Volume to Capacity	0.09	0.09	0.25
Queue Length 95th (ft)	0	8	24
Control Delay (s)	0.0	3.2	12.2
Lane LOS		A	B
Approach Delay (s)	0.0	3.2	12.2
Approach LOS			B

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	52	154	79	117	158	43	71	177	82	70	180	67
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	66	195	100	127	172	47	87	216	100	88	225	84

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	361	346	302	100	396
Volume Left (vph)	66	127	87	0	88
Volume Right (vph)	100	47	0	100	84
Hadj (s)	-0.10	0.03	0.18	-0.67	-0.05
Departure Headway (s)	8.7	8.9	9.4	8.5	8.7
Degree Utilization, x	0.88	0.86	0.79	0.24	0.96
Capacity (veh/h)	399	397	376	411	408
Control Delay (s)	49.0	46.6	38.6	12.9	65.4
Approach Delay (s)	49.0	46.6	32.2		65.4
Approach LOS	E	E	D		F

Intersection Summary			
Delay	48.3		
Level of Service	E		
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	225	56	19	221	4	49	1	33	6	6	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	256	64	22	251	5	56	1	38	7	7	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	256			319			598	593	288	629	623	253
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	256			319			598	593	288	629	623	253
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			86	100	95	98	98	100
cM capacity (veh/h)	1309			1241			401	410	752	369	394	785

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	323	277	94	17
Volume Left	3	22	56	7
Volume Right	64	5	38	3
cSH	1309	1241	492	425
Volume to Capacity	0.00	0.02	0.19	0.04
Queue Length 95th (ft)	0	1	18	3
Control Delay (s)	0.1	0.8	14.0	13.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.8	14.0	13.8
Approach LOS			B	B

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑	↱	↰	↱		↰	↑	↱
Volume (vph)	129	167	38	38	194	101	64	186	25	84	253	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850		0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1811	0	1770	1863	1583	1770	1829	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1811	0	1770	1863	1583	1770	1829	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				154		9				191
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	157	204	46	51	259	135	80	232	31	99	298	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	250	0	51	259	135	80	263	0	99	298	191
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	13.0	22.0		12.0	21.0	21.0	12.0	24.0		12.0	24.0	24.0
Total Split (%)	18.6%	31.4%		17.1%	30.0%	30.0%	17.1%	34.3%		17.1%	34.3%	34.3%
Maximum Green (s)	9.0	17.1		8.0	16.1	16.1	8.0	19.1		8.0	19.1	19.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.4	16.7		7.6	13.5	13.5	7.9	14.9		8.1	17.2	17.2
Actuated g/C Ratio	0.16	0.29		0.13	0.24	0.24	0.14	0.26		0.14	0.30	0.30
v/c Ratio	0.54	0.46		0.22	0.59	0.28	0.33	0.55		0.40	0.53	0.31
Control Delay	36.8	22.6		30.1	29.2	5.2	31.8	25.2		33.2	24.1	5.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.8	22.6		30.1	29.2	5.2	31.8	25.2		33.2	24.1	5.3
LOS	D	C		C	C	A	C	C		C	C	A
Approach Delay		28.0			22.0			26.7			19.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	59	79		19	92	0	29	88		37	105	0
Queue Length 95th (ft)	#125	138		42	137	17	63	137		80	173	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	321	680		286	605	618	286	711		286	742	745
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.49	0.37		0.18	0.43	0.22	0.28	0.37		0.35	0.40	0.26

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 57.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 23.5 Intersection LOS: C
Intersection Capacity Utilization 49.1% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.

ø1	ø2	ø3	ø4
12 s	24 s	12 s	22 s
ø5	ø6	ø7	ø8
12 s	24 s	13 s	21 s

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	195	7	1	178
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	1	222	8	1	202
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	430	226			230	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430	226			230	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	582	814			1338	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	230	203
Volume Left	6	0	1
Volume Right	1	8	0
cSH	611	1700	1338
Volume to Capacity	0.01	0.14	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.0	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	11.0	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	598	194	7	487	55	127	164	26	92	256	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.985				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	3374	1524	1770	3358	0	1770	3539	1583	1687	3539	1369
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1421	3374	1524	1770	3358	0	1770	3539	1583	1687	3539	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234		17				154			154
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.90	0.90	0.90	0.86	0.86	0.86
Heavy Vehicles (%)	27%	7%	6%	2%	6%	5%	2%	2%	2%	7%	2%	18%
Adj. Flow (vph)	75	720	234	7	507	57	141	182	29	107	298	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	720	234	7	564	0	141	182	29	107	298	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	24.0	24.0	12.0	24.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	17.1%	34.3%	34.3%	17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	31.4%
Maximum Green (s)	8.0	19.1	19.1	8.0	19.1		8.0	17.1	17.1	8.0	17.1	17.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.7	20.8	20.8	6.4	16.4		8.3	10.8	10.8	7.9	10.7	10.7
Actuated g/C Ratio	0.15	0.39	0.39	0.12	0.31		0.16	0.20	0.20	0.15	0.20	0.20
v/c Ratio	0.36	0.54	0.31	0.03	0.53		0.51	0.25	0.07	0.42	0.41	0.29
Control Delay	31.0	15.7	4.0	27.3	19.4		34.4	21.8	0.3	31.4	22.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	15.7	4.0	27.3	19.4		34.4	21.8	0.3	31.4	22.9	4.6
LOS	C	B	A	C	B		C	C	A	C	C	A
Approach Delay		14.2			19.5			25.0			20.5	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	25	86	0	2	91		48	30	0	35	50	0
Queue Length 95th (ft)	62	175	35	14	150		#134	58	0	84	84	20
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	237	1558	830	295	1348		295	1262	663	281	1262	587
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.46	0.28	0.02	0.42		0.48	0.14	0.04	0.38	0.24	0.20

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.8

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 18.3 Intersection LOS: B

Intersection Capacity Utilization 48.8% ICU Level of Service A

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.

ø1	ø2	ø3	ø4
12 s	22 s	12 s	24 s
ø5	ø6	ø7	ø8
12 s	22 s	12 s	24 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰	↑	↱	↰	↑↱	
Volume (vph)	41	635	92	148	426	24	63	132	110	31	129	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.992				0.850		0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3511	0	1770	1863	1583	1770	1820	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3472	0	1770	3511	0	1770	1863	1583	1770	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			8				154		12	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	47	730	106	163	468	26	73	153	128	35	147	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	836	0	163	494	0	73	153	128	35	173	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.5		12.0	24.5		12.0	21.5	21.5	12.0	21.5	
Total Split (%)	17.1%	35.0%		17.1%	35.0%		17.1%	30.7%	30.7%	17.1%	30.7%	
Maximum Green (s)	8.0	19.6		8.0	19.6		8.0	16.6	16.6	8.0	16.6	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.0	18.0		8.3	24.4		7.4	13.0	13.0	6.8	10.8	
Actuated g/C Ratio	0.12	0.31		0.14	0.42		0.13	0.22	0.22	0.12	0.19	
v/c Ratio	0.22	0.76		0.64	0.33		0.32	0.36	0.27	0.17	0.50	
Control Delay	29.4	24.8		42.5	16.2		30.9	23.4	4.8	28.9	26.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.4	24.8		42.5	16.2		30.9	23.4	4.8	28.9	26.7	
LOS	C	C		D	B		C	C	A	C	C	
Approach Delay		25.1			22.7			18.2			27.1	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	17	150		63	77		27	41	0	13	58	
Queue Length 95th (ft)	45	#235		#164	133		63	99	24	37	108	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	255	1245		255	1487		255	595	610	255	554	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.18	0.67		0.64	0.33		0.29	0.26	0.21	0.14	0.31	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 57.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 23.4 Intersection LOS: C
Intersection Capacity Utilization 55.2% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue

ø1	ø2	ø3	ø4
12 s	21.5 s	12 s	24.5 s
ø5	ø6	ø7	ø8
12 s	21.5 s	12 s	24.5 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰	↑↱		↰	↑↱	
Volume (veh/h)	2	3	7	17	4	101	3	200	50	285	256	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93	0.88	0.88	0.88
Hourly flow rate (vph)	2	3	8	18	4	110	3	215	54	324	291	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1165	1214	146	1043	1188	134	292			269		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1165	1214	146	1043	1188	134	292			269		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	97	99	87	97	88	100			75		
cM capacity (veh/h)	103	135	875	144	140	890	1267			1292		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	14	133	3	143	125	324	194	98
Volume Left	2	18	3	0	0	324	0	0
Volume Right	8	110	0	0	54	0	0	1
cSH	293	468	1267	1700	1700	1292	1700	1700
Volume to Capacity	0.05	0.28	0.00	0.08	0.07	0.25	0.11	0.06
Queue Length 95th (ft)	4	29	0	0	0	25	0	0
Control Delay (s)	20.3	15.7	7.8	0.0	0.0	8.7	0.0	0.0
Lane LOS	C	C	A			A		
Approach Delay (s)	20.3	15.7	0.1			4.6		
Approach LOS	C	C						

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	285	55	127	117	21	186
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.88	0.88
Hourly flow rate (vph)	328	63	135	124	24	211
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			391		754	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			391		754	359
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		93	69
cM capacity (veh/h)			1168		333	685

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	391	260	235
Volume Left	0	135	24
Volume Right	63	0	211
cSH	1700	1168	619
Volume to Capacity	0.23	0.12	0.38
Queue Length 95th (ft)	0	10	44
Control Delay (s)	0.0	4.9	14.3
Lane LOS		A	B
Approach Delay (s)	0.0	4.9	14.3
Approach LOS			B

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰↑	↱		✥	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	47	171	33	120	177	63	70	207	110	52	197	73
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	56	204	39	141	208	74	78	230	122	64	243	90

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	299	424	308	122	398
Volume Left (vph)	56	141	78	0	64
Volume Right (vph)	39	74	0	122	90
Hadj (s)	-0.01	0.00	0.16	-0.67	-0.07
Departure Headway (s)	9.0	8.7	9.2	8.4	8.6
Degree Utilization, x	0.75	1.02	0.79	0.29	0.95
Capacity (veh/h)	383	412	380	417	398
Control Delay (s)	34.7	79.3	38.1	13.6	61.9
Approach Delay (s)	34.7	79.3	31.2		61.9
Approach LOS	D	F	D		F

Intersection Summary			
Delay	52.9		
Level of Service	F		
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	7	206	66	17	120	6	43	1	22	4	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	234	75	19	136	7	49	1	25	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	143			309			468	469	272	491	503	140
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	143			309			468	469	272	491	503	140
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			90	100	97	99	100	100
cM capacity (veh/h)	1439			1251			495	482	767	463	461	908

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	317	162	75	8
Volume Left	8	19	49	5
Volume Right	75	7	25	1
cSH	1439	1251	561	497
Volume to Capacity	0.01	0.02	0.13	0.02
Queue Length 95th (ft)	0	1	11	1
Control Delay (s)	0.2	1.1	12.4	12.4
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.1	12.4	12.4
Approach LOS			B	B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	11.1	18.7		6.9	11.1	11.1	7.4	16.5		7.4	16.5	16.5
Actuated g/C Ratio	0.20	0.34		0.12	0.20	0.20	0.13	0.30		0.13	0.30	0.30
v/c Ratio	0.66	0.44		0.11	0.45	0.15	0.23	0.71		0.23	0.44	0.30
Control Delay	39.2	19.7		28.9	26.9	0.7	29.7	29.7		29.6	22.5	5.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	39.2	19.7		28.9	26.9	0.7	29.7	29.7		29.6	22.5	5.5
LOS	D	B		C	C	A	C	C		C	C	A
Approach Delay		28.7			20.4			29.7			16.9	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	89	68		8	60	0	20	135		19	79	0
Queue Length 95th (ft)	#224	166		28	107	0	54	#292		49	145	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	352	732		282	593	609	282	670		282	675	688
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.66	0.37		0.08	0.28	0.11	0.20	0.58		0.19	0.36	0.26

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 55.6
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 24.4 Intersection LOS: C
Intersection Capacity Utilization 56.3% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.

ø1	ø2	ø3	ø4
12 s	23.1 s	12 s	22.9 s
ø5	ø6	ø7	ø8
12 s	23.1 s	14 s	20.9 s

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	133	9	1	230
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	3	151	10	1	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420	156			161	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	156			161	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	590	889			1418	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	161	262
Volume Left	10	0	1
Volume Right	3	10	0
cSH	644	1700	1418
Volume to Capacity	0.02	0.09	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	10.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		

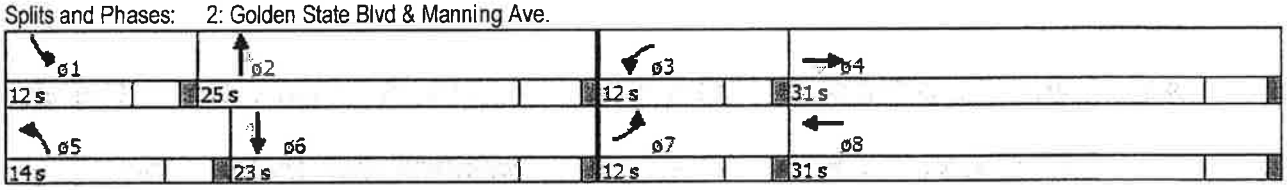
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	61	392	113	4	698	89	177	184	6	49	115	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153		18				135			135
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.74	0.74	0.74	0.78	0.78	0.78	0.91	0.91	0.91	0.77	0.77	0.77
Heavy Vehicles (%)	15%	11%	6%	2%	4%	3%	2%	2%	2%	6%	2%	20%
Adj. Flow (vph)	82	530	153	5	895	114	195	202	7	64	149	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	530	153	5	1009	0	195	202	7	64	149	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	31.0	31.0	12.0	31.0		14.0	25.0	25.0	12.0	23.0	23.0
Total Split (%)	15.0%	38.8%	38.8%	15.0%	38.8%		17.5%	31.3%	31.3%	15.0%	28.8%	28.8%
Maximum Green (s)	8.0	26.1	26.1	8.0	26.1		10.0	20.1	20.1	8.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.5	31.0	31.0	5.9	24.0		10.2	15.9	15.9	7.3	8.3	8.3
Actuated g/C Ratio	0.11	0.47	0.47	0.09	0.37		0.16	0.24	0.24	0.11	0.13	0.13
v/c Ratio	0.46	0.34	0.19	0.03	0.80		0.71	0.23	0.01	0.34	0.33	0.29
Control Delay	38.7	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.6	30.2	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.6	30.2	4.5
LOS	D	B	A	C	C		D	C	A	C	C	A
Approach Delay		13.2			25.0			34.9			24.0	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	34	60	0	2	195		83	42	0	26	31	0
Queue Length 95th (ft)	61	101	19	10	226		#189	71	0	53	48	4
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	197	1669	857	222	1411		278	1131	597	213	1006	479
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.32	0.18	0.02	0.72		0.70	0.18	0.01	0.30	0.15	0.17

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 65.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 53.5% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	415	59	90	693	18	119	97	126	37	165	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.996				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3525	0	1770	1863	1583	1770	1818	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3472	0	1770	3525	0	1770	1863	1583	1770	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			4				154		13	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.83	0.83	0.83	0.72	0.72	0.72
Adj. Flow (vph)	23	539	77	114	877	23	143	117	152	51	229	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	616	0	114	900	0	143	117	152	51	273	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.0		12.0	24.0		12.0	22.0	22.0	12.0	22.0	
Total Split (%)	17.1%	34.3%		17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	
Maximum Green (s)	8.0	19.1		8.0	19.1		8.0	17.1	17.1	8.0	17.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.8	18.0		7.9	22.8		8.2	16.3	16.3	7.3	13.7	
Actuated g/C Ratio	0.11	0.30		0.13	0.38		0.14	0.27	0.27	0.12	0.23	
v/c Ratio	0.11	0.58		0.49	0.67		0.59	0.23	0.28	0.24	0.64	
Control Delay	29.4	22.4		36.4	22.4		41.3	21.5	5.9	30.8	29.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.4	22.4		36.4	22.4		41.3	21.5	5.9	30.8	29.4	
LOS	C	C		D	C		D	C	A	C	C	
Approach Delay		22.6			23.9			22.6			29.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	9	111		44	133		56	38	0	19	95	
Queue Length 95th (ft)	25	138		83	#234		#124	74	32	40	129	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	255	1212		255	1415		255	617	627	255	570	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.09	0.51		0.45	0.64		0.56	0.19	0.24	0.20	0.48	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 59.7
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 24.1 Intersection LOS: C
Intersection Capacity Utilization 55.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue

ø1	ø2	ø3	ø4
12 s	22 s	12 s	24 s
ø5	ø6	ø7	ø8
12 s	22 s	12 s	24 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	1	41	2	236	3	156	18	77	151	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.85	0.85	0.85	0.81	0.81	0.81
Hourly flow rate (vph)	2	1	1	49	2	281	4	184	21	95	186	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	759	590	95	485	581	102	190			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	759	590	95	485	581	102	190			205		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	89	99	70	100			93		
cM capacity (veh/h)	194	388	943	438	393	933	1381			1364		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	332	4	122	82	95	124	66
Volume Left	2	49	4	0	0	95	0	0
Volume Right	1	281	0	0	21	0	0	4
cSH	345	793	1381	1700	1700	1364	1700	1700
Volume to Capacity	0.01	0.42	0.00	0.07	0.05	0.07	0.07	0.04
Queue Length 95th (ft)	1	52	0	0	0	6	0	0
Control Delay (s)	16.5	12.8	7.6	0.0	0.0	7.8	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	16.5	12.8	0.1			2.6		
Approach LOS	C	B						

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	116	22	116	235	36	107
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	136	26	135	273	42	124
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			162		692	149
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			162		692	149
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		89	86
cM capacity (veh/h)			1416		371	897

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	162	408	166
Volume Left	0	135	42
Volume Right	26	0	124
cSH	1700	1416	661
Volume to Capacity	0.10	0.10	0.25
Queue Length 95th (ft)	0	8	25
Control Delay (s)	0.0	3.2	12.3
Lane LOS		A	B
Approach Delay (s)	0.0	3.2	12.3
Approach LOS			B

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			↰	↱		✥	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	154	79	118	158	47	71	192	83	73	190	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	81	195	100	128	172	51	87	234	101	91	238	94
Direction, Lane #	**EB 1**	**WB 1**	**NB 1**	**NB 2**	**SB 1**							
Volume Total (vph)	376	351	321	101	423							
Volume Left (vph)	81	128	87	0	91							
Volume Right (vph)	100	51	0	101	94							
Hadj (s)	-0.08	0.02	0.17	-0.67	-0.06							
Departure Headway (s)	8.9	9.1	9.5	8.6	9.1							
Degree Utilization, x	0.93	0.88	0.84	0.24	1.07							
Capacity (veh/h)	402	391	365	405	387							
Control Delay (s)	58.1	51.4	45.8	13.2	95.0							
Approach Delay (s)	58.1	51.4	38.0		95.0							
Approach LOS	F	F	E		F							
Intersection Summary												
Delay			61.1									
Level of Service			F									
Intersection Capacity Utilization			72.5%	ICU Level of Service					C			
Analysis Period (min)			15									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (veh/h)	3	228	57	19	225	4	51	1	33	6	6	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	259	65	22	256	5	58	1	38	7	7	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	260			324			606	602	291	638	632	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	260			324			606	602	291	638	632	258
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			85	100	95	98	98	100
cM capacity (veh/h)	1304			1236			396	405	748	364	390	781

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	327	282	97	17
Volume Left	3	22	58	7
Volume Right	65	5	38	3
cSH	1304	1236	484	420
Volume to Capacity	0.00	0.02	0.20	0.04
Queue Length 95th (ft)	0	1	18	3
Control Delay (s)	0.1	0.8	14.3	13.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.8	14.3	13.9
Approach LOS			B	B

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	167	38	38	194	103	64	188	25	85	254	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1811	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1811	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				154		9				192
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	160	204	46	51	259	137	80	235	31	100	299	192
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	250	0	51	259	137	80	266	0	100	299	192
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	13.0	22.0		12.0	21.0	21.0	12.0	24.0		12.0	24.0	24.0
Total Split (%)	18.6%	31.4%		17.1%	30.0%	30.0%	17.1%	34.3%		17.1%	34.3%	34.3%
Maximum Green (s)	9.0	17.1		8.0	16.1	16.1	8.0	19.1		8.0	19.1	19.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.4	16.7		7.6	13.5	13.5	7.9	14.9		8.1	17.2	17.2
Actuated g/C Ratio	0.16	0.29		0.13	0.24	0.24	0.14	0.26		0.14	0.30	0.30
v/c Ratio	0.55	0.46		0.22	0.59	0.28	0.33	0.55		0.40	0.53	0.31
Control Delay	37.2	22.6		30.1	29.2	5.4	31.8	25.3		33.3	24.1	5.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	37.2	22.6		30.1	29.2	5.4	31.8	25.3		33.3	24.1	5.3
LOS	D	C		C	C	A	C	C		C	C	A
Approach Delay		28.3			22.0			26.8			19.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	60	80		19	92	0	29	89		37	106	0
Queue Length 95th (ft)	#128	138		42	137	18	63	139		80	173	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	321	680		285	605	618	285	711		285	742	746
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.50	0.37		0.18	0.43	0.22	0.28	0.37		0.35	0.40	0.26

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 57.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 23.5 Intersection LOS: C
Intersection Capacity Utilization 49.2% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.

ø1	ø2	ø3	ø4
12 s	24 s	12 s	22 s
ø5	ø6	ø7	ø8
12 s	24 s	13 s	21 s

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	200	7	1	182
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	1	227	8	1	207
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	440	231			235	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	440	231			235	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	574	808			1332	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	235	208
Volume Left	6	0	1
Volume Right	1	8	0
cSH	603	1700	1332
Volume to Capacity	0.01	0.14	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.0	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	11.0	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	62	598	194	7	487	60	127	167	26	96	258	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.984				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	3374	1524	1770	3355	0	1770	3539	1583	1687	3539	1369
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1421	3374	1524	1770	3355	0	1770	3539	1583	1687	3539	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234		19				154			154
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.90	0.90	0.90	0.86	0.86	0.86
Heavy Vehicles (%)	27%	7%	6%	2%	6%	5%	2%	2%	2%	7%	2%	18%
Adj. Flow (vph)	75	720	234	7	507	62	141	186	29	112	300	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	720	234	7	569	0	141	186	29	112	300	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	24.0	24.0	12.0	24.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	17.1%	34.3%	34.3%	17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	31.4%
Maximum Green (s)	8.0	19.1	19.1	8.0	19.1		8.0	17.1	17.1	8.0	17.1	17.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.7	21.1	21.1	6.4	16.7		8.4	10.9	10.9	8.1	10.8	10.8
Actuated g/C Ratio	0.14	0.40	0.40	0.12	0.31		0.16	0.20	0.20	0.15	0.20	0.20
v/c Ratio	0.37	0.54	0.31	0.03	0.53		0.51	0.26	0.07	0.44	0.42	0.29
Control Delay	31.2	15.7	4.0	27.3	19.3		34.6	21.9	0.3	32.2	23.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	15.7	4.0	27.3	19.3		34.6	21.9	0.3	32.2	23.0	4.5
LOS	C	B	A	C	B		C	C	A	C	C	A
Approach Delay		14.2			19.4			25.2			20.9	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	25	87	0	2	92		49	31	0	38	52	0
Queue Length 95th (ft)	62	175	35	14	151		#134	59	0	#91	85	20
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	236	1563	831	293	1341		293	1256	661	280	1256	585
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.46	0.28	0.02	0.42		0.48	0.15	0.04	0.40	0.24	0.20

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 53.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 18.4 Intersection LOS: B
Intersection Capacity Utilization 48.9% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.

ø1	ø2	ø3	ø4
12 s	22 s	12 s	24 s
ø5	ø6	ø7	ø8
12 s	22 s	12 s	24 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↱	
Volume (vph)	41	635	96	152	426	24	68	137	115	31	133	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.992				0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3511	0	1770	1863	1583	1770	1822	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3511	0	1770	1863	1583	1770	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			8				154		12	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	47	730	110	167	468	26	79	159	134	35	151	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	840	0	167	494	0	79	159	134	35	177	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.5		12.0	24.5		12.0	21.5	21.5	12.0	21.5	
Total Split (%)	17.1%	35.0%		17.1%	35.0%		17.1%	30.7%	30.7%	17.1%	30.7%	
Maximum Green (s)	8.0	19.6		8.0	19.6		8.0	16.6	16.6	8.0	16.6	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.0	18.0		8.3	24.1		7.4	15.5	15.5	6.8	11.0	
Actuated g/C Ratio	0.12	0.30		0.14	0.40		0.12	0.26	0.26	0.11	0.18	
v/c Ratio	0.23	0.80		0.69	0.35		0.37	0.33	0.26	0.17	0.52	
Control Delay	30.0	27.4		46.3	17.0		32.5	22.4	5.0	29.4	28.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	27.4		46.3	17.0		32.5	22.4	5.0	29.4	28.0	
LOS	C	C		D	B		C	C	A	C	C	
Approach Delay		27.5			24.4			18.3			28.3	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	17	152		65	78		29	43	0	13	60	
Queue Length 95th (ft)	46	#250		#169	133		67	102	27	37	111	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	244	1189		244	1408		244	593	609	244	530	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.19	0.71		0.68	0.35		0.32	0.27	0.22	0.14	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 60.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 25.0 Intersection LOS: C
Intersection Capacity Utilization 56.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue

ø1	ø2	ø3	ø4
12 s	21.5 s	12 s	24.5 s
ø5	ø6	ø7	ø8
12 s	21.5 s	12 s	24.5 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	3	7	19	4	104	3	200	52	287	256	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93	0.88	0.88	0.88
Hourly flow rate (vph)	2	3	8	21	4	113	3	215	56	326	291	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1173	1221	146	1049	1194	135	292			271		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1173	1221	146	1049	1194	135	292			271		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	97	99	85	97	87	100			75		
cM capacity (veh/h)	101	133	875	142	138	888	1267			1289		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	14	138	3	143	128	326	194	98
Volume Left	2	21	3	0	0	326	0	0
Volume Right	8	113	0	0	56	0	0	1
cSH	288	454	1267	1700	1700	1289	1700	1700
Volume to Capacity	0.05	0.30	0.00	0.08	0.08	0.25	0.11	0.06
Queue Length 95th (ft)	4	32	0	0	0	25	0	0
Control Delay (s)	20.5	16.4	7.8	0.0	0.0	8.7	0.0	0.0
Lane LOS	C	C	A			A		
Approach Delay (s)	20.5	16.4	0.1			4.6		
Approach LOS	C	C						

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	289	55	132	122	21	190
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.88	0.88
Hourly flow rate (vph)	332	63	140	130	24	216
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			395		774	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			395		774	364
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		93	68
cM capacity (veh/h)			1163		322	681

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	395	270	240
Volume Left	0	140	24
Volume Right	63	0	216
cSH	1700	1163	613
Volume to Capacity	0.23	0.12	0.39
Queue Length 95th (ft)	0	10	46
Control Delay (s)	0.0	5.0	14.6
Lane LOS		A	B
Approach Delay (s)	0.0	5.0	14.6
Approach LOS			B

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	74	171	33	122	177	72	70	242	112	62	235	103
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	88	204	39	144	208	85	78	269	124	77	290	127

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	331	436	347	124	494
Volume Left (vph)	88	144	78	0	77
Volume Right (vph)	39	85	0	124	127
Hadj (s)	0.02	-0.02	0.15	-0.67	-0.09
Departure Headway (s)	9.4	9.0	9.5	8.7	9.0
Degree Utilization, x	0.86	1.09	0.92	0.30	1.24
Capacity (veh/h)	371	399	370	408	403
Control Delay (s)	48.8	101.6	57.8	14.2	153.9
Approach Delay (s)	48.8	101.6	46.3		153.9
Approach LOS	E	F	E		F

Intersection Summary			
Delay	91.4		
Level of Service	F		
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	7	216	71	17	129	6	47	1	22	4	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	245	81	19	147	7	53	1	25	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	153			326			493	494	286	516	531	150
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	153			326			493	494	286	516	531	150
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			89	100	97	99	99	100
cM capacity (veh/h)	1427			1234			476	466	753	446	445	896

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	334	173	80	8
Volume Left	8	19	53	5
Volume Right	81	7	25	1
cSH	1427	1234	538	480
Volume to Capacity	0.01	0.02	0.15	0.02
Queue Length 95th (ft)	0	1	13	1
Control Delay (s)	0.2	1.0	12.8	12.6
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.0	12.8	12.6
Approach LOS			B	B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑	↱	↰	↱		↰	↑	↱
Volume (vph)	213	196	47	20	143	60	51	330	32	50	213	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1809	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1809	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				154		7				186
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	237	218	52	23	166	70	55	359	35	59	251	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	270	0	23	166	70	55	394	0	59	251	186
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	14.0	22.9		12.0	20.9	20.9	12.0	23.1		12.0	23.1	23.1
Total Split (%)	20.0%	32.7%		17.1%	29.9%	29.9%	17.1%	33.0%		17.1%	33.0%	33.0%
Maximum Green (s)	10.0	18.0		8.0	16.0	16.0	8.0	18.2		8.0	18.2	18.2
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	11.1	18.7		6.9	11.1	11.1	7.4	16.6		7.4	16.6	16.6
Actuated g/C Ratio	0.20	0.34		0.12	0.20	0.20	0.13	0.30		0.13	0.30	0.30
v/c Ratio	0.68	0.44		0.11	0.45	0.16	0.24	0.71		0.25	0.45	0.31
Control Delay	40.2	19.8		28.9	27.0	0.8	29.7	29.9		30.0	22.6	5.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	40.2	19.8		28.9	27.0	0.8	29.7	29.9		30.0	22.6	5.4
LOS	D	B		C	C	A	C	C		C	C	A
Approach Delay		29.3			20.1			29.9			17.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	92	68		8	60	0	20	137		22	81	0
Queue Length 95th (ft)	#230	166		28	107	0	54	#296		54	148	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	351	729		281	591	607	281	668		281	673	691
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.68	0.37		0.08	0.28	0.12	0.20	0.59		0.21	0.37	0.27

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 55.7

Natural 70

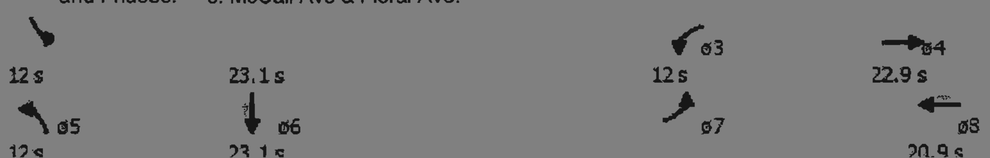
Maximum v/c Ratio: 0.71

Intersection Capacity Utilization 56.8% ICU Level of Service B

95th percentile volume exceeds capacity, queue may be longer.

ueu wn is maximum

and Phases: 8: McCall Ave & Floral Ave.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	178	9	1	248
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	3	202	10	1	282
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	491	207			212	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	491	207			212	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	536	833			1358	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	212	283
Volume Left	10	0	1
Volume Right	3	10	0
cSH	588	1700	1358
Volume to Capacity	0.02	0.13	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	11.3	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	11.3	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	61	408	162	4	736	92	271	238	7	73	119	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			219		18				135			135
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.74	0.74	0.74	0.78	0.78	0.78	0.91	0.91	0.91	0.77	0.77	0.77
Heavy Vehicles (%)	15%	11%	6%	2%	4%	3%	2%	2%	2%	6%	2%	20%
Adj. Flow (vph)	82	551	219	5	944	118	298	262	8	95	155	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	551	219	5	1062	0	298	262	8	95	155	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	31.0	31.0	12.0	31.0		14.0	25.0	25.0	12.0	23.0	23.0
Total Split (%)	15.0%	38.8%	38.8%	15.0%	38.8%		17.5%	31.3%	31.3%	15.0%	28.8%	28.8%
Maximum Green (s)	8.0	26.1	26.1	8.0	26.1		10.0	20.1	20.1	8.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.4	32.1	32.1	5.9	25.0		10.2	13.8	13.8	7.6	8.6	8.6
Actuated g/C Ratio	0.11	0.48	0.48	0.09	0.37		0.15	0.21	0.21	0.11	0.13	0.13
v/c Ratio	0.47	0.35	0.26	0.03	0.82		1.10	0.36	0.02	0.49	0.34	0.29
Control Delay	39.6	12.4	3.1	31.0	26.5		119.2	27.6	0.1	39.5	30.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	12.4	3.1	31.0	26.5		119.2	27.6	0.1	39.5	30.1	4.4
LOS	D	B	A	C	C		F	C	A	D	C	A
Approach Delay		12.6			26.5			75.3			26.4	
Approach LOS		B			C			E			C	
Queue Length 50th (ft)	34	63	0	2	211		~159	55	0	39	33	0
Queue Length 95th (ft)	62	107	20	10	247		#314	90	0	72	50	4
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	191	1639	877	216	1372		270	1087	580	207	978	469
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.34	0.25	0.02	0.77		1.10	0.24	0.01	0.46	0.16	0.18

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 66.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 32.1 Intersection LOS: C
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.

ø1	ø2	ø3	ø4
12 s	25 s	12 s	31 s
ø5	ø6	ø7	ø8
14 s	23 s	12 s	31 s

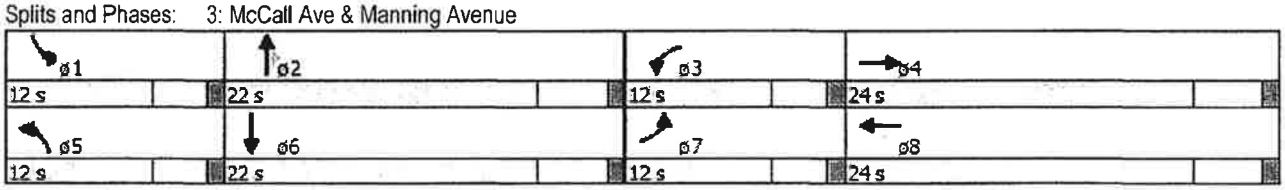
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	437	82	106	741	50	180	110	132	53	167	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.991				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3507	0	1770	1863	1583	1770	1818	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3454	0	1770	3507	0	1770	1863	1583	1770	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			10				159		13	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.83	0.83	0.83	0.72	0.72	0.72
Adj. Flow (vph)	23	568	106	134	938	63	217	133	159	74	232	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	674	0	134	1001	0	217	133	159	74	276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.0		12.0	24.0		12.0	22.0	22.0	12.0	22.0	
Total Split (%)	17.1%	34.3%		17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	
Maximum Green (s)	8.0	19.1		8.0	19.1		8.0	17.1	17.1	8.0	17.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.5	18.4		7.8	23.3		8.1	19.2	19.2	7.2	13.6	
Actuated g/C Ratio	0.10	0.29		0.12	0.37		0.13	0.30	0.30	0.11	0.21	
v/c Ratio	0.13	0.66		0.62	0.77		0.96	0.24	0.27	0.37	0.69	
Control Delay	29.9	23.9		43.3	26.2		84.4	21.7	5.7	33.6	32.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.9	23.9		43.3	26.2		84.4	21.7	5.7	33.6	32.1	
LOS	C	C		D	C		F	C	A	C	C	
Approach Delay		24.1			28.2			43.4			32.4	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	9	123		53	154		~94	46	0	28	99	
Queue Length 95th (ft)	25	151		#104	#291		#205	82	34	53	130	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	227	1081		227	1299		227	578	600	227	509	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.10	0.62		0.59	0.77		0.96	0.23	0.27	0.33	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 63.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 30.6 Intersection LOS: C
Intersection Capacity Utilization 60.9% ICU Level of Service B
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	1	43	2	371	3	168	23	148	157	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.85	0.85	0.85	0.81	0.81	0.81
Hourly flow rate (vph)	2	1	1	51	2	442	4	198	27	183	194	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1110	793	99	681	781	112	198			225		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1110	793	99	681	781	112	198			225		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	83	99	52	100			86		
cM capacity (veh/h)	76	275	938	299	280	919	1372			1341		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	495	4	132	93	183	129	68
Volume Left	2	51	4	0	0	183	0	0
Volume Right	1	442	0	0	27	0	0	4
cSH	190	750	1372	1700	1700	1341	1700	1700
Volume to Capacity	0.02	0.66	0.00	0.08	0.05	0.14	0.08	0.04
Queue Length 95th (ft)	2	126	0	0	0	12	0	0
Control Delay (s)	25.4	18.6	7.6	0.0	0.0	8.1	0.0	0.0
Lane LOS	D	C	A			A		
Approach Delay (s)	25.4	18.6	0.1			3.9		
Approach LOS	D	C						

Intersection Summary			
Average Delay	9.8		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	206	31	116	407	49	107
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	242	36	135	473	57	124
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279		1004	261
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279		1004	261
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		76	84
cM capacity (veh/h)			1284		240	778

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	279	608	181
Volume Left	0	135	57
Volume Right	36	0	124
cSH	1700	1284	457
Volume to Capacity	0.16	0.11	0.40
Queue Length 95th (ft)	0	9	47
Control Delay (s)	0.0	2.7	18.0
Lane LOS		A	C
Approach Delay (s)	0.0	2.7	18.0
Approach LOS			C

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	245	79	224	178	213	71	208	123	114	195	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	81	310	100	243	193	232	87	254	150	142	244	94

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	491	668	340	150	480
Volume Left (vph)	81	243	87	0	143
Volume Right (vph)	100	232	0	150	94
Hadj (s)	-0.06	-0.10	0.16	-0.67	-0.02
Departure Headway (s)	9.3	9.3	9.8	9.0	9.5
Degree Utilization, x	1.27	1.72	0.93	0.38	1.26
Capacity (veh/h)	392	392	360	396	386
Control Delay (s)	169.1	358.8	61.6	16.1	165.2
Approach Delay (s)	169.1	358.8	47.7		165.2
Approach LOS	F	F	E		F

Intersection Summary			
Delay	199.8		
Level of Service	F		
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	3	383	74	19	488	4	80	1	33	6	6	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	435	84	22	555	5	91	1	38	7	7	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	559			519			1091	1086	477	1122	1126	557
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	559			519			1091	1086	477	1122	1126	557
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			50	99	94	96	97	99
cM capacity (veh/h)	1012			1047			183	211	588	168	200	530

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	523	581	130	17
Volume Left	3	22	91	7
Volume Right	84	5	38	3
cSH	1012	1047	229	210
Volume to Capacity	0.00	0.02	0.57	0.08
Queue Length 95th (ft)	0	2	78	7
Control Delay (s)	0.1	0.6	39.5	23.7
Lane LOS	A	A	E	C
Approach Delay (s)	0.1	0.6	39.5	23.7
Approach LOS			E	C

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	280	52	38	410	159	64	189	25	111	261	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				212		9				234
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	160	341	63	51	547	212	80	236	31	131	307	234
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	404	0	51	547	212	80	267	0	131	307	234
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	13.0	22.0		12.0	21.0	21.0	12.0	24.0		12.0	24.0	24.0
Total Split (%)	18.6%	31.4%		17.1%	30.0%	30.0%	17.1%	34.3%		17.1%	34.3%	34.3%
Maximum Green (s)	9.0	17.1		8.0	16.1	16.1	8.0	19.1		8.0	19.1	19.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	8.7	22.8		7.0	16.5	16.5	7.3	14.8		7.8	15.0	15.0
Actuated g/C Ratio	0.14	0.36		0.11	0.26	0.26	0.12	0.23		0.12	0.24	0.24
v/c Ratio	0.66	0.61		0.26	1.13	0.37	0.39	0.61		0.60	0.69	0.42
Control Delay	43.7	27.4		31.7	108.3	6.0	34.4	28.1		42.8	31.6	5.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.7	27.4		31.7	108.3	6.0	34.4	28.1		42.8	31.6	5.9
LOS	D	C		C	F	A	C	C		D	C	A
Approach Delay		32.1			76.7			29.5			24.8	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)	63	150		20	~282	0	31	94		52	115	0
Queue Length 95th (ft)	#128	#271		42	#369	27	63	140		#115	178	40
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	258	666		230	486	570	230	574		230	577	652
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.62	0.61		0.22	1.13	0.37	0.35	0.47		0.57	0.53	0.36

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 63.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 44.8 Intersection LOS: D
Intersection Capacity Utilization 61.3% ICU Level of Service B
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.

ø1	ø2	ø3	ø4
12 s	24 s	12 s	22 s
ø5	ø6	ø7	ø8
12 s	24 s	13 s	21 s

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	233	7	1	233
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	1	265	8	1	265
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	536	269			273	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	536	269			273	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	505	770			1291	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	273	266
Volume Left	6	0	1
Volume Right	1	8	0
cSH	536	1700	1291
Volume to Capacity	0.01	0.16	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.8	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	11.8	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		

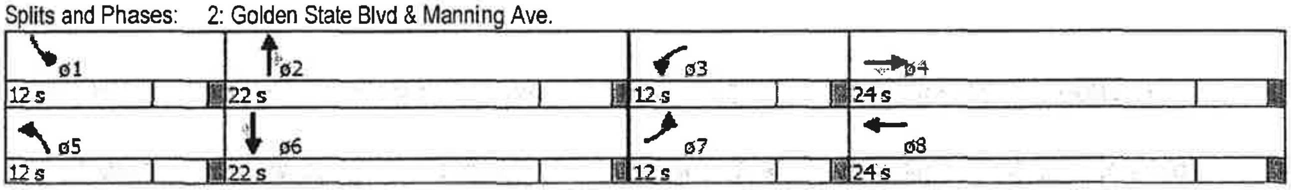
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	62	616	260	7	498	62	185	232	30	167	271	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	3374	1524	1770	3351	0	1770	3539	1583	1687	3539	1369
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1421	3374	1524	1770	3351	0	1770	3539	1583	1687	3539	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			313		19				154			154
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.90	0.90	0.90	0.86	0.86	0.86
Heavy Vehicles (%)	27%	7%	6%	2%	6%	5%	2%	2%	2%	7%	2%	18%
Adj. Flow (vph)	75	742	313	7	519	65	206	258	33	194	315	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	742	313	7	584	0	206	258	33	194	315	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	24.0	24.0	12.0	24.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	17.1%	34.3%	34.3%	17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	31.4%
Maximum Green (s)	8.0	19.1	19.1	8.0	19.1		8.0	17.1	17.1	8.0	17.1	17.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.4	21.1	21.1	6.0	16.5		8.3	10.8	10.8	8.3	10.8	10.8
Actuated g/C Ratio	0.13	0.38	0.38	0.11	0.29		0.15	0.19	0.19	0.15	0.19	0.19
v/c Ratio	0.40	0.59	0.41	0.04	0.59		0.79	0.38	0.08	0.78	0.46	0.30
Control Delay	32.9	17.1	4.2	27.7	20.6		52.8	23.0	0.4	53.1	24.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	17.1	4.2	27.7	20.6		52.8	23.0	0.4	53.1	24.0	4.7
LOS	C	B	A	C	C		D	C	A	D	C	A
Approach Delay		14.5			20.7			33.9			29.4	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	26	92	0	2	95		75	44	0	71	55	0
Queue Length 95th (ft)	62	182	39	14	156		#210	78	0	#188	88	20
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	209	1420	822	261	1192		261	1116	604	248	1116	537
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.52	0.38	0.03	0.49		0.79	0.23	0.05	0.78	0.28	0.22

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 56.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 22.5 Intersection LOS: C
Intersection Capacity Utilization 52.9% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱		↰	↑	↱	↰	↑↱	
Volume (vph)	41	663	176	169	444	55	115	139	131	69	146	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.984				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3429	0	1770	3483	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3429	0	1770	3483	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			19				154		11	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	47	762	202	186	488	60	134	162	152	78	166	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	964	0	186	548	0	134	162	152	78	192	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.5		12.0	24.5		12.0	21.5	21.5	12.0	21.5	
Total Split (%)	17.1%	35.0%		17.1%	35.0%		17.1%	30.7%	30.7%	17.1%	30.7%	
Maximum Green (s)	8.0	19.6		8.0	19.6		8.0	16.6	16.6	8.0	16.6	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.0	19.6		8.2	25.4		7.8	11.7	11.7	7.3	11.5	
Actuated g/C Ratio	0.11	0.31		0.13	0.41		0.12	0.19	0.19	0.12	0.18	
v/c Ratio	0.24	0.87		0.81	0.38		0.61	0.47	0.36	0.38	0.56	
Control Delay	30.7	31.8		58.0	17.2		42.4	28.1	7.1	33.3	29.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	30.7	31.8		58.0	17.2		42.4	28.1	7.1	33.3	29.2	
LOS	C	C		E	B		D	C	A	C	C	
Approach Delay		31.8			27.5			25.2			30.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	182		74	87		51	58	0	29	66	
Queue Length 95th (ft)	46	#312		#193	148		#121	103	36	68	119	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	231	1132		231	1426		231	506	542	231	504	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.20	0.85		0.81	0.38		0.58	0.32	0.28	0.34	0.38	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 62.4
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 29.2 Intersection LOS: C
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue

ø1	ø2	ø3	ø4
12 s	21.5 s	12 s	24.5 s
ø5	ø6	ø7	ø8
12 s	21.5 s	12 s	24.5 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		✥		↰	↑↱		↰	↑↱	
Volume (veh/h)	2	3	7	23	4	215	3	211	55	417	276	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93	0.88	0.88	0.88
Hourly flow rate (vph)	2	3	8	25	4	234	3	227	59	474	314	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1618	1554	157	1369	1525	143	315			286		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1618	1554	157	1369	1525	143	315			286		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	95	99	65	94	73	100			63		
cM capacity (veh/h)	34	70	860	72	73	879	1242			1273		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	14	263	3	151	135	474	209	106
Volume Left	2	25	3	0	0	474	0	0
Volume Right	8	234	0	0	59	0	0	1
cSH	134	390	1242	1700	1700	1273	1700	1700
Volume to Capacity	0.10	0.67	0.00	0.09	0.08	0.37	0.12	0.06
Queue Length 95th (ft)	8	120	0	0	0	44	0	0
Control Delay (s)	37.3	31.4	7.9	0.0	0.0	9.5	0.0	0.0
Lane LOS	E	D	A			A		
Approach Delay (s)	37.3	31.4	0.1			5.7		
Approach LOS	E	D						

Intersection Summary			
Average Delay	9.8		
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	455	82	132	264	37	190
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.88	0.88
Hourly flow rate (vph)	523	94	140	281	42	216
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			617		1132	570
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			617		1132	570
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		78	59
cM capacity (veh/h)			963		192	521

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	617	421	258
Volume Left	0	140	42
Volume Right	94	0	216
cSH	1700	963	407
Volume to Capacity	0.36	0.15	0.63
Queue Length 95th (ft)	0	13	106
Control Delay (s)	0.0	4.2	27.9
Lane LOS		A	D
Approach Delay (s)	0.0	4.2	27.9
Approach LOS			D

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	74	344	33	189	321	209	70	251	210	259	251	103
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	88	410	39	222	378	246	78	279	233	320	310	127

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	537	846	357	233	757
Volume Left (vph)	88	222	78	0	320
Volume Right (vph)	39	246	0	233	127
Hadj (s)	0.02	-0.09	0.14	-0.67	0.02
Departure Headway (s)	9.5	9.4	9.8	9.0	9.6
Degree Utilization, x	1.42	2.20	0.97	0.58	2.01
Capacity (veh/h)	389	391	357	390	382
Control Delay (s)	227.4	570.8	71.0	22.7	487.4
Approach Delay (s)	227.4	570.8	51.9		487.4
Approach LOS	F	F	F		F

Intersection Summary			
Delay	368.0		
Level of Service	F		
Intersection Capacity Utilization	125.7%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	637	118	17	442	6	82	1	22	4	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	724	134	19	502	7	93	1	25	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	509			858			1353	1355	791	1377	1418	506
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	509			858			1353	1355	791	1377	1418	506
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			24	99	94	96	98	100
cM capacity (veh/h)	1056			783			122	145	390	111	132	567

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	866	528	119	8
Volume Left	8	19	93	5
Volume Right	134	7	25	1
cSH	1056	783	143	132
Volume to Capacity	0.01	0.02	0.84	0.06
Queue Length 95th (ft)	1	2	135	5
Control Delay (s)	0.2	0.7	97.5	33.9
Lane LOS	A	A	F	D
Approach Delay (s)	0.2	0.7	97.5	33.9
Approach LOS			F	D

Intersection Summary			
Average Delay	8.2		
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	467	83	20	386	114	51	337	32	120	216	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				154		7				212
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	237	519	92	23	449	133	55	366	35	141	254	212
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	611	0	23	449	133	55	401	0	141	254	212
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	14.0	22.9		12.0	20.9	20.9	12.0	23.1		12.0	23.1	23.1
Total Split (%)	20.0%	32.7%		17.1%	29.9%	29.9%	17.1%	33.0%		17.1%	33.0%	33.0%
Maximum Green (s)	10.0	18.0		8.0	16.0	16.0	8.0	18.2		8.0	18.2	18.2
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.0	25.5		6.5	16.0	16.0	7.1	17.3		7.8	22.1	22.1
Actuated g/C Ratio	0.15	0.37		0.09	0.23	0.23	0.10	0.25		0.11	0.32	0.32
v/c Ratio	0.93	0.90		0.14	1.04	0.27	0.30	0.86		0.70	0.43	0.33
Control Delay	73.2	43.5		30.6	83.7	4.9	33.4	44.6		51.0	23.0	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	73.2	43.5		30.6	83.7	4.9	33.4	44.6		51.0	23.0	5.1
LOS	E	D		C	F	A	C	D		D	C	A
Approach Delay		51.8			64.4			43.2			23.3	
Approach LOS		D			E			D			C	
Queue Length 50th (ft)	103	212		9	~217	0	22	160		60	93	0
Queue Length 95th (ft)	#230	#532		28	#356	27	54	#304		#127	150	39
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	256	680		205	432	486	205	491		205	596	651
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.93	0.90		0.11	1.04	0.27	0.27	0.82		0.69	0.43	0.33

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 68.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 46.4 Intersection LOS: D
Intersection Capacity Utilization 74.1% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.

ø1	ø2	ø3	ø4
12 s	23.1 s	12 s	22.9 s
ø5	ø6	ø7	ø8
12 s	23.1 s	14 s	20.9 s

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	185	12	1	425
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	3	201	13	1	462
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	672	208			214	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	672	208			214	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	421	833			1356	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	214	463
Volume Left	10	0	1
Volume Right	3	13	0
cSH	480	1700	1356
Volume to Capacity	0.03	0.13	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	12.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	12.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

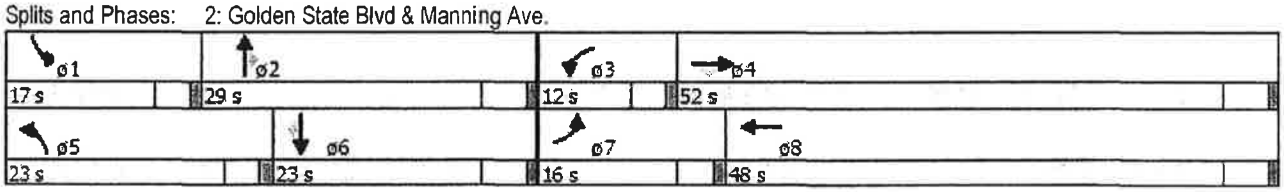
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	488	162	5	1009	251	271	519	8	155	462	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.970				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176		33				98			174
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	530	176	5	1097	273	295	564	9	168	502	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	530	176	5	1370	0	295	564	9	168	502	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	52.0	52.0	12.0	48.0		23.0	29.0	29.0	17.0	23.0	23.0
Total Split (%)	14.5%	47.3%	47.3%	10.9%	43.6%		20.9%	26.4%	26.4%	15.5%	20.9%	20.9%
Maximum Green (s)	12.0	47.1	47.1	8.0	43.1		19.0	24.1	24.1	13.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	57.0	57.0	5.9	43.1		19.0	24.1	24.1	12.6	17.7	17.7
Actuated g/C Ratio	0.11	0.52	0.52	0.05	0.39		0.17	0.22	0.22	0.11	0.16	0.16
v/c Ratio	0.96	0.29	0.19	0.05	1.00		0.96	0.72	0.02	0.83	0.88	0.83
Control Delay	105.0	16.1	3.1	50.2	57.5		89.0	45.9	0.1	79.0	62.6	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.0	16.1	3.1	50.2	57.5		89.0	45.9	0.1	79.0	62.6	39.5
LOS	F	B	A	D	E		F	D	A	E	E	D
Approach Delay		32.0			57.4			60.1			57.7	
Approach LOS		C			E			E			E	
Queue Length 50th (ft)	133	102	0	3	~497		209	195	0	117	183	111
Queue Length 95th (ft)	#275	168	39	16	#663		#380	258	0	#230	#272	#262
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	194	1839	907	128	1370		306	779	425	210	584	406
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.29	0.19	0.04	1.00		0.96	0.72	0.02	0.80	0.86	0.82

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 109.6
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 52.6 — Intersection LOS: D
Intersection Capacity Utilization 88.0% — ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	596	80	178	1096	50	179	141	234	84	303	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.993				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6				178		8	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	648	87	193	1191	54	195	153	254	91	329	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	735	0	193	1245	0	195	153	254	91	380	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	32.4		17.0	37.4		15.0	27.6	27.6	13.0	25.6	
Total Split (%)	13.3%	36.0%		18.9%	41.6%		16.7%	30.7%	30.7%	14.4%	28.4%	
Maximum Green (s)	8.0	27.5		13.0	32.5		11.0	22.7	22.7	9.0	20.7	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.6	23.1		12.2	34.9		11.1	25.0	25.0	8.2	19.7	
Actuated g/C Ratio	0.08	0.28		0.15	0.42		0.13	0.30	0.30	0.10	0.23	
v/c Ratio	0.16	0.76		0.75	0.85		0.84	0.28	0.43	0.53	0.88	
Control Delay	40.8	33.1		55.5	30.7		68.2	27.4	11.7	49.5	54.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	40.8	33.1		55.5	30.7		68.2	27.4	11.7	49.5	54.0	
LOS	D	C		E	C		E	C	B	D	D	
Approach Delay		33.4			34.0			34.0			53.1	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	11	187		101	277		105	66	32	47	193	
Queue Length 95th (ft)	35	251		#211	#513		#236	125	102	99	#372	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	169	1157		275	1486		233	553	595	191	459	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.13	0.64		0.70	0.84		0.84	0.28	0.43	0.48	0.83	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 84
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 36.6 Intersection LOS: D
Intersection Capacity Utilization 78.8% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue

ø1	ø2	ø3	ø4
13 s	27.6 s	17 s	32.4 s
ø5	ø6	ø7	ø8
15 s	25.6 s	12 s	37.4 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		✣		↰	↑↱		↰	↑↱	
Volume (veh/h)	49	19	50	105	77	370	143	245	22	147	445	133
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	21	54	114	84	402	155	266	24	160	484	145
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1764	1477	314	1161	1537	145	628			290		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1764	1477	314	1161	1537	145	628			290		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	77	92	0	0	54	84			87		
cM capacity (veh/h)	1	91	682	91	84	876	950			1268		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	128	600	155	178	113	160	322	306
Volume Left	53	114	155	0	0	160	0	0
Volume Right	54	402	0	0	24	0	0	145
cSH	4	222	950	1700	1700	1268	1700	1700
Volume to Capacity	33.76	2.70	0.16	0.10	0.07	0.13	0.19	0.18
Queue Length 95th (ft)	Err	1291	15	0	0	11	0	0
Control Delay (s)	Err	813.3	9.5	0.0	0.0	8.2	0.0	0.0
Lane LOS	F	F	A			A		
Approach Delay (s)	Err	813.3	3.3			1.7		
Approach LOS	F	F						

Intersection Summary			
Average Delay	903.8		
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	204	80	296	406	116	212
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	222	87	322	441	126	230
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			309		1350	265
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			309		1350	265
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			74		0	70
cM capacity (veh/h)			1252		123	773

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	309	763	357
Volume Left	0	322	126
Volume Right	87	0	230
cSH	1700	1252	270
Volume to Capacity	0.18	0.26	1.32
Queue Length 95th (ft)	0	26	454
Control Delay (s)	0.0	5.5	205.1
Lane LOS		A	F
Approach Delay (s)	0.0	5.5	205.1
Approach LOS			F

Intersection Summary			
Average Delay	54.2		
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	87	245	146	223	277	209	110	255	122	111	424	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	266	159	242	301	227	120	277	133	121	461	167
Direction, Lane #	**EB 1**	**WB 1**	**NB 1**	**NB 2**	**SB 1**							
Volume Total (vph)	520	771	397	133	749							
Volume Left (vph)	95	242	120	0	121							
Volume Right (vph)	159	227	0	133	167							
Hadj (s)	-0.11	-0.08	0.18	-0.67	-0.07							
Departure Headway (s)	9.4	9.4	9.8	9.0	9.6							
Degree Utilization, x	1.36	2.02	1.09	0.33	1.99							
Capacity (veh/h)	391	387	373	396	382							
Control Delay (s)	204.1	490.7	102.8	15.2	476.0							
Approach Delay (s)	204.1	490.7	80.9		476.0							
Approach LOS	F	F	F		F							
Intersection Summary												
Delay			344.0									
Level of Service			F									
Intersection Capacity Utilization			134.4%		ICU Level of Service				H			
Analysis Period (min)			15									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (veh/h)	4	380	73	24	492	5	78	1	43	7	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	413	79	26	535	5	85	1	47	8	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	540			492			1059	1054	453	1098	1091	538
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	540			492			1059	1054	453	1098	1091	538
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			56	100	92	96	96	99
cM capacity (veh/h)	1028			1071			191	220	607	171	209	544

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	497	566	133	20
Volume Left	4	26	85	8
Volume Right	79	5	47	4
cSH	1028	1071	252	220
Volume to Capacity	0.00	0.02	0.53	0.09
Queue Length 95th (ft)	0	2	70	7
Control Delay (s)	0.1	0.7	34.1	23.0
Lane LOS	A	A	D	C
Approach Delay (s)	0.1	0.7	34.1	23.0
Approach LOS			D	C

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

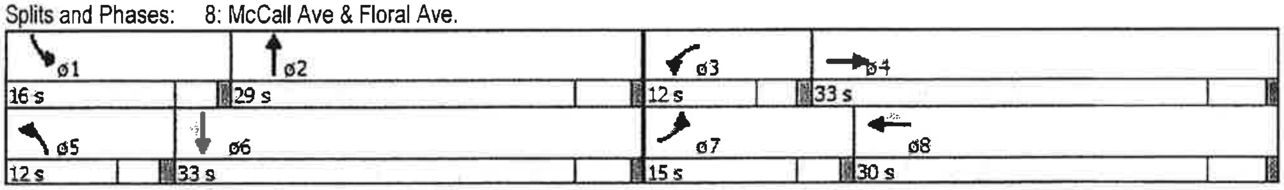
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑	↱	↰	↱		↰	↑	↱
Volume (vph)	170	280	52	55	410	174	68	205	32	158	442	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				189		9				353
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	304	57	60	446	189	74	223	35	172	480	353
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	361	0	60	446	189	74	258	0	172	480	353
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	15.0	33.0		12.0	30.0	30.0	12.0	29.0		16.0	33.0	33.0
Total Split (%)	16.7%	36.7%		13.3%	33.3%	33.3%	13.3%	32.2%		17.8%	36.7%	36.7%
Maximum Green (s)	11.0	28.1		8.0	25.1	25.1	8.0	24.1		12.0	28.1	28.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.9	29.1		7.3	22.9	22.9	7.5	20.1		11.3	26.5	26.5
Actuated g/C Ratio	0.13	0.35		0.09	0.27	0.27	0.09	0.24		0.14	0.32	0.32
v/c Ratio	0.80	0.56		0.39	0.87	0.33	0.47	0.58		0.72	0.81	0.47
Control Delay	64.5	28.2		46.3	49.3	5.8	49.2	32.8		55.1	40.2	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	64.5	28.2		46.3	49.3	5.8	49.2	32.8		55.1	40.2	5.1
LOS	E	C		D	D	A	D	C		E	D	A
Approach Delay		40.5			37.2			36.5			30.4	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	105	169		33	240	0	41	120		95	251	0
Queue Length 95th (ft)	#222	263		72	#405	48	85	196		#190	#414	60
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	238	643		173	573	617	173	545		260	641	777
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.78	0.56		0.35	0.78	0.31	0.43	0.47		0.66	0.75	0.45

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 83.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 35.2 Intersection LOS: D
Intersection Capacity Utilization 72.9% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	497	9	1	346
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	540	10	1	376
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	923	545			550	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	923	545			550	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	299	538			1020	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	550	377
Volume Left	5	0	1
Volume Right	1	10	0
cSH	323	1700	1020
Volume to Capacity	0.02	0.32	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	16.4	0.0	0.0
Lane LOS	C		A
Approach Delay (s)	16.4	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

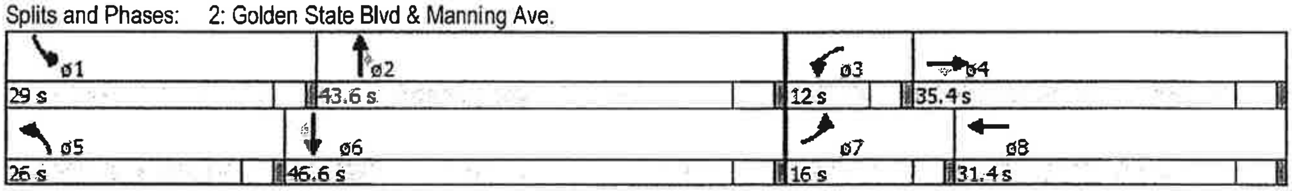
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	177	740	260	10	570	216	244	1057	73	370	838	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.959				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3394	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3394	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			283		42				90			229
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	804	283	11	620	235	265	1149	79	402	911	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	804	283	11	855	0	265	1149	79	402	911	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	35.4	35.4	12.0	31.4		26.0	43.6	43.6	29.0	46.6	46.6
Total Split (%)	13.3%	29.5%	29.5%	10.0%	26.2%		21.7%	36.3%	36.3%	24.2%	38.8%	38.8%
Maximum Green (s)	12.0	30.5	30.5	8.0	26.5		22.0	38.7	38.7	25.0	41.7	41.7
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	40.2	40.2	6.3	26.5		20.7	38.7	38.7	25.0	43.0	43.0
Actuated g/C Ratio	0.10	0.34	0.34	0.05	0.22		0.17	0.32	0.32	0.21	0.36	0.36
v/c Ratio	1.08	0.68	0.39	0.12	1.09		0.87	1.01	0.14	1.09	0.72	0.43
Control Delay	142.5	38.6	5.5	56.4	102.4		75.6	69.1	5.2	118.7	37.5	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	142.5	38.6	5.5	56.4	102.4		75.6	69.1	5.2	118.7	37.5	9.8
LOS	F	D	A	E	F		E	E	A	F	D	A
Approach Delay		46.9			101.8			66.9			52.5	
Approach LOS		D			F			E			D	
Queue Length 50th (ft)	~167	272	0	8	~380		199	~473	0	~351	324	40
Queue Length 95th (ft)	#317	#423	68	28	#510		#337	#626	29	#549	403	114
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	177	1184	718	118	782		324	1141	571	368	1268	714
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.68	0.39	0.09	1.09		0.82	1.01	0.14	1.09	0.72	0.43

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 63.3 — Intersection LOS: E
Intersection Capacity Utilization 97.0% — ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



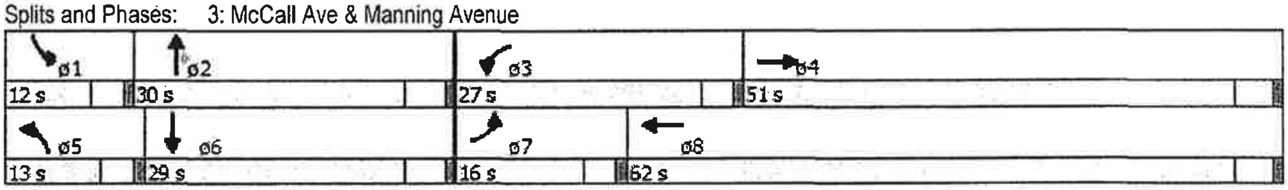
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	1098	172	321	777	99	110	329	249	93	225	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.983				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3479	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3479	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			16				126		6	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1193	187	349	845	108	120	358	271	101	245	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	1380	0	349	953	0	120	358	271	101	282	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	16.0	51.0		27.0	62.0		13.0	30.0	30.0	12.0	29.0	
Total Split (%)	13.3%	42.5%		22.5%	51.7%		10.8%	25.0%	25.0%	10.0%	24.2%	
Maximum Green (s)	12.0	46.1		23.0	57.1		9.0	25.1	25.1	8.0	24.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	10.2	46.1		23.0	61.1		9.0	24.5	24.5	8.0	23.5	
Actuated g/C Ratio	0.09	0.39		0.19	0.51		0.08	0.21	0.21	0.07	0.20	
v/c Ratio	0.56	1.02		1.02	0.53		0.90	0.94	0.64	0.86	0.77	
Control Delay	66.8	66.8		103.0	21.6		111.5	79.8	30.3	106.1	59.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	66.8	66.8		103.0	21.6		111.5	79.8	30.3	106.1	59.9	
LOS	E	E		F	C		F	E	C	F	E	
Approach Delay		66.8			43.4			67.0			72.1	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)	64	~596		~289	263		94	274	102	79	204	
Queue Length 95th (ft)	117	#738		#476	332		#211	#452	196	#184	#326	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	178	1348		341	1786		133	391	432	118	373	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.48	1.02		1.02	0.53		0.90	0.92	0.63	0.86	0.76	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.4
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 59.6 Intersection LOS: E
Intersection Capacity Utilization 90.9% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰	↑↱		↰	↑↱	
Volume (veh/h)	123	54	252	33	51	212	141	1025	76	445	796	49
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	59	274	36	55	230	153	1114	83	484	865	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2981	3362	459	2891	3348	598	918			1197		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2981	3362	459	2891	3348	598	918			1197		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	50	0	0	48	79			16		
cM capacity (veh/h)	0	1	549	0	1	445	739			579		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	466	322	153	743	454	484	577	342
Volume Left	134	36	153	0	0	484	0	0
Volume Right	274	230	0	0	83	0	0	53
cSH	0	0	739	1700	1700	579	1700	1700
Volume to Capacity	Err	Err	0.21	0.44	0.27	0.84	0.34	0.20
Queue Length 95th (ft)	Err	Err	19	0	0	219	0	0
Control Delay (s)	Err	Err	11.1	0.0	0.0	35.1	0.0	0.0
Lane LOS	F	F	B			E		
Approach Delay (s)	Err	Err	1.3			12.1		
Approach LOS	F	F						

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	451	209	293	259	98	439
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	490	227	318	282	107	477
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			717		1522	604
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			717		1522	604
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			64		0	4
cM capacity (veh/h)			884		83	498

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	717	600	584
Volume Left	0	318	107
Volume Right	227	0	477
cSH	1700	884	261
Volume to Capacity	0.42	0.36	2.24
Queue Length 95th (ft)	0	41	1130
Control Delay (s)	0.0	8.3	599.1
Lane LOS		A	F
Approach Delay (s)	0.0	8.3	599.1
Approach LOS			F

Intersection Summary			
Average Delay	186.6		
Intersection Capacity Utilization	108.8%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↱	
Volume (vph)	20	596	82	180	1096	50	180	142	235	84	305	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.993				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6				177		8	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	648	89	196	1191	54	196	154	255	91	332	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	737	0	196	1245	0	196	154	255	91	383	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	32.4		17.0	37.4		15.0	27.6	27.6	13.0	25.6	
Total Split (%)	13.3%	36.0%		18.9%	41.6%		16.7%	30.7%	30.7%	14.4%	28.4%	
Maximum Green (s)	8.0	27.5		13.0	32.5		11.0	22.7	22.7	9.0	20.7	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.6	23.1		12.3	35.0		11.1	25.1	25.1	8.2	19.8	
Actuated g/C Ratio	0.08	0.27		0.15	0.42		0.13	0.30	0.30	0.10	0.24	
v/c Ratio	0.16	0.76		0.76	0.85		0.84	0.28	0.43	0.53	0.88	
Control Delay	40.8	33.3		56.1	30.7		69.2	27.4	11.9	49.6	54.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	40.8	33.3		56.1	30.7		69.2	27.4	11.9	49.6	54.6	
LOS	D	C		E	C		E	C	B	D	D	
Approach Delay		33.5			34.1			34.4			53.7	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	11	188		103	277		106	67	33	47	195	
Queue Length 95th (ft)	35	252		#215	#513		#239	126	103	99	#376	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	169	1154		275	1484		232	554	595	190	457	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.13	0.64		0.71	0.84		0.84	0.28	0.43	0.48	0.84	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 84.2

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 36.9 Intersection LOS: D

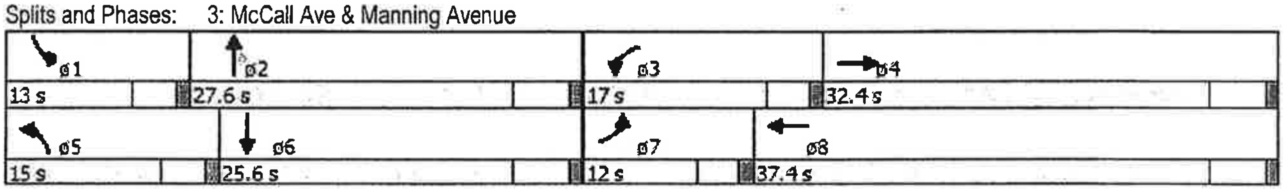
Intersection Capacity Utilization 78.9% ICU Level of Service D

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	19	50	105	77	371	143	245	23	148	445	133
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	21	54	114	84	403	155	266	25	161	484	145
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1767	1480	314	1164	1540	146	628			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1767	1480	314	1164	1540	146	628			291		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	77	92	0	0	54	84			87		
cM capacity (veh/h)	0	91	682	91	84	875	950			1267		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	128	601	155	178	114	161	322	306
Volume Left	53	114	155	0	0	161	0	0
Volume Right	54	403	0	0	25	0	0	145
cSH	2	221	950	1700	1700	1267	1700	1700
Volume to Capacity	72.78	2.72	0.16	0.10	0.07	0.13	0.19	0.18
Queue Length 95th (ft)	Err	1296	15	0	0	11	0	0
Control Delay (s)	Err	820.1	9.5	0.0	0.0	8.3	0.0	0.0
Lane LOS	F	F	A			A		
Approach Delay (s)	Err	820.1	3.3			1.7		
Approach LOS	F	F						

Intersection Summary			
Average Delay	904.8		
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	206	80	297	407	116	214
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	224	87	323	442	126	233
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			311		1355	267
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			311		1355	267
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			74		0	70
cM capacity (veh/h)			1250		122	771

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	311	765	359
Volume Left	0	323	126
Volume Right	87	0	233
cSH	1700	1250	269
Volume to Capacity	0.18	0.26	1.33
Queue Length 95th (ft)	0	26	463
Control Delay (s)	0.0	5.5	210.6
Lane LOS		A	F
Approach Delay (s)	0.0	5.5	210.6
Approach LOS			F

Intersection Summary			
Average Delay	55.6		
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	99	245	146	224	277	213	110	270	123	114	434	162
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	108	266	159	243	301	232	120	293	134	124	472	176

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	533	776	413	134	772
Volume Left (vph)	108	243	120	0	124
Volume Right (vph)	159	232	0	134	176
Hadj (s)	-0.10	-0.08	0.18	-0.67	-0.07
Departure Headway (s)	9.4	9.4	9.8	9.0	9.6
Degree Utilization, x	1.39	2.04	1.13	0.33	2.05
Capacity (veh/h)	391	387	378	396	383
Control Delay (s)	218.6	496.8	117.2	15.3	502.6
Approach Delay (s)	218.6	496.8	92.3		502.6
Approach LOS	F	F	F		F

Intersection Summary			
Delay	357.9		
Level of Service	F		
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	383	74	24	496	5	80	1	43	7	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	416	80	26	539	5	87	1	47	8	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	545			497			1067	1062	457	1107	1099	542
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545			497			1067	1062	457	1107	1099	542
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			54	99	92	95	96	99
cM capacity (veh/h)	1024			1067			188	217	604	169	206	540

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	501	571	135	20
Volume Left	4	26	87	8
Volume Right	80	5	47	4
cSH	1024	1067	248	217
Volume to Capacity	0.00	0.02	0.54	0.09
Queue Length 95th (ft)	0	2	74	7
Control Delay (s)	0.1	0.7	35.6	23.2
Lane LOS	A	A	E	C
Approach Delay (s)	0.1	0.7	35.6	23.2
Approach LOS			E	C

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑	↱	↰	↱		↰	↑	↱
Volume (vph)	172	280	52	55	410	176	68	207	32	159	443	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				191		8				354
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	304	57	60	446	191	74	225	35	173	482	354
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	361	0	60	446	191	74	260	0	173	482	354
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	15.0	33.0		12.0	30.0	30.0	12.0	29.0		16.0	33.0	33.0
Total Split (%)	16.7%	36.7%		13.3%	33.3%	33.3%	13.3%	32.2%		17.8%	36.7%	36.7%
Maximum Green (s)	11.0	28.1		8.0	25.1	25.1	8.0	24.1		12.0	28.1	28.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	171	367	92	187	321	200	127	543	208	249	412	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	186	399	100	203	349	217	138	590	226	271	448	150

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	685	770	728	226	868
Volume Left (vph)	186	203	138	0	271
Volume Right (vph)	100	217	0	226	150
Hadj (s)	0.00	-0.08	0.13	-0.67	-0.01
Departure Headway (s)	9.5	9.4	9.8	9.0	9.6
Degree Utilization, x	1.81	2.02	1.98	0.57	2.32
Capacity (veh/h)	383	387	373	389	382
Control Delay (s)	398.4	489.2	472.0	21.9	623.5
Approach Delay (s)	398.4	489.2	365.3		623.5
Approach LOS	F	F	F		F

Intersection Summary			
Delay	469.8		
Level of Service	F		
Intersection Capacity Utilization	141.4%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (veh/h)	9	627	113	21	439	7	78	1	28	5	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	682	123	23	477	8	85	1	30	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	485			804			1291	1293	743	1320	1351	481
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	485			804			1291	1293	743	1320	1351	481
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			37	99	93	95	98	100
cM capacity (veh/h)	1078			820			134	157	415	120	145	585

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	814	508	116	9
Volume Left	10	23	85	5
Volume Right	123	8	30	1
cSH	1078	820	164	140
Volume to Capacity	0.01	0.03	0.71	0.06
Queue Length 95th (ft)	1	2	107	5
Control Delay (s)	0.2	0.8	68.2	32.5
Lane LOS	A	A	F	D
Approach Delay (s)	0.2	0.8	68.2	32.5
Approach LOS			F	D

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

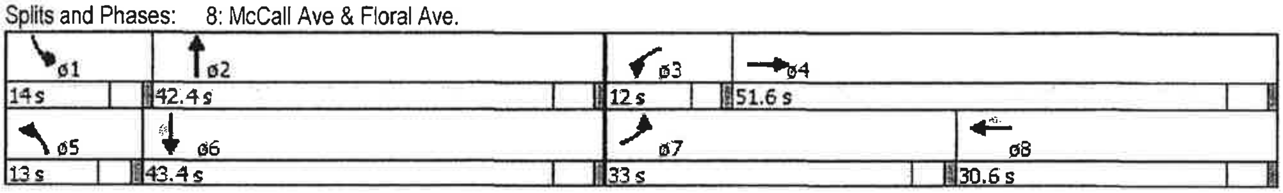
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	467	83	25	386	163	63	520	39	136	299	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1844	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1844	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				177		3				314
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	457	508	90	27	420	177	68	565	42	148	325	314
Shared Lane Traffic (%)												
Lane Group Flow (vph)	457	598	0	27	420	177	68	607	0	148	325	314
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	33.0	51.6		12.0	30.6	30.6	13.0	42.4		14.0	43.4	43.4
Total Split (%)	27.5%	43.0%		10.0%	25.5%	25.5%	10.8%	35.3%		11.7%	36.2%	36.2%
Maximum Green (s)	29.0	46.7		8.0	25.7	25.7	9.0	37.5		10.0	38.5	38.5
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	29.0	51.7		7.0	25.7	25.7	8.3	37.5		10.0	41.2	41.2
Actuated g/C Ratio	0.24	0.43		0.06	0.21	0.21	0.07	0.31		0.08	0.34	0.34
v/c Ratio	1.07	0.76		0.26	1.06	0.37	0.56	1.05		1.01	0.51	0.42
Control Delay	107.2	37.3		60.0	106.0	8.0	71.6	91.5		131.1	35.8	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	107.2	37.3		60.0	106.0	8.0	71.6	91.5		131.1	35.8	5.1
LOS	F	D		E	F	A	E	F		F	D	A
Approach Delay		67.6			76.2			89.5			41.5	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	~392	405		20	~355	0	52	~511		~117	206	0
Queue Length 95th (ft)	#598	#607		51	#557	59	101	#739		#255	300	64
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	427	788		118	398	478	132	578		147	639	750
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	1.07	0.76		0.23	1.06	0.37	0.52	1.05		1.01	0.51	0.42

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 67.5 Intersection LOS: E
Intersection Capacity Utilization 95.7% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	186	12	1	427
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	3	202	13	1	464
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	675	209			215	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675	209			215	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	419	832			1355	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	215	465
Volume Left	10	0	1
Volume Right	3	13	0
cSH	478	1700	1355
Volume to Capacity	0.03	0.13	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	12.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	12.7	0.0	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		33.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	171	488	162	5	1009	252	271	520	8	157	463	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.970				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176		33				98			174
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	530	176	5	1097	274	295	565	9	171	503	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	530	176	5	1371	0	295	565	9	171	503	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	52.0	52.0	12.0	48.0		23.0	29.0	29.0	17.0	23.0	23.0
Total Split (%)	14.5%	47.3%	47.3%	10.9%	43.6%		20.9%	26.4%	26.4%	15.5%	20.9%	20.9%
Maximum Green (s)	12.0	47.1	47.1	8.0	43.1		19.0	24.1	24.1	13.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	56.9	56.9	5.9	43.1		19.0	24.1	24.1	12.6	17.7	17.7
Actuated g/C Ratio	0.11	0.52	0.52	0.05	0.39		0.17	0.22	0.22	0.11	0.16	0.16
v/c Ratio	0.96	0.29	0.19	0.05	1.00		0.96	0.73	0.02	0.84	0.88	0.83
Control Delay	105.0	16.1	3.1	50.2	57.7		89.2	46.0	0.1	80.6	62.7	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.0	16.1	3.1	50.2	57.7		89.2	46.0	0.1	80.6	62.7	39.5
LOS	F	B	A	D	E		F	D	A	F	E	D
Approach Delay		32.1			57.6			60.2			58.1	
Approach LOS		C			E			E			E	
Queue Length 50th (ft)	133	102	0	3	~498		209	196	0	120	184	111
Queue Length 95th (ft)	#275	168	39	16	#664		#380	259	0	#236	#272	#262
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	194	1839	906	128	1369		306	778	424	210	584	406
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.29	0.19	0.04	1.00		0.96	0.73	0.02	0.81	0.86	0.82

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 109.6

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 52.8 Intersection LOS: D

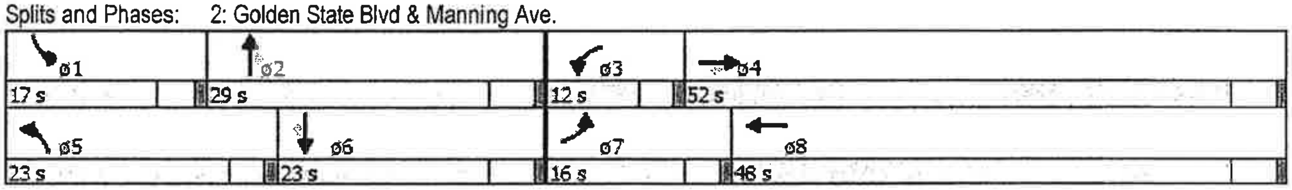
Intersection Capacity Utilization 88.1% ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.9	29.1		7.3	22.9	22.9	7.4	20.1		11.3	26.6	26.6
Actuated g/C Ratio	0.13	0.35		0.09	0.27	0.27	0.09	0.24		0.14	0.32	0.32
v/c Ratio	0.81	0.56		0.39	0.87	0.33	0.47	0.58		0.72	0.81	0.48
Control Delay	65.1	28.2		46.4	49.4	5.8	49.2	33.1		55.4	40.4	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	65.1	28.2		46.4	49.4	5.8	49.2	33.1		55.4	40.4	5.1
LOS	E	C		D	D	A	D	C		E	D	A
Approach Delay		40.8			37.2			36.7			30.6	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	106	169		33	240	0	41	122		96	253	0
Queue Length 95th (ft)	#225	263		72	#405	49	85	198		#192	#416	60
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	238	643		173	572	618	173	543		260	640	776
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.79	0.56		0.35	0.78	0.31	0.43	0.48		0.67	0.75	0.46

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 83.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 35.3 Intersection LOS: D
Intersection Capacity Utilization 73.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.

ø1	ø2	ø3	ø4
16 s	29 s	12 s	33 s

ø5	ø6	ø7	ø8
12 s	33 s	15 s	30 s

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	502	9	1	350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	546	10	1	380
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	933	551			555	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	933	551			555	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	295	534			1015	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	555	382
Volume Left	5	0	1
Volume Right	1	10	0
cSH	319	1700	1015
Volume to Capacity	0.02	0.33	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	16.5	0.0	0.0
Lane LOS	C		A
Approach Delay (s)	16.5	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Volume (vph)	177	740	260	10	570	221	244	1060	73	374	840	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.958				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3391	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3391	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			283		43				90			229
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	804	283	11	620	240	265	1152	79	407	913	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	804	283	11	860	0	265	1152	79	407	913	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	35.4	35.4	12.0	31.4		26.0	43.6	43.6	29.0	46.6	46.6
Total Split (%)	13.3%	29.5%	29.5%	10.0%	26.2%		21.7%	36.3%	36.3%	24.2%	38.8%	38.8%
Maximum Green (s)	12.0	30.5	30.5	8.0	26.5		22.0	38.7	38.7	25.0	41.7	41.7
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	40.2	40.2	6.3	26.5		20.7	38.7	38.7	25.0	43.0	43.0
Actuated g/C Ratio	0.10	0.34	0.34	0.05	0.22		0.17	0.32	0.32	0.21	0.36	0.36
v/c Ratio	1.08	0.68	0.39	0.12	1.10		0.87	1.01	0.14	1.11	0.72	0.43
Control Delay	142.5	38.6	5.5	56.4	104.5		75.6	69.7	5.2	122.8	37.5	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	142.5	38.6	5.5	56.4	104.5		75.6	69.7	5.2	122.8	37.5	9.8
LOS	F	D	A	E	F		E	E	A	F	D	A
Approach Delay		46.9			103.9			67.3			53.7	
Approach LOS		D			F			E			D	
Queue Length 50th (ft)	~167	272	0	8	~384		199	~476	0	~359	325	40
Queue Length 95th (ft)	#317	#423	68	28	#515		#337	#628	29	#557	403	114
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	177	1184	718	118	782		324	1141	571	368	1268	714
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.68	0.39	0.09	1.10		0.82	1.01	0.14	1.11	0.72	0.43

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 64.2 — Intersection LOS: E

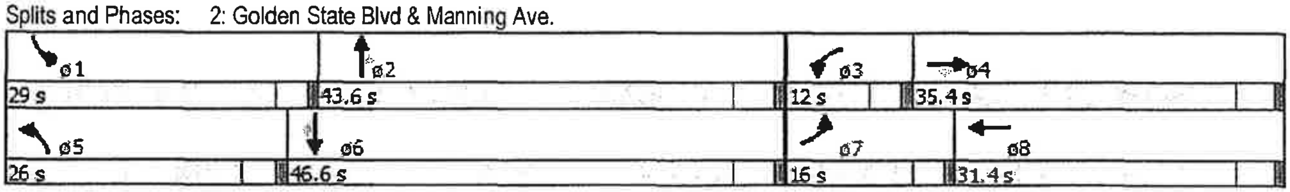
Intersection Capacity Utilization 97.5% — ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑	↱	↰	↱	
Volume (vph)	78	1098	176	325	777	99	115	334	254	93	229	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.983				0.850		0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3479	0	1770	1863	1583	1770	1827	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3479	0	1770	1863	1583	1770	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			16				126		6	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1193	191	353	845	108	125	363	276	101	249	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	1384	0	353	953	0	125	363	276	101	286	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	16.0	51.0		27.0	62.0		13.0	30.0	30.0	12.0	29.0	
Total Split (%)	13.3%	42.5%		22.5%	51.7%		10.8%	25.0%	25.0%	10.0%	24.2%	
Maximum Green (s)	12.0	46.1		23.0	57.1		9.0	25.1	25.1	8.0	24.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	10.2	46.1		23.0	61.1		9.0	24.7	24.7	8.0	23.7	
Actuated g/C Ratio	0.09	0.39		0.19	0.51		0.08	0.21	0.21	0.07	0.20	
v/c Ratio	0.56	1.03		1.04	0.53		0.95	0.95	0.65	0.86	0.78	
Control Delay	66.8	68.4		106.4	21.7		120.1	81.2	31.0	106.4	60.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	66.8	68.4		106.4	21.7		120.1	81.2	31.0	106.4	60.3	
LOS	E	E		F	C		F	F	C	F	E	
Approach Delay		68.3			44.6			69.4			72.4	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)	64	~601		~296	263		98	278	106	79	207	
Queue Length 95th (ft)	117	#741		#484	332		#220	#463	203	#184	#332	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	177	1345		340	1783		132	390	431	118	372	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.48	1.03		1.04	0.53		0.95	0.93	0.64	0.86	0.77	

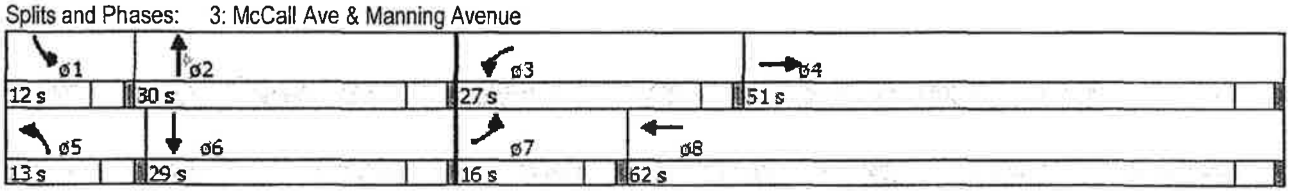
Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 61.0 Intersection LOS: E
Intersection Capacity Utilization 91.5% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	54	252	35	51	215	141	1025	78	447	796	49
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	59	274	38	55	234	153	1114	85	486	865	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2989	3369	459	2897	3353	599	918			1199		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2989	3369	459	2897	3353	599	918			1199		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	50	0	0	47	79			16		
cM capacity (veh/h)	0	1	549	0	1	444	739			578		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	466	327	153	743	456	486	577	342
Volume Left	134	38	153	0	0	486	0	0
Volume Right	274	234	0	0	85	0	0	53
cSH	0	0	739	1700	1700	578	1700	1700
Volume to Capacity	Err	Err	0.21	0.44	0.27	0.84	0.34	0.20
Queue Length 95th (ft)	Err	Err	19	0	0	223	0	0
Control Delay (s)	Err	Err	11.1	0.0	0.0	35.7	0.0	0.0
Lane LOS	F	F	B			E		
Approach Delay (s)	Err	Err	1.3			12.4		
Approach LOS	F	F						

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	455	209	298	264	98	443
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	495	227	324	287	107	482
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			722		1543	608
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			722		1543	608
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			63		0	3
cM capacity (veh/h)			880		80	496

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	722	611	588
Volume Left	0	324	107
Volume Right	227	0	482
cSH	1700	880	255
Volume to Capacity	0.42	0.37	2.30
Queue Length 95th (ft)	0	43	1159
Control Delay (s)	0.0	8.5	629.9
Lane LOS		A	F
Approach Delay (s)	0.0	8.5	629.9
Approach LOS			F

Intersection Summary			
Average Delay	195.5		
Intersection Capacity Utilization	109.8%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑	↱		↰↑↱	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	198	367	92	189	321	209	127	578	210	259	450	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	215	399	100	205	349	227	138	628	228	282	489	183

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	714	782	766	228	953
Volume Left (vph)	215	205	138	0	282
Volume Right (vph)	100	227	0	228	183
Hadj (s)	0.01	-0.09	0.12	-0.67	-0.02
Departure Headway (s)	9.5	9.4	9.8	9.0	9.6
Degree Utilization, x	1.89	2.05	2.08	0.57	2.54
Capacity (veh/h)	383	388	374	389	384
Control Delay (s)	433.4	502.6	517.3	22.1	722.8
Approach Delay (s)	433.4	502.6	403.6		722.8
Approach LOS	F	F	F		F

Intersection Summary			
Delay	520.6		
Level of Service	F		
Intersection Capacity Utilization	146.4%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (veh/h)	9	637	118	21	448	7	82	1	28	5	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	692	128	23	487	8	89	1	30	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	495			821			1315	1316	757	1343	1377	491
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	495			821			1315	1316	757	1343	1377	491
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			31	99	93	95	98	100
cM capacity (veh/h)	1069			808			129	152	408	115	140	578

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	830	517	121	9
Volume Left	10	23	89	5
Volume Right	128	8	30	1
cSH	1069	808	157	135
Volume to Capacity	0.01	0.03	0.77	0.06
Queue Length 95th (ft)	1	2	121	5
Control Delay (s)	0.2	0.8	79.6	33.6
Lane LOS	A	A	F	D
Approach Delay (s)	0.2	0.8	79.6	33.6
Approach LOS			F	D

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

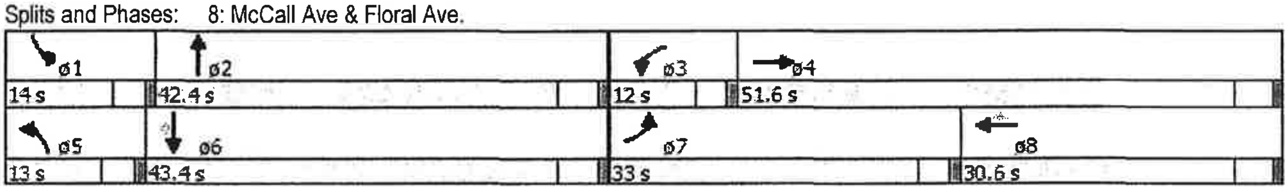
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑	↱	↰	↱		↰	↑	↱
Volume (vph)	424	467	83	25	386	167	63	520	43	141	304	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1840	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1840	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				182		4				320
Link Speed (mph)		40			40			50			50	
Link Distance (ft)		1360			2660			1896			5353	
Travel Time (s)		23.2			45.3			25.9			73.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	461	508	90	27	420	182	68	565	47	153	330	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	461	598	0	27	420	182	68	612	0	153	330	320
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	33.0	51.6		12.0	30.6	30.6	13.0	42.4		14.0	43.4	43.4
Total Split (%)	27.5%	43.0%		10.0%	25.5%	25.5%	10.8%	35.3%		11.7%	36.2%	36.2%
Maximum Green (s)	29.0	46.7		8.0	25.7	25.7	9.0	37.5		10.0	38.5	38.5
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	29.0	51.7		7.0	25.7	25.7	8.3	37.5		10.0	41.2	41.2
Actuated g/C Ratio	0.24	0.43		0.06	0.21	0.21	0.07	0.31		0.08	0.34	0.34
v/c Ratio	1.08	0.76		0.26	1.06	0.38	0.56	1.06		1.04	0.52	0.42
Control Delay	109.9	37.3		60.0	106.0	8.0	71.6	94.5		138.8	36.0	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	109.9	37.3		60.0	106.0	8.0	71.6	94.5		138.8	36.0	5.1
LOS	F	D		E	F	A	E	F		F	D	A
Approach Delay		68.9			75.7			92.2			43.3	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	~398	405		20	~355	0	52	~520		~128	210	0
Queue Length 95th (ft)	#605	#607		51	#557	60	101	#749		#265	307	64
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	427	788		118	398	482	132	577		147	639	754
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	1.08	0.76		0.23	1.06	0.38	0.52	1.06		1.04	0.52	0.42

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 68.8 Intersection LOS: E
Intersection Capacity Utilization 96.4% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



APPENDIX C
MITIGATED INTERSECTION ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	154	79	118	158	47	71	192	83	73	190	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	81	195	100	128	172	51	87	234	101	91	238	94
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total (vph)	81	295	128	223	321	101	423					
Volume Left (vph)	81	0	128	0	87	0	91					
Volume Right (vph)	0	100	0	51	0	101	94					
Hadj (s)	0.53	-0.20	0.53	-0.13	0.17	-0.67	-0.06					
Departure Headway (s)	9.3	8.5	9.4	8.7	8.6	7.8	8.1					
Degree Utilization, x	0.21	0.70	0.34	0.54	0.77	0.22	0.95					
Capacity (veh/h)	387	418	381	404	404	454	423					
Control Delay (s)	13.5	27.8	15.9	20.3	34.0	11.8	60.0					
Approach Delay (s)	24.7		18.7		28.7		60.0					
Approach LOS	C		C		D		F					
Intersection Summary												
Delay			33.9									
Level of Service			D									
Intersection Capacity Utilization			65.4%		ICU Level of Service				C			
Analysis Period (min)			15									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	74	171	33	122	177	72	70	242	112	62	235	103
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	88	204	39	144	208	85	78	269	124	77	290	127

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	243	144	293	347	124	494
Volume Left (vph)	88	0	144	0	78	0	77
Volume Right (vph)	0	39	0	85	0	124	127
Hadj (s)	0.53	-0.08	0.53	-0.17	0.15	-0.67	-0.09
Departure Headway (s)	9.4	8.8	9.2	8.5	8.6	7.8	8.3
Degree Utilization, x	0.23	0.59	0.37	0.69	0.83	0.27	1.13
Capacity (veh/h)	374	395	384	413	413	452	439
Control Delay (s)	13.9	22.5	16.1	27.0	40.3	12.5	112.9
Approach Delay (s)	20.2		23.5		33.0		112.9
Approach LOS	C		C		D		F

Intersection Summary			
Delay	50.9		
Level of Service	F		
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↑	↱	↰	↑	↱	↰	↱	
Volume (vph)	64	245	79	224	178	213	71	208	123	114	195	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		150	200		0	200		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963				0.850			0.850		0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1794	0	1770	1863	1583	1770	1863	1583	1770	1785	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1794	0	1770	1863	1583	1770	1863	1583	1770	1785	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				232			150		23	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5257			2597			5353			5277	
Travel Time (s)		71.7			35.4			73.0			72.0	
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Adj. Flow (vph)	81	310	100	243	193	232	87	254	150	142	244	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	81	410	0	243	193	232	87	254	150	142	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9	12.0	20.9	
Total Split (s)	13.0	26.6		17.0	30.6	30.6	12.0	24.4	24.4	12.0	24.4	
Total Split (%)	16.3%	33.3%		21.3%	38.3%	38.3%	15.0%	30.5%	30.5%	15.0%	30.5%	
Maximum Green (s)	9.0	21.7		13.0	25.7	25.7	8.0	19.5	19.5	8.0	19.5	
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	7.9	19.4		12.6	26.5	26.5	7.5	16.4	16.4	8.1	19.5	
Actuated g/C Ratio	0.11	0.26		0.17	0.36	0.36	0.10	0.22	0.22	0.11	0.26	
v/c Ratio	0.43	0.85		0.82	0.29	0.33	0.49	0.62	0.32	0.74	0.70	
Control Delay	40.5	43.9		55.0	21.2	4.5	44.0	33.9	6.8	59.5	34.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.5	43.9		55.0	21.2	4.5	44.0	33.9	6.8	59.5	34.4	
LOS	D	D		E	C	A	D	C	A	E	C	
Approach Delay		43.3			27.7			27.4			41.9	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	38	183		119	72	0	42	111	0	71	146	
Queue Length 95th (ft)	70	241		#243	125	47	78	165	34	#137	204	
Internal Link Dist (ft)		5177			2517			5273			5197	
Turn Bay Length (ft)	200			200		150	200			200		
Base Capacity (vph)	217	544		313	666	715	193	494	530	193	500	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.75		0.78	0.29	0.32	0.45	0.51	0.28	0.74	0.68	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.5
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 63.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.

ø1	ø2	ø3	ø4
12 s	24.4 s	17 s	26.6 s
ø5	ø6	ø7	ø8
12 s	24.4 s	13 s	30.6 s

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	344	33	189	321	209	70	251	210	259	251	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		150	200		0	200		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987				0.850			0.850		0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	1863	1583	1770	1863	1583	1770	1781	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1839	0	1770	1863	1583	1770	1863	1583	1770	1781	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				246			233		24	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5257			2597			5353			5277	
Travel Time (s)		71.7			35.4			73.0			72.0	
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Adj. Flow (vph)	88	410	39	222	378	246	78	279	233	320	310	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	449	0	222	378	246	78	279	233	320	437	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	28.0		16.0	32.0	32.0	12.0	25.0	25.0	21.0	34.0	
Total Split (%)	13.3%	31.1%		17.8%	35.6%	35.6%	13.3%	27.8%	27.8%	23.3%	37.8%	
Maximum Green (s)	8.0	23.1		12.0	27.1	27.1	8.0	20.1	20.1	17.0	29.1	
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	7.6	22.7		12.0	29.3	29.3	7.5	16.9	16.9	17.0	28.6	
Actuated g/C Ratio	0.09	0.26		0.14	0.34	0.34	0.09	0.20	0.20	0.20	0.33	
v/c Ratio	0.57	0.93		0.90	0.60	0.35	0.51	0.77	0.47	0.92	0.72	
Control Delay	53.9	59.2		76.8	30.5	4.9	51.2	47.6	7.6	68.4	33.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.9	59.2		76.8	30.5	4.9	51.2	47.6	7.6	68.4	33.1	
LOS	D	E		E	C	A	D	D	A	E	C	
Approach Delay		58.3			35.2			32.3			48.0	
Approach LOS		E			D			C			D	
Queue Length 50th (ft)	48	241		124	181	0	42	146	0	177	208	
Queue Length 95th (ft)	90	#387		#241	265	43	88	232	58	#290	273	
Internal Link Dist (ft)		5177			2517			5273			5197	
Turn Bay Length (ft)	200			200		150	200			200		
Base Capacity (vph)	164	496		246	630	698	164	434	547	348	631	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.54	0.91		0.90	0.60	0.35	0.48	0.64	0.43	0.92	0.69	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 86.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 42.7 Intersection LOS: D

Intersection Capacity Utilization 73.0% ICU Level of Service C

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.

ø1	ø2	ø3	ø4
21 s	25 s	16 s	28 s
ø5	ø6	ø7	ø8
12 s	34 s	12 s	32 s

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↱		↰	↑↑	↰	↱
Volume (vph)	206	80	297	407	116	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			90		90	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.958					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3391	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3391	0	1770	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	87					233
Link Speed (mph)	50			50	40	
Link Distance (ft)	1082			4218	1359	
Travel Time (s)	14.8			57.5	23.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	224	87	323	442	126	233
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	323	442	126	233
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	NA	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Detector Phase	4		3	8	2	2
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.9		12.0	20.9	20.9	20.9
Total Split (s)	20.9		18.0	38.9	21.1	21.1
Total Split (%)	34.8%		30.0%	64.8%	35.2%	35.2%
Maximum Green (s)	16.0		14.0	34.0	16.2	16.2
Yellow Time (s)	3.9		3.0	3.9	3.9	3.9
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9		4.0	4.9	4.9	4.9
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	8.4		12.4	24.9	8.5	8.5
Actuated g/C Ratio	0.19		0.29	0.57	0.20	0.20
v/c Ratio	0.43		0.64	0.22	0.36	0.47
Control Delay	13.6		21.7	5.0	19.3	6.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.6		21.7	5.0	19.3	6.6
LOS	B		C	A	B	A
Approach Delay	13.6			12.1	11.0	
Approach LOS	B			B	B	
Queue Length 50th (ft)	26		67	22	28	0
Queue Length 95th (ft)	57		#178	46	68	43
Internal Link Dist (ft)	1002			4138	1279	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1329		582	2829	674	747
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.23		0.55	0.16	0.19	0.31

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 43.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 42.6% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Highland Ave. & Dinuba Ave.

ø2	ø3	ø4
21.1 s	18 s	20.9 s
	ø8	
	38.9 s	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	245	146	224	277	213	110	270	123	114	434	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	200		150	200		150	200		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.944			0.935			0.953			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3341	0	1770	3309	0	1770	3373	0	1770	3394	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3341	0	1770	3309	0	1770	3373	0	1770	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		159			232			99			71	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1039			1271			979			1941	
Travel Time (s)		14.2			17.3			13.4			26.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	266	159	243	301	232	120	293	134	124	472	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	425	0	243	533	0	120	427	0	124	648	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	13.0	20.9		16.0	23.9		12.0	21.1		12.0	21.1	
Total Split (%)	18.6%	29.9%		22.9%	34.1%		17.1%	30.1%		17.1%	30.1%	
Maximum Green (s)	9.0	16.0		12.0	19.0		8.0	16.2		8.0	16.2	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.1	10.7		11.5	17.1		7.8	14.5		7.8	14.5	
Actuated g/C Ratio	0.14	0.18		0.19	0.28		0.13	0.24		0.13	0.24	
v/c Ratio	0.45	0.59		0.71	0.48		0.52	0.48		0.54	0.74	
Control Delay	33.5	18.3		39.9	13.5		37.6	18.1		38.3	26.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	33.5	18.3		39.9	13.5		37.6	18.1		38.3	26.2	
LOS	C	B		D	B		D	B		D	C	
Approach Delay		21.4			21.8			22.4			28.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	40	50		91	54		45	56		47	108	
Queue Length 95th (ft)	90	90		#213	97		#112	104		#118	#184	
Internal Link Dist (ft)		959			1191			899			1861	
Turn Bay Length (ft)	200			200			200			200		
Base Capacity (vph)	278	1048		371	1255		247	1025		247	1011	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.41		0.65	0.42		0.49	0.42		0.50	0.64	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 60
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 62.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.

ø1	ø2	ø3	ø4
12 s	21.1 s	16 s	20.9 s
ø5	ø6	ø7	ø8
12 s	21.1 s	13 s	23.9 s

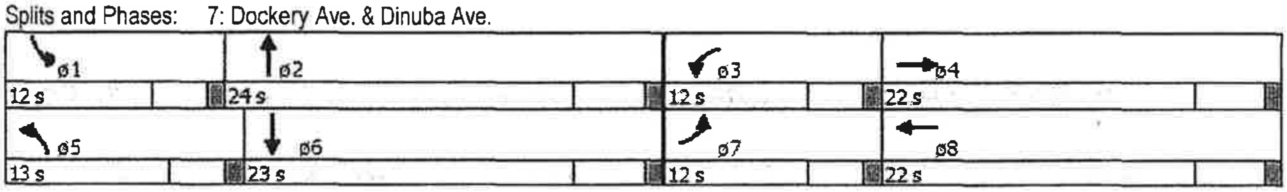
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↱		↰	↱	
Volume (vph)	4	383	74	24	496	5	80	1	43	7	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.999			0.853			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3536	0	1770	1589	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3454	0	1770	3536	0	1770	1589	0	1770	1770	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			1			47			4	
Link Speed (mph)		50			50			40			40	
Link Distance (ft)		1326			1693			756			463	
Travel Time (s)		18.1			23.1			12.9			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	416	80	26	539	5	87	1	47	8	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	496	0	26	544	0	87	48	0	8	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane											Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	12.0	22.0		12.0	22.0		13.0	24.0		12.0	23.0	
Total Split (%)	17.1%	31.4%		17.1%	31.4%		18.6%	34.3%		17.1%	32.9%	
Maximum Green (s)	8.0	17.1		8.0	17.1		9.0	19.1		8.0	18.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.3	12.3		6.9	12.5		7.9	11.3		6.5	6.5	
Actuated g/C Ratio	0.17	0.33		0.18	0.33		0.21	0.30		0.17	0.17	
v/c Ratio	0.01	0.43		0.08	0.46		0.23	0.09		0.03	0.04	
Control Delay	20.5	12.4		19.5	12.9		18.6	7.2		20.0	17.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.5	12.4		19.5	12.9		18.6	7.2		20.0	17.5	
LOS	C	B		B	B		B	A		B	B	
Approach Delay		12.4			13.2			14.5			18.5	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	1	41		5	48		16	0		2	2	
Queue Length 95th (ft)	9	108		27	118		63	24		13	15	
Internal Link Dist (ft)		1246			1613			676			383	
Turn Bay Length (ft)	200			200								
Base Capacity (vph)	426	1794		426	1842		480	934		426	967	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.01	0.28		0.06	0.30		0.18	0.05		0.02	0.01	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 37.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 39.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Dockery Ave. & Dinuba Ave.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	455	209	298	264	98	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			90		90	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.953					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3373	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3373	0	1770	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	121					482
Link Speed (mph)	50			50	40	
Link Distance (ft)	1062			4218	1359	
Travel Time (s)	14.5			57.5	23.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	495	227	324	287	107	482
Shared Lane Traffic (%)						
Lane Group Flow (vph)	722	0	324	287	107	482
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	NA	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Detector Phase	4		3	8	2	2
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.9		12.0	20.9	20.9	20.9
Total Split (s)	20.9		18.0	38.9	21.1	21.1
Total Split (%)	34.8%		30.0%	64.8%	35.2%	35.2%
Maximum Green (s)	16.0		14.0	34.0	16.2	16.2
Yellow Time (s)	3.9		3.0	3.9	3.9	3.9
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9		4.0	4.9	4.9	4.9
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	13.8		12.8	30.7	9.1	9.1
Actuated g/C Ratio	0.28		0.26	0.62	0.18	0.18
v/c Ratio	0.71		0.71	0.13	0.33	0.71
Control Delay	18.4		29.8	4.7	21.4	8.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.4		29.8	4.7	21.4	8.7
LOS	B		C	A	C	A
Approach Delay	18.4			18.0	11.0	
Approach LOS	B			B	B	
Queue Length 50th (ft)	81		87	14	29	0
Queue Length 95th (ft)	158		#227	37	64	62
Internal Link Dist (ft)	982			4138	1279	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1189		508	2470	588	848
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.61		0.64	0.12	0.18	0.57

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 49.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 54.9% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Highland Ave. & Dinuba Ave.

ø2	ø3	ø4
21.1 s	18 s	20.9 s
	ø8	
	38.9 s	

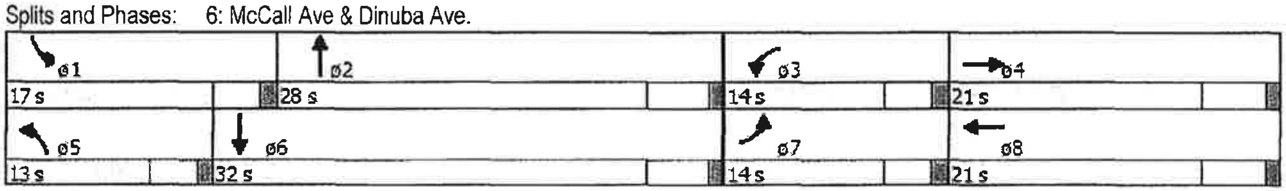
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Volume (vph)	198	367	92	189	321	209	127	578	210	259	450	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	200		150	200		150	200		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.970			0.941			0.960			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3433	0	1770	3330	0	1770	3398	0	1770	3394	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3433	0	1770	3330	0	1770	3398	0	1770	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			168			65			73	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1039			1251			1039			2551	
Travel Time (s)		14.2			17.1			14.2			34.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	215	399	100	205	349	227	138	628	228	282	489	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	499	0	205	576	0	138	856	0	282	672	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	14.0	21.0		14.0	21.0		13.0	28.0		17.0	32.0	
Total Split (%)	17.5%	26.3%		17.5%	26.3%		16.3%	35.0%		21.3%	40.0%	
Maximum Green (s)	10.0	16.1		10.0	16.1		9.0	23.1		13.0	27.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	10.0	14.5		10.0	14.5		8.6	21.7		13.0	26.1	
Actuated g/C Ratio	0.13	0.19		0.13	0.19		0.11	0.28		0.17	0.34	
v/c Ratio	0.93	0.74		0.89	0.75		0.70	0.86		0.94	0.56	
Control Delay	82.3	34.9		73.9	27.9		54.1	34.3		75.4	20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	82.3	34.9		73.9	27.9		54.1	34.3		75.4	20.8	
LOS	F	C		E	C		D	C		E	C	
Approach Delay		49.2			40.0			37.0			37.0	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	109	114		103	100		68	195		142	125	
Queue Length 95th (ft)	#241	166		#229	156		#149	#291		#292	178	
Internal Link Dist (ft)		959			1171			959			2471	
Turn Bay Length (ft)	200			200			200			200		
Base Capacity (vph)	230	746		230	830		207	1066		299	1243	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.67		0.89	0.69		0.67	0.80		0.94	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 77.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 40.2 Intersection LOS: D
Intersection Capacity Utilization 78.4% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↱		↰	↱	
Volume (vph)	9	637	118	21	448	7	82	1	28	5	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.998			0.855			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3532	0	1770	1593	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3458	0	1770	3532	0	1770	1593	0	1770	1770	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			2			30			1	
Link Speed (mph)		50			50			40			40	
Link Distance (ft)		1346			1693			756			463	
Travel Time (s)		18.4			23.1			12.9			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	692	128	23	487	8	89	1	30	5	2	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	820	0	23	495	0	89	31	0	5	3	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	12.0	24.4		12.0	24.4		12.0	21.6		12.0	21.6	
Total Split (%)	17.1%	34.9%		17.1%	34.9%		17.1%	30.9%		17.1%	30.9%	
Maximum Green (s)	8.0	19.5		8.0	19.5		8.0	16.7		8.0	16.7	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.4	16.3		6.7	16.4		7.6	10.7		6.3	6.2	
Actuated g/C Ratio	0.16	0.40		0.16	0.40		0.19	0.26		0.15	0.15	
v/c Ratio	0.04	0.59		0.08	0.35		0.27	0.07		0.02	0.01	
Control Delay	21.1	12.9		20.9	10.8		21.3	9.2		21.4	20.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.1	12.9		20.9	10.8		21.3	9.2		21.4	20.0	
LOS	C	B		C	B		C	A		C	B	
Approach Delay		13.0			11.3			18.2			20.9	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	2	78		5	43		20	0		1	1	
Queue Length 95th (ft)	15	182		25	103		66	21		10	7	
Internal Link Dist (ft)		1266			1613			676			383	
Turn Bay Length (ft)	200			200			200			200		
Base Capacity (vph)	383	1841		383	1877		383	746		383	801	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.45		0.06	0.26		0.23	0.04		0.01	0.00	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 40.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 12.9 — Intersection LOS: B
Intersection Capacity Utilization 40.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Dockery Ave. & Dinuba Ave.

ø1	ø2	ø3	ø4
12 s	21.6 s	12 s	24.4 s
ø5	ø6	ø7	ø8
12 s	21.6 s	12 s	24.4 s

Section C: Comment Letters

RESULTS OF THE PUBLIC REVIEW

The review documents were circulated to twenty-one (21) public agencies and departments concerned with the project and every other public agency and department with jurisdiction by law over resources affected by the project. During the November 25, 2015 to December 16, 2015 consultation review period five (5) letters of comments were received by the City of Selma. At the discretion of the lead agency, comments received after December 16, 2015 public comment period were considered.

These comment letters are identified as follows:

Letter	Agency	Date Received
A.	San Joaquin Valley Air Pollution Control District	January 6, 2016
B.	Table Mountain Rancheria Tribal Government	January 5, 2016
C.	Fresno County Public Works and Planning	January 4, 2016
D.	Department of Transportation district 6	December 31, 2015
E.	Consolidate Mosquito Abatement	December 21, 2015

RESPONSES

A. Responses to Letter received January 6, 2016

San Joaquin Valley Air Pollution control District
Sharla Yang, Air Quality Specialist

Comments are as follows:
San Joaquin Valley Air Pollution Control District provided comments outlining the rules and regulations to be followed along with construction mitigation measures to reduce the level of emissions generated by this project.

Response:
Mitigation measures recommended were incorporated into the project Mitigation Monitoring Program for this project. The City of Selma and the San Joaquin Valley Air Pollution Control District will ensure the Subdivider or successor in interest follows all the rules and requirements of the San Joaquin Valley Air Pollution Control District.

The City required the Applicant to complete an Air Quality Impact Assessment which is attached as Appendix A to the Final Mitigation Negative Declaration and the recommended project mitigations incorporated into the Mitigation Monitoring Program.

B. Responses to Letter received January 5, 2016

Table Mountain Rancheria Tribal Government
Bob Pennell, Cultural Resources director

Comments are as follows:
The Table Mountain Rancheria Tribal Government responded the project site is beyond their area of interest.

Response:
No response required.

C. Responses to Letter received January 4, 2006

County of Fresno Public Works
Christina Monfette, Planner

Comments are as follows:
The County of Fresno Public Works commented on the intersection of Dinuba-McCall stating the County would no longer contribute to the maintenance or improvements of this intersection.

Response:
The Dinuba and McCall Avenue intersection is a four leg intersection which at this time is controlled with four way stops. The southeast leg is currently in the city limits and the other three legs are under County jurisdiction.

With the annexation related to this project, the east half of the Dinuba/McCall intersection will be in the City's jurisdiction. The east half of McCall/Dinuba remains under Fresno County's responsibility.

The project is responsible to pay its fair share for the signalization of this intersection as well as frontage street improvements. With the proposed development in the area this intersection will signalized in the near future in coordination with Fresno County.

D. Responses to Letter received December 31, 2015

Department of Transportation District 6
Michael Navarro, Chief Planning North Branch

Comments are as follows:
The Department of Transportation District 6 provided comments on the project impacts for the interchange improvements to Dinuba Avenue/State Highway 99. The fee schedule used by CALTrans was the 2008 Traffic Impact Study. A new fair share estimate will be completed to determine today's project obligation.

Response:
The City of Selma will ensure the Subdivider or successor in interest will pay Selma's current 2016 impact fees that include costs for the Dinuba Avenue/State Highway 99.

The developer or successor in interest will enter into a Pro-Rata share Agreement with Caltrans for the cost of the project-related impact of the State highway facilities.

E. Responses to Letter received December 17, 2015

Consolidated Mosquito Abatement District
Mark Amorino, Source Reduction Specialist

Comments are as follows:
The Consolidated Mosquito Abatement District (District) recommended the project to implement the necessary regulations to mitigate project's impact.

Response:
The City of Selma will require the Subdivider or successor in interest will

incorporate CMAD standards in the construction and maintenance of the onsite ponding basin.

COMMENT LETTERS

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

January 6, 2016

Bryant Hemby
City of Selma
Community Development Department
1710 Tucker Street
Selma, CA 93662

Project: Initial Study/Draft Mitigated Negative Declaration (IS/MND) for the V-5 Mini-Storage and Commercial Center Project

District CEQA Reference No: 20150984

Dear Mr. Hemby:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Initial Study and Draft Mitigated Negative Declaration (IS/MND) for the V-5 Mini-Storage and Commercial Center Project. The proposed project consists of a 124,021 square foot mini storage facility with caretaker's home and an 83,332 square foot commercial center located on the north east corner of McCall and Dinuba Avenues in Selma, CA. The District offers the following comments:

Emissions Analysis

1) The IS/MND claims that there is a less than significant impact on air quality by relying on the project adhering to complying with District Rule 9510 Indirect Source Review and the Dust Control Plan as required by the District's Regulation VIII. Please note that complying with Regulation VIII may not be sufficient to reduce project specific emissions to less than significant level for a project of this size. Furthermore, based on the information provided in the IS/MND, the emissions resulting from construction and/or operation of the project may exceed the following thresholds of significance: 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year of particulate matter of 10 microns or less in size (PM10). Therefore, the District recommends that the IS/MND be revised to include a quantitative air quality assessment to determine the project's impact on air quality. The quantitative air quality assessment should include the following:

a) **Criteria Pollutants:** Project related criteria pollutant emissions should be identified and quantified. The discussion should include existing and post-project emissions.

i) Construction Emissions: Construction emissions are short-term emissions and should be evaluated separate from operational emissions. The District's significance thresholds are 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10).

- *Recommended Mitigation:* To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the project to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier II emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier II and above engine standards.

ii) Operational Emissions: Operational Emissions: Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. The District's significance thresholds are 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10).

- *Recommended Mitigation:* Project related impacts on air quality can be reduced through incorporation of design elements, for example, that increase energy efficiency, reduce vehicle miles traveled, and reduce construction exhaust related emissions. However, design elements and compliance with District rules and regulations may not be sufficient to reduce project related impacts on air quality to a less than significant level. Another example of a feasible mitigation measure is the mitigation of project emissions through a Voluntary Emission Reduction Agreement (VERA). The VERA is an instrument by which the project proponent provides monies to the District, which is used by the District to fund emission reduction projects that achieve the reductions required by the lead agency. District staff is available to meet with project proponents to discuss a VERA for specific projects. For more information, or questions concerning this topic, please call District Staff at (559) 230-6000.

iii) Recommended Model: Project related criteria pollutant emissions should be identified and quantified. Emissions analysis should be performed using CalEEMod (**Cal**ifornia **E**mission **E**stimator **Mod**el), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

b) **Health Impacts:** The IS/MND states that the project site is adjacent to a mobile home dwelling complex. The IS/MND did not perform a health assessment to evaluate the impacts to sensitive receptors. For the purpose of CEQA, toxic air contaminants (TACs) are pollutants identified by the State of California that may cause or contribute to an increase in risk exposure to the surrounding public. The most common source of TACs can be attributed to diesel exhaust fumes that are emitted from both stationary and mobile sources. If this is a multi-year construction project, the District recommends the project be evaluated for potential health impacts to sensitive receptors resulting from operational emissions and include construction emissions in the analysis. Health impacts may require a refined health risk assessment (HRA).

Prior to conducting an HRA, an applicant may perform a prioritization on all sources of emissions to determine if it is necessary to conduct an HRA. A prioritization is a screening tool used to identify projects that may have significant health impacts. If the project has a prioritization score of 1.0 or more, the project has the potential to exceed the District's significance threshold for health impacts of 20 in a million and an HRA should be performed.

If an HRA is to be performed, it is recommended that the project proponent contact the District to review the proposed modeling approach. The project would be considered to have a significant health risk if the HRA demonstrates that project related health impacts would exceed the District's significance threshold of 20 in a million.

More information on TACs, prioritizations and HRAs can be obtained by:

- E-mailing inquiries to: hramodeler@valleyair.org; or
- Visiting the District's website at:
  http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

2) For your future reference, the District's *Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) Revised March 19, 2015* is available and should be used as guidance for the review of proposed projects under the California Environmental Quality Act (CEQA) within the boundaries of the District. The current version of the *GAMAQI* is available online at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf.

3) The following comments are specific to the air quality (AQ) discussion in the IS/MND:

   a) The AQ discussion states that, "all fixed or motorized equipment will have to obtain a permit from the SJVAPCD prior to beginning operation." The District would like to clarify that although some stationary sources may be subject to District permit requirements, there may be some sources that are not under the jurisdiction of the District (e.g. mobile sources). To identify District rules or

District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees be made a condition of project approval. Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

The District recommends that a copy of the District's comments be provided to the project proponent. If you have any questions or require further information, please call Sharla Yang at (559) 230-5934.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Sharla Yang

For Brian Clements
Program Manager

AM: sy

TABLE MOUNTAIN RANCHERIA
TRIBAL GOVERNMENT OFFICE

January 5, 2016

Attn: Bryant Hemby , Planner
City of Selma
Community Development Department
1710 Tucker Street
Selma, Ca. 93662

RE: The V-5 Mini Storage and Commercial Center Project in the City of Selma.

Dear Bryant Hemby,

This is in response to your letter dated, November 25, 2015, regarding, The V-5 Mini Storage and Commercial Center Project in the City of Selma.

We appreciate receiving notice; however, this project site is beyond our area of interest.

Sincerely,

Bob Pennell
Cultural Resources Director

23736
Sky Harbour Road
Post Office
Box 410
Friant
California
93626
(559) 822-2587
Fax
(559) 822-2693

County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ALAN WEAVER, DIRECTOR

January 4, 2016

1/6/2016

Community Development Department
Attn: Bryant Hemby, Planner
City of Selma
1710 Tucker Street
Selma, CA 93662

Dear Mr. Hemby:

SUBJECT: Notice of Availability/Completion of an Initial Study and Draft Mitigated Negative Declaration for the V-5 Mini-Storage and Commercial Center Project.

The County appreciates the opportunity to review and comment on the completion of the Initial Study and Draft Mitigated Negative Declaration for the V-5 Mini-Storage and Commercial Center Project. Based on the County's review of the project the following comments are offered for your consideration:

The following comments are specific to zoning:

No concerns exist if the subject parcel is annexed to the City of Selma prior to submittal of any land use and mapping applications. If the County of Fresno is the lead agency on the land use and mapping applications, the Zoning Section will provide comments on each application. The subject parcel is currently zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District and is classified as a legal non-conforming lot.

The following comments are specific to traffic:

The County of Fresno of Fresno will not be contributing to future signalization of the Dinuba-McCale intersection. If the project's impacts require pro-rata shares towards the improvement of any of the intersections studied, the County will not be contributing towards their improvement.

The County of Fresno appreciates the opportunity to provide comments. Should you have any questions regarding these comments, please call me at (559) 600-4245.

Sincerely,

Christina Monfette, Planner
Development Services Division

c: Frank Daniele, Supervising Engineer, Road Maintenance and Operations
Tawanda Mtunga, Zoning Planner, Development Services
Chris Motta, Principal Planner, Development Services
Eric VonBerg, Senior Planner, Development Services

CMM
G:\4360Devs&Pln\EnvPlan\OAR\City of Selma\2015-0005 Commercial\NOA\1Jan_14 Response Letter.docx

DEPARTMENT OF TRANSPORTATION
DISTRICT 6
1352 WEST OLIVE AVENUE
P.O. BOX 12616
FRESNO, CA 93778-2616
PHONE (559) 445-5868
FAX (559) 445-5875
TTY 711
www.dot.ca.gov

Serious drought.
Help save water!

December 31, 2015

06-FRE-99-06.236
V-5 Dinuba Mini Storage
Commercial Project
SCH 2015121019

Mr. Bryant Hemby
Planning Division
City of Selma
1710 Tucker Street
Selma, California 93662

Dear Mr. Hemby:

We have completed our review of the proposed mini storage and commercial center. The project will be constructed in two phases. The first phase is to construct a 124,021 square foot mini storage facility with caretaker's home and associated parking. This phase will be constructed in phases as market demands. The second phase will be to develop the remaining parcels of approximately 83,332 square feet into a commercial center. This commercial center will mirror the uses in the shopping center to the south across Dinuba Avenue. Access to the commercial center will be from both from McCall and Dinuba Avenues. Phase II will be constructed in one phase. Caltrans has the following comments:

We concur with the City's mitigation measure MM TRF-1 that the developer will be required to pay traffic impact mitigation fees as outlined in the traffic impact mitigation section of the City's Impact Fee Ordinance.

It is our understanding that this fee was last revised and updated on February 1, 2008. The SR 99/Dinuba Interchange project is included in the Master Project List, under ST-49, *Interchange Improvements – Dinuba Avenue/State Highway 99.* The projected cost was set at $4,500,000, substantially lower than current projected estimates.

Caltrans suggest revisiting an updating the Master Facilities Plan/Master Project List to update all facilities including the SR 99/Dinuba Avenue interchange (ST-49) or at minimum, update the cost estimate specifically the SR 99/Dinuba Avenue interchange.

If you have any further questions, please contact David Padilla, Associate Transportation Planner, Transportation Planning at (559) 444-2493.

Sincerely,

MICHAEL NAVARRO, Chief
Planning North Branch

Consolidated Mosquito Abatement District

2425 FLORAL AVENUE
MAIL: P.O. BOX 278
SELMA, CALIFORNIA 93662
(559) 896-1082
(559) 888-2619
FAX (559) 896-6425

12/21/2015 — JB

December 17, 2015

Bryant Hemby
City of Selma
Community Development Department
1710 Tucker Street
Selma, CA 93662

Re: The V-5 MINI STORAGE AND COMMERCIAL CENTER PROJECT, (APN: 358-021-17)

Dear Mr. Hemby:

The Consolidated Mosquito Abatement District (District) is a local government agency charged by the California Health and Safety Code (Code) with the responsibility to protect the public, in our jurisdiction, from nuisance and disease caused by mosquitoes. Code section 2041 (1) encourages participation in the review process by authorizing the District to make recommendations regarding local, state, or federal land use planning and environmental quality processes. The above referenced project is in the District's jurisdiction, and we are concerned with the potential for the proposed onsite ponding basin to promote mosquito production. Public Health issues, such as preventing habitat development for disease carrying mosquitoes, need to be addressed when stormwater detention basins are designed and constructed.

Stormwater detention basins provide mosquitoes with substantial breeding habitat during the summer when low in-flows of surface water runoff (nuisance water) result in the formation of a large shallow pond. Shallow water conditions encourage pond-edge and emergent weed growth such as cattails and tules that both enhance mosquito breeding habitat and complicate basin maintenance efforts. To help illustrate this point, I have included a photo of a basin that exemplifies the negative effects of shallow water in a stormwater basin. Proper design and maintenance of stormwater basins is essential to minimize the public's exposure to mosquitoes and mosquito-borne diseases such as West Nile virus.

The District strongly recommends that the City of Selma require the Applicant to implement the following mosquito control mitigation measures as a condition of approval for this Project:

1. The basin should be constructed and/or managed so that water depths are maintained to a minimum of four feet in order to preclude invasive emergent vegetation such as cattails.

2. If water levels are subject to fluctuation during the summer mosquito breeding season, the basin should be constructed with a low flow/sump area (see attached diagram). To prevent the growth of emergent vegetation the sump area should be excavated to a minimum depth of four feet below the pond floor. The engineer responsible for the grading and drainage plan for this project should be able to approximate the size of the sump area required to accommodate the low in-flows of summer-time nuisance water that are associated with this type of development. The basin floor should also be graded or sloped so as the standing water recedes it will drain into the sump area.

3. Access must be provided. A free and unencumbered access roadway around the entire basin perimeter for pond maintenance and mosquito abatement activities is essential.

4. Basin edges should be well managed and maintained free of excess vegetation that promotes mosquito breeding and hinders District control efforts.

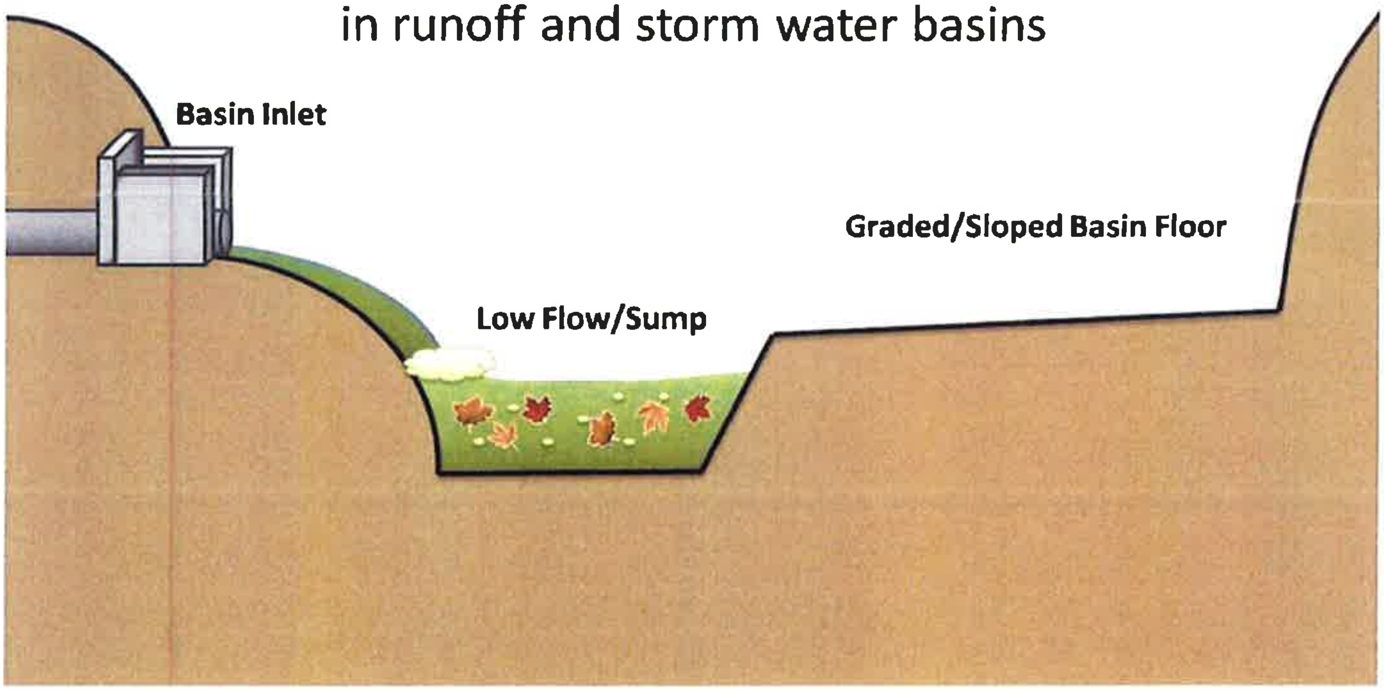
District Manager Steve Mulligan and I are available to meet with Planning Department staff, if needed, to discuss the District's mosquito control mitigation measures for this Project. Please call me at (559) 896-1085 if you have any questions.

Sincerely,

Mark Amorino

Mark Amorino
Operations Director
Consolidated Mosquito Abatement District

Design criteria to minimize mosquito breeding habitat in runoff and storm water basins



STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

RECEIVED 1/11/2016 BD

January 6, 2016

Bryant Hemby
City of Selma
1710 Tucker Street
Selma, CA 93662

Subject: V-5 Dinuba Mini Storage Commercial Project
SCH#: 2015121019

Dear Bryant Hemby:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on January 5, 2016, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan

Scott Morgan
Director, State Clearinghouse

Document Details Report
State Clearinghouse Data Base

SCH#	**2015121019**
Project Title	V-5 Dinuba Mini Storage Commercial Project
Lead Agency	Selma, City of

Type **MND** Mitigated Negative Declaration

Description The project will be developed in phases. The first phase is to construct a 124,021 sq. ft. Mini Storage facility with caretaker's home, parking and design features including enhanced landscaped decorative street light and a decorative masonry block with the entrance to the storage facility will be on Dinuba Avenue. This phase will be built in phases as market demands.
The second phase will be to develop the remaining parcels approx. 83,332 sq. ft. into a commercial center. This commercial center will mirror the uses in the shopping center to the south across Dinuba Avenue. Access to the commercial center will be from both from McCall and Dinuba Avenues. Phase II will be constructed in one phase.

Lead Agency Contact

Name	Bryant Hemby		
Agency	City of Selma		
Phone	559-891-2209	**Fax**	
email			
Address	1710 Tucker Street		
City	Selma	**State** CA	**Zip** 93662

Project Location

County	Fresno						
City	Selma						
Region							
Lat / Long							
Cross Streets	McCall and Dinuba Avenues						
Parcel No.	358-021-17						
Township	15S	**Range**	22E	**Section**	MDBM	**Base**	

Proximity to:

Highways	99
Airports	
Railways	UPRR
Waterways	
Schools	Selma Unified
Land Use	vineyards, AE20, Agriculture Exclusive 20 acre

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Economics/Jobs; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 4; Department of Parks and Recreation; Department of Water Resources; Resources, Recycling and Recovery; California Highway Patrol; Caltrans, District 6; Air Resources Board; State Water Resources Control Board, Divison of Financial Assistance; Regional Water Quality Control Bd., Region 5 (Fresno); Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission

Date Received 12/07/2015 **Start of Review** 12/07/2015 **End of Review** 01/05/2016

Note: Blanks in data fields result from insufficient information provided by lead agency.

V-5 Dinuba Mini Storage Commercial Project

SCH Number: 2015121019

Document Type: MND - Mitigated Negative Declaration

Project Lead Agency: Selma, City of

Project Description

The project will be developed in phases. The first phase is to construct a 124,021 sq. ft. Mini Storage facility with caretaker's home, parking and design features including enhanced landscaped decorative street light and a decorative masonry block with the entrance to the storage facility will be on Dinuba Avenue. This phase will be built in phases as market demands. The second phase will be to develop the remaining parcels approx. 83,332 sq. ft. into a commercial center. This commercial center will mirror the uses in the shopping center to the south across Dinuba Avenue. Access to the commercial center will be from both from McCall and Dinuba Avenues. Phase II will be constructed in one phase.

Contact Information

Primary Contact:
Bryant Hemby
City of Selma
559-891-2209
1710 Tucker Street
Selma, CA 93662

Project Location

County: Fresno
City: Selma
Region:
Cross Streets: McCall and Dinuba Avenues
Latitude/Longitude:
Parcel No: 358-021-17
Township: 15S
Range: 22E
Section: MDBM
Base:
Other Location Info:

Proximity To

Highways: 99
Airports:
Railways: UPRR
Waterways:
Schools: Selma Unified
Land Use: vineyards, AE20, Agriculture Exclusive 20 acre

Development Type

Commercial

Local Action

General Plan Amendment, Annexation, Rezone, Use Permit, Subdivision, Site Plan

---

Project Issues

Aesthetic/Visual, Agricultural Land, Air Quality, Archaeologic-Historic, Biological Resources, Economics/Jobs, Geologic/Seismic, Minerals, Noise, Population/Housing Balance, Public Services, Recreation/Parks, Schools/Universities, Sewer Capacity, Soil Erosion/Compaction/Grading, Solid Waste, Toxic/Hazardous, Traffic/Circulation, Water Quality, Water Supply, Landuse, Cumulative Effects

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Reviewing Agencies (Agencies in **Bold Type** submitted comment letters to the State Clearinghouse)