

Appendix E

Traffic Study

Memorandum

Date: August 4, 2025

To: Paul Haifley and Lauren Gradia, Marin Transit
Alex Lee and Shawn O’Keefe, Mark Thomas

From: Bob Grandy, Alex Murray, Drake Hayes, and John Holmes, Fehr & Peers

Subject: Traffic and CEQA and NEPA Assessment – Marin Transit Facility at 1075 Francisco Boulevard East, San Rafael

SF23-1344.03

Introduction

This memorandum provides a California Environmental Quality Act (CEQA) and a National Environmental Policy Act (NEPA) assessment of the transportation conditions at and adjacent to a proposed Marin Transit bus storage, maintenance, and fueling/charging facility at 1075 Francisco Boulevard East (“the Project”) in the City of San Rafael. The 3.5-acre site, which is currently vacant and undeveloped, was previously the proposed site of a hotel, but this project did not move forward to construction. This new project proposes adding a bus facility that would accommodate five bus maintenance bays, up to 50 bus parking stalls, and up to 60 automobile parking stalls for employees and visitors. All these buses are already part of Marin Transit’s fleet and are being relocated to the project site from other nearby facilities.

The scope of this traffic study is based on the City of San Rafael *Transportation Analysis Guidelines* (TA Guidelines) as well as CEQA and NEPA guidance, and the traffic analysis documented in this memorandum includes the Project’s net trip generation estimates, a review of the Project’s effects on the local transportation system, and a discussion of the Project’s NEPA and CEQA environmental impacts. Based on a review of the project’s net trip generation and consultation with City of San Rafael Public Works staff¹ this project falls within Tier 2 of the TA Guidelines (as it would generate between than 110 and 1,000 daily trips). Tier 2 projects are required to conduct a Local Traffic Analysis (LTA) that includes an analysis of off-site intersection operations. The LTA

¹ Telephone correspondence with City of San Rafael Staff, February 20, 2025.



also must include a review of the project's site plan and an assessment of the project's interaction with automobile, bicycle, pedestrian, and transit conditions

This transportation assessment, including its discussion of the Project's CEQA impact and NEPA effects, is based on a variety of data and project information including the Marin Transit Request for Task Order Proposal; bus and employee trip data from the current bus facility provided by Marin Transit staff; and the site plan and project description, which was provided by Marin Transit, Mark Thomas, and Circlepoint on July 25, 2025.

Summary of Transportation Assessment

The proposed bus storage, maintenance, and fueling/charging facility would generate most trips during off-peak periods as bus maintenance employees and drivers would arrive and buses would depart before the AM peak period, and buses would return and drivers/employees would leave their shifts at the facility mostly after the PM peak period. This is consistent with the schedules and trip patterns of existing nearby bus storage, maintenance, and refueling facilities that would be consolidated at the project location. Most of the existing facilities are located in close proximity to the project site and trips to and from those facilities are already traversing the study intersections. As such, a small number of net new bus and passenger vehicle trips would travel through study intersections during the AM and PM peak hour.

Based on the transportation assessment described in this memo, the Project would not result in NEPA effects or CEQA impacts for VMT, bicycle, pedestrian, or transit circulation, or hazards and emergency access. The Project presents no site circulation issues, and the addition of proposed Project trips would not result in adverse effects on traffic operations. The Project does not include features that would disrupt nearby roadway facilities nor generate a substantial number of vehicle trips that would worsen or create new traffic issues.

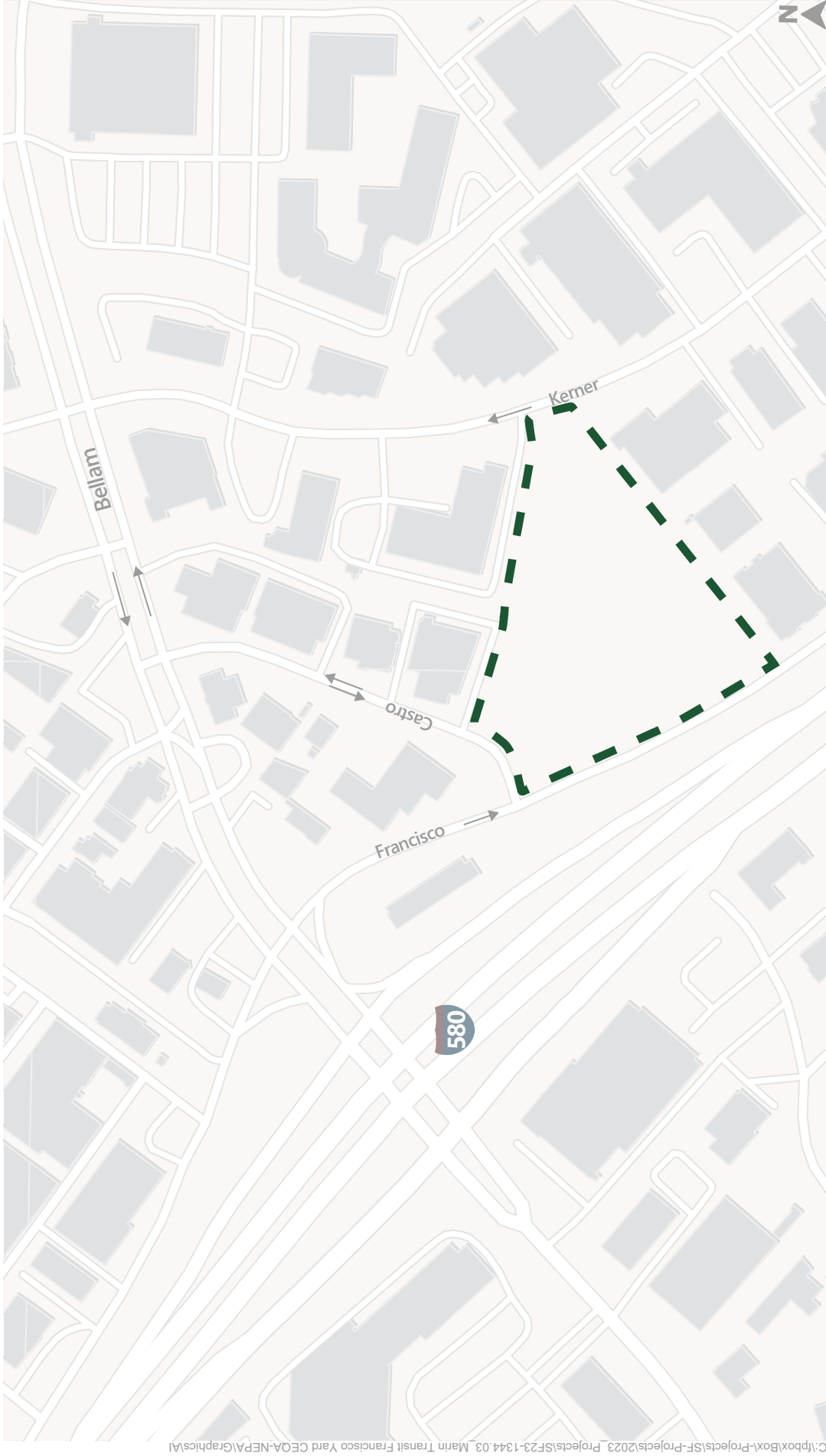


Project Description

The Project includes the redevelopment of a 3.5-acre site located at 1075 Francisco Boulevard East in the City of San Rafael. The Project would redevelop the site into a new bus parking and maintenance facility for Marin Transit. The site is currently vacant and undeveloped. As shown in **Figure 1**, the Project site is located on the north side of Francisco Boulevard East, between Irene Street and Castro Avenue. The site is directly across Francisco Boulevard East from I-580 to the west, and it is located to the north of the Richmond-San Rafael Bridge. The Project site is zoned for general commercial uses and is surrounded by retail, light industrial, and office developments to the north, east, and south.

The project would add an approximately 18,600 square-foot, single-story building for operations, up to 50 bus parking stalls, bus fueling and charging facilities, five bus maintenance bays, a bus washing station, and up to 60 employee and visitor parking spaces. **Figure 2** shows the project's site plan, which has four driveway locations. Three of these driveways will be located on Francisco Boulevard East and the fourth will be on Castro Avenue. Three of these driveways, including the driveway on Castro Avenue, are designated for bus traffic.

The Project is part of Marin Transit's efforts to electrify its bus fleet and the agency is planning to convert to a fully zero emission fleet by 2040 in accordance with California's zero emission bus fleet regulations. The bus yard will be designed to incorporate electric vehicle charging infrastructure, in addition to refueling facilities for non-zero emission buses which will be used during the transition period to a zero-emission fleet.



Project Site

Lane Direction

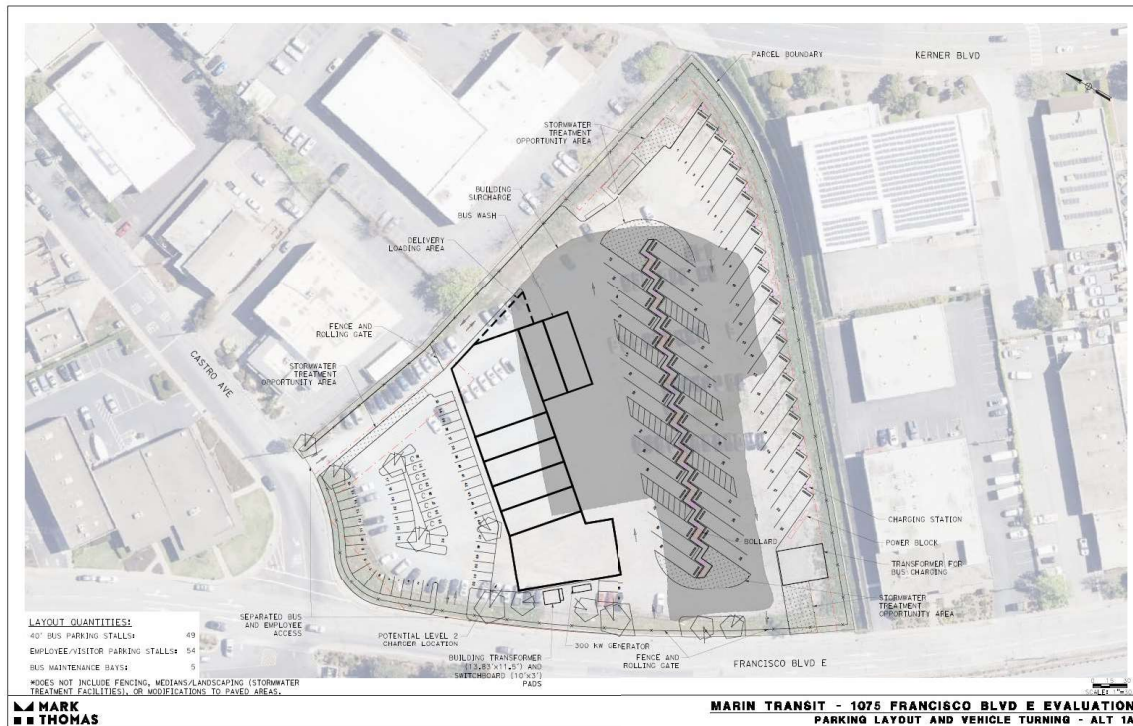
Figure 1

Project Site





Figure 2: Site Plan



Source: Mark Thomas

Project Bus and Employee Vehicle Circulation

Most buses will enter the site from Francisco Boulevard East, which is a one-way street, although buses can also use the driveway on Castro Avenue as an alternate entrance. As shown in **Figure 3**, most buses leaving the proposed transit yard will exit via Francisco Boulevard East and make a loop on Irene Street and Kerner Boulevard to access Highway 101 via Bellam Boulevard. Most buses will complete this loop, which is necessary due to the layout of one-way streets in the area. A small number of buses that serve the Canal Neighborhood will use Castro Avenue to access Bellam Boulevard. These buses will only make a right turn at the intersection of Castro Avenue and Bellam Boulevard, and no buses will make a left turn onto Bellam Boulevard at this intersection. This intersection is unsignalized, and only Castro Avenue is stop controlled, which would make left turns difficult for buses. Employee vehicles will enter the site from Francisco Boulevard East. Employees leaving the site will either continue southeast on Francisco Boulevard East to access I-580/Sir Francis Drake or make a loop on Irene Street and Kerner Boulevard to access Bellam Boulevard.

C:\pbox\Box1-Projects\SF-Projects\2023_P\Projects\SF23-1344.03_Marin Transit Francisco Yard CEQA-NEPA\Graphics\A



- | | | | |
|---|--------------------------|---|----------------|
|  | Bus Entrance Route |  | Project Site |
|  | Primary Bus Exit Route |  | Lane Direction |
|  | Secondary Bus Exit Route | | |

Figure 3





Existing Transportation Conditions

The following section describes the existing transportation conditions in the area surrounding the Project site. This includes a description of nearby roadways, pedestrian and bicycle facilities, and local transit services.

Existing Roadway Network

Francisco Boulevard East has an east-west orientation in the vicinity of the Project site. The roadway allows one-way traffic in the vicinity of the project site and includes two eastbound vehicle lanes. Near the Project site, Francisco Boulevard East does not include bicycle infrastructure and there is parallel parking along the frontage of the project site on the north side of the street. Francisco Boulevard East has a sidewalk on the north side of the street that runs the entire length of the roadway in the vicinity of the project site. Francisco Boulevard East is approximately 30 feet wide with a seven-foot-wide sidewalk near the project.

Kerner Boulevard has an east-west orientation in the vicinity of the Project site. The roadway allows one-way traffic in the vicinity of the project site and includes two westbound vehicle lanes. Near the Project site, there is parallel parking on the south side of the street and angled parking on the north side of the street. There is no bicycle infrastructure on the roadway, but there are sidewalks on both sides. The roadway is approximately 55 feet wide with six-foot-wide sidewalks.

Irene Street has a north-south orientation in the vicinity of the Project site, with two vehicle lanes in the northbound direction and one in the southbound direction. Near the project site, there are no parking or bicycle facilities on the roadway, but there are sidewalks on both sides. The roadway is approximately 40 feet wide with five-foot-wide sidewalks.

Castro Avenue has a north-south orientation in the vicinity of the Project site, with one vehicle lane in each direction. There is parallel parking on both sides of the street. Castro Avenue has no bicycle infrastructure on the roadway, but there are sidewalks on both sides of the street. The roadway is approximately 30 feet wide with six-foot-wide sidewalks.

Bellam Boulevard has a north-south orientation in the vicinity of the Project site. West of Kerner Boulevard, Bellam Boulevard has two travel lanes in the northbound direction and three travel lanes in the southbound direction. East of Kerner Boulevard, Bellam Boulevard has two travel lanes in each direction and a Class II bike lane in the northbound direction. There are sidewalks on both sides. Bellam Boulevard is approximately 80 feet wide with approximately five-foot-wide sidewalks.



I-580 has an east-west orientation and is the Project's primary regional access route, which can be reached from the Project site via the on- and off-ramps on Sir Francis Drake Boulevard and the on- and off-ramps at Bellam Boulevard. I-580 provides regional access to Marin County and the rest of the Bay Area via the Richmond-San Rafael Bridge and US Route 101 (US-101).

Existing Pedestrian Facilities

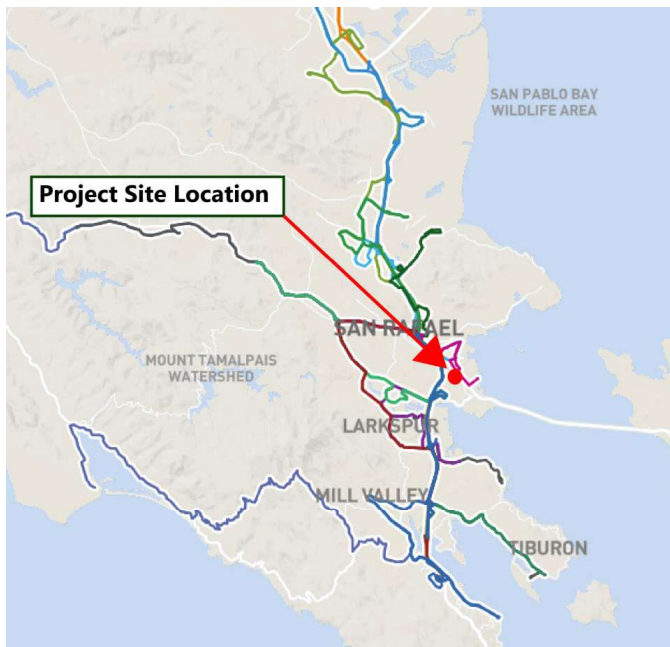
Most of the streets in the vicinity of the Project, including the sections of Francisco Boulevard East and Castro Avenue that front the Project site, have sidewalks. There is a pedestrian crossing at the northwest corner of the Project site, across Castro Avenue. Francisco Boulevard East does not have any pedestrian crossings in the vicinity of the project site because I-580 is directly across from the Project site and there are no other land uses between the project site and the freeway. There is no direct pedestrian access to Kerner Boulevard, on the northeast corner of the project site, because of a stormwater drain.



Existing Transit Services

There are currently 13 regular service Marin Transit routes and four supplemental school service routes that operate in the vicinity of the Project. As shown in **Figure 4**, the project site is located at a central location of these bus lines and its location provides broader regional access via I-580, US-101, and the Richmond-San Rafael Bridge.

Figure 4: Marin Transit Bus Routes



Source: Marin Transit

The closest bus stop to the Project site is located on Bellam Boulevard, approximately $\frac{1}{8}$ of a mile to the northwest of the Project, at 108 Bellam Boulevard. Golden Gate Transit's Route 130 provides limited southbound service toward San Francisco from this stop. Additionally, Marin Transit has two routes that serve this stop. Route 35 provides northbound service toward Northgate Mall via Downtown San Rafael and Route 36 provides southbound service toward Marin City via Downtown San Rafael. Both Marin Transit routes operate frequent schedules daily and connect to other local and regional transit routes at the Downtown San Rafael Transit Center.



Data Collection

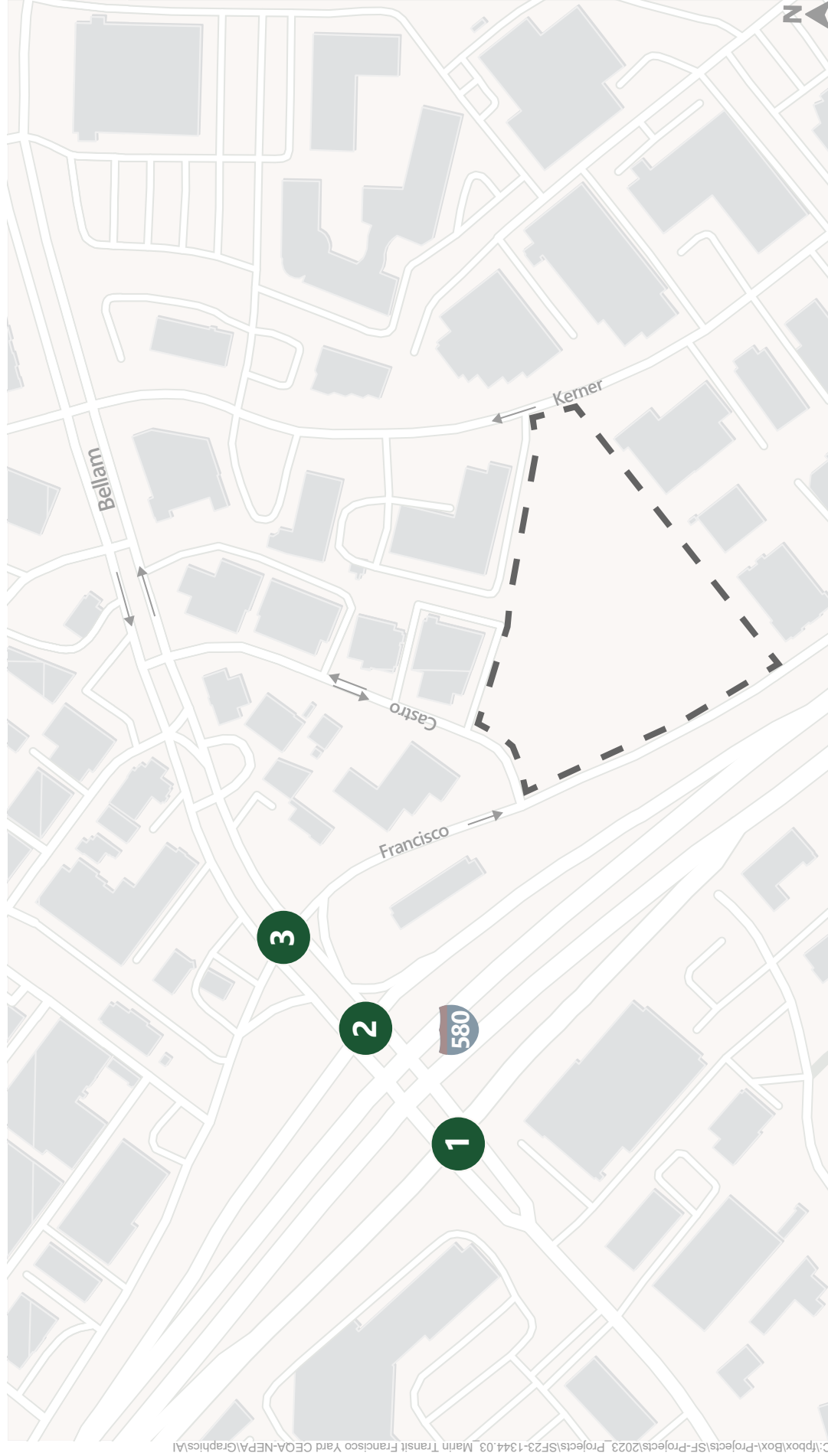
Existing Traffic Volumes

Intersection Turning Movement Counts

Fehr & Peers collected morning (7-9 AM) and evening (4-6 PM) peak period intersection turning movement counts at six intersections in the vicinity of the project site. Level of service (LOS) analysis is conducted at the following three study intersections, selected based on their usage by the project's bus and employee trips:

1. US-101 Off-Ramp / I-580 Eastbound Ramps & Bellam Boulevard
2. US-101 Northbound / I-580 Westbound Ramps & Bellam Boulevard
3. Francisco Boulevard East & Bellam Boulevard

All counts were collected on Thursday January 16th, 2025 and are available in **Appendix A**, and **Figure 5** shows where the study intersections are located in relation to the project site.



- Project Site
- Study Intersection
- Lane Direction

Figure 5

Study Intersections



Tube Counts

In addition to these intersections, we also collected a 48-hour tube count on Francisco Boulevard East, about 100 ft to the south of Castro Avenue. This tube count was collected on Wednesday January 15th and Thursday January 16th, 2025 and the volumes are included in **Table 1**.

Table 1: Current Weekday Traffic Volumes at Project Site on Francisco Boulevard East

Date	Direction	5AM-5PM	Daily Total
January 15, 2025	Southbound	6,990	8,562
January 16, 2025		6,540	8,098
Average		6,765	8,330

Source: Idax



Project Conditions

Planned Bus Operational Information

Marin Transit provided operational data for the buses and employees that will be relocated to the proposed project. Fehr & Peers and Marin Transit used this data to estimate the project's daily and peak period bus and employee trips. These trips, which are based on the agency's January 2025 weekday schedule, are shown in **Table 4**.

Project Trip Generation and Facility Usage

Fehr & Peers used Marin Transit's bus operational information data to estimate the vehicle trips associated with the Proposed Project. The Proposed Project would generate most trips during off-peak periods as bus maintenance employees and drivers would arrive and buses would depart before the AM peak period. Buses would return and drivers/employees would depart mostly after the PM peak period. This is consistent with the schedules and trip patterns of existing nearby bus storage, maintenance, and refueling facilities that would be consolidated at the project location. The trip generation estimates, which are included in **Table 2**, show that the Proposed Project would result in an increase of 176 vehicle trips per day, which includes 64 daily bus trips and 112 daily employee car trips. The project will generate five new vehicle trips during the AM peak hour and 14 new vehicle trips during the PM peak hour.

The facility would be used by three primary groups of users with varied hours of use. The highest number of users would be transit drivers, and they would typically use the facility over a 23-hour period from 4:00 a.m. to 3:00 a.m. The second largest group would be maintenance workers (two shifts) who would typically occupy the facility from 5:00 a.m. until 9:00 p.m. and would return for service in the evening (4 p.m. to 10 p.m.). Administrative staff, the smallest group of users, would typically use the facility from 7:00 a.m. until 5:00 p.m. The mid- to late-morning hours (8:00 a.m. – 12:00 p.m.) and late-night hours (after 11:00 p.m.) will experience the lowest volume of project trips.

A typical day would see two periods of increased activity around the times when drivers would report and pull out for service and the times when drivers would pull in and exit the facility. Drivers would enter the facility and park their personal car in the employee lot before reporting for work. After entering the building and checking-in, drivers would be assigned a transit vehicle in the yard, conduct their inspection, and depart the yard to start service. In total, up to 50 buses will be stored in the yard for driver assignment. Additional trips to/from the facility made by users outside these primary user groups would occur during the administrative hours and consist of



visitor traffic, deliveries to the facility (primarily for maintenance parts), and fuel trucks. These daily volumes are expected to be very minimal.

Table 2: Bus Yard Trip Generation

Trip Type	Daily			AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
<i>Bus Pull Ins and Pull Outs</i>	32	32	64	0	4	4	6	0	6
<i>Employee Trips</i>	56	56	112	1	0	1	2	7	8
<i>Proposed Project Trip Total</i>	88	88	176	1	4	5	8	7	14

Source: Fehr & Peers, Marin Transit

Credit for Relocated Bus Traffic

The project will relocate existing Marin Transit buses from other facilities to the proposed Francisco Boulevard East yard. This includes buses relocated from the Central Marin Sanitation Agency facility on Andersen Drive, which is less than 1.5 miles from the proposed project. These buses currently pass through the project's study intersections to access US 101 and the Canal Neighborhood. As shown in **Table 3**, there are three of these bus trips during the AM peak hour and zero bus trips during the PM peak hour.

Table 3: Project Peak Hour Trip Generation with Relocated Bus Trips

Trip Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<i>Proposed Project Bus Traffic</i>						
<i>Bus Pull Ins and Pull Outs</i>	0	4	4	6	0	6
<i>Employee Trips (automobiles)</i>	1	0	1	2	7	8
<i>Proposed Project Trip Total</i>	1	4	5	8	7	14
<i>Relocated Bus Traffic Passing Through Study Area</i>						
<i>Relocated Bus Traffic</i>	0	-3	-3	0	0	0
<i>Net Trip Generation</i>						
<i>Bus Trips</i>	1	1	1	6	0	6
<i>Employee Automobile Trips</i>	1	0	1	2	7	8
<i>Total Net Trip Generation</i>	2	1	2	8	7	14

Source: Fehr & Peers, Marin Transit.



Table 4: Planned Transit Yard Bus and Employee Trips – Weekday Operations

Time (Hour Start)	Entering Employee Vehicles	Exiting Employee Vehicles	Entering Transit Vehicles	Exiting Transit Vehicles	Total Vehicles
1:00 AM	0	0	0	0	0
2:00 AM	0	1	1	0	2
3:00 AM	0	0	0	0	0
4:00 AM	2	0	0	1	3
5:00 AM	14	0	0	9	23
6:00 AM	12	0	0	14	26
7:00 AM	1	0	0	4	5
8:00 AM	1	0	0	0	1
9:00 AM	1	4	0	1	6
10:00 AM	0	0	0	1	1
11:00 AM	5	0	0	0	5
12:00 PM	4	6	0	0	10
1:00 PM	8	4	1	2	15
2:00 PM	5	3	1	0	9
3:00 PM	0	6	0	0	6
4:00 PM	0	5	6	0	11
5:00 PM	1	2	2	0	5
6:00 PM	2	7	6	0	15
7:00 PM	0	3	1	0	4
8:00 PM	0	3	4	0	7
9:00 PM	0	3	4	0	7
10:00 PM	0	5	5	0	10
11:00 PM	0	4	1	0	5
12:00 AM	0	0	0	0	0

Source: Marin Transit



Intersection Level of Service Analysis

Fehr & Peers conducted an intersection level of service (LOS) assessment for the project's three study intersections using the Highway Capacity Manual (HCM) 2000 Edition methodology and the Synchro software package. We used the HCM 2000 edition, rather than the more recent 6th edition, as the 2000 edition supports clustered signalized intersections. All three of the study intersections have clustered signal timing.

City of San Rafael LOS Standards

These LOS calculations were conducted in accordance with the City of San Rafael TA Guidelines. Projects are considered by the City to cause deficient mobility conditions if project traffic causes an intersection to fall below the LOS thresholds listed in the City's General Plan. City of San Rafael General Plan Policy M-2.5 provides the following relevant LOS standards:²

- Intersection standards: LOS "D" shall be the citywide standard for intersections, except as noted below
 - Signalized intersections at Highway 101 and I-580 on-ramps and off-ramps are exempt because these locations are affected by regional traffic and are not significantly impacted by local measures
 - LOS "E" shall be acceptable at the following intersections:
 - Bellam Boulevard and Francisco Boulevard East (AM Peak Only)
 - LOS "F" shall be acceptable at the following intersections:
 - Bellam Boulevard and Francisco Boulevard East (PM Peak Only)

As shown in **Figure 5**, the project's three study intersections include the US 101 and I-580 ramps on Bellam Boulevard, which are exempt from the City's LOS standard, and the intersection of Bellam Boulevard and Francisco Boulevard East, which as an LOS standard of "E" during the AM peak hour and an LOS standard of "F" during the PM peak hour. LOS results for the US 101 and I-580 ramps on Bellam Boulevard are provided in this memorandum for reference purposes.

The City's TA Guidelines state that intersections that are already failing the City's LOS standards are considered to have deficient conditions if the project causes an increase in delay of five seconds or more at the intersection.³

² *San Rafael General Plan 2040, Mobility Element*. City of San Rafael. August 2, 2021. Pg 10-20.
<https://storage.googleapis.com/proudcity/sanrafaelca/uploads/2021/09/FullDocument-Adopted080221.pdf>

³ *City of San Rafael Transportation Analysis Guidelines*. City of San Rafael. February 2022. Pg 36.
https://storage.googleapis.com/proudcity/sanrafaelca/2024/08/SanRafael_TA_Guidelines_Feb-2022.pdf



Existing No Project & Existing Plus Project Conditions

Table 5 presents the existing and existing plus project LOS and intersection delay for each study intersection. The project's small number of net new trips does not increase delay at the study intersections and LOS remains unchanged from Existing to Existing Plus Project conditions. Detailed LOS results are provided in **Appendix B** of this memorandum.

Table 5: Existing and Existing Plus Project Level of Service Analysis

Intersection		Control Type	LOS Standard	AM Peak Hour				PM Peak Hour			
				Existing		Existing Plus Project		Existing		Existing Plus Project	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	US-101 Off-Ramp / I-580 Eastbound Ramps & Bellam Blvd	Signal	N/A	29	C	29	C	55	E	55	E
2	US-101 Northbound / I-580 Westbound Ramps & Bellam Blvd		N/A	50	D	50	D	50	D	50	D
3	Francisco Blvd East & Bellam Blvd		E (AM) F (PM)	22	C	22	C	22	C	22	C

Source: Fehr & Peers



Cumulative No Project & Cumulative Plus Project Conditions

Fehr & Peers used traffic volumes from the City's 2040 General Plan to analyze cumulative and cumulative plus project traffic conditions. These results are presented in **Table 6** and detailed LOS analysis results are provided in **Appendix B**. Like Existing conditions, the addition of the project's small number of net new peak hour trips does not increase delay at study intersections and the LOS remains unchanged from Cumulative to Cumulative Plus Project conditions.

Table 6: Cumulative and Cumulative Plus Project Level of Service Analysis

Intersection	Control Type	LOS Standard	AM Peak Hour				PM Peak Hour			
			Cumulative		Cumulative Plus Project		Cumulative		Cumulative Plus Project	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1 US-101 Off-Ramp / I-580 Eastbound Ramps & Bellam Blvd	Signal	N/A	30	C	30	C	46	D	46	D
2 US-101 Northbound / I-580 Westbound Ramps & Bellam Blvd		N/A	40	D	40	D	74	E	74	E
3 Francisco Blvd East & Bellam Blvd		E (AM) F (PM)	28	C	28	C	26	C	26	C

Source: Fehr & Peers



CEQA and NEPA Analysis

This section describes the CEQA environmental impacts and the NEPA environmental effects of the Project. This includes an analysis to determine if the Project would:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), which relates to vehicle miles traveled (VMT).⁴
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access

Impact Assessment

Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities

CEQA Assessment

The Project is located on Francisco Boulevard East in an area that is predominantly developed with commercial and industrial land uses. Francisco Boulevard East is designated as Minor Arterial in the City of San Rafael 2040 General Plan, and it can accommodate transit vehicles. Castro Avenue, Irene Street, and Kerner Boulevard are also wide and straight enough to accommodate transit vehicles. Therefore, the addition of Project bus vehicles on these roadways would not conflict with City programs, plans, ordinances, or policies related to the circulation system.

In the vicinity of the Project site, Francisco Boulevard East has sidewalks on both sides of the street. Castro Avenue, Irene Street, and Kerner Boulevard all have sidewalks on both sides of the street. The City of San Rafael Bicycle and Pedestrian Master Plan does not include planned pedestrian or bicycle improvements on any of these streets, and the Project does not propose to make changes to the public right of way. Therefore, the Project would not conflict with the City of San Rafael Bicycle and Master Plan.

⁴ CEQA Guidelines Section 15064.3, subdivision (b) refers to the discontinuation of vehicle level of service as an impact metric for transportation analysis and instead recommends the use of VMT; this section gives lead agencies discretion to choose the most appropriate methodology to evaluate the impact due to a project's VMT.



NEPA Assessment

As discussed in the CEQA assessment, the Proposed Project does not conflict with City of San Rafael programs, plans, ordinances, or policies related to the circulation system, and would therefore not have an adverse effect on planned improvements or be inconsistent with policies or plans.

Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), which relates to vehicle miles traveled (VMT)

CEQA Assessment

The Project involves relocating buses that are stored at a patchwork of leased and contractor owned facilities in San Rafael and Novato to the Project site at 1075 Francisco Boulevard East. The buses may be relocated from multiple locations: 1011 Andersen Drive in San Rafael (Golden Gate Transit), 1 Golden Gate Place in Novato (Golden Gate Transit), 1301 Andersen Drive in San Rafael (Central Marin Sanitation Agency), and 600 Rush Landing (Marin Transit). The Project would shift employees from these locations to the project site, which would not result in substantial changes in VMT.

The proposed Project facilitates transit services, which reduce VMT in the community by providing alternatives to private automobile travel. The Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA, which provides guidance on identifying CEQA VMT impacts and mitigation measures, provides the following guidance on transit and active transportation projects.⁵

Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development.

The above OPR guidance also indicates that "Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include: projects designed to improve the condition of existing assets...and that do not add additional motor vehicle capacity".

⁵ *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Governor's Office of Planning and Research (OPR) [recently renamed as Governor's Office of Land Use and Climate Innovation (LCI)]. December 2018. Pg 23. https://lci.ca.gov/docs/20190122-743_Technical_Advisory.pdf



Therefore, the Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) and the impact would be less than significant.

NEPA Assessment

As discussed in the CEQA assessment, the Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) and there would be no adverse effect on VMT.

Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

CEQA Assessment

Proposed project activities would occur on the site of the existing undeveloped lot, and the Project design does not propose alterations to the public roadway adjacent to the Project site. Project site access to Francisco Boulevard East and Castro Avenue will be provided via four driveways that have good visibility. Neither Francisco Boulevard East nor Castro Avenue include any curves or other visual obstructions that would prevent bus operators from having sufficient visual clearance to avoid roadway conflicts when using these driveways to turn onto and off Francisco Boulevard East or Castro Avenue.

Francisco Boulevard East is designated as a Minor Arterial in the City of San Rafael General Plan and the roadway wide enough to accommodate transit vehicles. Castro Avenue, Irene Street, and Kerner Boulevard are also wide enough for bus traffic. Therefore, the addition of bus vehicles to these streets would not be an incompatible use, and the impact is less than significant.

NEPA Assessment

As discussed in the CEQA assessment, the Project is not expected to increase hazards due to geometric design features or incompatible uses and there would be no adverse hazards effect associated with transportation infrastructure constructed by the proposed project.

Result in inadequate emergency access

CEQA Assessment

Marin Transit's planned bus operations at the facility would not create traffic conditions that would result in inadequate emergency access and the Project does not propose any changes to the public roadway. As shown in **Table 3**, the overall bus traffic entering and exiting the proposed facility would be intermittent, with peak activity occurring between 6-7 AM, when 14 buses would exit the yard to complete morning traffic operations. This number of transit vehicles would not result in inadequate emergency access and the impact would be less than significant.

There is a fire station near the project site on Castro Avenue, and the fire engines may interact with the small number of buses that will exit the project site on Castro Avenue to get to Bellam



Boulevard. Because Castro Avenue's right-of-way is narrowed by on-street parking and the intersection of Castro Avenue and Bellam Boulevard is unsignalized, buses making left turns onto Bellam Boulevard could potentially cause delay to emergency vehicles, as buses would need to wait for gaps in traffic before they could make a left turn. Buses are longer than passenger cars, which would make this left turn difficult and could lead to delays on Castro Avenue. To avoid this issue, Marin Transit has agreed to only have buses make right turns at this intersection, reducing the amount of time buses are stopped at the intersection. If a bus was waiting at the intersection when an emergency vehicle needed to pass through, the bus could turn right into one of the two travel lanes on Bellam Boulevard, making room for an emergency vehicle using its emergency lights and siren and turn left or right without obstruction. Employee passenger cars and non-project vehicles will still be permitted to make a left turn at this intersection. This intersection, although unsignalized, includes warning lights and signage on Bellam Boulevard that there is a fire station in close proximity, and these warning lights are activated when fire trucks are responding to emergencies.

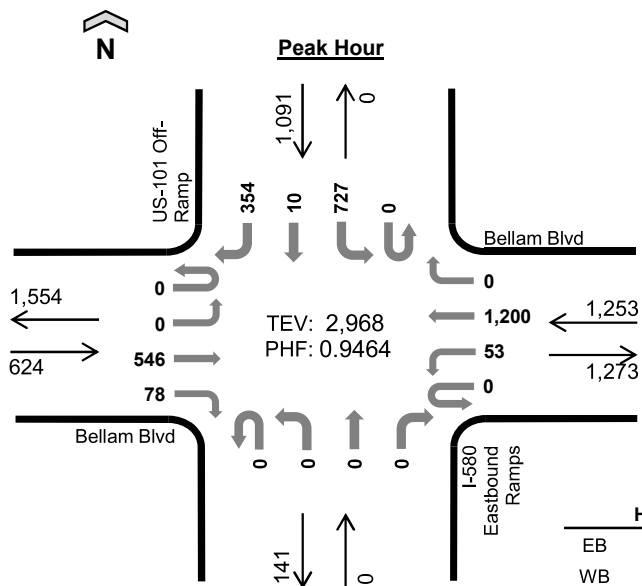
To minimize the potential for these interactions between buses and emergency vehicles, any buses heading towards the I-580 and US 101 interchange will use Francisco Boulevard East, Irene Street, and Kerner Boulevard to reach Bellam Boulevard. As a result, the number of buses making a right turn from Castro Avenue onto Bellam Boulevard is limited and only one bus during the AM peak hour and five buses daily will be taking this route.

NEPA Assessment

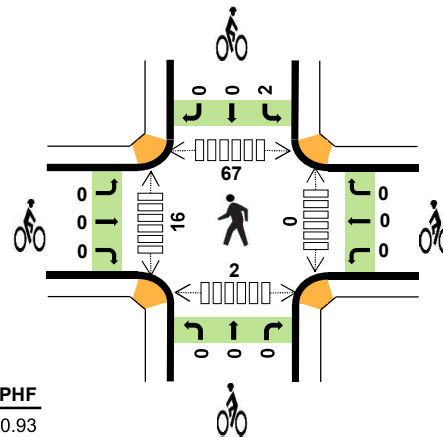
As discussed in the CEQA assessment, the Project is not expected to result in inadequate emergency access and there would be no adverse effect on emergency vehicle access.

Appendix A: Existing Traffic Counts

US-101 Off-Ramp Bellam Blvd



Date: 1/16/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV%	PHF
EB	8%	0.93
WB	8%	0.97
NB	--	--
SB	5%	0.87
TOTAL	7%	0.95

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM		0	0	135	20	0	12	309	0	0	0	0	0	151	2	81	710	0	
8:15 AM		0	0	142	25	0	16	303	0	0	0	0	0	191	3	82	762	0	
8:30 AM		0	0	139	15	0	14	276	0	0	0	0	0	178	1	89	712	0	
8:45 AM		0	0	130	18	0	11	312	0	0	0	0	0	207	4	102	784	2,968	
Pk Hr	All	0	0	546	78	0	53	1,200	0	0	0	0	0	727	10	354	2,968		
	HV	0	0	37	15	0	7	94	0	0	0	0	0	20	1	33	207		
	HV%	-	-	7%	19%	-	13%	8%	-	-	-	-	-	3%	10%	9%	7%		

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	13	20	0	12	45	0	0	0	1	1	0	5	23	1	29
8:15 AM	16	20	0	9	45	0	0	0	0	0	0	5	15	0	20
8:30 AM	10	23	0	18	51	0	0	0	1	1	0	3	15	0	18
8:45 AM	13	38	0	15	66	0	0	0	0	0	0	3	14	1	18
Peak Hour	52	101	0	54	207	0	0	0	2	2	0	16	67	2	85

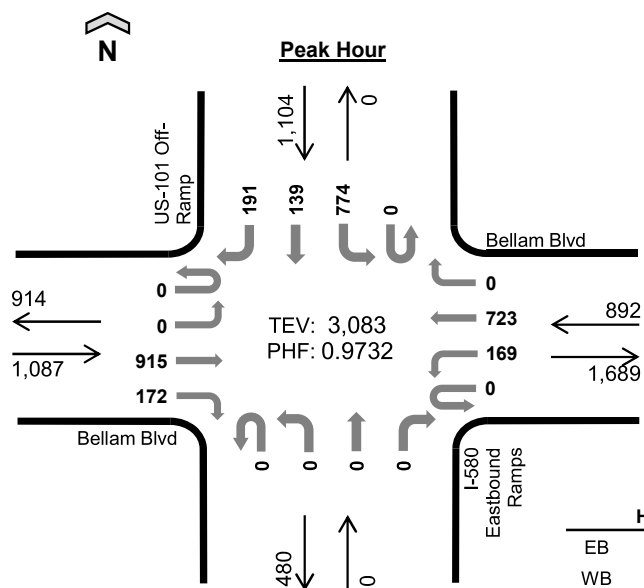
Count Summaries - All Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	87	19	0	14	290	0	0	0	0	0	149	1	58	618	0	
7:15 AM	0	0	113	25	0	15	311	0	0	0	0	0	197	5	69	735	0	
7:30 AM	0	0	106	21	0	9	283	0	0	0	0	0	188	2	67	676	0	
7:45 AM	0	0	137	13	0	12	321	0	0	0	0	0	192	4	77	756	2,785	
8:00 AM	0	0	135	20	0	12	309	0	0	0	0	0	151	2	81	710	2,877	
8:15 AM	0	0	142	25	0	16	303	0	0	0	0	0	191	3	82	762	2,904	
8:30 AM	0	0	139	15	0	14	276	0	0	0	0	0	178	1	89	712	2,940	
8:45 AM	0	0	130	18	0	11	312	0	0	0	0	0	207	4	102	784	2,968	
Count Total	0	0	989	156	0	103	2,405	0	0	0	0	0	1,453	22	625	5,753		
Pk Hr	All	0	0	546	78	0	53	1,200	0	0	0	0	0	727	10	354	2,968	
	HV	0	0	37	15	0	7	94	0	0	0	0	0	20	1	33	207	
	HV%	-	-	7%	19%	-	13%	8%	-	-	-	-	-	3%	10%	9%	7%	

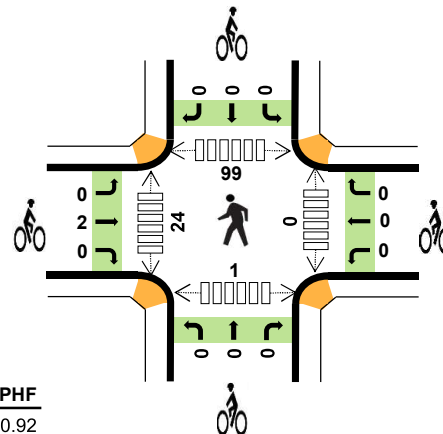
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	15	17	0	7	39	0	0	0	0	0	0	4	27	0	31
7:15 AM	15	20	0	10	45	0	0	0	0	0	0	5	27	0	32
7:30 AM	12	18	0	15	45	0	0	0	0	0	0	2	29	1	32
7:45 AM	14	20	0	16	50	0	0	0	0	0	0	4	21	0	25
8:00 AM	13	20	0	12	45	0	0	0	1	1	0	5	23	1	29
8:15 AM	16	20	0	9	45	0	0	0	0	0	0	5	15	0	20
8:30 AM	10	23	0	18	51	0	0	0	1	1	0	3	15	0	18
8:45 AM	13	38	0	15	66	0	0	0	0	0	0	3	14	1	18
Count Total	108	176	0	102	386	0	0	0	2	2	0	31	171	3	205
Peak Hour	52	101	0	54	207	0	0	0	2	2	0	16	67	2	85

Count Summaries - Heavy Vehicles																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	13	2	0	2	15	0	0	0	0	0	0	4	0	3	39	0
7:15 AM	0	0	11	4	0	3	17	0	0	0	0	0	0	9	0	1	45	0
7:30 AM	0	0	9	3	0	0	18	0	0	0	0	0	0	8	0	7	45	0
7:45 AM	0	0	14	0	0	0	20	0	0	0	0	0	0	8	0	8	50	179
8:00 AM	0	0	10	3	0	1	19	0	0	0	0	0	0	6	0	6	45	185
8:15 AM	0	0	8	8	0	2	18	0	0	0	0	0	0	1	1	7	45	185
8:30 AM	0	0	9	1	0	1	22	0	0	0	0	0	0	8	0	10	51	191
8:45 AM	0	0	10	3	0	3	35	0	0	0	0	0	0	5	0	10	66	207
Count Total	0	0	84	24	0	12	164	0	0	0	0	0	0	49	1	52	386	
Pk Hr Heavy	0	0	37	15	0	7	94	0	0	0	0	0	0	20	1	33	207	
Count Summaries - Bikes																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	

US-101 Off-Ramp Bellam Blvd



Date: 1/16/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV%	PHF
EB	4%	0.92
WB	2%	0.95
NB	--	--
SB	2%	0.98
TOTAL	3%	0.97

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	208	40	0	45	161	0	0	0	0	0	188	37	58	737	0	
4:15 PM		0	0	224	41	0	43	184	0	0	0	0	0	196	33	44	765	0	
4:30 PM		0	0	236	43	0	44	191	0	0	0	0	0	199	34	45	792	0	
4:45 PM		0	0	247	48	0	37	187	0	0	0	0	0	191	35	44	789	3,083	
Pk Hr	All	0	0	915	172	0	169	723	0	0	0	0	0	774	139	191	3,083		
	HV	0	0	28	11	0	8	9	0	0	0	0	0	20	2	4	82		
	HV%	-	-	3%	6%	-	5%	1%	-	-	-	-	-	3%	1%	2%	3%		

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	11	3	0	9	23	0	0	0	0	0	0	8	23	0	31
4:15 PM	17	9	0	7	33	2	0	0	0	2	0	5	20	1	26
4:30 PM	8	2	0	5	15	0	0	0	0	0	0	5	32	0	37
4:45 PM	3	3	0	5	11	0	0	0	0	0	0	6	24	0	30
Peak Hour	39	17	0	26	82	2	0	0	0	2	0	24	99	1	124

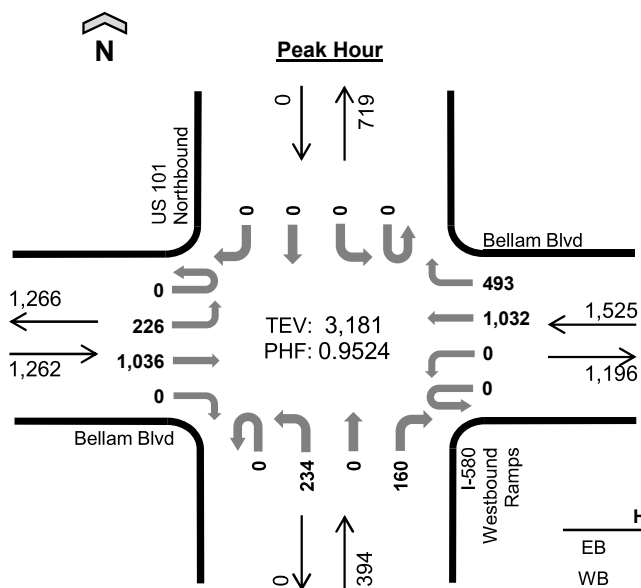
Count Summaries - All Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	208	40	0	45	161	0	0	0	0	0	0	188	37	58	737	0
4:15 PM	0	0	224	41	0	43	184	0	0	0	0	0	0	196	33	44	765	0
4:30 PM	0	0	236	43	0	44	191	0	0	0	0	0	0	199	34	45	792	0
4:45 PM	0	0	247	48	0	37	187	0	0	0	0	0	0	191	35	44	789	3,083
5:00 PM	0	0	240	35	0	41	176	0	0	0	0	0	0	186	27	29	734	3,080
5:15 PM	0	0	208	36	0	48	184	0	0	0	0	0	0	196	37	21	730	3,045
5:30 PM	0	0	207	38	0	53	159	0	0	0	0	0	0	182	38	37	714	2,967
5:45 PM	0	0	163	31	0	40	175	0	0	0	0	0	0	172	43	42	666	2,844
Count Total		0	0	1,733	312	0	351	1,417	0	0	0	0	0	1,510	284	320	5,927	
Pk Hr	All	0	0	915	172	0	169	723	0	0	0	0	0	774	139	191	3,083	
	HV	0	0	28	11	0	8	9	0	0	0	0	0	20	2	4	82	
	HV%	-	-	3%	6%	-	5%	1%	-	-	-	-	-	3%	1%	2%	3%	

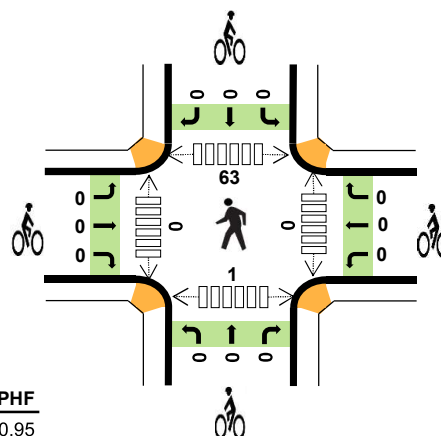
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	11	3	0	9	23	0	0	0	0	0	0	8	23	0	31
4:15 PM	17	9	0	7	33	2	0	0	0	2	0	5	20	1	26
4:30 PM	8	2	0	5	15	0	0	0	0	0	0	5	32	0	37
4:45 PM	3	3	0	5	11	0	0	0	0	0	0	6	24	0	30
5:00 PM	5	4	0	1	10	0	0	0	0	0	0	3	18	0	21
5:15 PM	4	8	0	3	15	0	0	0	0	0	0	1	13	1	15
5:30 PM	8	4	0	4	16	1	0	0	0	1	0	4	14	0	18
5:45 PM	3	6	0	5	14	0	0	0	0	0	0	2	6	0	8
Count Total	59	39	0	39	137	3	0	0	0	3	0	34	150	2	186
Peak Hour	39	17	0	26	82	2	0	0	0	2	0	24	99	1	124

Count Summaries - Heavy Vehicles																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	7	4	0	1	2	0	0	0	0	0	0	5	0	4	23	0
4:15 PM	0	0	12	5	0	5	4	0	0	0	0	0	0	6	1	0	33	0
4:30 PM	0	0	8	0	0	1	1	0	0	0	0	0	0	4	1	0	15	0
4:45 PM	0	0	1	2	0	1	2	0	0	0	0	0	0	5	0	0	11	82
5:00 PM	0	0	5	0	0	1	3	0	0	0	0	0	0	1	0	0	10	69
5:15 PM	0	0	3	1	0	3	5	0	0	0	0	0	0	1	2	0	15	51
5:30 PM	0	0	8	0	0	2	2	0	0	0	0	0	0	2	0	2	16	52
5:45 PM	0	0	3	0	0	1	5	0	0	0	0	0	0	4	0	1	14	55
Count Total	0	0	47	12	0	15	24	0	0	0	0	0	0	28	4	7	137	
Pk Hr Heavy	0	0	28	11	0	8	9	0	0	0	0	0	0	20	2	4	82	
Count Summaries - Bikes																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Eastbound Ramps				US-101 Off-Ramp				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Pk Hr Bike	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	

US 101 Northbound Bellam Blvd



Date: 1/16/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV%	PHF
EB	5%	0.95
WB	7%	0.94
NB	8%	0.93
SB	--	--
TOTAL	6%	0.95

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	55	270	0	0	0	296	108	0	57	0	49	0	0	0	0	835	0
8:00 AM		0	60	223	0	0	0	255	139	0	61	0	36	0	0	0	0	774	0
8:15 AM		0	58	273	0	0	0	228	135	0	66	0	34	0	0	0	0	794	0
8:30 AM		0	53	270	0	0	0	253	111	0	50	0	41	0	0	0	0	778	3,181
Pk Hr	All	0	226	1,036	0	0	0	1,032	493	0	234	0	160	0	0	0	0	3,181	
	HV	0	29	37	0	0	0	79	23	0	21	0	10	0	0	0	0	199	
	HV%	-	13%	4%	-	-	-	8%	5%	-	9%	-	6%	-	-	-	-	6%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	20	21	10	0	51	0	0	0	0	0	0	0	17	1	18
8:00 AM	13	26	5	0	44	0	0	0	0	0	0	0	23	0	23
8:15 AM	15	27	12	0	54	0	0	0	0	0	0	0	13	0	13
8:30 AM	18	28	4	0	50	0	0	0	0	0	0	0	10	0	10
Peak Hour	66	102	31	0	199	0	0	0	0	0	0	0	63	1	64

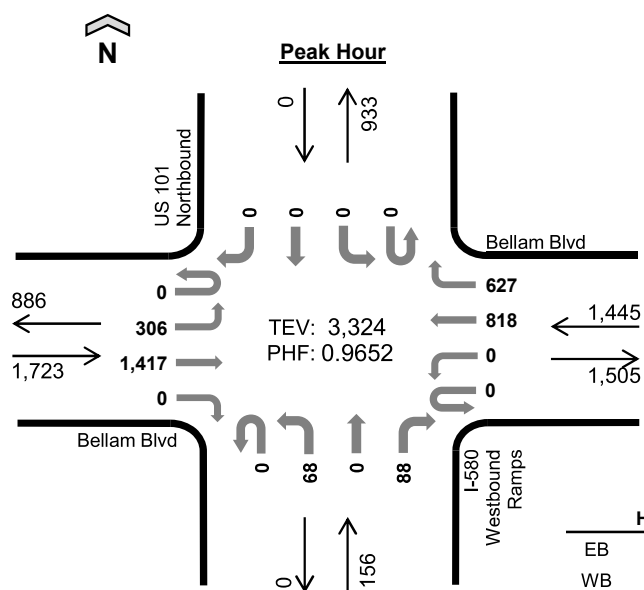
Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	33	211	0	0	0	277	82	0	30	0	39	0	0	0	0	672	0
7:15 AM		0	57	240	0	0	0	283	107	0	31	1	50	0	0	0	0	769	0
7:30 AM		0	57	237	0	0	0	279	103	0	39	0	43	0	0	0	0	758	0
7:45 AM		0	55	270	0	0	0	296	108	0	57	0	49	0	0	0	0	835	3,034
8:00 AM		0	60	223	0	0	0	255	139	0	61	0	36	0	0	0	0	774	3,136
8:15 AM		0	58	273	0	0	0	228	135	0	66	0	34	0	0	0	0	794	3,161
8:30 AM		0	53	270	0	0	0	253	111	0	50	0	41	0	0	0	0	778	3,181
8:45 AM		1	56	271	0	0	0	246	89	0	56	0	36	0	0	0	0	755	3,101
Count Total		1	429	1,995	0	0	0	2,117	874	0	390	1	328	0	0	0	0	6,135	
Pk Hr	All	0	226	1,036	0	0	0	1,032	493	0	234	0	160	0	0	0	0	3,181	
	HV	0	29	37	0	0	0	79	23	0	21	0	10	0	0	0	0	199	
	HV%	-	13%	4%	-	-	-	8%	5%	-	9%	-	6%	-	-	-	-	6%	

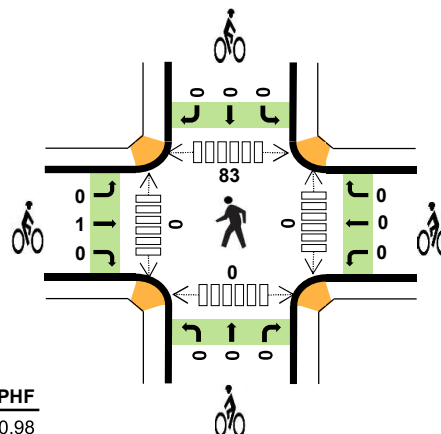
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	15	7	4	0	26	0	0	0	0	0	0	0	22	0	22
7:15 AM	16	12	6	0	34	0	0	0	0	0	0	0	18	2	20
7:30 AM	15	17	6	0	38	0	0	0	0	0	0	0	18	1	19
7:45 AM	20	21	10	0	51	0	0	0	0	0	0	0	17	1	18
8:00 AM	13	26	5	0	44	0	0	0	0	0	0	0	23	0	23
8:15 AM	15	27	12	0	54	0	0	0	0	0	0	0	13	0	13
8:30 AM	18	28	4	0	50	0	0	0	0	0	0	0	10	0	10
8:45 AM	17	34	9	0	60	0	0	0	0	0	0	0	13	0	13
Count Total	129	172	56	0	357	0	0	0	0	0	0	0	134	4	138
Peak Hour	66	102	31	0	199	0	0	0	0	0	0	0	63	1	64

Count Summaries - Heavy Vehicles																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	9	6	0	0	0	7	0	0	2	0	2	0	0	0	0	26	0
7:15 AM	0	6	10	0	0	0	8	4	0	6	0	0	0	0	0	0	34	0
7:30 AM	0	7	8	0	0	0	13	4	0	4	0	2	0	0	0	0	38	0
7:45 AM	0	8	12	0	0	0	18	3	0	8	0	2	0	0	0	0	51	149
8:00 AM	0	9	4	0	0	0	17	9	0	4	0	1	0	0	0	0	44	167
8:15 AM	0	7	8	0	0	0	21	6	0	7	0	5	0	0	0	0	54	187
8:30 AM	0	5	13	0	0	0	23	5	0	2	0	2	0	0	0	0	50	199
8:45 AM	0	12	5	0	0	0	30	4	0	6	0	3	0	0	0	0	60	208
Count Total	0	63	66	0	0	0	137	35	0	39	0	17	0	0	0	0	357	
Pk Hr Heavy	0	29	37	0	0	0	79	23	0	21	0	10	0	0	0	0	199	
Count Summaries - Bikes																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

US 101 Northbound Bellam Blvd



Date: 1/16/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV%	PHF
EB	2%	0.98
WB	2%	0.94
NB	4%	0.87
SB	--	--
TOTAL	2%	0.97

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	80	341	0	0	0	206	144	0	18	0	17	0	0	0	0	806	0
4:30 PM		0	73	367	0	0	0	217	166	0	19	0	19	0	0	0	0	861	0
4:45 PM		0	74	367	0	0	0	195	157	0	12	0	26	0	0	0	0	831	0
5:00 PM		0	79	342	0	0	0	200	160	0	19	0	26	0	0	0	0	826	3,324
Pk Hr	All	0	306	1,417	0	0	0	818	627	0	68	0	88	0	0	0	0	3,324	
	HV	0	10	26	0	0	0	24	5	0	3	0	3	0	0	0	0	71	
	HV%	-	3%	2%	-	-	-	3%	1%	-	4%	-	3%	-	-	-	-	2%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:15 PM	12	6	0	0	18	1	0	0	0	1	0	0	25	0	25
4:30 PM	13	7	1	0	21	0	0	0	0	0	0	0	24	0	24
4:45 PM	7	6	1	0	14	0	0	0	0	0	0	0	19	0	19
5:00 PM	4	10	4	0	18	0	0	0	0	0	0	0	15	0	15
Peak Hour	36	29	6	0	71	1	0	0	0	1	0	0	83	0	83

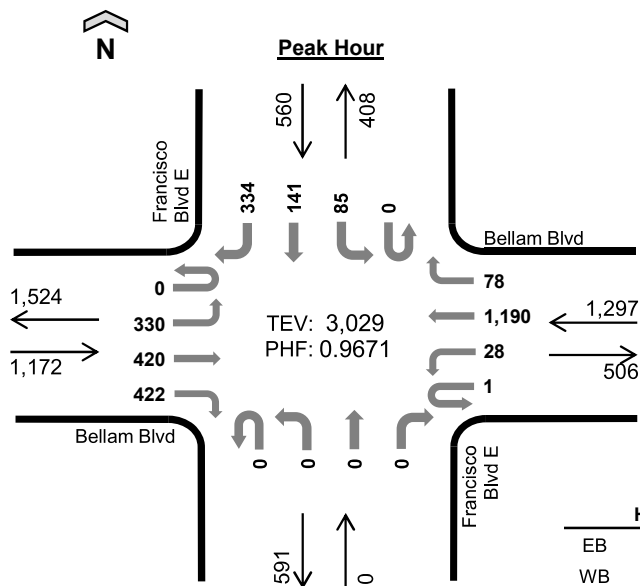
Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	80	318	0	0	0	190	110	0	21	0	19	0	0	0	0	738	0
4:15 PM		0	80	341	0	0	0	206	144	0	18	0	17	0	0	0	0	806	0
4:30 PM		0	73	367	0	0	0	217	166	0	19	0	19	0	0	0	0	861	0
4:45 PM		0	74	367	0	0	0	195	157	0	12	0	26	0	0	0	0	831	3,236
5:00 PM		0	79	342	0	0	0	200	160	0	19	0	26	0	0	0	0	826	3,324
5:15 PM		0	63	346	0	0	0	210	137	0	19	0	31	0	0	0	0	806	3,324
5:30 PM		0	56	334	0	0	0	194	151	0	12	0	24	0	0	0	0	771	3,234
5:45 PM		0	56	288	0	0	0	222	125	0	14	0	23	0	0	0	0	728	3,131
Count Total		0	561	2,703	0	0	0	1,634	1,150	0	134	0	185	0	0	0	0	6,367	
Pk Hr	All	0	306	1,417	0	0	0	818	627	0	68	0	88	0	0	0	0	3,324	
	HV	0	10	26	0	0	0	24	5	0	3	0	3	0	0	0	0	71	
	HV%	-	3%	2%	-	-	-	3%	1%	-	4%	-	3%	-	-	-	-	2%	

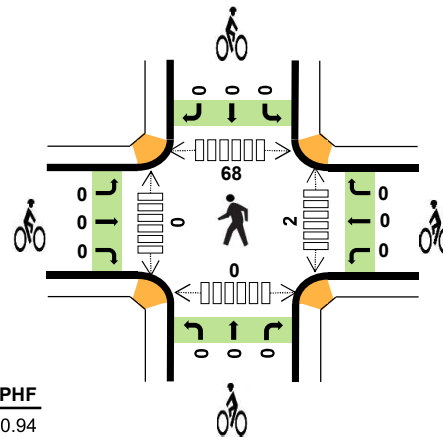
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	19	6	0	0	25	0	0	0	0	0	0	0	24	0	24
4:15 PM	12	6	0	0	18	1	0	0	0	1	0	0	25	0	25
4:30 PM	13	7	1	0	21	0	0	0	0	0	0	0	24	0	24
4:45 PM	7	6	1	0	14	0	0	0	0	0	0	0	19	0	19
5:00 PM	4	10	4	0	18	0	0	0	0	0	0	0	15	0	15
5:15 PM	7	3	2	0	12	0	0	0	0	0	0	0	12	0	12
5:30 PM	10	3	1	0	14	1	0	0	0	1	0	0	11	0	11
5:45 PM	7	2	0	0	9	0	0	0	0	0	0	0	7	0	7
Count Total	79	43	9	0	131	2	0	0	0	2	0	0	137	0	137
Peak Hour	36	29	6	0	71	1	0	0	0	1	0	0	83	0	83

Count Summaries - Heavy Vehicles																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	4	15	0	0	0	6	0	0	0	0	0	0	0	0	0	25	0
4:15 PM	0	4	8	0	0	0	5	1	0	0	0	0	0	0	0	0	18	0
4:30 PM	0	4	9	0	0	0	7	0	0	1	0	0	0	0	0	0	21	0
4:45 PM	0	0	7	0	0	0	5	1	0	0	0	1	0	0	0	0	14	78
5:00 PM	0	2	2	0	0	0	7	3	0	2	0	2	0	0	0	0	18	71
5:15 PM	0	1	6	0	0	0	2	1	0	0	0	2	0	0	0	0	12	65
5:30 PM	0	4	6	0	0	0	2	1	0	0	0	1	0	0	0	0	14	58
5:45 PM	0	2	5	0	0	0	2	0	0	0	0	0	0	0	0	0	9	53
Count Total	0	21	58	0	0	0	36	7	0	3	0	6	0	0	0	0	131	
Pk Hr Heavy	0	10	26	0	0	0	24	5	0	3	0	3	0	0	0	0	71	
Count Summaries - Bikes																		
Interval Start	Bellam Blvd				Bellam Blvd				I-580 Westbound Ramps				US 101 Northbound				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Pk Hr Bike	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

Francisco Blvd E Bellam Blvd



Date: 1/16/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV%	PHF
EB	3%	0.94
WB	6%	0.95
NB	--	--
SB	10%	0.93
TOTAL	5%	0.97

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	76	130	107	0	4	321	15	0	0	0	0	0	17	29	84	783	0
8:00 AM		0	76	99	84	0	5	280	19	0	0	0	0	0	20	38	92	713	0
8:15 AM		0	88	83	130	0	14	294	20	0	0	0	0	0	19	34	84	766	0
8:30 AM		0	90	108	101	1	5	295	24	0	0	0	0	0	29	40	74	767	3,029
Pk Hr	All	0	330	420	422	1	28	1,190	78	0	0	0	0	0	85	141	334	3,029	
	HV	0	18	12	10	0	2	64	6	0	0	0	0	0	12	2	40	166	
	HV%	-	5%	3%	2%	0%	7%	5%	8%	-	-	-	-	-	14%	1%	12%	5%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	10	15	0	11	36	0	0	0	0	0	0	0	18	0	18
8:00 AM	6	14	0	17	37	0	0	0	0	0	1	0	25	0	26
8:15 AM	11	19	0	9	39	0	0	0	0	0	1	0	14	0	15
8:30 AM	13	24	0	17	54	0	0	0	0	0	0	0	11	0	11
Peak Hour	40	72	0	54	166	0	0	0	0	0	2	0	68	0	70

Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	61	101	85	0	3	277	26	0	0	0	0	0	18	22	83	676	0
7:15 AM		0	72	125	105	0	5	305	19	0	0	0	0	0	15	38	84	768	0
7:30 AM		0	56	132	93	0	5	308	23	0	0	0	0	0	12	37	80	746	0
7:45 AM		0	76	130	107	0	4	321	15	0	0	0	0	0	17	29	84	783	2,973
8:00 AM		0	76	99	84	0	5	280	19	0	0	0	0	0	20	38	92	713	3,010
8:15 AM		0	88	83	130	0	14	294	20	0	0	0	0	0	19	34	84	766	3,008
8:30 AM		0	90	108	101	1	5	295	24	0	0	0	0	0	29	40	74	767	3,029
8:45 AM		0	74	112	131	0	9	255	26	0	0	0	0	0	16	35	81	739	2,985
Count Total		0	593	890	836	1	50	2,335	172	0	0	0	0	0	146	273	662	5,958	
Pk Hr	All	0	330	420	422	1	28	1,190	78	0	0	0	0	0	85	141	334	3,029	
	HV	0	18	12	10	0	2	64	6	0	0	0	0	0	12	2	40	166	
	HV%	-	5%	3%	2%	0%	7%	5%	8%	-	-	-	-	-	14%	1%	12%	5%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	8	4	0	7	19	0	0	0	0	0	6	0	24	0	30
7:15 AM	15	7	0	6	28	0	0	0	0	0	2	0	24	2	28
7:30 AM	10	12	0	12	34	0	0	0	0	0	3	0	28	0	31
7:45 AM	10	15	0	11	36	0	0	0	0	0	0	0	18	0	18
8:00 AM	6	14	0	17	37	0	0	0	0	0	1	0	25	0	26
8:15 AM	11	19	0	9	39	0	0	0	0	0	1	0	14	0	15
8:30 AM	13	24	0	17	54	0	0	0	0	0	0	0	11	0	11
8:45 AM	10	34	0	16	60	0	0	0	0	0	2	0	17	0	19
Count Total	83	129	0	95	307	0	0	0	0	0	15	0	161	2	178
Peak Hour	40	72	0	54	166	0	0	0	0	0	2	0	68	0	70

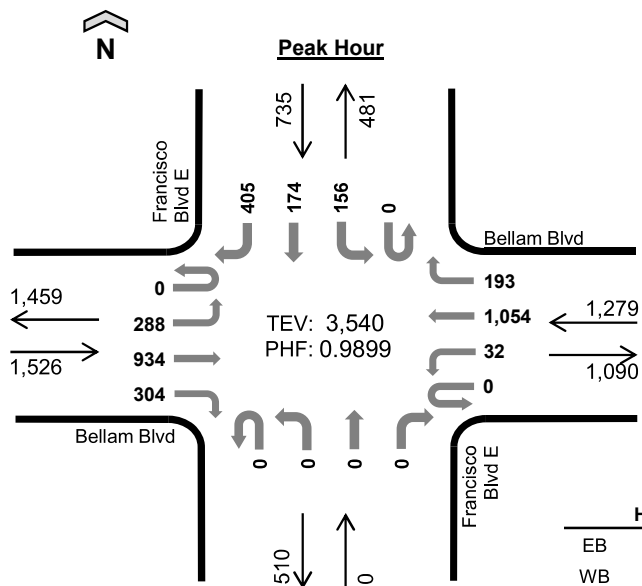
Count Summaries - Heavy Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	4	1	0	0	2	2	0	0	0	0	0	4	0	3	19	0
7:15 AM	0	4	5	6	0	0	3	4	0	0	0	0	0	0	0	6	28	0
7:30 AM	0	1	4	5	0	2	6	4	0	0	0	0	0	2	0	10	34	0
7:45 AM	0	3	5	2	0	0	15	0	0	0	0	0	0	2	1	8	36	117
8:00 AM	0	4	1	1	0	1	12	1	0	0	0	0	0	5	0	12	37	135
8:15 AM	0	7	3	1	0	0	19	0	0	0	0	0	0	1	0	8	39	146
8:30 AM	0	4	3	6	0	1	18	5	0	0	0	0	0	4	1	12	54	166
8:45 AM	0	2	7	1	0	1	30	3	0	0	0	0	0	1	1	14	60	190
Count Total	0	28	32	23	0	5	105	19	0	0	0	0	0	19	3	73	307	
Pk Hr Heavy	0	18	12	10	0	2	64	6	0	0	0	0	0	12	2	40	166	

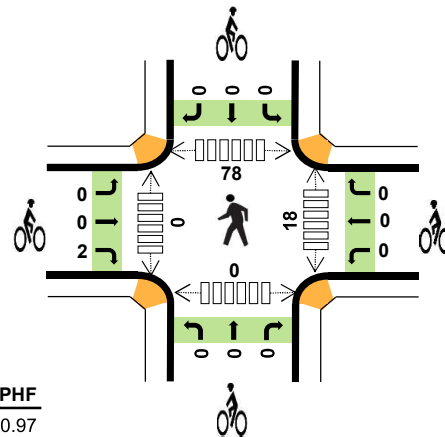
Count Summaries - Bikes

Interval Start	Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Francisco Blvd E Bellam Blvd



Date: 1/16/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV%	PHF
EB	2%	0.97
WB	1%	0.95
NB	--	--
SB	3%	0.96
TOTAL	2%	0.99

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	69	247	65	0	8	282	46	0	0	0	0	0	38	38	101	894	0
4:45 PM		0	84	229	81	0	4	257	33	0	0	0	0	0	33	49	105	875	0
5:00 PM		0	71	232	72	0	10	260	50	0	0	0	0	0	39	47	105	886	0
5:15 PM		0	64	226	86	0	10	255	64	0	0	0	0	0	46	40	94	885	3,540
Pk Hr	All	0	288	934	304	0	32	1,054	193	0	0	0	0	0	156	174	405	3,540	
	HV	0	7	5	15	0	1	10	5	0	0	0	0	0	7	7	11	68	
	HV%	-	2%	1%	5%	-	3%	1%	3%	-	-	-	-	-	4%	4%	3%	2%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:30 PM	6	4	0	5	15	0	0	0	0	0	4	0	22	0	26
4:45 PM	12	2	0	5	19	1	0	0	0	1	3	0	24	0	27
5:00 PM	4	3	0	10	17	0	0	0	0	0	7	0	19	0	26
5:15 PM	5	7	0	5	17	1	0	0	0	1	4	0	13	0	17
Peak Hour	27	16	0	25	68	2	0	0	0	2	18	0	78	0	96

Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	73	172	85	1	14	215	54	0	0	0	0	0	45	39	94	792	0
4:15 PM		0	59	210	94	0	18	237	48	0	0	0	0	0	43	45	88	842	0
4:30 PM		0	69	247	65	0	8	282	46	0	0	0	0	0	38	38	101	894	0
4:45 PM		0	84	229	81	0	4	257	33	0	0	0	0	0	33	49	105	875	3,403
5:00 PM		0	71	232	72	0	10	260	50	0	0	0	0	0	39	47	105	886	3,497
5:15 PM		0	64	226	86	0	10	255	64	0	0	0	0	0	46	40	94	885	3,540
5:30 PM		0	58	222	75	1	13	243	52	0	0	0	0	0	41	34	98	837	3,483
5:45 PM		0	65	197	52	0	10	251	45	0	0	0	0	0	54	38	99	811	3,419
Count Total		0	543	1,735	610	2	87	2,000	392	0	0	0	0	0	339	330	784	6,822	
Pk Hr	All	0	288	934	304	0	32	1,054	193	0	0	0	0	0	156	174	405	3,540	
	HV	0	7	5	15	0	1	10	5	0	0	0	0	0	7	7	11	68	
	HV%	-	2%	1%	5%	-	3%	1%	3%	-	-	-	-	-	4%	4%	3%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	10	7	0	7	24	0	0	0	0	0	10	0	24	1	35
4:15 PM	14	9	0	5	28	0	0	0	0	0	5	0	24	0	29
4:30 PM	6	4	0	5	15	0	0	0	0	0	4	0	22	0	26
4:45 PM	12	2	0	5	19	1	0	0	0	1	3	0	24	0	27
5:00 PM	4	3	0	10	17	0	0	0	0	0	7	0	19	0	26
5:15 PM	5	7	0	5	17	1	0	0	0	1	4	0	13	0	17
5:30 PM	5	2	0	4	11	0	0	0	0	0	5	0	12	0	17
5:45 PM	8	3	0	6	17	0	0	0	0	0	0	0	10	0	10
Count Total	64	37	0	47	148	2	0	0	0	2	38	0	148	1	187
Peak Hour	27	16	0	25	68	2	0	0	0	2	18	0	78	0	96

Count Summaries - Heavy Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	4	0	6	0	0	5	2	0	0	0	0	0	1	1	5	24	0
4:15 PM	0	2	3	9	0	0	5	4	0	0	0	0	0	4	1	0	28	0
4:30 PM	0	0	2	4	0	1	2	1	0	0	0	0	0	1	1	3	15	0
4:45 PM	0	3	1	8	0	0	2	0	0	0	0	0	0	1	1	3	19	86
5:00 PM	0	2	1	1	0	0	2	1	0	0	0	0	0	3	3	4	17	79
5:15 PM	0	2	1	2	0	0	4	3	0	0	0	0	0	2	2	1	17	68
5:30 PM	0	1	2	2	0	0	2	0	0	0	0	0	0	1	1	2	11	64
5:45 PM	0	3	0	5	0	1	2	0	0	0	0	0	0	2	3	1	17	62
Count Total	0	17	10	37	0	2	24	11	0	0	0	0	0	15	13	19	148	
Pk Hr Heavy	0	7	5	15	0	1	10	5	0	0	0	0	0	7	7	11	68	

Count Summaries - Bikes

Interval Start	Bellam Blvd				Bellam Blvd				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
Pk Hr Bike	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	

Castro Ave Bellam Blvd

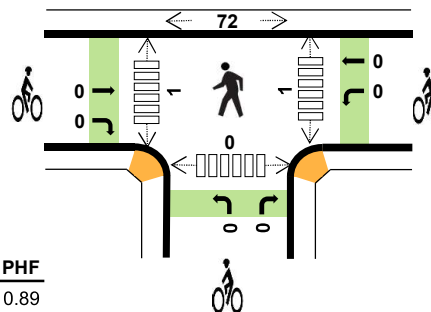
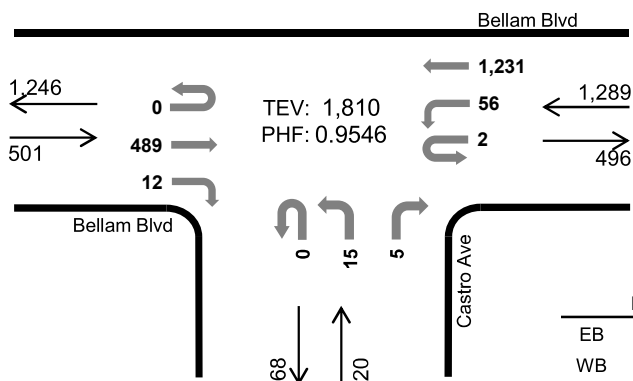


Peak Hour

Date: 1/16/2025

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:15 AM to 8:15 AM



Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:15 AM		0	0	136	4	2	13	312	0	0	6	0	1	0	0	0	0	474	0
7:30 AM		0	0	121	3	0	18	313	0	0	4	0	1	0	0	0	0	460	0
7:45 AM		0	0	129	2	0	14	300	0	0	3	0	2	0	0	0	0	450	0
8:00 AM		0	0	103	3	0	11	306	0	0	2	0	1	0	0	0	0	426	1,810
Pk Hr	All	0	0	489	12	2	56	1,231	0	0	15	0	5	0	0	0	0	1,810	
	HV	0	0	22	4	0	4	51	0	0	2	0	0	0	0	0	0	83	
	HV%	-	-	4%	33%	0%	7%	4%	-	-	13%	-	0%	-	-	-	-	5%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:15 AM	5	10	1	0	16	0	0	0	0	0	1	0	23	0	24
7:30 AM	7	9	1	0	17	0	0	0	0	0	0	0	21	0	21
7:45 AM	8	20	0	0	28	0	0	0	0	0	0	0	15	0	15
8:00 AM	6	16	0	0	22	0	0	0	0	0	0	1	13	0	14
Peak Hour	26	55	2	0	83	0	0	0	0	0	1	1	72	0	74

Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	104	1	0	26	289	0	0	4	0	0	0	0	0	0	424	0
7:15 AM		0	0	136	4	2	13	312	0	0	6	0	1	0	0	0	0	474	0
7:30 AM		0	0	121	3	0	18	313	0	0	4	0	1	0	0	0	0	460	0
7:45 AM		0	0	129	2	0	14	300	0	0	3	0	2	0	0	0	0	450	1,808
8:00 AM		0	0	103	3	0	11	306	0	0	2	0	1	0	0	0	0	426	1,810
8:15 AM		0	0	105	6	1	14	310	0	0	8	0	3	0	0	0	0	447	1,783
8:30 AM		0	0	127	5	1	15	294	0	0	11	0	6	0	0	0	0	459	1,782
8:45 AM		0	0	123	5	1	14	260	0	0	8	0	5	0	0	0	0	416	1,748
Count Total		0	0	948	29	5	125	2,384	0	0	46	0	19	0	0	0	0	3,556	
Pk Hr	All	0	0	489	12	2	56	1,231	0	0	15	0	5	0	0	0	0	1,810	
	HV	0	0	22	4	0	4	51	0	0	2	0	0	0	0	0	0	83	
	HV%	-	-	4%	33%	0%	7%	4%	-	-	13%	-	0%	-	-	-	-	5%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	8	4	1	0	13	0	0	0	0	0	1	0	19	0	20
7:15 AM	5	10	1	0	16	0	0	0	0	0	1	0	23	0	24
7:30 AM	7	9	1	0	17	0	0	0	0	0	0	0	21	0	21
7:45 AM	8	20	0	0	28	0	0	0	0	0	0	0	15	0	15
8:00 AM	6	16	0	0	22	0	0	0	0	0	0	1	13	0	14
8:15 AM	5	18	1	0	24	0	0	0	0	0	0	0	9	0	9
8:30 AM	8	31	2	0	41	0	0	0	0	0	0	0	9	0	9
8:45 AM	6	24	3	0	33	1	0	0	0	1	0	0	16	0	16
Count Total	53	132	9	0	194	1	0	0	0	1	2	1	125	0	128
Peak Hour	26	55	2	0	83	0	0	0	0	0	1	1	72	0	74

Count Summaries - Heavy Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	8	0	0	0	4	0	0	1	0	0	0	0	0	0	13	0
7:15 AM	0	0	4	1	0	0	10	0	0	1	0	0	0	0	0	0	16	0
7:30 AM	0	0	6	1	0	1	8	0	0	1	0	0	0	0	0	0	17	0
7:45 AM	0	0	6	2	0	2	18	0	0	0	0	0	0	0	0	0	28	74
8:00 AM	0	0	6	0	0	1	15	0	0	0	0	0	0	0	0	0	22	83
8:15 AM	0	0	4	1	0	1	17	0	0	1	0	0	0	0	0	0	24	91
8:30 AM	0	0	8	0	0	1	30	0	0	1	0	1	0	0	0	0	41	115
8:45 AM	0	0	6	0	1	1	22	0	0	2	0	1	0	0	0	0	33	120
Count Total	0	0	48	5	1	7	124	0	0	7	0	2	0	0	0	0	194	
Pk Hr Heavy	0	0	22	4	0	4	51	0	0	2	0	0	0	0	0	0	83	

Count Summaries - Bikes

Interval Start	Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Count Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Castro Ave Bellam Blvd

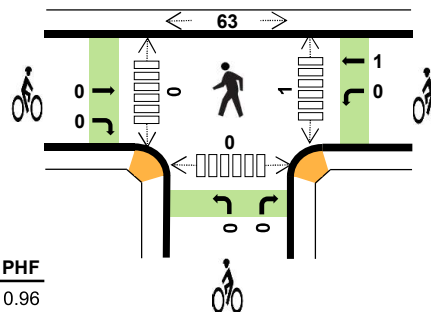
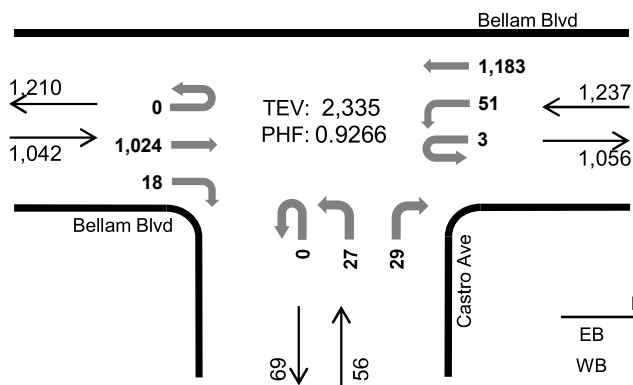


Peak Hour

Date: 1/16/2025

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:30 PM to 5:30 PM



	HV%	PHF
EB	1%	0.96
WB	2%	0.90
NB	0%	0.88
SB	--	--
TOTAL	1%	0.93

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	0	265	5	1	18	326	0	0	7	0	8	0	0	0	0	630	0
4:45 PM		0	0	242	7	2	10	278	0	0	7	0	6	0	0	0	0	552	0
5:00 PM		0	0	250	3	0	11	288	0	0	10	0	2	0	0	0	0	564	0
5:15 PM		0	0	267	3	0	12	291	0	0	3	0	13	0	0	0	0	589	2,335
Pk Hr	All	0	0	1,024	18	3	51	1,183	0	0	27	0	29	0	0	0	0	2,335	
	HV	0	0	11	0	0	3	16	0	0	0	0	0	0	0	0	0	30	
	HV%	-	-	1%	0%	0%	6%	1%	-	-	0%	-	0%	-	-	-	-	1%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:30 PM	3	5	0	0	8	0	0	0	0	0	0	0	19	0	19
4:45 PM	1	3	0	0	4	0	1	0	0	1	0	0	21	0	21
5:00 PM	3	4	0	0	7	0	0	0	0	0	0	0	14	0	14
5:15 PM	4	7	0	0	11	0	0	0	0	0	1	0	9	0	10
Peak Hour	11	19	0	0	30	0	1	0	0	1	1	0	63	0	64

Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	221	2	0	18	241	0	0	6	0	5	0	0	0	0	493	0
4:15 PM		0	0	243	6	3	10	303	0	0	6	0	9	0	0	0	0	580	0
4:30 PM		0	0	265	5	1	18	326	0	0	7	0	8	0	0	0	0	630	0
4:45 PM		0	0	242	7	2	10	278	0	0	7	0	6	0	0	0	0	552	2,255
5:00 PM		0	0	250	3	0	11	288	0	0	10	0	2	0	0	0	0	564	2,326
5:15 PM		0	0	267	3	0	12	291	0	0	3	0	13	0	0	0	0	589	2,335
5:30 PM		0	0	264	2	0	14	281	0	0	19	0	6	0	0	0	0	586	2,291
5:45 PM		0	0	250	3	3	8	273	0	0	9	0	9	0	0	0	0	555	2,294
Count Total		0	0	2,002	31	9	101	2,281	0	0	67	0	58	0	0	0	0	4,549	
Pk Hr	All	0	0	1,024	18	3	51	1,183	0	0	27	0	29	0	0	0	0	2,335	
	HV	0	0	11	0	0	3	16	0	0	0	0	0	0	0	0	0	30	
	HV%	-	-	1%	0%	0%	6%	1%	-	-	0%	-	0%	-	-	-	-	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	2	5	0	0	7	0	1	0	0	1	0	0	12	0	12
4:15 PM	5	12	0	0	17	0	0	0	0	0	0	0	11	0	11
4:30 PM	3	5	0	0	8	0	0	0	0	0	0	0	19	0	19
4:45 PM	1	3	0	0	4	0	1	0	0	1	0	0	21	0	21
5:00 PM	3	4	0	0	7	0	0	0	0	0	0	0	14	0	14
5:15 PM	4	7	0	0	11	0	0	0	0	0	1	0	9	0	10
5:30 PM	3	1	0	0	4	0	0	0	0	0	1	0	12	0	13
5:45 PM	2	2	0	0	4	0	0	0	0	0	1	0	14	0	15
Count Total	23	39	0	0	62	0	2	0	0	2	3	0	112	0	115
Peak Hour	11	19	0	0	30	0	1	0	0	1	1	0	63	0	64

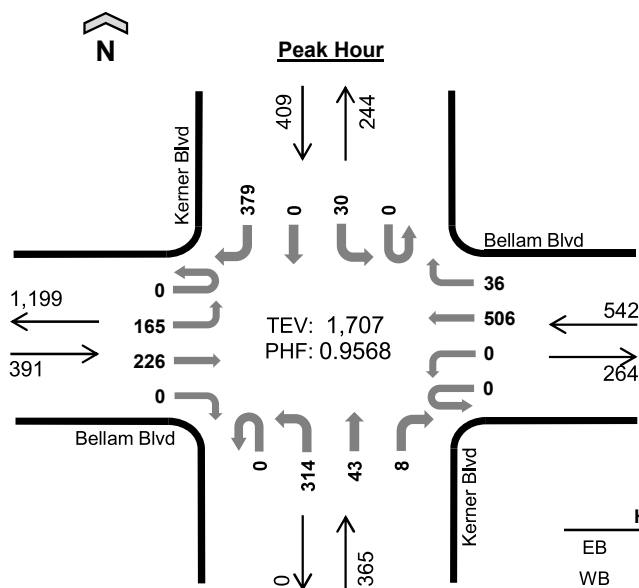
Count Summaries - Heavy Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	1	4	0	0	0	0	0	0	0	0	0	7	0
4:15 PM	0	0	5	0	0	1	11	0	0	0	0	0	0	0	0	0	17	0
4:30 PM	0	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	8	0
4:45 PM	0	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	4	36
5:00 PM	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	7	36
5:15 PM	0	0	4	0	0	2	5	0	0	0	0	0	0	0	0	0	11	30
5:30 PM	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	4	26
5:45 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	26
Count Total	0	0	22	1	0	5	34	0	0	0	0	0	0	0	0	0	62	
Pk Hr Heavy	0	0	11	0	0	3	16	0	0	0	0	0	0	0	0	0	30	

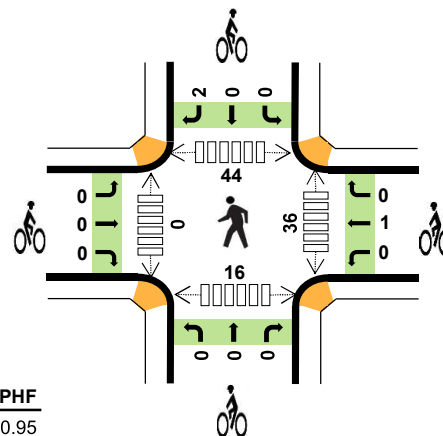
Count Summaries - Bikes

Interval Start	Bellam Blvd				Bellam Blvd				Castro Ave				n/a				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
Pk Hr Bike	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	

Kerner Blvd Bellam Blvd



Date: 1/16/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV%	PHF
EB	6%	0.95
WB	2%	0.90
NB	11%	0.93
SB	4%	0.78
TOTAL	5%	0.96

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:15 AM		0	44	54	0	0	0	145	6	0	76	9	0	0	4	0	83	421	0
7:30 AM		0	45	58	0	0	0	118	9	0	74	8	3	0	6	0	125	446	0
7:45 AM		0	39	55	0	0	0	122	7	0	85	9	4	0	10	0	89	420	0
8:00 AM		0	37	59	0	0	0	121	14	0	79	17	1	0	10	0	82	420	1,707
Pk Hr	All	0	165	226	0	0	0	506	36	0	314	43	8	0	30	0	379	1,707	
	HV	0	13	9	0	0	0	9	0	0	30	5	4	0	2	0	13	85	
	HV%	-	8%	4%	-	-	-	2%	0%	-	10%	12%	50%	-	7%	-	3%	5%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:15 AM	3	2	6	5	16	0	0	0	1	1	3	0	7	2	12
7:30 AM	6	2	8	2	18	0	0	0	0	0	10	0	18	2	30
7:45 AM	5	3	15	4	27	0	1	0	0	1	10	0	12	5	27
8:00 AM	8	2	10	4	24	0	0	0	1	1	13	0	7	7	27
Peak Hour	22	9	39	15	85	0	1	0	2	3	36	0	44	16	96

Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	38	33	0	0	0	88	4	0	45	6	1	0	9	0	138	362	0
7:15 AM		0	44	54	0	0	0	145	6	0	76	9	0	0	4	0	83	421	0
7:30 AM		0	45	58	0	0	0	118	9	0	74	8	3	0	6	0	125	446	0
7:45 AM		0	39	55	0	0	0	122	7	0	85	9	4	0	10	0	89	420	1,649
8:00 AM		0	37	59	0	0	0	121	14	0	79	17	1	0	10	0	82	420	1,707
8:15 AM		0	38	44	0	1	0	104	8	0	92	8	0	0	2	0	104	401	1,687
8:30 AM		0	58	56	0	0	0	77	6	0	115	4	0	0	6	0	93	415	1,656
8:45 AM		1	54	62	0	0	0	65	3	0	94	7	4	0	8	0	82	380	1,616
Count Total		1	353	421	0	1	0	840	57	0	660	68	13	0	55	0	796	3,265	
Pk Hr	All	0	165	226	0	0	0	506	36	0	314	43	8	0	30	0	379	1,707	
	HV	0	13	9	0	0	0	9	0	0	30	5	4	0	2	0	13	85	
	HV%	-	8%	4%	-	-	-	2%	0%	-	10%	12%	50%	-	7%	-	3%	5%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	7	0	3	2	12	0	0	0	0	0	8	0	10	2	20
7:15 AM	3	2	6	5	16	0	0	0	1	1	3	0	7	2	12
7:30 AM	6	2	8	2	18	0	0	0	0	0	10	0	18	2	30
7:45 AM	5	3	15	4	27	0	1	0	0	1	10	0	12	5	27
8:00 AM	8	2	10	4	24	0	0	0	1	1	13	0	7	7	27
8:15 AM	4	2	10	11	27	0	0	0	0	0	6	0	9	5	20
8:30 AM	6	1	28	2	37	0	0	0	1	1	11	0	7	8	26
8:45 AM	10	1	21	2	34	0	0	0	0	0	8	0	4	5	17
Count Total	49	13	101	32	195	0	1	0	3	4	69	0	74	36	179
Peak Hour	22	9	39	15	85	0	1	0	2	3	36	0	44	16	96

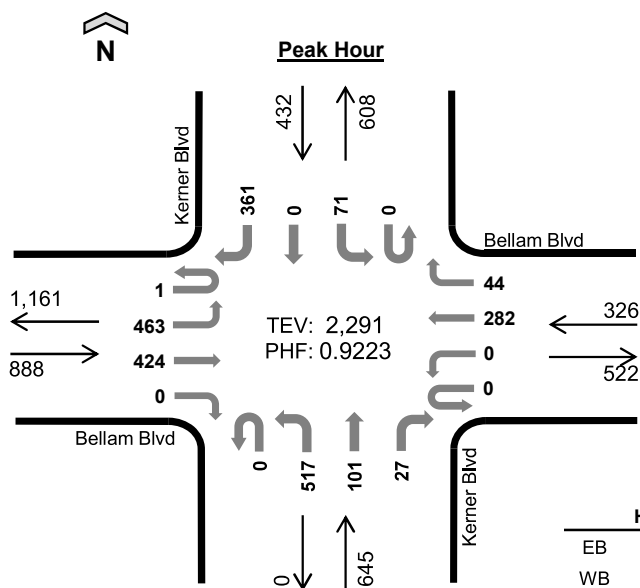
Count Summaries - Heavy Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	5	2	0	0	0	0	0	0	2	0	1	0	0	0	2	12	0
7:15 AM	0	2	1	0	0	0	2	0	0	4	2	0	0	0	0	5	16	0
7:30 AM	0	5	1	0	0	0	2	0	0	5	0	3	0	0	0	2	18	0
7:45 AM	0	2	3	0	0	0	3	0	0	13	1	1	0	0	0	4	27	73
8:00 AM	0	4	4	0	0	0	2	0	0	8	2	0	0	2	0	2	24	85
8:15 AM	0	2	2	0	0	0	2	0	0	8	2	0	0	0	0	11	27	96
8:30 AM	0	3	3	0	0	0	1	0	0	28	0	0	0	0	0	2	37	115
8:45 AM	0	3	7	0	0	0	1	0	0	19	2	0	0	0	0	2	34	122
Count Total	0	26	23	0	0	0	13	0	0	87	9	5	0	2	0	30	195	
Pk Hr Heavy	0	13	9	0	0	0	9	0	0	30	5	4	0	2	0	13	85	

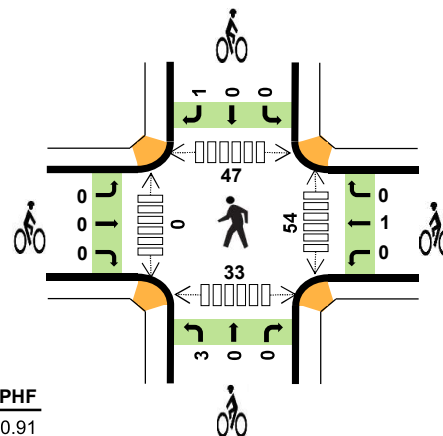
Count Summaries - Bikes

Interval Start	Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	4	
Pk Hr Bike	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	3	

Kerner Blvd Bellam Blvd



Date: 1/16/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV%	PHF
EB	1%	0.91
WB	1%	0.82
NB	1%	0.93
SB	2%	0.89
TOTAL	1%	0.92

Peak Hour Count Summaries

Peak Hour Interval Start		Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	113	119	0	0	0	91	8	0	136	28	4	0	21	0	101	621	0
4:45 PM		1	115	95	0	0	0	66	12	0	121	19	8	0	20	0	83	540	0
5:00 PM		0	108	94	0	0	0	66	11	0	127	25	4	0	15	0	99	549	0
5:15 PM		0	127	116	0	0	0	59	13	0	133	29	11	0	15	0	78	581	2,291
Pk Hr	All	1	463	424	0	0	0	282	44	0	517	101	27	0	71	0	361	2,291	
	HV	0	9	2	0	0	0	3	0	0	6	2	0	0	1	0	8	31	
	HV%	0%	2%	0%	-	-	-	1%	0%	-	1%	2%	0%	-	1%	-	2%	1%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:30 PM	4	2	1	2	9	0	1	0	0	1	12	0	13	4	29
4:45 PM	1	0	3	2	6	0	0	1	0	1	16	0	14	10	40
5:00 PM	3	0	3	1	7	0	0	2	0	2	16	0	8	9	33
5:15 PM	3	1	1	4	9	0	0	0	1	1	10	0	12	10	32
Peak Hour	11	3	8	9	31	0	1	3	1	5	54	0	47	33	134

Count Summaries - All Vehicles

Interval Start		Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	111	100	0	0	0	66	10	0	113	14	3	0	16	0	69	502	0
4:15 PM		0	106	95	0	0	0	76	8	0	136	15	2	0	15	0	84	537	0
4:30 PM		0	113	119	0	0	0	91	8	0	136	28	4	0	21	0	101	621	0
4:45 PM		1	115	95	0	0	0	66	12	0	121	19	8	0	20	0	83	540	2,200
5:00 PM		0	108	94	0	0	0	66	11	0	127	25	4	0	15	0	99	549	2,247
5:15 PM		0	127	116	0	0	0	59	13	0	133	29	11	0	15	0	78	581	2,291
5:30 PM		0	125	126	0	0	0	74	11	0	101	25	2	0	10	0	85	559	2,229
5:45 PM		0	111	106	0	0	0	70	12	0	96	22	1	0	16	0	85	519	2,208
Count Total		1	916	851	0	0	0	568	85	0	963	177	35	0	128	0	684	4,408	
Pk Hr	All	1	463	424	0	0	0	282	44	0	517	101	27	0	71	0	361	2,291	
	HV	0	9	2	0	0	0	3	0	0	6	2	0	0	1	0	8	31	
	HV%	0%	2%	0%	-	-	-	1%	0%	-	1%	2%	0%	-	1%	-	2%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	3	4	3	3	13	0	0	0	0	0	7	0	9	8	24
4:15 PM	4	2	2	6	14	0	0	0	0	0	8	0	9	4	21
4:30 PM	4	2	1	2	9	0	1	0	0	1	12	0	13	4	29
4:45 PM	1	0	3	2	6	0	0	1	0	1	16	0	14	10	40
5:00 PM	3	0	3	1	7	0	0	2	0	2	16	0	8	9	33
5:15 PM	3	1	1	4	9	0	0	0	1	1	10	0	12	10	32
5:30 PM	2	1	2	0	5	0	0	0	0	0	15	0	22	5	42
5:45 PM	2	0	1	1	4	0	0	0	0	0	10	0	5	3	18
Count Total	22	10	16	19	67	0	1	3	1	5	94	0	92	53	239
Peak Hour	11	3	8	9	31	0	1	3	1	5	54	0	47	33	134

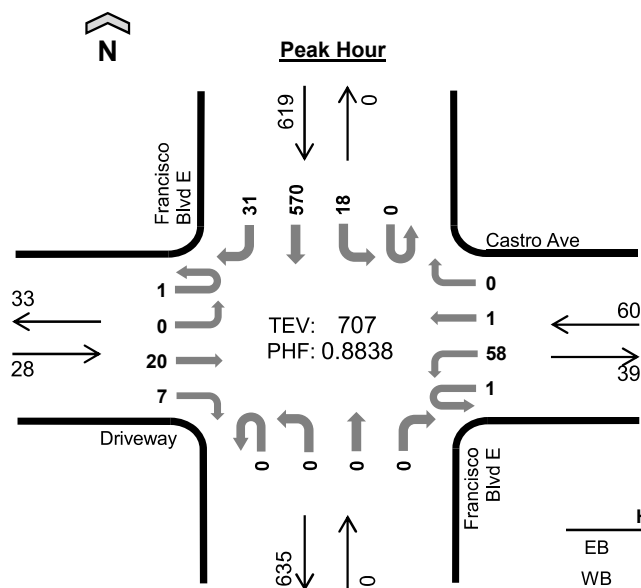
Count Summaries - Heavy Vehicles

Interval Start	Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	1	0	0	0	3	1	0	2	1	0	0	0	0	3	13	0
4:15 PM	0	1	3	0	0	0	2	0	0	2	0	0	0	0	0	6	14	0
4:30 PM	0	3	1	0	0	0	2	0	0	1	0	0	0	0	0	2	9	0
4:45 PM	0	1	0	0	0	0	0	0	0	2	1	0	0	1	0	1	6	42
5:00 PM	0	3	0	0	0	0	0	0	0	2	1	0	0	0	0	1	7	36
5:15 PM	0	2	1	0	0	0	1	0	0	1	0	0	0	0	0	4	9	31
5:30 PM	0	2	0	0	0	0	0	1	0	1	1	0	0	0	0	0	5	27
5:45 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4	25
Count Total	0	16	6	0	0	0	8	2	0	12	4	0	0	1	0	18	67	
Pk Hr Heavy	0	9	2	0	0	0	3	0	0	6	2	0	0	1	0	8	31	

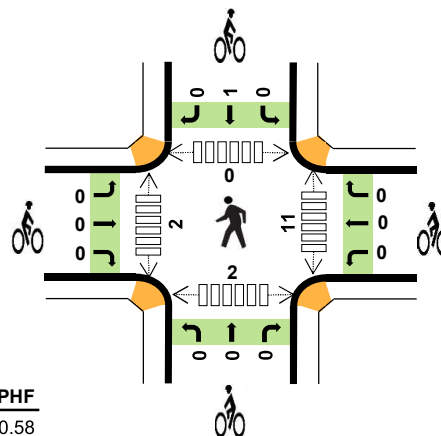
Count Summaries - Bikes

Interval Start	Bellam Blvd				Bellam Blvd				Kerner Blvd				Kerner Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	1	5	
Pk Hr Bike	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	1	5	

Francisco Blvd E Castro Ave



Date: 1/16/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV%	PHF
EB	0%	0.58
WB	10%	0.75
NB	--	--
SB	3%	0.86
TOTAL	3%	0.88

Peak Hour Count Summaries

Peak Hour Interval Start	Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	1	0	0	0	0	13	0	0	0	0	0	0	0	0	3	118	4	139	0
8:15 AM	0	0	5	1	1	18	1	0	0	0	0	0	0	0	7	145	13	191	0
8:30 AM	0	0	9	3	0	16	0	0	0	0	0	0	0	0	5	139	5	177	0
8:45 AM	0	0	6	3	0	11	0	0	0	0	0	0	0	0	3	168	9	200	707
P k Hr	All	1	0	20	7	1	58	1	0	0	0	0	0	0	18	570	31	707	
	HV	0	0	0	0	0	6	0	0	0	0	0	0	0	1	16	0	23	
	HV%	0%	-	0%	0%	0%	10%	0%	-	-	-	-	-	-	6%	3%	0%	3%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	0	2	0	5	7	0	0	0	1	1	3	1	0	0	4
8:15 AM	0	2	0	2	4	0	0	0	0	0	4	0	0	0	4
8:30 AM	0	1	0	8	9	0	0	0	0	0	1	0	0	2	3
8:45 AM	0	1	0	2	3	0	0	0	0	0	3	1	0	0	4
Peak Hour	0	6	0	17	23	0	0	0	1	1	11	2	0	2	15

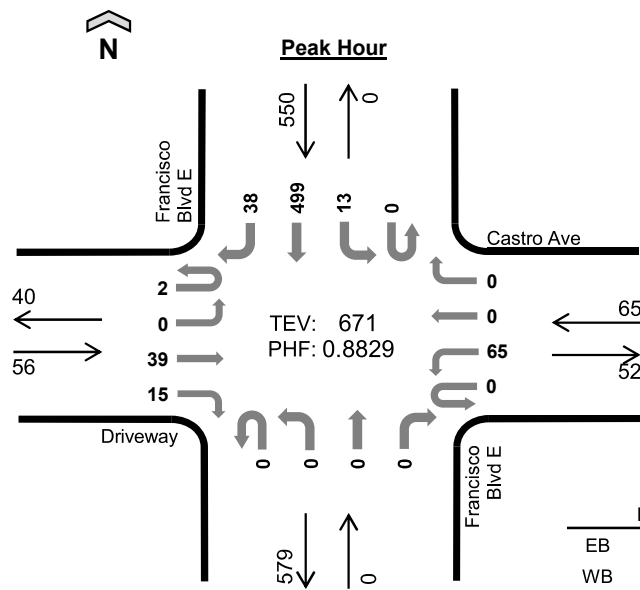
Count Summaries - All Vehicles

Interval Start	Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	1	0	26	0	0	0	0	0	0	0	0	3	103	3	136	0
7:15 AM	1	0	5	2	0	13	0	0	0	0	0	0	0	0	1	138	4	164	0
7:30 AM	0	0	0	1	0	21	0	0	0	0	0	0	0	0	2	139	2	165	0
7:45 AM	0	0	4	2	0	19	1	0	0	0	0	0	0	0	4	134	7	171	636
8:00 AM	1	0	0	0	0	13	0	0	0	0	0	0	0	0	3	118	4	139	639
8:15 AM	0	0	5	1	1	18	1	0	0	0	0	0	0	0	7	145	13	191	666
8:30 AM	0	0	9	3	0	16	0	0	0	0	0	0	0	0	5	139	5	177	678
8:45 AM	0	0	6	3	0	11	0	0	0	0	0	0	0	0	3	168	9	200	707
Count Total		2	0	29	13	1	137	2	0	0	0	0	0	0	28	1,084	47	1,343	
Pk Hr	All	1	0	20	7	1	58	1	0	0	0	0	0	0	18	570	31	707	
	HV	0	0	0	0	0	6	0	0	0	0	0	0	0	1	16	0	23	
	HV%	0%	-	0%	0%	0%	10%	0%	-	-	-	-	-	-	6%	3%	0%	3%	

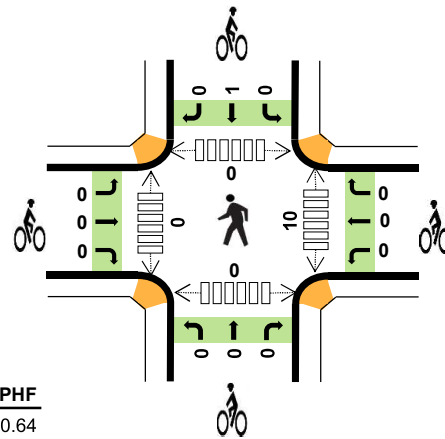
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	0	0	1	1	0	0	0	1	1	3	0	0	0	3
7:15 AM	0	0	0	4	4	0	0	0	0	0	1	0	0	0	1
7:30 AM	0	3	0	5	8	0	0	0	0	0	1	0	0	0	1
7:45 AM	0	2	0	5	7	0	0	0	0	0	2	0	0	0	2
8:00 AM	0	2	0	5	7	0	0	0	1	1	3	1	0	0	4
8:15 AM	0	2	0	2	4	0	0	0	0	0	4	0	0	0	4
8:30 AM	0	1	0	8	9	0	0	0	0	0	1	0	0	2	3
8:45 AM	0	1	0	2	3	0	0	0	0	0	3	1	0	0	4
Count Total	0	11	0	32	43	0	0	0	2	2	18	2	0	2	22
Peak Hour	0	6	0	17	23	0	0	0	1	1	11	2	0	2	15

Count Summaries - Heavy Vehicles																		
Interval Start	Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0
7:30 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	4	8	0
7:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	4	7	20
8:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	5	0	7	26
8:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	4	26
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	7	9	27
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	3	23
Count Total	0	0	0	0	0	11	0	0	0	0	0	0	0	3	29	0	43	
Pk Hr Heavy	0	0	0	0	0	6	0	0	0	0	0	0	0	1	16	0	23	
Count Summaries - Bikes																		
Interval Start	Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	

Francisco Blvd E Castro Ave



Date: 1/16/2025
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV%	PHF
EB	0%	0.64
WB	9%	0.77
NB	--	--
SB	5%	0.88
TOTAL	5%	0.88

Peak Hour Count Summaries

Peak Hour Interval Start		Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	7	3	0	21	0	0	0	0	0	0	0	4	120	11	166	0
4:15 PM		0	0	15	7	0	12	0	0	0	0	0	0	0	7	136	13	190	0
4:30 PM		0	0	10	5	0	18	0	0	0	0	0	0	0	2	112	8	155	0
4:45 PM		2	0	7	0	0	14	0	0	0	0	0	0	0	0	131	6	160	671
Pk Hr	All	2	0	39	15	0	65	0	0	0	0	0	0	0	13	499	38	671	
	HV	0	0	0	0	0	6	0	0	0	0	0	0	0	0	27	0	33	
	HV%	0%	-	0%	0%	-	9%	-	-	-	-	-	-	-	0%	5%	0%	5%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	4	0	4	8	0	0	0	0	0	4	0	0	0	4
4:15 PM	0	0	0	7	7	0	0	0	1	1	2	0	0	0	2
4:30 PM	0	1	0	9	10	0	0	0	0	0	2	0	0	0	2
4:45 PM	0	1	0	7	8	0	0	0	0	0	2	0	0	0	2
Peak Hour	0	6	0	27	33	0	0	0	1	1	10	0	0	0	10

Count Summaries - All Vehicles

Interval Start		Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	7	3	0	21	0	0	0	0	0	0	0	4	120	11	166	0
4:15 PM		0	0	15	7	0	12	0	0	0	0	0	0	0	7	136	13	190	0
4:30 PM		0	0	10	5	0	18	0	0	0	0	0	0	0	2	112	8	155	0
4:45 PM		2	0	7	0	0	14	0	0	0	0	0	0	0	0	131	6	160	671
5:00 PM		0	0	4	6	0	10	0	0	0	0	0	0	0	9	106	17	152	657
5:15 PM		0	0	8	5	0	13	1	0	0	0	0	0	0	5	120	10	162	629
5:30 PM		0	0	7	4	0	14	0	0	0	0	0	0	0	5	104	9	143	617
5:45 PM		1	0	5	7	0	8	0	0	0	0	0	0	0	4	87	12	124	581
Count Total		3	0	63	37	0	110	1	0	0	0	0	0	0	36	916	86	1,252	
Pk Hr	All	2	0	39	15	0	65	0	0	0	0	0	0	13	499	38	671		
	HV	0	0	0	0	0	6	0	0	0	0	0	0	0	27	0	33		
	HV%	0%	-	0%	0%	-	9%	-	-	-	-	-	-	0%	5%	0%	5%		

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	4	0	4	8	0	0	0	0	0	4	0	0	0	4
4:15 PM	0	0	0	7	7	0	0	0	1	1	2	0	0	0	2
4:30 PM	0	1	0	9	10	0	0	0	0	0	2	0	0	0	2
4:45 PM	0	1	0	7	8	0	0	0	0	0	2	0	0	0	2
5:00 PM	0	0	0	4	4	0	0	0	1	1	3	0	0	0	3
5:15 PM	0	3	0	6	9	0	0	0	1	1	2	0	0	0	2
5:30 PM	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0
Count Total	0	9	0	49	58	0	0	0	3	3	15	0	0	0	15
Peak Hour	0	6	0	27	33	0	0	0	1	1	10	0	0	0	10

Count Summaries - Heavy Vehicles																			
Interval Start	Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4	0	8	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	9	0	10	0
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	8	33
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	29
5:15 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	6	0	9	31
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	25
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	8	25
Count Total	0	0	0	0	0	8	1	0	0	0	0	0	0	0	1	48	0	58	
Pk Hr Heavy	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	27	0	33	

Count Summaries - Bikes																			
Interval Start	Driveway				Castro Ave				Francisco Blvd E				Francisco Blvd E				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	
Pk Hr Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	

Location: Francisco Blvd E, 100 Ft S/O Castro Avenue
Date Range: 1/15/2025 - 1/21/2025
Site Code: 01

Time	Wednesday 1/15/2025			Thursday 1/16/2025			Friday 1/17/2025			Saturday 1/18/2025			Sunday 1/19/2025			Monday 1/20/2025			Tuesday 1/21/2025			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	0	9	9	0	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	10	10
1:00 AM	0	12	12	0	14	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	13	13
2:00 AM	0	19	19	0	21	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20	20
3:00 AM	0	46	46	0	51	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	49	49
4:00 AM	0	61	61	0	55	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	58	58
5:00 AM	0	126	126	0	103	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	115	115
6:00 AM	0	345	345	0	321	321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	333	333
7:00 AM	0	547	547	0	582	582	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	565	565
8:00 AM	0	584	584	0	618	618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	601	601
9:00 AM	0	616	616	0	606	606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	611	611
10:00 AM	0	635	635	0	624	624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	630	630
11:00 AM	0	722	722	0	671	671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	697	697
12:00 PM	0	769	769	0	660	660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	715	715
1:00 PM	0	771	771	0	632	632	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	702	702
2:00 PM	0	671	671	0	568	568	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	620	620
3:00 PM	0	630	630	0	584	584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	607	607
4:00 PM	0	574	574	0	571	571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	573	573
5:00 PM	0	531	531	0	479	479	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	505	505
6:00 PM	0	345	345	0	304	304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	325	325
7:00 PM	0	220	220	0	252	252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	236	236
8:00 PM	0	166	166	0	192	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	179	179
9:00 PM	0	102	102	0	107	107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	105	105
10:00 PM	0	44	44	0	53	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	49	49
11:00 PM	0	17	17	0	19	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	18	18
Total	-	8,562	8,562	-	8,098	8,098	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,330	8,330
Percent	-	100%		-	100%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	
AM Peak	-	11:00	11:00	-	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11:00	11:00
Vol.	-	722	722	-	671	671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	697	697
PM Peak	-	13:00	13:00	-	12:00	12:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12:00	12:00
Vol.	-	771	771	-	660	660	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	715	715

1. Mid-week average includes data between Tuesday and Thursday.

Appendix B: LOS Reports

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-Ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			 	
Traffic Volume (vph)	712	10	329	0	0	0	0	553	73	54	1212	0
Future Volume (vph)	712	10	329	0	0	0	0	553	73	54	1212	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.96					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1704	1540					4865		1668	4793	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1704	1540					4865		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	742	10	343	0	0	0	0	576	76	56	1262	0
RTOR Reduction (vph)	0	0	259	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	378	374	84	0	0	0	0	639	0	56	1263	0
Confl. Peds. (#/hr)			17									
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	31.2	31.2	31.2					52.3		32.4	60.3	
Effective Green, g (s)	31.9	31.9	31.9					53.0		33.1	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.41		0.25	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	416	418	377					1983		424	2249	
v/s Ratio Prot								c0.13		0.03	c0.26	
v/s Ratio Perm	c0.22	0.22	0.05									
v/c Ratio	0.91	0.89	0.22					0.32		0.13	0.56	
Uniform Delay, d1	47.6	47.4	39.2					26.3		37.4	24.9	
Progression Factor	1.00	1.00	1.00					1.00		1.59	0.09	
Incremental Delay, d2	23.1	20.9	0.3					0.1		0.1	0.2	
Delay (s)	70.8	68.3	39.5					26.3		59.5	2.5	
Level of Service	E	E	D					C		E	A	
Approach Delay (s/veh)		60.1			0.0			26.3			4.9	
Approach LOS		E			A			C			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			29.2									
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			84.5%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	234	0	160	227	1038	0	0	1032	493
Future Volume (vph)	0	0	0	234	0	160	227	1038	0	0	1032	493
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.85
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1353
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1353
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	246	0	168	239	1093	0	0	1086	519
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	339
Lane Group Flow (vph)	0	0	0	246	0	168	239	1093	0	0	1086	180
Confl. Peds. (#/hr)									1			63
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	468
v/s Ratio Prot				c0.14			0.14	c0.32			c0.22	
v/s Ratio Perm						0.06						0.13
v/c Ratio				1.31		0.57	0.30	0.67			0.63	0.38
Uniform Delay, d1				58.2		55.3	21.3	26.8			35.6	32.0
Progression Factor				1.00		1.00	0.82	0.46			0.91	2.58
Incremental Delay, d2				171.7		2.5	0.2	0.8			1.6	2.2
Delay (s)				229.8		57.8	17.7	13.1			34.1	84.9
Level of Service				F		E	B	B			C	F
Approach Delay (s/veh)		0.0			160.0			13.9			50.5	
Approach LOS		A			F			B			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			49.5									
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			84.5%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 		 	  	
Traffic Volume (vph)	85	141	334	0	0	0	337	429	432	29	1191	78
Future Volume (vph)	85	141	334	0	0	0	337	429	432	29	1191	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	0.99				1.00	1.00	1.00	1.00	1.00	0.90
Flpb, ped/bikes		1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3391	1587				3467	3574	1599	1787	5136	1441
Flt Permitted		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3391	1587				3467	3574	1599	1787	5136	1441
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	145	344	0	0	0	347	442	445	30	1228	80
RTOR Reduction (vph)	0	0	41	0	0	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	233	303	0	0	0	347	442	445	30	1228	59
Confl. Peds. (#/hr)			2									68
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		16.7	33.5				16.8	93.2	130.0	6.0	82.1	82.1
Effective Green, g (s)		17.4	34.9				17.5	93.9	130.0	6.7	83.1	83.1
Actuated g/C Ratio		0.13	0.27				0.13	0.72	1.00	0.05	0.64	0.64
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		453	474				466	2581	1599	92	3283	921
v/s Ratio Prot			c0.09				c0.10	0.12		0.02	c0.24	
v/s Ratio Perm		0.07	0.11						0.28			0.04
v/c Ratio		0.51	0.64				0.74	0.17	0.28	0.33	0.37	0.06
Uniform Delay, d1		52.4	42.0				54.1	5.7	0.0	59.5	11.1	8.8
Progression Factor		1.00	1.00				1.14	0.95	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4	2.1				4.3	0.1	0.3	0.8	0.3	0.1
Delay (s)		52.8	44.1				65.8	5.6	0.3	60.2	11.4	9.0
Level of Service		D	D				E	A	A	E	B	A
Approach Delay (s/veh)		47.6			0.0			20.6			12.4	
Approach LOS		D			A			C			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			22.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			56.4%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			 	
Traffic Volume (vph)	777	133	139	0	0	0	0	936	162	170	738	0
Future Volume (vph)	777	133	139	0	0	0	0	936	162	170	738	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1723	1545					4826		1668	4793	
Flt Permitted	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1723	1545					4826		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	809	139	145	0	0	0	0	975	169	177	769	0
RTOR Reduction (vph)	0	0	108	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	413	535	37	0	0	0	0	1125	0	177	769	0
Confl. Peds. (#/hr)			15						1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	32.3	32.3	32.3					59.3		24.3	60.3	
Effective Green, g (s)	33.0	33.0	33.0					60.0		25.0	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.46		0.19	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	431	437	392					2227		320	2249	
v/s Ratio Prot								c0.23		c0.11	0.16	
v/s Ratio Perm	0.24	0.31	0.02									
v/c Ratio	0.96	1.22	0.09					0.51		0.55	0.34	
Uniform Delay, d1	47.8	48.5	37.1					24.6		47.5	21.8	
Progression Factor	1.00	1.00	1.00					1.00		1.86	0.14	
Incremental Delay, d2	32.4	119.8	0.1					0.2		1.8	0.1	
Delay (s)	80.2	168.3	37.2					24.8		90.2	3.1	
Level of Service	F	F	D					C		F	A	
Approach Delay (s/veh)		117.6			0.0			24.8			19.4	
Approach LOS		F			A			C			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			55.1									
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			130.0							17.4		
Intersection Capacity Utilization			100.7%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-Ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	69	0	102	289	1424	0	0	839	630
Future Volume (vph)	0	0	0	69	0	102	289	1424	0	0	839	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.83
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1328
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1328
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	71	0	105	298	1468	0	0	865	649
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	382
Lane Group Flow (vph)	0	0	0	71	0	105	298	1468	0	0	865	267
Confl. Peds. (#/hr)												70
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	459
v/s Ratio Prot				c0.04			0.17	c0.42			0.17	
v/s Ratio Perm						0.04						c0.20
v/c Ratio				0.38		0.35	0.37	0.91			0.50	0.58
Uniform Delay, d1				54.2		54.0	22.1	31.8			33.7	34.8
Progression Factor				1.00		1.00	0.96	0.58			1.24	3.60
Incremental Delay, d2				1.3		0.7	0.2	4.4			1.0	4.9
Delay (s)				55.5		54.8	21.6	23.0			42.8	130.1
Level of Service				E		D	C	C			D	F
Approach Delay (s/veh)		0.0			55.0			22.7			80.2	
Approach LOS		A			E			C			F	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			49.6									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			130.0								18.8	
Intersection Capacity Utilization			100.7%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 			  	
Traffic Volume (vph)	156	174	408	0	0	0	288	934	304	32	1061	193
Future Volume (vph)	156	174	408	0	0	0	288	934	304	32	1061	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	1.00				1.00	1.00	0.99	1.00	1.00	0.89
Flpb, ped/bikes		0.99	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3338	1599				3467	3574	1579	1787	5136	1421
Flt Permitted		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3338	1599				3467	3574	1579	1787	5136	1421
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	158	176	412	0	0	0	291	943	307	32	1072	195
RTOR Reduction (vph)	0	0	40	0	0	0	0	0	0	0	0	63
Lane Group Flow (vph)	0	334	372	0	0	0	291	943	307	32	1072	132
Confl. Peds. (#/hr)	18											78
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		21.0	35.1				14.1	88.9	130.0	6.0	80.5	80.5
Effective Green, g (s)		21.7	36.5				14.8	89.6	130.0	6.7	81.5	81.5
Actuated g/C Ratio		0.17	0.28				0.11	0.69	1.00	0.05	0.63	0.63
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		557	498				394	2463	1579	92	3219	890
v/s Ratio Prot			c0.08				0.08	c0.26		0.02	c0.21	
v/s Ratio Perm		0.10	0.15						0.19			0.09
v/c Ratio		0.60	0.75				0.74	0.38	0.19	0.35	0.33	0.15
Uniform Delay, d1		50.1	42.5				55.7	8.5	0.0	59.5	11.4	10.0
Progression Factor		1.00	1.00				1.42	0.27	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.2	5.3				2.9	0.2	0.1	0.8	0.3	0.4
Delay (s)		51.3	47.8				82.0	2.5	0.1	60.4	11.7	10.3
Level of Service		D	D				F	A	A	E	B	B
Approach Delay (s/veh)		49.4			0.0			17.1			12.7	
Approach LOS		D			A			B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)		22.2										
HCM 2000 Volume to Capacity ratio		0.52										
Actuated Cycle Length (s)		130.0										
Intersection Capacity Utilization		56.9%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-Ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			 	
Traffic Volume (vph)	712	10	329	0	0	0	0	550	73	54	1212	0
Future Volume (vph)	712	10	329	0	0	0	0	550	73	54	1212	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.96					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1704	1540					4864		1668	4793	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1704	1540					4864		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	742	10	343	0	0	0	0	573	76	56	1262	0
RTOR Reduction (vph)	0	0	259	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	378	374	84	0	0	0	0	636	0	56	1263	0
Confl. Peds. (#/hr)			17									
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	31.2	31.2	31.2					52.3		32.4	60.3	
Effective Green, g (s)	31.9	31.9	31.9					53.0		33.1	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.41		0.25	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	416	418	377					1983		424	2249	
v/s Ratio Prot								c0.13		0.03	c0.26	
v/s Ratio Perm	c0.22	0.22	0.05									
v/c Ratio	0.91	0.89	0.22					0.32		0.13	0.56	
Uniform Delay, d1	47.6	47.4	39.2					26.2		37.4	24.9	
Progression Factor	1.00	1.00	1.00					1.00		1.59	0.09	
Incremental Delay, d2	23.1	20.9	0.3					0.1		0.1	0.2	
Delay (s)	70.8	68.3	39.5					26.3		59.5	2.5	
Level of Service	E	E	D					C		E	A	
Approach Delay (s/veh)		60.1			0.0			26.3			4.9	
Approach LOS		E			A			C			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			29.2									
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			84.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	234	0	161	225	1037	0	0	1032	496
Future Volume (vph)	0	0	0	234	0	161	225	1037	0	0	1032	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.85
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1353
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1353
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	246	0	169	237	1092	0	0	1086	522
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	341
Lane Group Flow (vph)	0	0	0	246	0	169	237	1092	0	0	1086	181
Confl. Peds. (#/hr)									1			63
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	468
v/s Ratio Prot				c0.14			0.14	c0.32			c0.22	
v/s Ratio Perm						0.06						0.13
v/c Ratio				1.31		0.57	0.29	0.67			0.63	0.39
Uniform Delay, d1				58.2		55.4	21.2	26.8			35.6	32.1
Progression Factor				1.00		1.00	0.82	0.46			0.91	2.60
Incremental Delay, d2				171.7		2.7	0.2	0.8			1.6	2.2
Delay (s)				229.8		58.0	17.7	13.1			34.0	85.6
Level of Service				F		E	B	B			C	F
Approach Delay (s/veh)		0.0			159.9			13.9			50.8	
Approach LOS		A			F			B			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			49.7									
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			84.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 			  	
Traffic Volume (vph)	85	141	334	0	0	0	337	428	433	29	1194	78
Future Volume (vph)	85	141	334	0	0	0	337	428	433	29	1194	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	0.99				1.00	1.00	1.00	1.00	1.00	0.90
Flpb, ped/bikes		1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3391	1587				3467	3574	1599	1787	5136	1441
Flt Permitted		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3391	1587				3467	3574	1599	1787	5136	1441
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	145	344	0	0	0	347	441	446	30	1231	80
RTOR Reduction (vph)	0	0	41	0	0	0	0	0	0	0	0	21
Lane Group Flow (vph)	0	233	303	0	0	0	347	441	446	30	1231	59
Confl. Peds. (#/hr)			2									68
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		16.7	33.5				16.8	93.2	130.0	6.0	82.1	82.1
Effective Green, g (s)		17.4	34.9				17.5	93.9	130.0	6.7	83.1	83.1
Actuated g/C Ratio		0.13	0.27				0.13	0.72	1.00	0.05	0.64	0.64
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		453	474				466	2581	1599	92	3283	921
v/s Ratio Prot			c0.09				c0.10	0.12		0.02	c0.24	
v/s Ratio Perm		0.07	0.11						0.28			0.04
v/c Ratio		0.51	0.64				0.74	0.17	0.28	0.33	0.37	0.06
Uniform Delay, d1		52.4	42.0				54.1	5.7	0.0	59.5	11.1	8.8
Progression Factor		1.00	1.00				1.14	0.95	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4	2.1				4.3	0.1	0.3	0.8	0.3	0.1
Delay (s)		52.8	44.1				65.9	5.5	0.3	60.2	11.5	9.0
Level of Service		D	D				E	A	A	E	B	A
Approach Delay (s/veh)		47.6			0.0			20.6			12.4	
Approach LOS		D			A			C			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			22.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			56.4%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			 	
Traffic Volume (vph)	779	133	139	0	0	0	0	936	162	172	738	0
Future Volume (vph)	779	133	139	0	0	0	0	936	162	172	738	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1723	1545					4826		1668	4793	
Flt Permitted	0.95	0.96	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1723	1545					4826		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	811	139	145	0	0	0	0	975	169	179	769	0
RTOR Reduction (vph)	0	0	108	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	414	536	37	0	0	0	0	1125	0	179	769	0
Confl. Peds. (#/hr)			15						1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	32.3	32.3	32.3					59.3		24.3	60.3	
Effective Green, g (s)	33.0	33.0	33.0					60.0		25.0	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.46		0.19	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	431	437	392					2227		320	2249	
v/s Ratio Prot								c0.23		c0.11	0.16	
v/s Ratio Perm	0.24	0.31	0.02									
v/c Ratio	0.96	1.23	0.09					0.51		0.56	0.34	
Uniform Delay, d1	47.9	48.5	37.1					24.6		47.5	21.8	
Progression Factor	1.00	1.00	1.00					1.00		1.86	0.14	
Incremental Delay, d2	33.2	120.8	0.1					0.2		1.9	0.1	
Delay (s)	81.0	169.3	37.2					24.8		90.3	3.1	
Level of Service	F	F	D					C		F	A	
Approach Delay (s/veh)		118.4			0.0			24.8			19.5	
Approach LOS		F			A			C			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			55.4									
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			130.0							17.4		
Intersection Capacity Utilization			100.8%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-Ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	69	0	102	289	1426	0	0	841	632
Future Volume (vph)	0	0	0	69	0	102	289	1426	0	0	841	632
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.83
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1328
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1328
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	71	0	105	298	1470	0	0	867	652
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	382
Lane Group Flow (vph)	0	0	0	71	0	105	298	1470	0	0	867	270
Confl. Peds. (#/hr)												70
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	459
v/s Ratio Prot				c0.04			0.17	c0.43			0.17	
v/s Ratio Perm						0.04						c0.20
v/c Ratio				0.38		0.35	0.37	0.91			0.50	0.59
Uniform Delay, d1				54.2		54.0	22.1	31.9			33.7	34.9
Progression Factor				1.00		1.00	0.96	0.58			1.24	3.56
Incremental Delay, d2				1.3		0.7	0.2	4.4			1.0	5.0
Delay (s)				55.5		54.8	21.6	23.0			42.9	129.2
Level of Service				E		D	C	C			D	F
Approach Delay (s/veh)		0.0			55.0			22.8			79.9	
Approach LOS		A			E			C			E	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			49.5									
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			100.8%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 			  	
Traffic Volume (vph)	156	176	408	0	0	0	288	934	306	34	1065	193
Future Volume (vph)	156	176	408	0	0	0	288	934	306	34	1065	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	1.00				1.00	1.00	0.99	1.00	1.00	0.89
Flpb, ped/bikes		0.99	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3339	1599				3467	3574	1579	1787	5136	1421
Flt Permitted		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3339	1599				3467	3574	1579	1787	5136	1421
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	158	178	412	0	0	0	291	943	309	34	1076	195
RTOR Reduction (vph)	0	0	40	0	0	0	0	0	0	0	0	63
Lane Group Flow (vph)	0	336	372	0	0	0	291	943	309	34	1076	132
Confl. Peds. (#/hr)	18											78
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		21.0	35.1				14.1	88.9	130.0	6.0	80.5	80.5
Effective Green, g (s)		21.7	36.5				14.8	89.6	130.0	6.7	81.5	81.5
Actuated g/C Ratio		0.17	0.28				0.11	0.69	1.00	0.05	0.63	0.63
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		557	498				394	2463	1579	92	3219	890
v/s Ratio Prot			c0.08				0.08	c0.26		0.02	c0.21	
v/s Ratio Perm		0.10	0.15						0.20			0.09
v/c Ratio		0.60	0.75				0.74	0.38	0.20	0.37	0.33	0.15
Uniform Delay, d1		50.2	42.5				55.7	8.5	0.0	59.6	11.4	10.0
Progression Factor		1.00	1.00				1.42	0.27	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.3	5.3				2.9	0.2	0.1	0.9	0.3	0.4
Delay (s)		51.4	47.8				82.0	2.5	0.1	60.5	11.7	10.3
Level of Service		D	D				F	A	A	E	B	B
Approach Delay (s/veh)		49.4			0.0			17.0			12.8	
Approach LOS		D			A			B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			22.2				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			56.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-Ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	720	0	350	0	0	0	0	600	430	120	1270	0
Future Volume (vph)	720	0	350	0	0	0	0	600	430	120	1270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.96					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.94		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1698	1540					4641		1668	4793	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1698	1540					4641		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	750	0	365	0	0	0	0	625	448	125	1323	0
RTOR Reduction (vph)	0	0	271	0	0	0	0	100	0	0	0	0
Lane Group Flow (vph)	382	368	94	0	0	0	0	973	0	125	1323	0
Confl. Peds. (#/hr)			17									
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	31.3	31.3	31.3					52.3		32.3	60.3	
Effective Green, g (s)	32.0	32.0	32.0					53.0		33.0	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.41		0.25	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	417	417	379					1892		423	2249	
v/s Ratio Prot								c0.21		0.07	c0.28	
v/s Ratio Perm	c0.23	0.22	0.06									
v/c Ratio	0.92	0.88	0.25					0.51		0.30	0.59	
Uniform Delay, d1	47.7	47.2	39.4					28.9		39.1	25.3	
Progression Factor	1.00	1.00	1.00					1.00		1.59	0.09	
Incremental Delay, d2	24.5	19.2	0.3					0.2		0.3	0.2	
Delay (s)	72.2	66.4	39.7					29.1		62.7	2.6	
Level of Service	E	E	D					C		E	A	
Approach Delay (s/veh)		59.6			0.0			29.1			7.8	
Approach LOS		E			A			C			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			30.0									
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			130.0							17.4		
Intersection Capacity Utilization			98.9%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	190	0	190	220	1150	0	0	1230	600
Future Volume (vph)	0	0	0	190	0	190	220	1150	0	0	1230	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.85
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1353
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1353
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	200	0	200	232	1211	0	0	1295	632
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	406
Lane Group Flow (vph)	0	0	0	200	0	200	232	1211	0	0	1295	226
Confl. Peds. (#/hr)									1			63
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	468
v/s Ratio Prot				c0.11			0.13	c0.35			c0.26	
v/s Ratio Perm						0.07						0.17
v/c Ratio				1.06		0.68	0.29	0.75			0.75	0.48
Uniform Delay, d1				58.2		56.0	21.2	28.2			37.6	33.4
Progression Factor				1.00		1.00	0.74	0.46			0.97	1.70
Incremental Delay, d2				83.6		6.0	0.2	1.4			2.7	3.1
Delay (s)				141.7		62.0	15.8	14.2			39.1	59.7
Level of Service				F		E	B	B			D	E
Approach Delay (s/veh)		0.0			101.9			14.5			45.9	
Approach LOS		A			F			B			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			39.8									
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			130.0								18.8	
Intersection Capacity Utilization			98.9%								F	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 			  	
Traffic Volume (vph)	70	310	540	0	0	0	300	560	480	60	1090	100
Future Volume (vph)	70	310	540	0	0	0	300	560	480	60	1090	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	0.99				1.00	1.00	1.00	1.00	1.00	0.90
Flpb, ped/bikes		1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3424	1587				3467	3574	1599	1787	5136	1441
Flt Permitted		0.99	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3424	1587				3467	3574	1599	1787	5136	1441
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	72	320	557	0	0	0	309	577	495	62	1124	103
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	392	519	0	0	0	309	577	495	62	1124	71
Confl. Peds. (#/hr)			2									68
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		20.1	39.4				19.3	87.8	130.0	8.0	76.2	76.2
Effective Green, g (s)		20.8	40.8				20.0	88.5	130.0	8.7	77.2	77.2
Actuated g/C Ratio		0.16	0.31				0.15	0.68	1.00	0.07	0.59	0.59
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		547	546				533	2433	1599	119	3049	855
v/s Ratio Prot			c0.15				0.09	0.16		c0.03	c0.22	
v/s Ratio Perm		0.11	0.18						0.31			0.05
v/c Ratio		0.72	0.95				0.58	0.24	0.31	0.52	0.37	0.08
Uniform Delay, d1		51.8	43.6				51.1	7.9	0.0	58.6	13.7	11.3
Progression Factor		1.00	1.00				0.97	0.93	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.7	25.9				0.6	0.2	0.3	1.9	0.3	0.2
Delay (s)		55.5	69.5				50.4	7.5	0.3	60.5	14.1	11.5
Level of Service		E	E				D	A	A	E	B	B
Approach Delay (s/veh)		63.7		0.0				14.5			16.1	
Approach LOS		E		A				B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			28.0									
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			130.0							12.0		
Intersection Capacity Utilization			65.3%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			 	
Traffic Volume (vph)	890	0	210	0	0	0	0	1020	260	180	940	0
Future Volume (vph)	890	0	210	0	0	0	0	1020	260	180	940	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1698	1545					4780		1668	4793	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1698	1545					4780		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	927	0	219	0	0	0	0	1062	271	188	979	0
RTOR Reduction (vph)	0	0	163	0	0	0	0	34	0	0	0	0
Lane Group Flow (vph)	473	454	56	0	0	0	0	1300	0	188	979	0
Confl. Peds. (#/hr)			15						1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	32.3	32.3	32.3					59.3		24.3	60.3	
Effective Green, g (s)	33.0	33.0	33.0					60.0		25.0	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.46		0.19	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	431	431	392					2206		320	2249	
v/s Ratio Prot								c0.27		c0.11	0.20	
v/s Ratio Perm	c0.28	0.27	0.04									
v/c Ratio	1.10	1.05	0.14					0.59		0.59	0.44	
Uniform Delay, d1	48.5	48.5	37.5					25.9		47.8	23.0	
Progression Factor	1.00	1.00	1.00					1.00		1.86	0.05	
Incremental Delay, d2	72.4	58.1	0.2					0.4		2.3	0.1	
Delay (s)	120.9	106.6	37.7					26.3		91.1	1.4	
Level of Service	F	F	D					C		F	A	
Approach Delay (s/veh)		99.3			0.0			26.3			15.8	
Approach LOS		F			A			C			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			45.9									
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			102.0%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-Ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											  	
Traffic Volume (vph)	0	0	0	150	0	110	280	1660	0	0	960	590
Future Volume (vph)	0	0	0	150	0	110	280	1660	0	0	960	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.83
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1328
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1328
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	155	0	113	289	1711	0	0	990	608
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	388
Lane Group Flow (vph)	0	0	0	155	0	113	289	1711	0	0	990	220
Confl. Peds. (#/hr)												70
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	459
v/s Ratio Prot				c0.09			0.17	c0.50			c0.20	
v/s Ratio Perm						0.04						0.17
v/c Ratio				0.82		0.38	0.36	1.06			0.58	0.48
Uniform Delay, d1				57.0		54.2	22.0	34.5			34.7	33.3
Progression Factor				1.00		1.00	0.90	0.61			1.33	5.98
Incremental Delay, d2				24.5		0.8	0.2	33.0			1.3	3.2
Delay (s)				81.4		55.0	20.0	53.9			47.5	202.3
Level of Service				F		E	B	D			D	F
Approach Delay (s/veh)		0.0			70.3			49.0			106.4	
Approach LOS		A			E			D			F	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			74.2									
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			102.0%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 			   	
Traffic Volume (vph)	210	390	390	0	0	0	350	720	700	60	1160	170
Future Volume (vph)	210	390	390	0	0	0	350	720	700	60	1160	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	1.00				1.00	1.00	0.99	1.00	1.00	0.89
Flpb, ped/bikes		0.99	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3368	1599				3467	3574	1579	1787	5136	1421
Flt Permitted		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3368	1599				3467	3574	1579	1787	5136	1421
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	212	394	394	0	0	0	354	727	707	61	1172	172
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	0	0	0	58
Lane Group Flow (vph)	0	606	356	0	0	0	354	727	707	61	1172	114
Confl. Peds. (#/hr)	18											78
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		26.5	41.4				14.9	81.4	130.0	8.0	74.2	74.2
Effective Green, g (s)		27.2	42.8				15.6	82.1	130.0	8.7	75.2	75.2
Actuated g/C Ratio		0.21	0.33				0.12	0.63	1.00	0.07	0.58	0.58
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		704	575				416	2257	1579	119	2970	821
v/s Ratio Prot			0.07				c0.10	0.20		0.03	0.23	
v/s Ratio Perm		0.18	0.15						c0.45			0.08
v/c Ratio		0.86	0.62				0.85	0.32	0.45	0.51	0.39	0.14
Uniform Delay, d1		49.6	36.7				56.1	11.1	0.0	58.6	15.0	12.6
Progression Factor		1.00	1.00				1.50	0.28	1.00	1.00	1.00	1.00
Incremental Delay, d2		10.2	1.4				1.6	0.0	0.1	1.5	0.4	0.4
Delay (s)		59.7	38.2				85.7	3.2	0.1	60.1	15.4	12.9
Level of Service		E	D				F	A	A	E	B	B
Approach Delay (s/veh)		51.2			0.0			18.3			17.0	
Approach LOS		D			A			B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			25.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			61.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-Ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	720	0	350	0	0	0	0	597	430	120	1270	0
Future Volume (vph)	720	0	350	0	0	0	0	597	430	120	1270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.96					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.94		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1698	1540					4640		1668	4793	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1698	1540					4640		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	750	0	365	0	0	0	0	622	448	125	1323	0
RTOR Reduction (vph)	0	0	271	0	0	0	0	100	0	0	0	0
Lane Group Flow (vph)	382	368	94	0	0	0	0	970	0	125	1323	0
Confl. Peds. (#/hr)			17									
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	31.3	31.3	31.3					52.3		32.3	60.3	
Effective Green, g (s)	32.0	32.0	32.0					53.0		33.0	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.41		0.25	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	417	417	379					1891		423	2249	
v/s Ratio Prot								c0.21		0.07	c0.28	
v/s Ratio Perm	c0.23	0.22	0.06									
v/c Ratio	0.92	0.88	0.25					0.51		0.30	0.59	
Uniform Delay, d1	47.7	47.2	39.4					28.8		39.1	25.3	
Progression Factor	1.00	1.00	1.00					1.00		1.59	0.09	
Incremental Delay, d2	24.5	19.2	0.3					0.2		0.3	0.2	
Delay (s)	72.2	66.4	39.7					29.1		62.7	2.6	
Level of Service	E	E	D					C		E	A	
Approach Delay (s/veh)		59.6			0.0			29.1			7.8	
Approach LOS		E			A			C			A	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			30.0									
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			130.0							17.4		
Intersection Capacity Utilization			99.0%							F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	190	0	191	218	1149	0	0	1230	603
Future Volume (vph)	0	0	0	190	0	191	218	1149	0	0	1230	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.85
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1353
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1353
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	200	0	201	229	1209	0	0	1295	635
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	408
Lane Group Flow (vph)	0	0	0	200	0	201	229	1209	0	0	1295	227
Confl. Peds. (#/hr)									1			63
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	468
v/s Ratio Prot				c0.11			0.13	c0.35			c0.26	
v/s Ratio Perm						0.07						0.17
v/c Ratio				1.06		0.68	0.28	0.75			0.75	0.49
Uniform Delay, d1				58.2		56.0	21.1	28.2			37.6	33.4
Progression Factor				1.00		1.00	0.74	0.46			0.97	1.70
Incremental Delay, d2				83.6		6.1	0.2	1.4			2.7	3.1
Delay (s)				141.7		62.1	15.8	14.2			39.1	59.9
Level of Service				F		E	B	B			D	E
Approach Delay (s/veh)		0.0			101.8			14.5			46.0	
Approach LOS		A			F			B			D	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			39.9									
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			130.0								18.8	
Intersection Capacity Utilization			99.0%								F	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 					 	 			  	
Traffic Volume (vph)	70	310	540	0	0	0	300	559	481	60	1093	100
Future Volume (vph)	70	310	540	0	0	0	300	559	481	60	1093	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	0.99				1.00	1.00	1.00	1.00	1.00	0.90
Flpb, ped/bikes		1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3424	1587				3467	3574	1599	1787	5136	1441
Flt Permitted		0.99	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3424	1587				3467	3574	1599	1787	5136	1441
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	72	320	557	0	0	0	309	576	496	62	1127	103
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	392	519	0	0	0	309	576	496	62	1127	71
Confl. Peds. (#/hr)			2									68
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		20.1	39.4				19.3	87.8	130.0	8.0	76.2	76.2
Effective Green, g (s)		20.8	40.8				20.0	88.5	130.0	8.7	77.2	77.2
Actuated g/C Ratio		0.16	0.31				0.15	0.68	1.00	0.07	0.59	0.59
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		547	546				533	2433	1599	119	3049	855
v/s Ratio Prot			c0.15				0.09	0.16		c0.03	c0.22	
v/s Ratio Perm		0.11	0.18						0.31			0.05
v/c Ratio		0.72	0.95				0.58	0.24	0.31	0.52	0.37	0.08
Uniform Delay, d1		51.8	43.6				51.1	7.9	0.0	58.6	13.7	11.3
Progression Factor		1.00	1.00				0.98	0.93	1.00	1.00	1.00	1.00
Incremental Delay, d2		3.7	25.9				0.6	0.2	0.3	1.9	0.3	0.2
Delay (s)		55.5	69.5				50.5	7.5	0.3	60.5	14.1	11.5
Level of Service		E	E				D	A	A	E	B	B
Approach Delay (s/veh)		63.7		0.0				14.6			16.1	
Approach LOS		E		A				B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			28.0				HCM 2000 Level of Service		C			
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			65.3%				ICU Level of Service		C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: Bellam Blvd & 101/I-580 EB Off-ramp/I-580 EB On-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			 	
Traffic Volume (vph)	892	0	210	0	0	0	0	1020	260	182	940	0
Future Volume (vph)	892	0	210	0	0	0	0	1020	260	182	940	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	11	11	10	10	10
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97					1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00		1.00	1.00	
Frt	1.00	1.00	0.85					0.97		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1698	1698	1545					4780		1668	4793	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1698	1698	1545					4780		1668	4793	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	929	0	219	0	0	0	0	1062	271	190	979	0
RTOR Reduction (vph)	0	0	163	0	0	0	0	34	0	0	0	0
Lane Group Flow (vph)	474	455	56	0	0	0	0	1300	0	190	979	0
Confl. Peds. (#/hr)			15						1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	0	0
Turn Type	Perm	NA	Perm					NA		Prot	NA	
Protected Phases		4						2		1 3	3 6	
Permitted Phases	4		4									
Actuated Green, G (s)	32.3	32.3	32.3					59.3		24.3	60.3	
Effective Green, g (s)	33.0	33.0	33.0					60.0		25.0	61.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.46		0.19	0.47	
Clearance Time (s)	4.7	4.7	4.7					4.7				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	431	431	392					2206		320	2249	
v/s Ratio Prot								c0.27		c0.11	0.20	
v/s Ratio Perm	c0.28	0.27	0.04									
v/c Ratio	1.10	1.06	0.14					0.59		0.59	0.44	
Uniform Delay, d1	48.5	48.5	37.5					25.9		47.9	23.0	
Progression Factor	1.00	1.00	1.00					1.00		1.85	0.05	
Incremental Delay, d2	73.2	58.8	0.2					0.4		2.5	0.1	
Delay (s)	121.7	107.3	37.7					26.3		91.2	1.4	
Level of Service	F	F	D					C		F	A	
Approach Delay (s/veh)		99.9			0.0			26.3			16.0	
Approach LOS		F			A			C			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			46.1									
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			130.0							17.4		
Intersection Capacity Utilization			102.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: Bellam Blvd & I-580 WB On-Ramp/I-580 WB Off-ramp

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	150	0	110	280	1662	0	0	962	592
Future Volume (vph)	0	0	0	150	0	110	280	1662	0	0	962	592
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	11	12
Total Lost time (s)				2.3		2.3	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00		0.88	1.00	0.95			0.91	1.00
Frpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	0.83
Flpb, ped/bikes				1.00		1.00	1.00	1.00			1.00	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1787		2814	1728	3455			4964	1328
Flt Permitted				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1787		2814	1728	3455			4964	1328
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	155	0	113	289	1713	0	0	992	610
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	388
Lane Group Flow (vph)	0	0	0	155	0	113	289	1713	0	0	992	222
Confl. Peds. (#/hr)												70
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	1%	1%	0%	0%	1%	1%
Turn Type				Prot		Perm	Split	NA			NA	Perm
Protected Phases				8			5 7	5 7			6	
Permitted Phases						8						6
Actuated Green, G (s)				13.0		13.0	60.3	60.3			44.3	44.3
Effective Green, g (s)				13.7		13.7	61.0	61.0			45.0	45.0
Actuated g/C Ratio				0.11		0.11	0.47	0.47			0.35	0.35
Clearance Time (s)				3.0		3.0					4.7	4.7
Vehicle Extension (s)				3.0		3.0					3.0	3.0
Lane Grp Cap (vph)				188		296	810	1621			1718	459
v/s Ratio Prot				c0.09			0.17	c0.50			c0.20	
v/s Ratio Perm						0.04						0.17
v/c Ratio				0.82		0.38	0.36	1.06			0.58	0.48
Uniform Delay, d1				57.0		54.2	22.0	34.5			34.7	33.4
Progression Factor				1.00		1.00	0.90	0.61			1.33	5.88
Incremental Delay, d2				24.5		0.8	0.2	33.4			1.3	3.3
Delay (s)				81.4		55.0	20.0	54.4			47.6	199.5
Level of Service				F		E	B	D			D	F
Approach Delay (s/veh)		0.0			70.3			49.4			105.4	
Approach LOS		A			E			D			F	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			74.1									
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			130.0									
Intersection Capacity Utilization			102.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Bellam Blvd/Bellann Blvd & Francisco Blvd

04/17/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↔				↔↔	↔↔	↔	↔	↔↔↔	↔
Traffic Volume (vph)	210	392	390	0	0	0	350	720	702	62	1164	170
Future Volume (vph)	210	392	390	0	0	0	350	720	702	62	1164	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95	1.00				0.97	0.95	1.00	1.00	0.91	1.00
Frpb, ped/bikes		1.00	1.00				1.00	1.00	0.99	1.00	1.00	0.89
Flpb, ped/bikes		0.99	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85				1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3368	1599				3467	3574	1579	1787	5136	1421
Flt Permitted		0.98	1.00				0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3368	1599				3467	3574	1579	1787	5136	1421
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	212	396	394	0	0	0	354	727	709	63	1176	172
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	0	0	0	58
Lane Group Flow (vph)	0	608	356	0	0	0	354	727	709	63	1176	114
Confl. Peds. (#/hr)	18											78
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA	pm+ov				Prot	NA	Free	Prot	NA	Perm
Protected Phases		4	5				5	2		1	6	
Permitted Phases	4		4						Free			6
Actuated Green, G (s)		26.6	41.5				14.9	81.3	130.0	8.0	74.1	74.1
Effective Green, g (s)		27.3	42.9				15.6	82.0	130.0	8.7	75.1	75.1
Actuated g/C Ratio		0.21	0.33				0.12	0.63	1.00	0.07	0.58	0.58
Clearance Time (s)		4.7	4.7				4.7	4.7		4.7	5.0	5.0
Vehicle Extension (s)		1.5	2.0				2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)		707	576				416	2254	1579	119	2967	820
v/s Ratio Prot			0.07				c0.10	0.20		0.04	0.23	
v/s Ratio Perm		0.18	0.15						c0.45			0.08
v/c Ratio		0.86	0.62				0.85	0.32	0.45	0.53	0.40	0.14
Uniform Delay, d1		49.5	36.7				56.1	11.1	0.0	58.7	15.0	12.6
Progression Factor		1.00	1.00				1.50	0.28	1.00	1.00	1.00	1.00
Incremental Delay, d2		9.9	1.4				1.6	0.0	0.1	2.0	0.4	0.4
Delay (s)		59.4	38.1				85.8	3.2	0.1	60.6	15.4	13.0
Level of Service		E	D				F	A	A	E	B	B
Approach Delay (s/veh)		51.0			0.0			18.3			17.1	
Approach LOS		D			A			B			B	
Intersection Summary												
HCM 2000 Control Delay (s/veh)			25.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			61.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												