

**Viewpoint Old Town (223 Apartments)
City of San Diego
4620 Pacific Highway
August 4, 2023**

City of San Diego PRJ-1056469

Local Mobility Analysis Report

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Executive Summary

Viewpoint Old Town 223 Apartments

The proposed project includes 223 multi-family dwelling units (48 studios, 113 1-bedroom and 62 2-bedroom, including 33 affordable units with 15% at very low and 10% moderate income) and one level of at-grade and one level of above-grade parking for 240 vehicles. On-site residential amenities include two amenity decks, a gym, pool and jacuzzi.

The project is located at 4620 Pacific Highway in a Parking Standards Transit Priority Area (TPA), Transit Area Overlay Zone, Mobility Zone 2, and OTMCR-1-3 zone within the Old Town San Diego Community Planning Area. Local vehicular access to the site is proposed via one right-in/right-out only driveway located along Pacific Highway that will provide access to a gated parking structure. There is an existing center raised median on Pacific Highway at the driveway location. An entrance-only driveway on Rosecrans Street and exit-only driveway on Pacific Highway is proposed for loading, deliveries, and service vehicles only. The following discretionary approvals are required as part of the project:

- 1) Neighborhood Development Permit
- 2) Easement Vacation

The project does not require nor propose a Community Plan Amendment or rezone.

Trip Generation and Vehicle Operations

The project is expected to generate a minimum of 1,338 Average Daily Trips (ADT), with 107 AM peak hour trips (21 inbound and 86 outbound) and 120 PM peak hour trips (84 inbound and 36 outbound). The project site includes an existing and operating restaurant and the existing driveway trips at the site's eight (8) driveways were counted on Tuesday, December 20th, 2022 and Wednesday, December 21st, 2022. The net trips expected to be generated at the project site is 591 ADT with -2 AM peak hour trips (-43 inbound and 41 outbound) and 111 PM peak hour trips (81 inbound and 30 outbound). A Local Mobility Analysis ("LMA") is required because the project is calculated to generate 1,338 unadjusted ADT, which is greater than the 1,000 ADT threshold stated in the TSM. Though the total expected trip generation was used to evaluate the scope of study area, only the net trips were distributed to the study intersections.

Based on the study criteria in the Transportation Study Manual (TSM), an evaluation of the project's potential transportation effects and operations at three (3) intersections, and two (2) roadway segments were evaluated in the following scenarios:

- Existing
- Opening Year (2026) without Project
- Opening Year (2026) with Project

Study intersections included: 1) Pacific Highway at Anna Ave, 2) Pacific Hwy at Project Driveway, and 3) Pacific Hwy at Rosecrans Street/Taylor Street. The street segments included: 1) Pacific Hwy between Anna Ave and the Project Driveway, and 2) Pacific Hwy between the Project Driveway and Rosecrans St/Taylor St Ave.

LOS and Queuing

Under all study scenarios, the study intersections and segments were calculated to operate at LOS C or better under AM peak hour, PM peak hour, and daily traffic conditions.

Under Existing Conditions, at the intersection of Pacific Highway/Rosecrans St/Taylor St, the southbound right turn lane is calculated to exceed the right turn storage lane of 60 feet by an additional 35 feet in the PM peak hour based on the 95th percentile. A PM peak hour maximum queue of approximately 75 feet (exceeding the 60 foot storage by 15 feet) was observed on 6/6/23.

Under Opening Year 2026 No Project scenario, at the intersection of Pacific Highway/Rosecrans St/Taylor St, the southbound right turn lane is anticipated to exceed the right turn storage lane by 2 feet in the AM peak hour and 38 feet in the PM peak hour based on the forecasted 95th percentile.

Under Opening Year 2026 Plus Project scenario, at the intersection of Pacific Highway/Rosecrans St/Taylor St, the southbound right turn lane is anticipated to exceed the right turn storage lane by 23 feet in the AM peak hour and 47 feet in the PM peak hour based on the 95th percentile forecast. The project proposes to extend the striping for the southbound right turn lane by an additional 50 feet (from 60 feet to 110 feet) to accommodate the forecasted 95th percentile queue. A conceptual striping plan is shown in Figure 11 within the body of this report.

Summary of Vehicular Improvements:

- 1) At the intersection of Pacific Hwy/Rosecrans St/Taylor St, extend the striping along Pacific Highway for the southbound right turn lane (and adjacent bike lane) by an additional 50 feet (from 60 feet to 110 feet) to accommodate the forecasted 95th percentile queue.

Parking

Project parking is proposed in a parking garage. All parking modes are located within the parking garage or building. The number of required and provided parking spaces by mode are shown in **Table E-1**.

TABLE E-1: PROJECT PARKING SUMMARY

Parking Mode	Minimum Required Parking	Proposed Parking
Vehicle	0	234
Vehicle Accessible	6	6
Motorcycle	23	23
Bicycle	96	97

Source: Carrier Johnson Architects

Active Transportation Improvements

Pedestrian facilities within the half mile walking shed along the study roadways includes segments of missing sidewalks and curb ramps. The project will reconstruct the fronting sidewalks along Pacific Highway and Rosecrans St from contiguous to non-contiguous and add landscaping along the project frontage. The project does not propose to construct or install additional sidewalk or curb ramps, as none of the missing sidewalk is adjacent to the project site.

Bicycle facilities within a half mile bicycling distance along the study roadways identified locations without planned bicycle facilities. The project will replace the existing Class II with a one-way Class IV Cycle Track along its Pacific Highway frontage, and stripe a Class II Bicycle Lane its Rosecrans Street frontage. The project will provide a combination of short-term bicycle parking, long-term bicycle parking, and bicycle storage rooms for its residents per the SDMC and Climate Action Plan (CAP) Consistency Checklist requirements.

Transit facilities within a half mile walking shed includes the Old Town Transit Center that provides access to Amtrak rail, North County Transit District commuter rail, the Metropolitan Transit System (MTS) UCSD Blue Line Trolley, the MTS Orange Line Trolley, an airport shuttle (the “Old Town Flyer”), and 11 MTS bus routes. Based on the TSM criteria, no transit improvements are required or proposed.

Summary of Active Transportation Improvements:

- 1) Dedicate and improve the frontage along Pacific Highway and Rosecrans St to construct non-contiguous sidewalks buffered by landscaping along each of project frontages. Along its Pacific Highway frontage the project will dedicate 1.6 feet to create a 14 feet wide parkway (6 feet wide sidewalk with an 8 foot wide landscape buffer). Along its Rosecrans Street frontage, the project will dedicate 13 feet to create a 22 foot wide parkway (7 foot wide sidewalk with a 15 feet landscape buffer).
- 2) Stripe a buffered Class II Bicycle Lane along the project’s Rosecrans Street frontage, and replace the existing Class II buffered Bicycle Lane with a one-way Class IV Cycle Track along the project’s Pacific Highway frontage.
- 3) At the intersection of Pacific Hwy/Rosecrans St/Taylor St, upgrade and install signal heads with backplates that have retroreflective borders on each approach.

Systemic Safety Review

The City of San Diego Systemic Safety: The Data-Driven Path to Vision Zero (April 2019) policy promotes safe roadway design with a goal toward preventing collisions. As part of that goal, a systemic safety review provides an assessment of hotspots and recommended countermeasures to align with Vision Zero. The systemic safety review identified the following locations that match the criteria for potential improvements:

- 1) The intersection of Pacific Hwy/Rosecrans St/Taylor St meets the Bicycle Footprint #1 systemic criteria for potential countermeasures. The Class II bike lanes on Pacific Highway/Rosecrans St/Taylor St currently have bike loop detectors and green colored pavement along Pacific Highway approaching Rosecrans St/Taylor St. A possible countermeasure is a public safety messaging campaign; however, such a campaign is beyond the scope of this project. Therefore, no countermeasure is proposed.
- 2) The intersection of Pacific Hwy/Rosecrans St/Taylor St meets the Vehicle Footprint #3 systemic criteria for potential countermeasures. The recommended vehicle countermeasure is for the project to upgrade and install signal heads with backplates that have retroreflective borders for better visibility for each approach.

1.0 Introduction / Proposed Project

The proposed project includes 223 multi-family dwelling units (48 studios, 113 1-bedroom and 62 2-bedroom, including 33 affordable units with 15% at very low and 10% moderate income) and one level of at-grade and one level of above-grade parking for 240 vehicles. On-site residential amenities include two amenity decks, a gym, pool and jacuzzi.

The project is located at 4620 Pacific Highway in a Parking Standards Transit Priority Area (“TPA”), Transit Area Overlay Zone, Mobility Zone 2, and OTMCR-1-3 zone within the Old Town San Diego Community Planning Area. Local access to the site is proposed via one right-in/right-out only driveway located along Pacific Highway that will provide access to a gated parking structure. There is an existing center raised median on Pacific Highway at the driveway location. An entrance-only driveway on Rosecrans Street and exit-only driveway on Pacific Highway is proposed for service vehicles only.

The following discretionary approvals are required as part of the project:

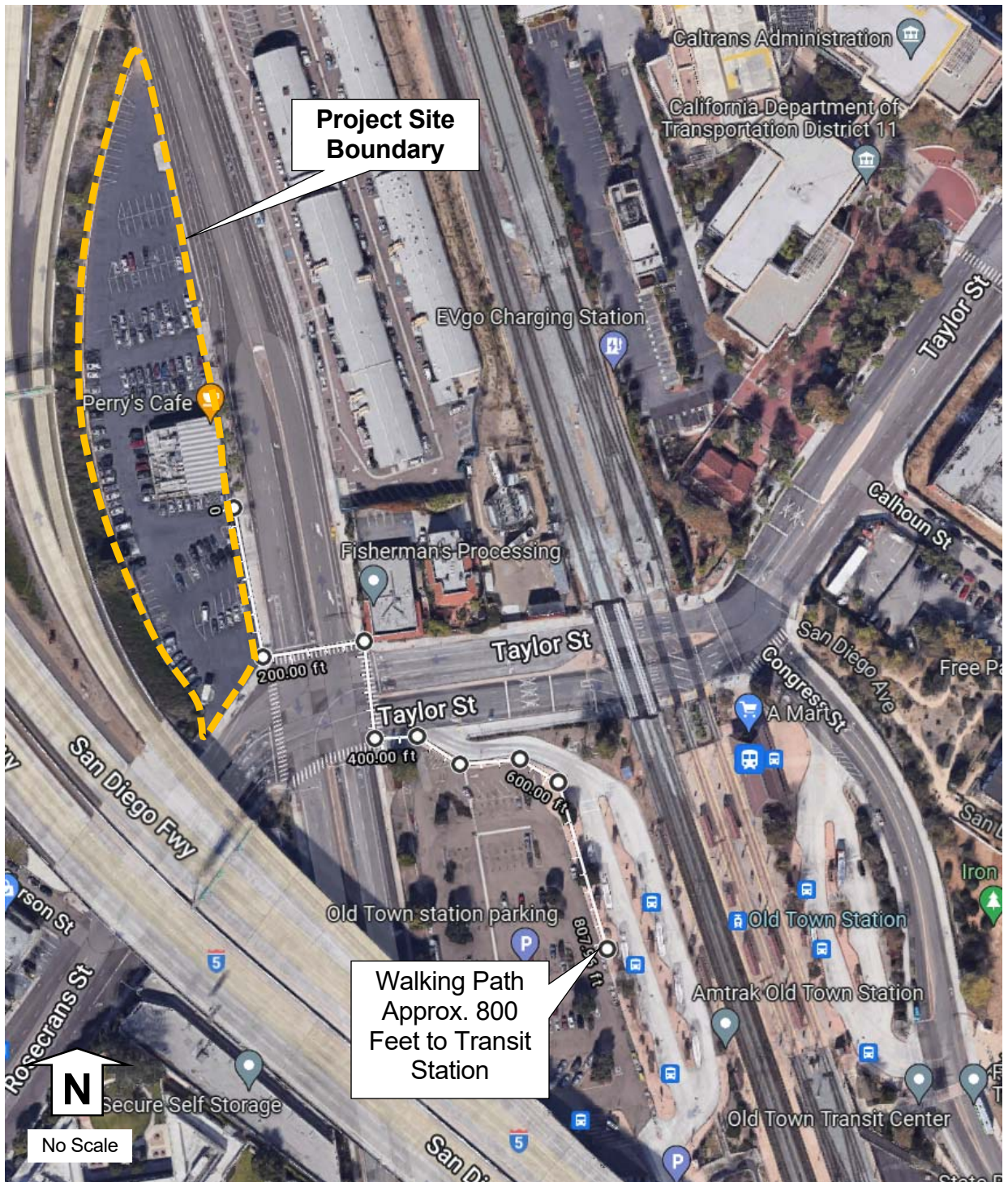
- 1) Neighborhood Development Permit
- 2) Easement Vacation

The project does not require nor propose a Community Plan Amendment or rezone.

The location of the project is shown in **Figure 1** with a preliminary site plan shown in **Figure 2**. The format of this study includes the following chapters:

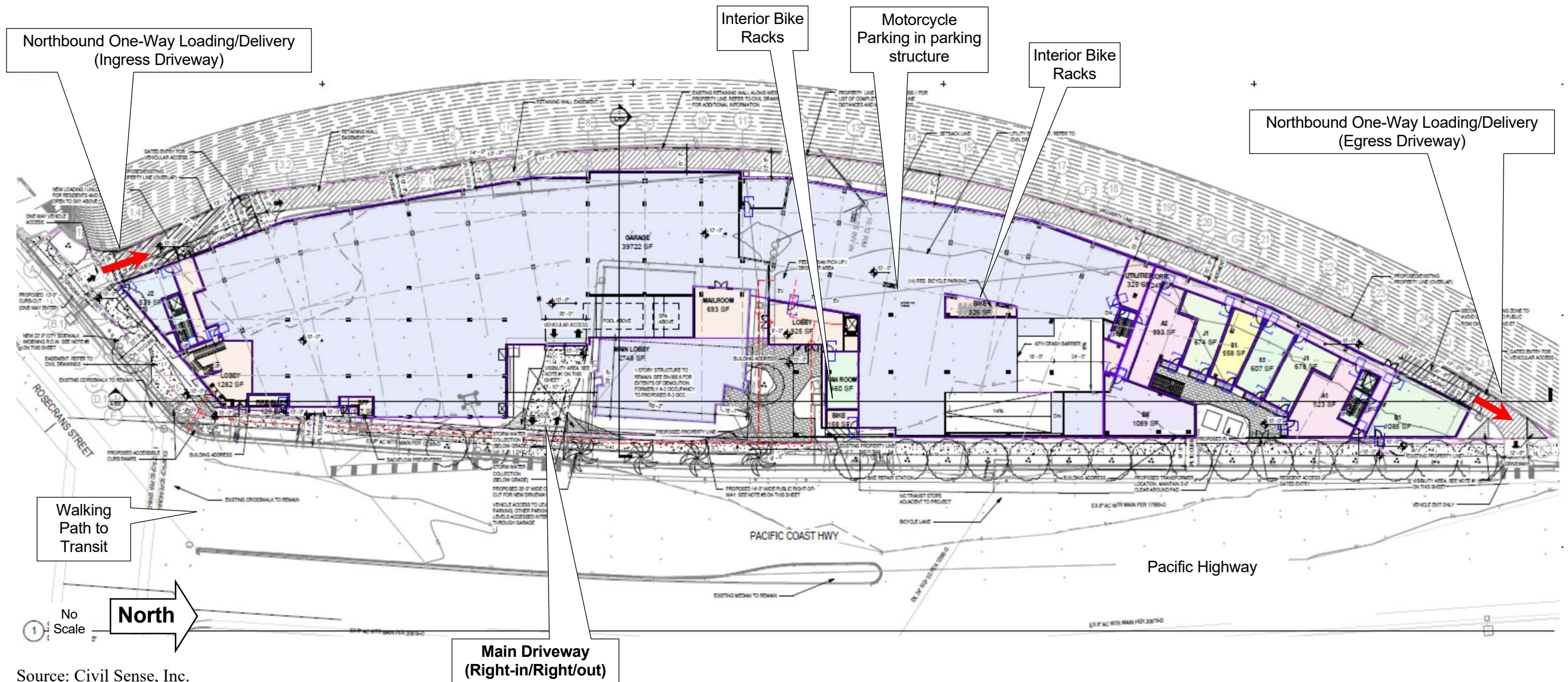
- 1.0 Introduction / Proposed Project
- 2.0 Analysis Methodology
- 3.0 Existing Conditions for All Modes
- 4.0 Opening Year (2026)
- 5.0 Pedestrian, Bicycle, and Transit Assessment
- 6.0 Site Access & Circulation
- 7.0 Parking / Loading
- 8.0 Systemic Safety Analysis

Figure 1: Project Location



Source: Google Maps

Figure 2: Site Plan



Source: Civil Sense, Inc.

2.0 Analysis Methodology

The City of San Diego *Transportation Study Manual*, (“TSM”) September 2022 states that all projects must complete a Local Mobility Analysis (“LMA”) unless they meet the following trip generation screening criteria:

- 1) Land uses consistent with the Community Plan/Zoning Designation: Generate less than 1,000 daily unadjusted driveway vehicle trips,
- 2) Land uses inconsistent with the Community Plan/Zoning Designation: Generate less than 500 daily unadjusted driveway vehicle trips, or
- 3) Projects in the Downtown Community Planning Area that generate less than 2,400 daily unadjusted trips.

As shown in **Table 1**, the project is anticipated to generate approximately 1,338 unadjusted average daily trips; therefore, a LMA is required.

TABLE 1: PROJECT UNADJUSTED AVERAGE DAILY TRIP GENERATION

Proposed Land Use	Rate	Size & Units	Average Daily Trips
Multi-Family Dwelling Unit (>20 du/acre)	6 /DU	223 DU	1,338

Source: City of San Diego *Trip Generation Manual*, May 2003. DU: Dwelling Unit.

The extent of the LMA study elements is based on the City’s study criteria for each mobility mode as follows:

- 1) Pedestrian: Documentation of pedestrian facilities and basic deficiencies (missing sidewalk, curb ramps, and major obstructions) within ½ mile walking distance measured from each pedestrian access point (for example, driveways, internal project sidewalk connections to the street, etc.).
Sidewalks within a ½ mile walking distance classified in the respective community plans as connector, corridor, or district were included in this analysis.
- 2) Bicycle: Documentation of bicycle facilities and basic deficiencies (bike lane gaps, obstructions) within ½ mile bicycling distance measured from the center of the intersection formed by each project driveway.
Bicycle facilities within a ½ mile bicycling distance were included in this analysis.
- 3) Transit: Identification of the closest transit routes and stops to the project. If the transit stops are within ½ mile walking distance of each pedestrian access point, the condition of the stop amenities must be described/evaluated.
Bus stops with a ½ mile walking distance and the Old Town Transit Center were included in this analysis.

- 4) Systemic Safety Review: Identification of study area intersections that satisfy the systemic safety criteria.

All three study intersections including 1) Pacific Highway/Anna Ave, 2) Pacific Highway/Project Driveway, and 3) Pacific Highway/Rosecrans St/Taylor St were included in this analysis.

- 5) Intersection Operations (projects with less than 2,400 daily final driveway trips):
 - a. All signalized intersections within ½ mile path of travel from the center of the intersection formed by each project driveway AND the project will add 50 or more peak hour final primary (cumulative) trips to any turning movement at the intersection.
 - b. All unsignalized intersections (side street stop controlled, all-way stop controlled, and roundabouts) and unsignalized project driveways located within ½ mile path of travel distance measured from the center of the intersection formed by each project driveway AND the project will add 50 or more peak hour final primary (cumulative) trips in either direction.
 - c. All freeway ramp terminal intersections where a project adds 50 or more peak hour final primary (cumulative) AM or PM net new trips in either direction must be analyzed regardless of their distance from the project site.

All three study intersections satisfied the above criteria and are included in this analysis: 1) Pacific Highway/Anna Ave, 2) Pacific Highway/Project Driveway, and 3) Pacific Highway/Rosecrans St/Taylor St.

- 6) Roadway Segments: The study area should include any roadway segments where the project adds 1,000 or more daily final primary trips (cumulative trips) if consistent with the Community Plan, or 500 or more daily final primary trips (cumulative trips) if inconsistent with the Community Plan AND:
 - a. Have improvements identified in the Community Plan; OR
 - b. Not built to the Community Plan ultimate classification (including planned new circulation element roadways).

Both of the study segments satisfied the above criteria and are included in this analysis: Pacific Highway (Anna Ave to Project Driveway), and Pacific Highway (Project Driveway to Rosecrans St).

The study area and elements for this LMA are shown in **Figure 3**.

Figure 3: LMA Study Area 1/2 Mile Limits and Study Elements



2.1 Study Scenarios

The number of study scenarios is dependent on the estimated trips generated by the project and whether the project would require a Community Plan Amendment and/or re-zone. For this project, the following scenarios were analyzed:

- 1) Existing Conditions
- 2) Opening Year 2026 No Project
- 3) Opening Year 2026 plus Project

2.2 Traffic Analysis Methodology

The Local Mobility Analysis prepared for this study was based on the *6th Edition Highway Capacity Manual* (HCM) operations analysis using Level of Service (LOS) evaluation criteria. The operating conditions of the study intersections, street segments, and freeway segments were measured using the HCM LOS designations, which ranges from A through F. LOS A represents the best operating condition and LOS F denotes the worst operating condition. The individual LOS criteria for each roadway component are described below.

2.2.1 Intersections

The study intersections were analyzed based on the **operational analysis** outlined in the 6th Edition HCM, (2016). This process defines LOS in terms of **average control delay** per vehicle, which is measured in seconds. LOS at the intersections were calculated using the computer software program Synchro 11 (Trafficware Corporation). The 6th Edition HCM LOS for the range of delay by seconds for intersections is shown in **Table 2**.

TABLE 2: INTERSECTION LEVEL OF SERVICE DEFINITIONS (6TH EDITION HCM)

Level of Service	Un-Signalized Control Delay for TWSC, AWSC, and Roundabout (sec/veh where $v/c \leq 1$)	Signalized Control Delay (sec/veh where $v/c \leq 1$)
A	0-10	≤ 10
B	> 10-15	> 10-20
C	> 15-25	> 20-35
D	> 25-35	> 35-55
E	> 35-50	> 55-80
F	> 50	> 80

Source: 6th Edition HCM. TWSC: Two Way Stop Control. AWSC: All Way Stop Control. For unsignalized intersections, the control delay is the worst movement delay in seconds/vehicle.

2.2.2 Intersection Queuing

The 95th percentile queue for study intersections located within the City of San Diego with more than 50 project peak hour turns were analyzed using SimTraffic 11 software. If only one peak hour had greater than 50 trips, both peak hours were analyzed. The queue was calculated running ten 60-minute simulations runs with a ten-minute seeding time. The 95th percentile queue was compared to the turn pocket storage that is generally measured from the intersection stop bar to the end of the turn pocket striping.

2.2.3 Street Segments

The street segments were analyzed based on the functional classification of the roadway using the City of San Diego *Roadway Segment LOS by Classification and Average Daily Traffic* capacity lookup table (**Appendix A**). The roadway segment capacity and LOS standards used to analyze street segments are summarized in **Table 3**.

TABLE 3: STREET SEGMENT DAILY CAPACITY AND LOS (CITY OF SAN DIEGO)

Circulation Element Road Classification	LOS A	LOS B	LOS C	LOS D	LOS E
Prime Arterial – 7 Lanes	<30,000	<42,500	<60,000	<65,000	<70,000
Prime Arterial – 6 Lanes	<25,000	<35,000	<50,000	<55,000	<60,000
Prime Arterial – 5 Lanes	<20,000	<28,000	<40,000	<45,000	<50,000
Major Arterial – 6 Lanes	<20,000	<28,000	<40,000	<45,000	<50,000
Major Arterial – 5 Lanes	<17,500	<24,500	<35,000	<40,000	<45,000
Major Arterial – 4 Lanes	<15,000	<21,000	<30,000	<35,000	<40,000
Collector – 5 Lanes	<12,500	<17,500	<25,000	<30,750	<37,500
Collector – 4 Lanes	<10,000	<14,000	<20,000	<25,000	<30,000
Collector (no Center Ln) – 4 Lanes	<5,000	<7,000	<10,000	<13,000	<15,000
Collector (with TWLTL) – 2 Lanes					
Collector – 2 Lanes (no fronting property)	<4,000	<5,500	<7,500	<9,000	<10,000
Collector – 2 Lanes (without two-way left turn lane)	<2,500	<3,500	<5,000	<6,500	<8,000
Sub-Collector – 2 Lanes (single-family)			<2,200		

Source: City of San Diego *Transportation Study Manual* September 19, 2022.

2.2.4 Project Traffic Effect Thresholds

A project Owner/Permittee should consider an improvement if the project traffic exceeds the City of San Diego Transportation Study Manual (TSM) defined thresholds as shown in **Table 4** (TSM excerpts included in **Appendix B**).

TABLE 4: CITY OF SAN DIEGO TRAFFIC THRESHOLDS FOR POTENTIAL ROADWAY IMPROVEMENTS

Facility	Thresholds for Considering an Improvement
Transit	Project causes transit movement to operate at LOS E or worse
Signalized Intersection	<p>No Existing Left-Turn Lane: If the project adds traffic to an individual left turn movement causing the total number of peak hour left turns to exceed 100, consider adding a left turn lane.</p> <p>Existing Single Left-Turn Lane: If the project adds traffic to an individual left turn movement causing the total number of peak hour left turns to exceed 300, consider adding a second left turn lane.</p> <p>No Existing Right Turn-Lane: If the addition of a right turn lane will not negatively affect other roadway users, will maintain a comfortable roadway environment, AND the project adds traffic to an individual right turn movement causing the total number of peak hour right turns to exceed 500, consider adding a right turn lane.</p> <p>Existing Single Right-Turn Lane: If the addition of a right turn lane will not negatively affect other roadway users, will maintain a comfortable roadway environment, AND the project adds traffic to an individual right turn movement causing the total number of peak hour right turns to exceed 800, consider adding a second right turn lane.</p> <p>Lengthening a Turn Pocket: If the project adds traffic to a turning movement and causes the 95th percentile queue to exceed the available turn pocket length, consider lengthening the turn pocket.</p> <p>Signal Timing Improvements/Signal Modification should be considered for study intersections within a ½ mile path of travel of a Major Transit Stop, if the project causes or adds traffic to an LOS F intersection, or outside ½ mile path of travel of a Major Transit Stop, if the project causes or adds traffic to an LOS E/F intersection.</p>
Un-Signalized Intersection	<p>An Intersection Control Evaluation should be prepared if:</p> <p>All Way Stop Control: Within a ½ mile path of travel of a Major Transit Stop, if the project causes intersection to degrade to LOS F, or if the project adds traffic to an intersection already operating at LOS F.</p> <p>All Way Stop Control: Outside of a ½ mile path of travel of a Major Transit Stop, if the project causes intersection to degrade to LOS E or F, or if the project adds traffic to an intersection already operating at LOS E or F.</p> <p>Side Street Stop Control: Within a ½ mile path of travel of a Major Transit Stop, if the project causes the worst movement to degrade to LOS F, or if the project adds traffic to an intersection already operating at LOS F.</p> <p>Side Street Stop Control: Outside a ½ mile path of travel of a Major Transit Stop, if the project causes the worst movement to degrade to LOS E or F, or if the project adds traffic to an intersection already operating at LOS E or F.</p>
Roadway Segment	<p>If the project adds greater than 50% of total daily vehicle trips on the segment, the project should consider implementing the improvements as identified in the community plan.</p> <p>If the project adds less than or equal to 50% of total daily vehicle trips on the segment, the project should evaluate its fair share toward the improvement.</p>

Source: City of San Diego Transportation Study Manual, 9/19/2022.

3.0 Existing Conditions for All Modes

The traffic analysis includes specific study scenarios, methodology for the analysis of roadway operations, and determination of potential off-site improvements triggered by the project traffic. Details for each of these parameters are included herein.

3.1 Existing Intersection Geometrics & Traffic Volumes

This section describes the existing study area street system, peak hour intersection volumes, daily roadway volumes, existing LOS, and queuing.

3.1.1 Existing Street System

The following is a description of the existing roadway network in the study area.

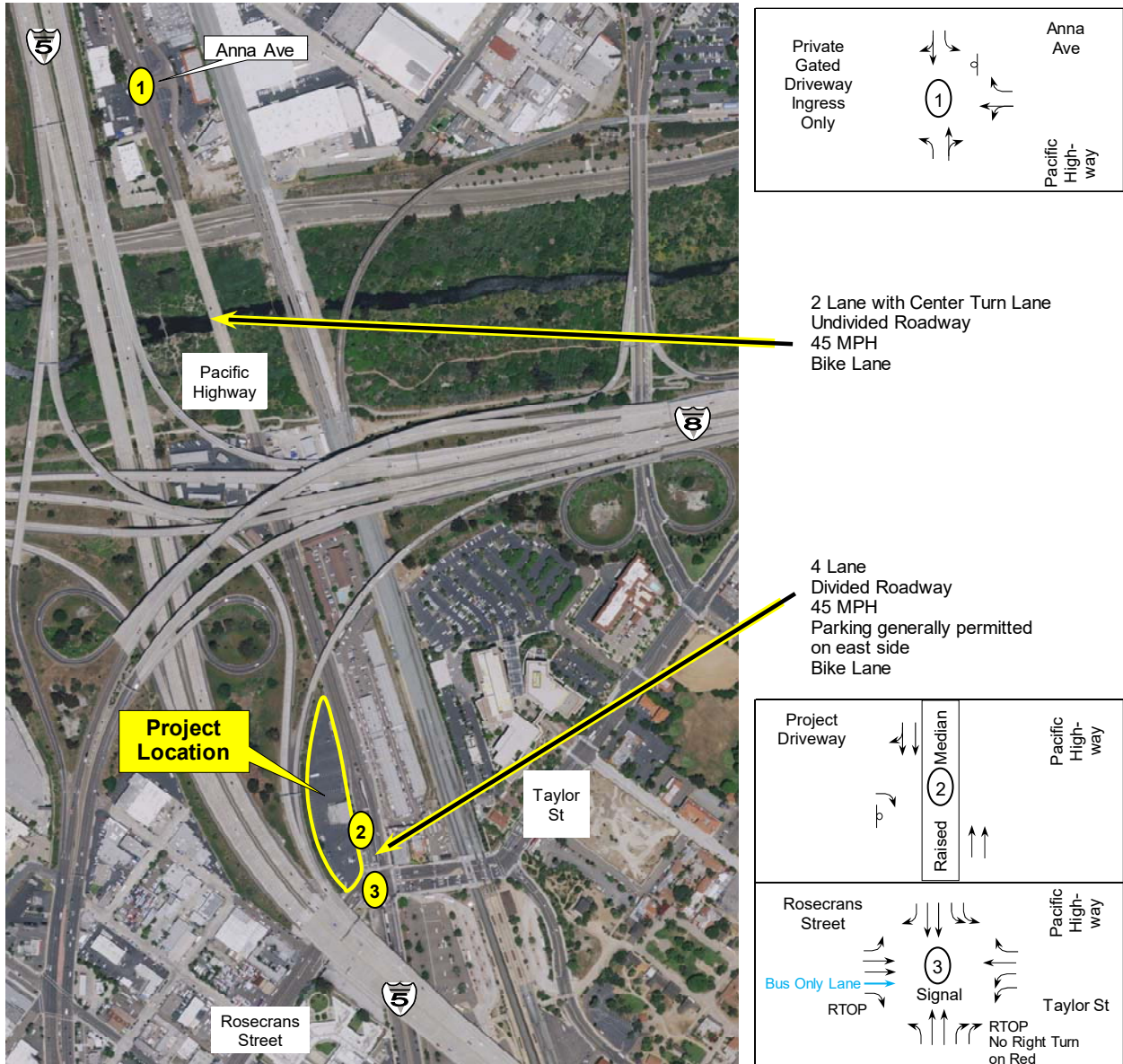
Pacific Highway is classified as a 2-Lane Collector Street with Center Left Turn Lane from Rosecrans Street/Taylor Street to Anna Ave per the *Old Town San Diego Community Plan, 2018*. It is constructed as a four-lane divided roadway from Rosecrans Street/Taylor Street northerly for approximately 330 feet, then as a two-lane undivided roadway with a center two way left turn lane between the raised median and Anna Avenue. There are Class II bike lanes in each direction. On the west side of the roadway, there is a contiguous sidewalk, curb, and gutter of approximately 13-foot in width from Rosecrans Street/Taylor Street northerly for approximately 375 feet, after which there is no sidewalk. On the east side of the roadway, there is a contiguous sidewalk, curb, and gutter that varies between approximately 5 and 10 feet in width from Rosecrans Street/Taylor Street northerly for approximately 1,680 feet, after which there is no sidewalk. On-street parking is generally permitted on both sides of the roadway, except for the segment between the San Diego River Bikeway and Anna Avenue where parking is restricted due to the narrowed overcrossing. The posted speed limit is 45 MPH within the Project vicinity.

Taylor Street is classified as a 4-Lane Major Street from Pacific Highway to Congress Street per the *Old Town San Diego Community Plan, 2018*. It is constructed as a four-lane divided roadway with a raised median. There are contiguous sidewalks on both sides of the street with a range in width of approximately 8 to 11 feet on the north side and approximately 9 to 15 feet on the south side within the study area. There are no bicycle facilities within the study area. The posted speed limit is 35 mph within the Project vicinity.

Rosecrans Street is classified as a 4-Lane Collector Street with Center Left Turn Lane from Pacific Highway to Sports Arena Blvd per the *Midway - Pacific Highway Community Plan, 2018*. It is constructed as a four-lane roadway with a center left turn lane except along the project frontage where it has one westbound through lane, two eastbound through lanes, and one eastbound bus only travel lane. The north side of the street has sections of contiguous sidewalk approximately 4-feet in width present and sections with no sidewalk. The south side of the street has an approximately 4-foot wide contiguous sidewalk present. There are no bicycle facilities within the study area. The posted speed limit is 30 MPH within the Project vicinity.

Excerpts from the Community Plans are included in **Appendix C**. The existing conditions are shown in **Figure 4**.

Figure 4: Existing Vehicular Conditions



Source: USGS (Image date: 5/20/2020)

LEGEND

- Lane Geometry
- Stop Sign
- RTOP Right Turn Overlap Phase



3.2 Existing Traffic Conditions

Existing intersection counts were collected between 7:00 AM and 9:00 AM for the AM commuter period and from 4:00 PM to 6:00 PM for the PM commuter period on Thursday, February 9, 2023. Street segment counts were also collected on Thursday, February 9, 2023. San Diego Unified School District school were in session during the data collection. The intersections included:

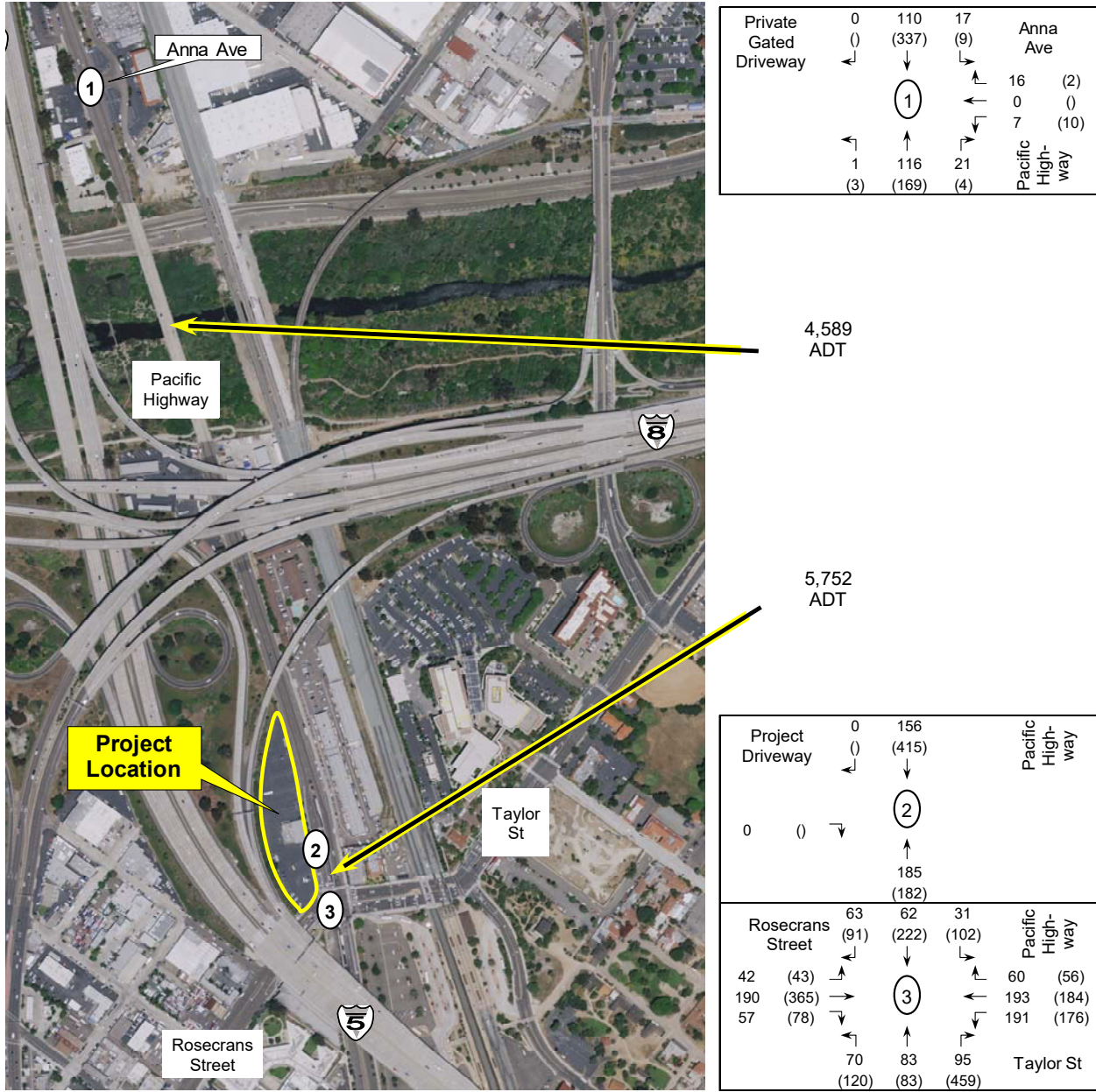
- 1) Pacific Hwy at Anna Ave
- 2) *No Count (Future Project Driveway)*
- 3) Pacific Hwy at Rosecrans St/Taylor St

The street segments included:

- 1) Pacific Hwy between Anna Ave and the project driveway.
- 2) Pacific Hwy between the project driveway and Rosecrans St/Taylor St.

The existing AM, PM, and daily volumes are shown on **Figure 5**, with count data included in **Appendix D**.

Figure 5: Existing Traffic Volumes



USGS (Image date: 5/20/2020)

EGEND

- XX AM peak hour volumes at intersections
- YY PM peak hour volumes at intersections
- ZZZ ADT volumes shown along segments
- ① Intersection Reference Number to LOS Tables
- Existing Roadways



No Scale

The intersection LOS is shown in **Table 5**. The 95th percentile turning queues where the project are expected to add trips, are shown in **Table 6**. The segment LOS is shown in **Table 7**. The intersections were analyzed based on existing signal timing, which was obtained from the City of San Diego. The signal timing sheets are included in **Appendix E**. The intersection LOS and queueing worksheets are included in **Appendix F**.

TABLE 5: EXISTING INTERSECTION LOS

Intersection and (Analysis) ¹	Approach	Study Period	Existing	
			Delay ²	LOS ³
1) Pacific Highway at Anna Ave (U)	WB	AM	9.9	A
	WB	PM	13.3	B
2) Pacific Highway at Project Driveway (U)	EB	AM	Future	NA
	EB	PM	Driveway	NA
3) Pacific Highway at Rosecrans St (S)	All	AM	31.4	C
	All	PM	32.0	C

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. NA: Not Applicable.

TABLE 6: EXISTING INTERSECTION TURN LANE QUEUING

Intersection	Peak Hour	Approach	Storage Length in feet (notes)		Existing 95 th %ile Queue ¹ (ft)	Exceeds Storage?	Distance Exceeding Storage (ft)
1) Pacific Highway at Anna Ave (U)	AM	WBL	50	(2)	26	No	NA
	PM	WBL	50	(2)	30	No	NA
3) Pacific Highway at Rosecrans St (S)	AM	EBL	160	(2)	56	No	NA
	AM	SBL	230	(2)	56	No	NA
	AM	SBR	60	(2)	59	No	NA
	PM	EBL	160	(2)	57	No	NA
	PM	SBL	230	(2)	109	No	NA
	PM	SBR	60	(2)	95	Yes	35

Notes: WBL: Westbound Left. EBL: Eastbound Left. SBL: Southbound Left. SBR: Southbound Right. (1) Queue is 95th percentile from SimTraffic analysis. (2) Stop bar to end of turn lane striping. BOLD = SimTraffic 95th percentile forecasted queue beyond storage bay capacity.

TABLE 7: EXISTING SEGMENT ADT VOLUMES AND LOS

Segment	Functional Classification	LOS E Capacity	Existing		
			Daily Volume	V/C	LOS
<u>Pacific Highway</u>					
Anna Ave to Project Dwy	2 Ln Coll. + TWLTL	15,000	4,589	0.306	A
Project Dwy to Rosecrans	4 Ln Major	40,000	5,752	0.144	A

Notes: 2 Ln Coll. +TWLTL = 2 un-divided lanes + two way left turn lane. Daily volume is a 24 hour volume. LOS: Level of Service. V/C: Volume to Capacity Ratio.

Under Existing Conditions, at the intersection of Pacific Highway/Rosecrans St/Taylor St, the southbound right turn lane queue is estimated to exceed the right turn storage lane of 60 feet by 35 feet in the PM peak hour based on the 95th percentile forecast. A PM peak hour maximum queue of approximately 75 feet (exceeding the 60 foot storage by 15 feet) was observed on 6/6/23.

3.3 Project Trip Generation

The project site has an approximately 4,980 sf existing sit-down high turnover restaurant that is open, operational, and generating trips. A site-specific trip generation was collected from two days (48 hours) of video counts on Tuesday, December 20, 2022, and on Wednesday, December 21, 2022 that included all eight existing driveways (**Appendix G**). Schools were not in session during the data collection and would not be an issue for trip generation in this area because there are no primary or secondary schools in the project vicinity. The existing restaurant will be removed and replaced by the residential project. The existing site trip generation is shown in **Table 8**.

TABLE 8: EXISTING SITE TRIP GENERATION

Perry's Café	ADT	AM			PM		
		IN	OUT	Total	IN	OUT	Total
Driveway Counts Tue 12-20-22	750	55	43	98	3	7	10
Driveway Counts Wed 12-21-22	744	73	47	120	2	6	8
Average Driveway Trips:	747	64	45	109	3	6	9

The City of San Diego *Trip Generation Manual*, May 2003 was used to estimate the trip generation for the project. The proposed project includes 223 multi-family dwelling units. The project is expected to generate unadjusted trips in the amount of 1,338 ADT with 107 AM peak hour trips (21 inbound and 86 outbound) and 120 PM peak hour trips (84 inbound and 36 outbound). The net trip generation is expected to be approximately 591 ADT with -2 AM peak hour trips (-43 inbound and 41 outbound) and 111 PM peak hour trips (81 inbound and 30 outbound). The trip generation for the existing use, proposed project, unadjusted, and adjusted trips are shown in **Table 9**.

TABLE 9: PROJECT NET TRIP GENERATION

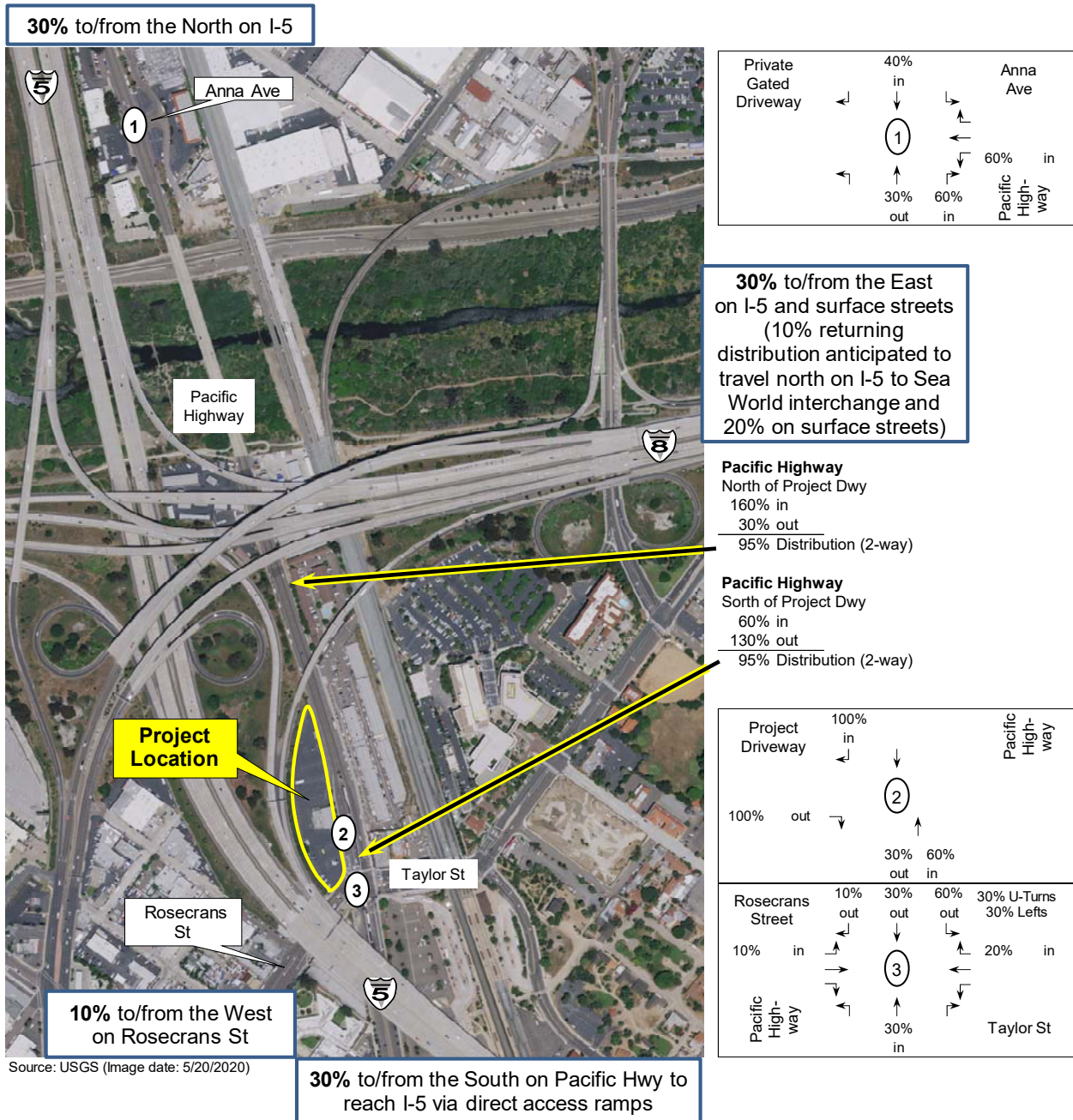
Land Use	Rate	Size & Units	ADT	%	Split	AM			PM				
						IN	OUT	%	Split	IN	OUT		
Proposed Project (Unadjusted Driveway Trips)													
Multi-Family Dwelling Unit (over 20 du/acre)	6 /DU	223 DU	1,338	8%	0.2 0.8	21	86	9%	0.7 0.3	84	36		
						<i>Pk Hr Total</i>			<i>Pk Hr Total</i>		<i>Pk Hr Total</i>		
							107			120			
Existing Driveway Trips (to be removed)													
Perry's Café Driveway Counts			-747			-64	-45			-3	-6		
						<i>Pk Hr Total</i>			<i>Pk Hr Total</i>		<i>Pk Hr Total</i>		
							-109			-9			
							-43	41		81	30		
			Adjusted Driveway Trips:	591			<i>Pk Hr Total</i>			<i>Pk Hr Total</i>		<i>Pk Hr Total</i>	
							-2			111			

Source: City of San Diego *Trip Generation Manual*, May 2003. KSF - 1,000 Square Feet; DU: Dwelling Unit. SF: Square Feet.

3.3.1 Project Trip Generation and Distribution

Project trips were distributed to the adjacent roadway network based on engineering judgement, freeway access, and surrounding attractions. The project distribution is shown in **Figure 6**. The project assignment is shown in **Figure 7**, which shows the adjusted negative AM inbound trips as zero.

Figure 6: Project Trip Distribution



Source: USGS (Image date: 5/20/2020)

LEGEND

- % Distribution
- ⊙ Intersection Reference Number to LOS Tables
- Existing Roadways

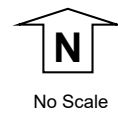
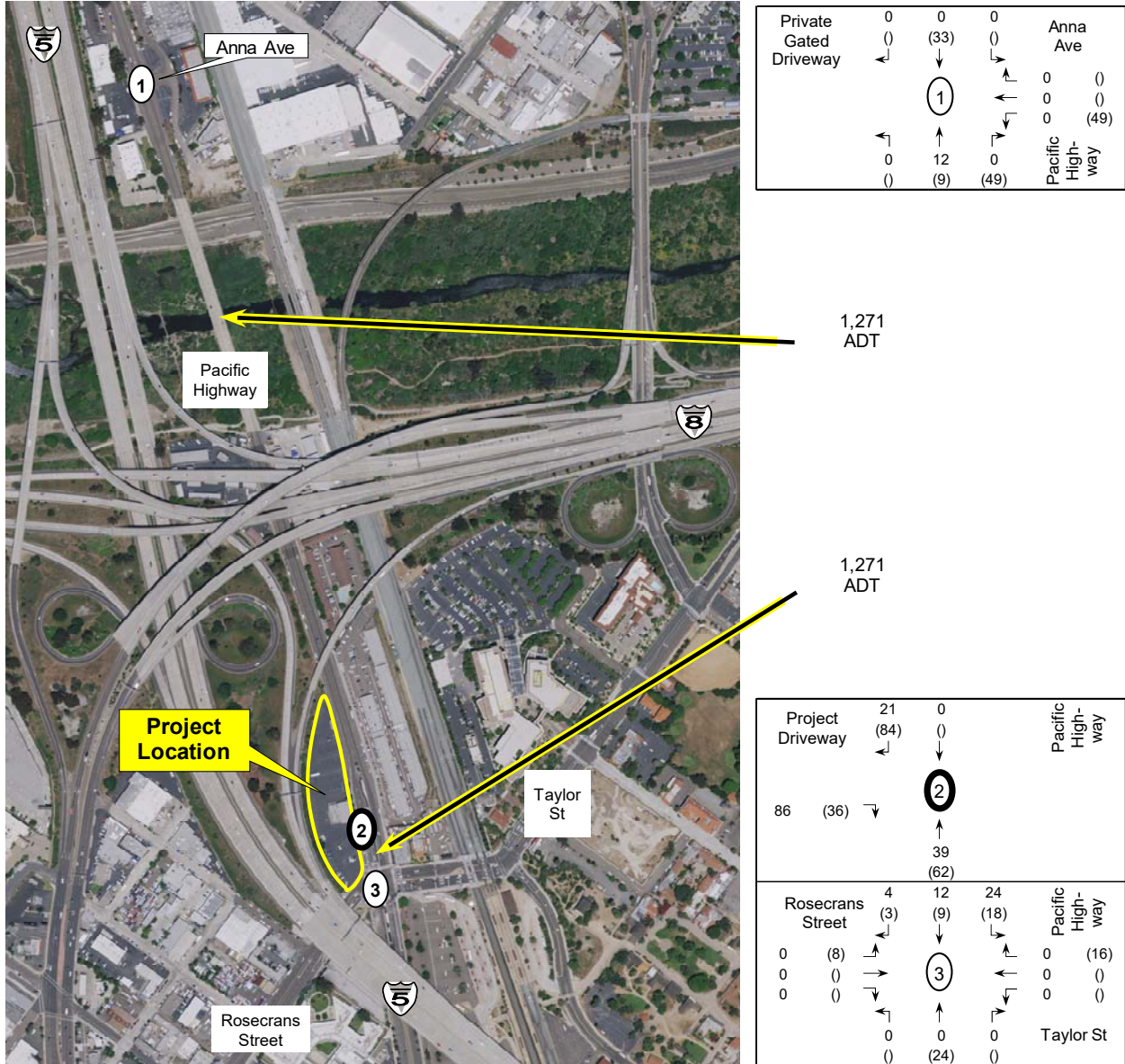


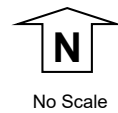
Figure 7: Project Trip Assignment



Source: USGS (Image date: 5/20/2020)

LEGEND

- XX AM peak hour volumes at intersections
- (YY) PM peak hour volumes at intersections
- Z.ZZZ ADT volumes shown along segments
- (#) Intersection Reference Number to LOS Tables
Adjusted Project Trips reflecting trip credit
- (#) Intersection Reference Number to LOS Tables
Unadjusted Project Trips, thus will not match adjacent intersection volumes
- Existing Roadways



4.0 Opening Year (2026)

This scenario describes the anticipated roadway operations during the opening year of the project, anticipated to be in 2026.

4.1 Cumulative Projects

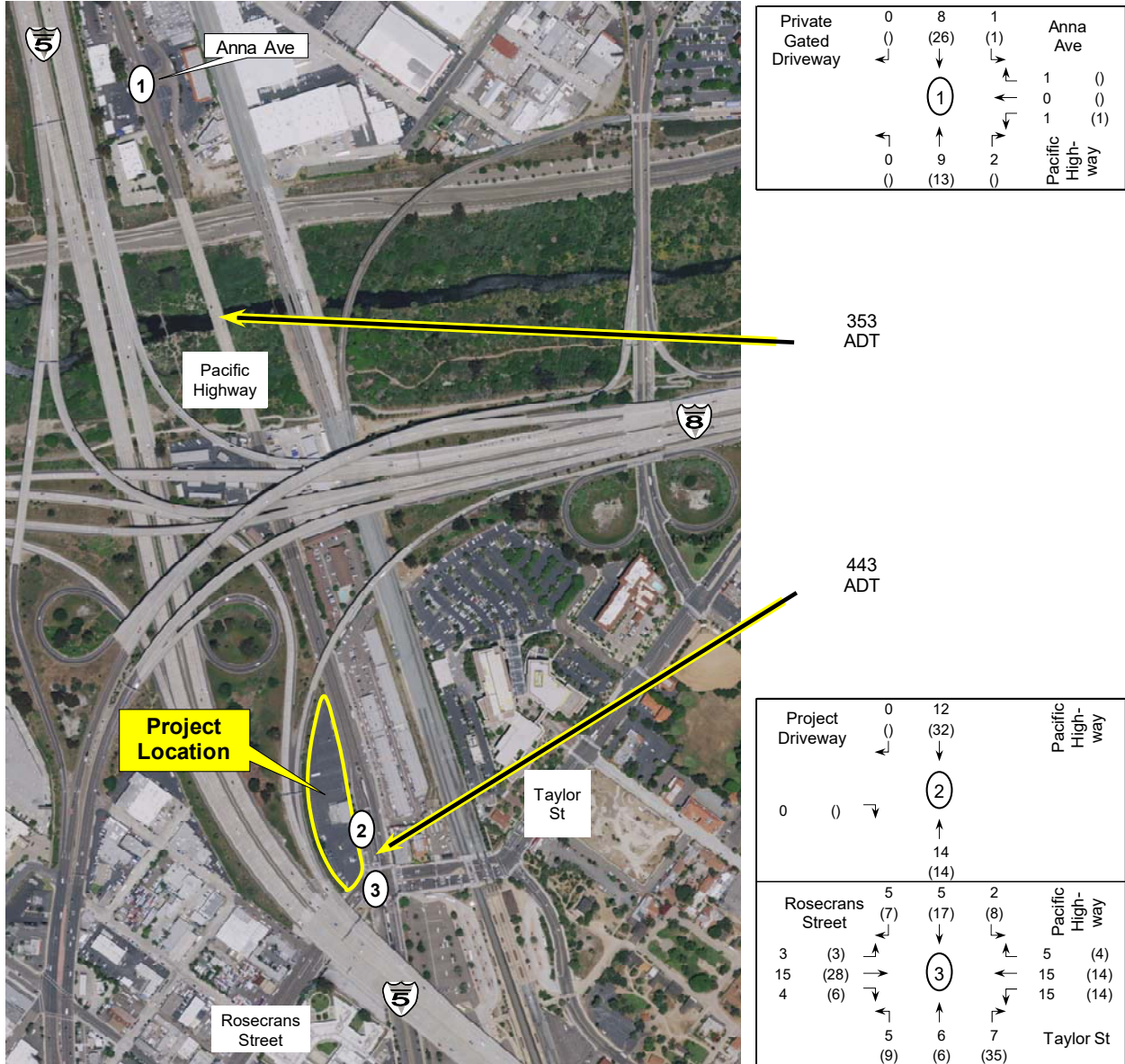
No immediately surrounding cumulative projects were identified; therefore, year 2026 volumes are based on historical ambient growth of daily traffic adjacent to the project site. Historical daily traffic volumes were obtained from the City of San Diego. The historical average growth of daily volumes adjacent to the project site is calculated at 2.5% per year (calculations included in **Appendix H**).

Applying a compound growth factor, the 2.5% per year over three (3) years to Opening Year 2026 results in a total growth factor of 7.7% based on the following formula.

$$\begin{aligned}\text{Compound growth} &= (1 + \text{Annual Growth Rate}/1)^{\text{Years}} - 1 \\ \text{Compound growth} &= (1 + 0.025/1)^3 - 1 = 7.7\%\end{aligned}$$

Ambient growth volumes (existing volumes multiplied by 7.7%) are shown in **Figure 8**.

Figure 8: Ambient Growth Volumes for Opening Year (2026)



Source: USGS (Image date: 5/20/2020)

LEGEND

- XX AM peak hour volumes at intersections
- (YY) PM peak hour volumes at intersections
- Z,ZZZ ADT volumes shown along segments
- Ⓛ Intersection Reference Number to LOS Tables
- Existing Roadways

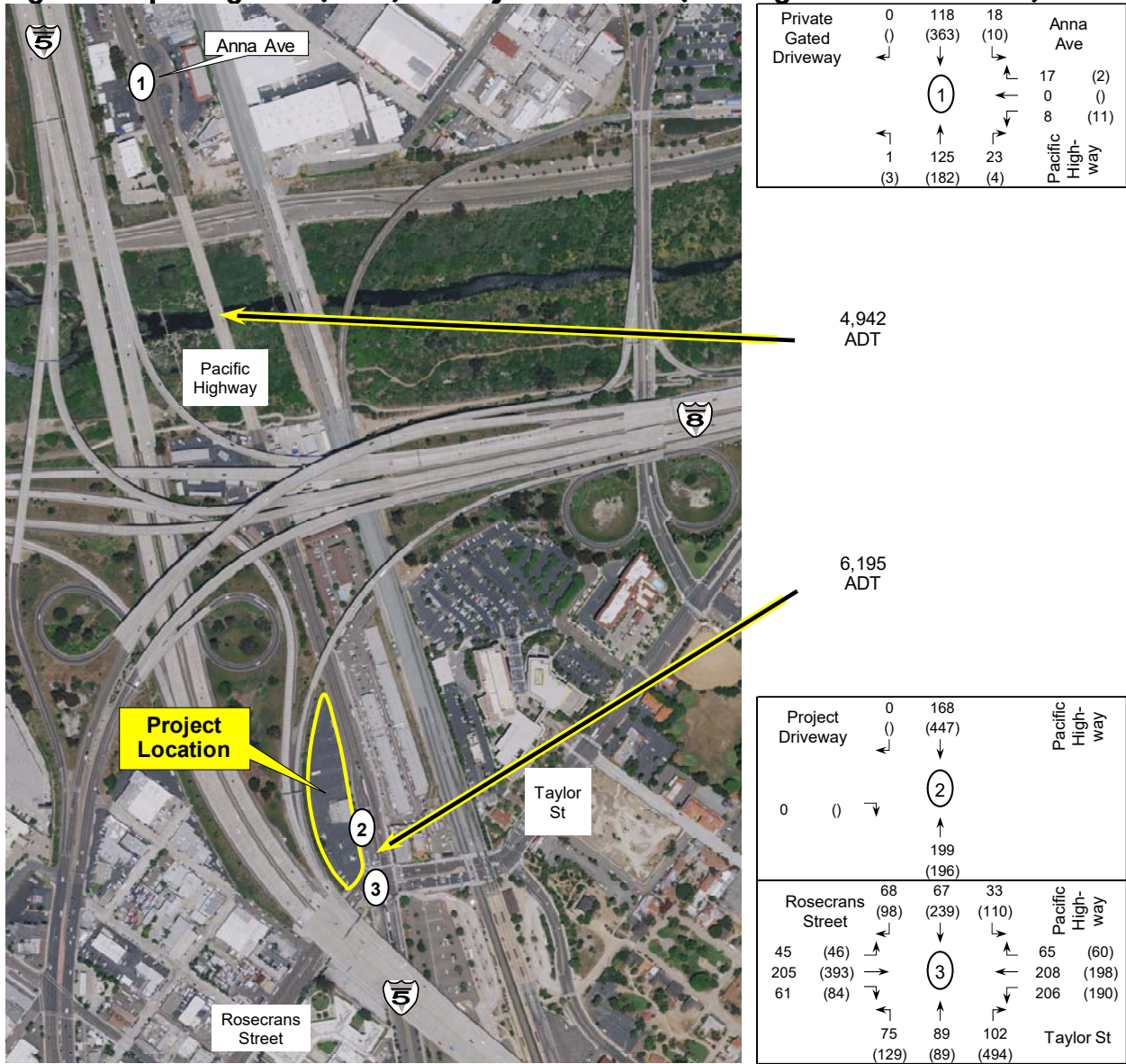


No Scale

4.2 Opening Year (2026) Transportation Network & Traffic Volumes

Opening Year 2026 No Project traffic volumes (existing + ambient growth) are shown in **Figure 9**.

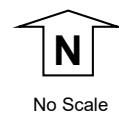
Figure 9: Opening Year (2026) No Project Volumes (Existing + Ambient Growth)



Source: USGS (Image date: 5/20/2020)

LEGEND

- XX AM peak hour volumes at intersections
- YY PM peak hour volumes at intersections
- ZZZZ ADT volumes shown along segments
- ① Intersection Reference Number to LOS Tables
- Existing Roadways



4.3 Opening Year (2026) Without Project

The Opening Year (2025) Without Project intersection LOS are shown in **Table 10**. The 95th percentile turning queues where the project will add traffic are shown in **Table 11**. The segment LOS is shown in **Table 12**. The intersection LOS and queuing worksheets are included in **Appendix I**.

TABLE 10: OPENING YEAR (2026) NO PROJECT INTERSECTION LOS

Intersection and (Analysis) ¹	Approach	Peak Hour	Opening Year	
			Delay ²	LOS ³
1) Pacific Highway at Anna Ave (U)	WB	AM	10.1	B
	WB	PM	14.0	B
2) Pacific Highway at Project Driveway (U)	EB	AM	Future	NA
	EB	PM	Driveway	NA
3) Pacific Highway at Rosecrans St (S)	All	AM	33.7	C
	All	PM	33.3	C

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. DNE: Does Not Exist. NA: Not Applicable.

TABLE 11: OPENING YEAR (2026) NO PROJECT INTERSECTION TURN LANE QUEUING

Intersection	Peak Hour	Approach	Storage		Opening Year		Distance Exceeding Storage (ft)
			Length in feet (notes)	95 th %ile Queue ¹ (ft)	Exceeds Storage?		
1) Pacific Highway at Anna Ave (U)	AM	WBL	50 (2)	28	No	NA	
	PM	WBL	50 (2)	31	No	NA	
3) Pacific Highway at Rosecrans St (S)	AM	EBL	160 (2)	77	No	NA	
	AM	SBL	230 (2)	57	No	NA	
	AM	SBR	60 (2)	62	Yes	2	
	PM	EBL	160 (2)	89	No	NA	
	PM	SBL	230 (2)	116	No	NA	
	PM	SBR	60 (2)	98	Yes	38	

Notes: WBL: Westbound Left. EBL: Eastbound Left. SBL: Southbound Left. SBR: Southbound Right. (1) Queue is 95th percentile from SimTraffic analysis. (2) Stop bar to end of turn lane striping. BOLD = SimTraffic 95th percentile forecasted queue beyond storage bay capacity.

TABLE 12: OPENING YEAR (2026) NO PROJECT SEGMENT ADT VOLUMES AND LOS

Daily	Functional Classification	LOS E Capacity	Opening Year		
			Daily Volume	V/C	LOS
Pacific Highway					
Anna Ave to Project Dwy	2 Ln Coll. + TWLTL	15,000	4,942	0.329	A
Project Dwy to Rosecrans	4 Ln Major	40,000	6,195	0.155	A

Notes: 2 Ln Coll. + TWLTL = 2 un-divided lanes + two way left turn lane. Daily volume is a 24 hour volume. LOS: Level of Service. V/C: Volume to Capacity Ratio.

Under the Opening Year (2026) No Project scenario, at the intersection of Pacific Highway/Rosecrans St/Taylor St, the queue in the southbound right turn lane would be expected to exceed the right turn storage lane by 2 feet in the AM peak hour and 38 feet in the PM peak hour based on the 95th percentile forecast.

4.4 Opening Year (2026) With Project

This scenario documents the addition of Project trips onto Opening Year (2026). The volumes shown in **Figure 10**. The intersection LOS is shown in **Table 13**. The 95th percentile turning queues where the project will add trips, are shown in **Table 14**. The segment LOS is shown in **Table 15**. The intersection LOS and queuing worksheets are included in **Appendix J**.

TABLE 13: OPENING YEAR (2026) PLUS PROJECT INTERSECTION LOS

Intersection and (Analysis) ¹	Approach	Peak Hour	Opening Year		Opening Year + Project		
			Delay ²	LOS ³	Delay ²	LOS ³	Delta ⁴
1) Pacific Highway at Anna Ave (U)	WB	AM	10.1	B	10.2	B	0.1
	WB	PM	14.0	B	19.5	C	5.5
2) Pacific Highway at Project Driveway (U)	EB	AM	Future	NA	9.5	A	NA
	EB	PM	Driveway	NA	10.7	B	NA
3) Pacific Highway at Rosecrans St (S)	All	AM	33.7	C	34.0	C	NA
	All	PM	33.3	C	33.8	C	0.5

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. 4) Delta is the increase in delay from project. NA: Not Applicable.

TABLE 14: OPENING YEAR (2026) PLUS PROJECT INTERSECTION TURN LANE QUEUING

Intersection	Peak Hour	Approach	Storage		Opening Year		Opening Year + Project	
			Length in feet (notes)	95 th %ile Queue ¹ (ft)	95 th %ile Queue ¹ (ft)	Exceeds Storage?	Distance in feet	
1) Pacific Highway at Anna Ave (U)	AM	WBL	50 (2)	28	31	No	NA	
	PM	WBL	50 (2)	31	50	No	NA	
3) Pacific Highway at Rosecrans St (S)	AM	EBL	160 (2)	77	88	No	NA	
	AM	SBL	230 (2)	57	88	No	NA	
	AM	SBR	60 (2)	62	83	Yes	23	
	PM	EBL	160 (2)	89	111	No	NA	
	PM	SBL	230 (2)	116	125	No	NA	
	PM	SBR	60 (2)	98	107	Yes	47	

Notes: WBL: Westbound Left. EBL: Eastbound Left. SBL: Southbound Left. SBR: Southbound Right. (1) Queue is 95th percentile from SimTraffic analysis. (2) Stop bar to end of turn lane striping. BOLD = SimTraffic 95th percentile forecasted queue beyond storage bay capacity.

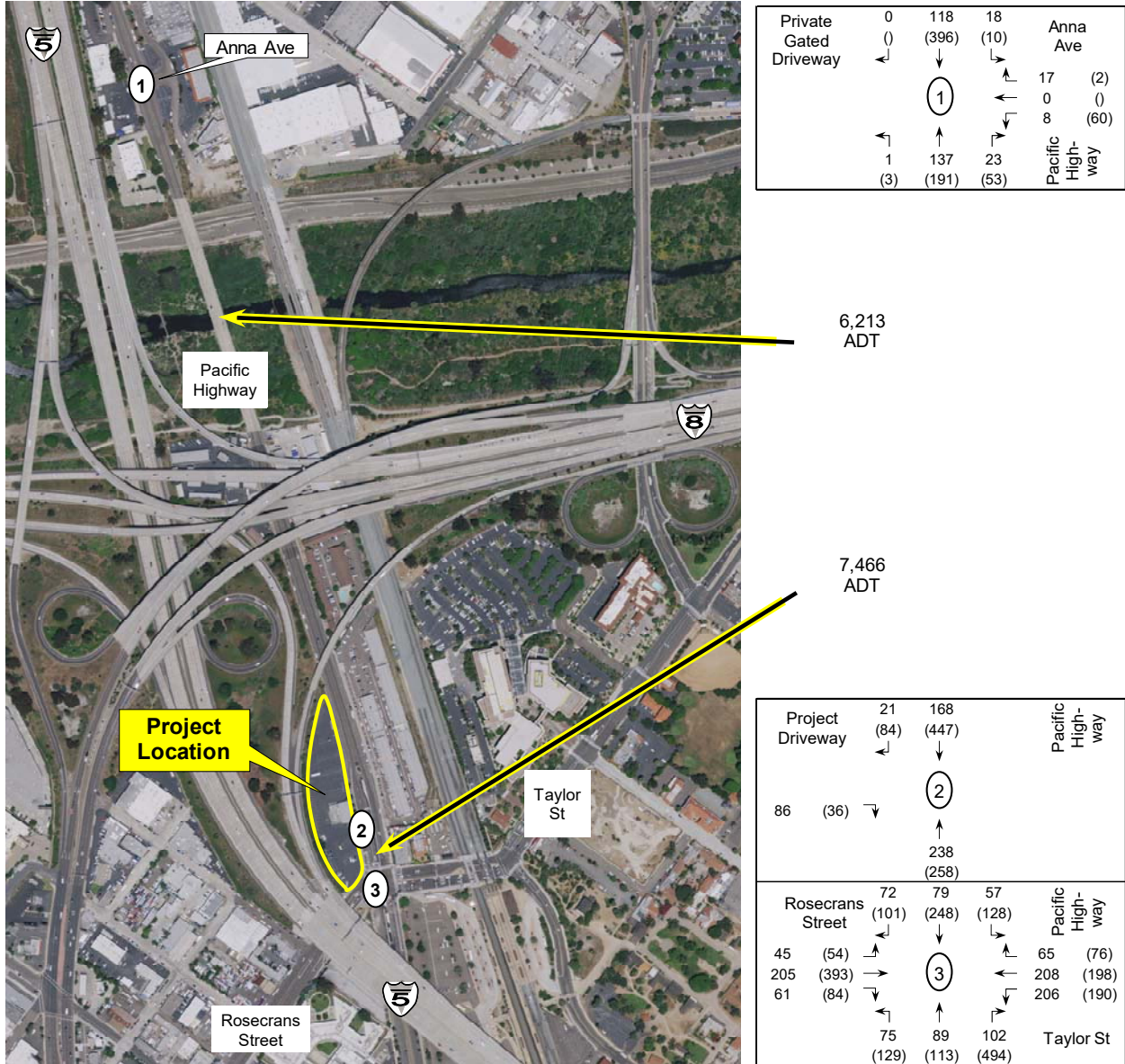
TABLE 15: OPENING YEAR (2026) PLUS PROJECT SEGMENT ADT VOLUMES AND LOS

Segment	Functional Classification	LOS E Capacity	Opening Year		Project		Opening Year + Project			
			Daily Volume	V/C	Daily Volume	LOS	Daily Volume	V/C	Change in V/C	
Pacific Highway										
Anna Ave to Project Dwy 2 Ln Coll. + TWLTL		15,000	4,942	0.329	A	1,271	6,213	0.414	A	0.085
Project Dwy to Rosecrans	4 Ln Major	40,000	6,195	0.155	A	1,271	7,466	0.187	A	0.032

Notes: 2 Ln Coll. +TWLTL = 2 un-divided lanes + two way left turn lane. Daily volume is a 24 hour volume. LOS: Level of Service. V/C: Volume to Capacity Ratio.

At the intersection of Pacific Highway/Rosecrans St/Taylor St in the Opening Year 2026 Plus Project scenario, the queue in the southbound right turn lane is expected to exceed the right turn storage lane by 23 feet in the AM peak hour and 47 feet in the PM peak hour based on the 95th percentile forecast.

Figure 10: Opening Year (2026) Plus Project Volumes



Source: USGS (Image date: 5/20/2020)

LEGEND

- XX AM peak hour volumes at intersections
- (YY) PM peak hour volumes at intersections
- ZZZZ ADT volumes shown along segments
- ③ Intersection Reference Number to LOS Tables
- Existing Roadways

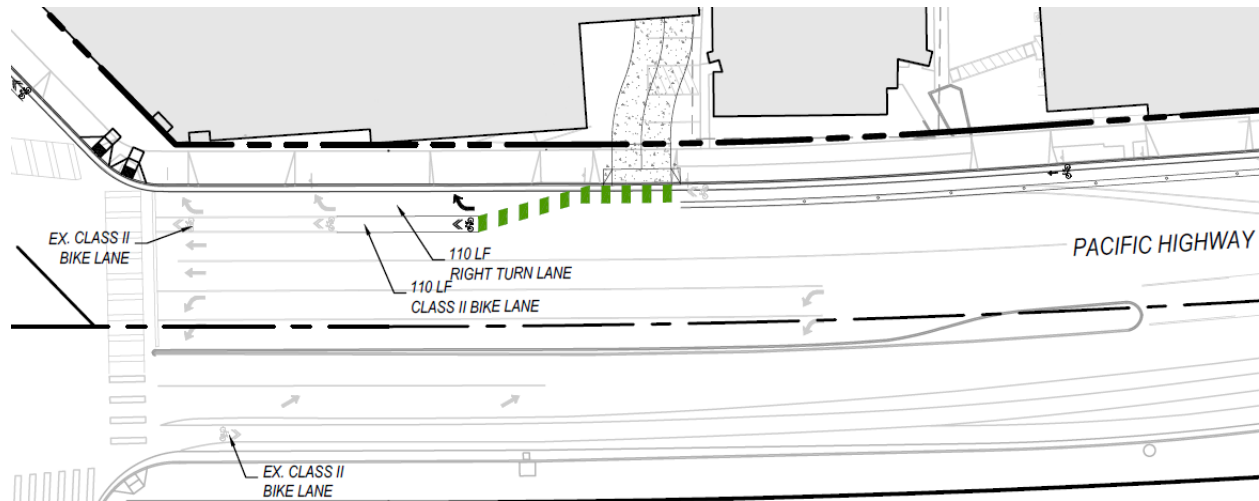


No Scale

4.5 Identification of Improvements

The project proposes to extend the striping for the southbound right turn lane (and adjacent one-way Class IV Cycle Track) by an additional 50 feet (from 60 feet to 110 feet) to accommodate the forecasted 95th percentile queue. A conceptual drawing of the proposed improvement is shown in **Figure 11**.

Figure 11: Conceptual Drawing of Proposed Improvement



5.0 Pedestrian, Bicycle, and Transit Assessment

This chapter describes pedestrian, bicycle, and transit facilities.

5.1 Pedestrian Assessment

The pedestrian analysis consists of documenting existing pedestrian facilities and basic deficiencies such as missing sidewalk sections, curb ramps, and major obstructions within half mile walking from the project access along the study roadways. Sidewalks within a half mile walking distance classified in the respective community plans as connector, corridor, or district were included in this analysis as shown in **Figure 12**. Excerpts from the Old Town and Midway-Pacific Highway community plans are included in **Appendix C**.

The TSM states that off-site improvements should be considered as follows:

Closing Sidewalk Gaps/Removing Obstructions:

- o The project should construct sidewalks to close sidewalk gaps adjacent to the project site.
- o The project should remove sidewalk obstructions that constrain pedestrian access route to less than four feet adjacent to the project site.
- o The project should construct curb ramps/meet accessibility standards for any intersections adjacent to the project site.

Accommodating Pedestrian Demand:

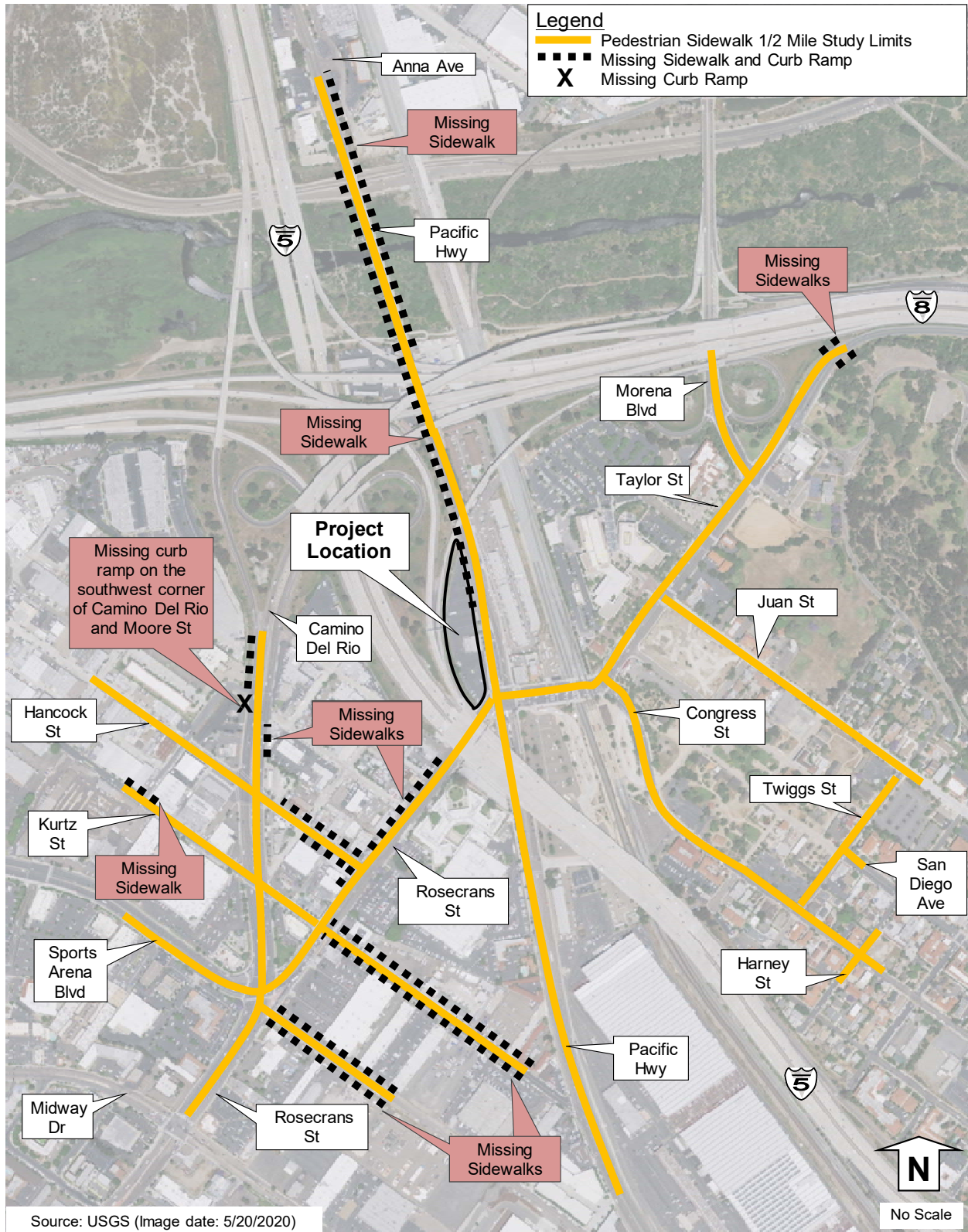
- o The project should consider adding traffic calming and pedestrian-related signal timing changes (such as pedestrian hybrid beacons, leading pedestrian interval signal timing, etc.) to accommodate an increase in pedestrian demand on roadways and intersections adjacent to the project site.

As shown in Figure 4, there are several areas within the half mile walking shed with missing sidewalks and curb ramps; however, these missing sections are not adjacent to the project site. The missing sidewalk on the west side of Pacific Highway immediately north of the project site is not proposed to be completed by the Owner/Permittee because there are no pedestrian amenities immediately north of the project site and the bridge over the San Diego River does not have sidewalks. Additionally, a Caltrans support column for the fly over ramp occupies the entire space between the Caltrans ROW fence and back of curb just north of the project site. Nearby retail, food, and park attractions are located within walking distance along existing sidewalks to the south and east of the project site.

Based on the TSM criteria and the SDMC, the project shall dedicate frontage along the project site and reconstruct existing sidewalks along Pacific Highway and Rosecrans St to create non-contiguous sidewalks with landscaping along the project frontages as follows:

- 1) Pacific Highway will have a 14-ft wide parkway including a 6 foot wide non-contiguous sidewalk with an 8 foot width of landscape buffer.
- 2) Rosecrans Street will have a 22-ft wide parkway including a 7 foot wide non-contiguous sidewalk and a 15 foot width of landscape buffer.

Figure 12: Pedestrian Sidewalk Analysis (1/2 Mile Walking Distance)



5.2 Bicycle Assessment

The bicycle assessment consists of documenting existing bicycle facilities and basic deficiencies (bike lane gaps, obstructions) within half mile bicycling distance measured from the center of the intersection formed by each project driveway. The existing and proposed bicycle facilities were obtained from the respective community plan with excerpts included in **Appendix C**. Bicycle facilities within a half mile bicycling distance were included in this analysis as shown in **Figure 13**.

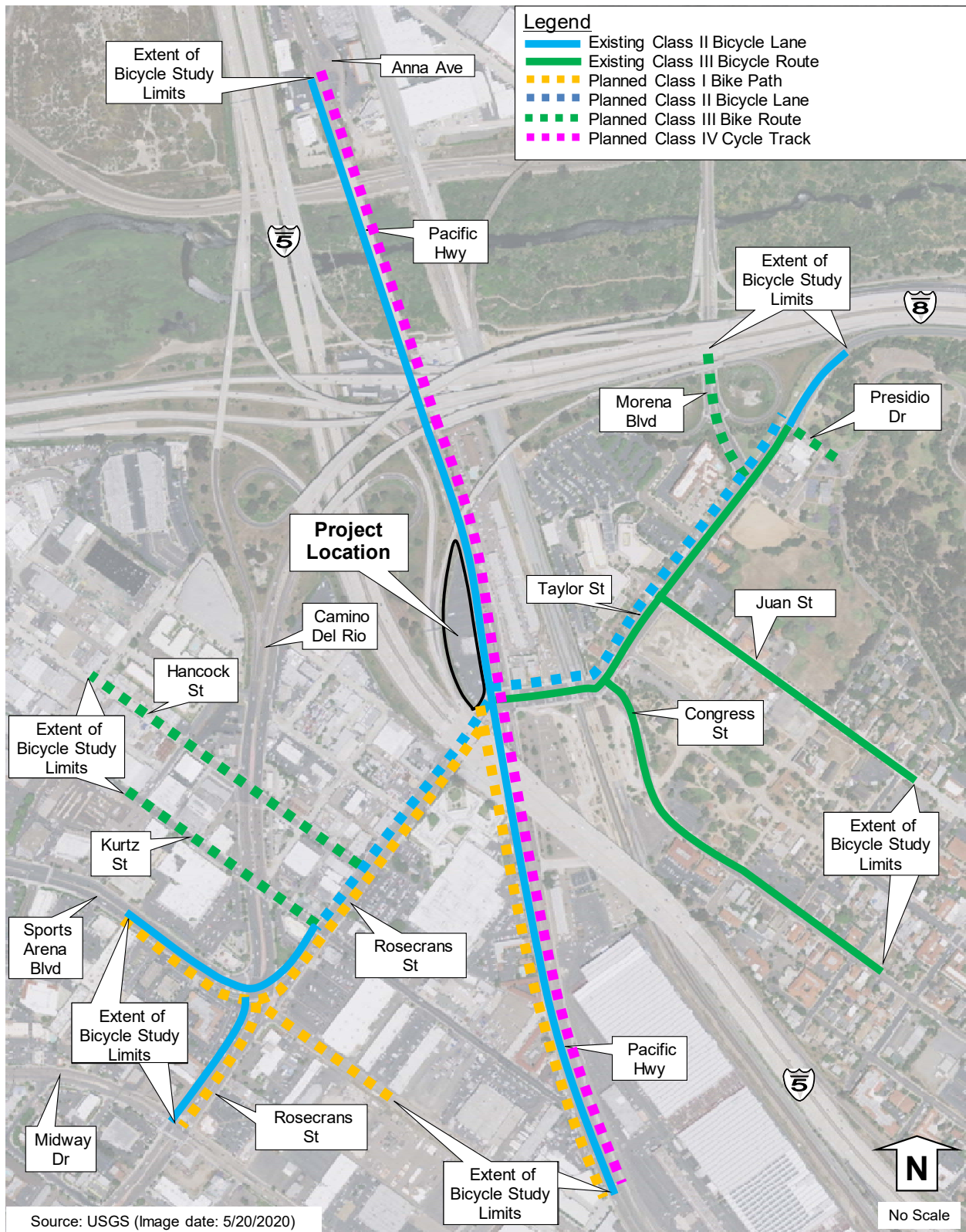
The TSM states that off-site improvements should be considered as follows:

Accommodating Bicycle Demand:

- o The project should construct (or reserve space for) any planned bicycle facility per the Community Plan or Bicycle Master Plan.
- o The project should consider upgrading adjacent bicycle facilities by adding upgraded treatments (such as green bike lane paint, buffers, etc. where appropriate) to accommodate an increase in bicycle demand.

Based on the TSM criteria, the project shall replace the existing Class II Bicycle Lane with the planned one-way Class IV Cycle Track along its Pacific Highway frontage and stripe a Class II Bicycle Lane along its Rosecrans Street frontage, consistent with the Old Town and Midway-Pacific Highway Community Plans, respectively. The project will provide a combination of short-term bicycle parking, long-term bicycle parking, and bicycle storage rooms for its residents per the SDMC and CAP Consistency Checklist.

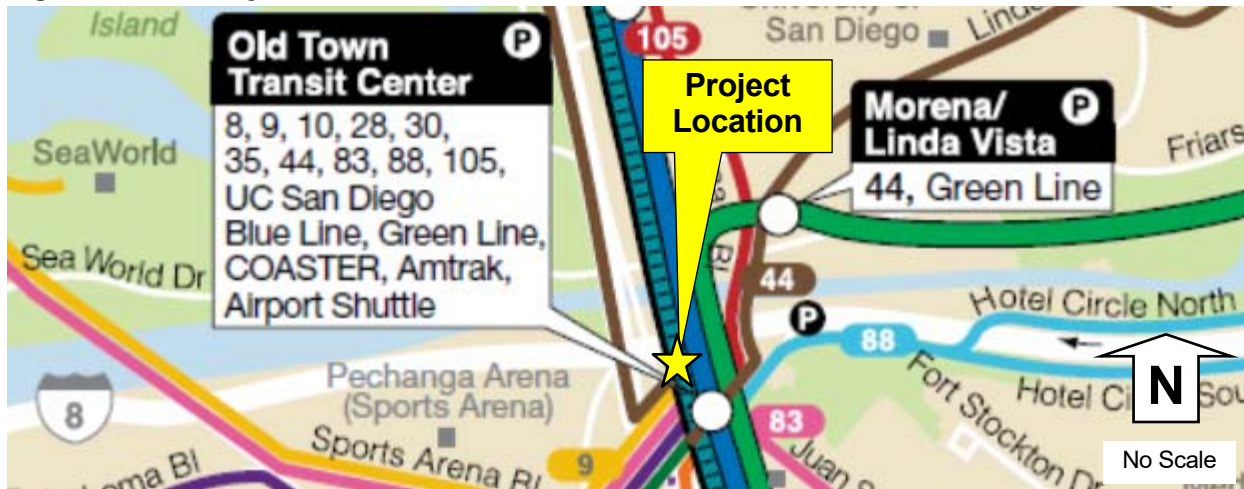
Figure 13: Bicycle Analysis (1/2 Mile Biking Distance)



5.3 Transit Assessment

The project is located within a Parking Standards Transit Priority Area (TPA), Transit Area Overlay Zone, Mobility Zone 2, and OTMCR-1-3 zone per the City of San Diego Project Tracking System. The project building entrance is approximately 800 feet walking distance from the Old Town Transit Center, which provides service to 11 bus routes operated by the Metropolitan Transit System (MTS), the UCSD Blue Line Trolley, and the Sycuan Green Line Trolley, North County Transit Center (NCTD) Coaster rail, Amtrak rail, and an airport shuttle (the “Old Town Flyer” service). Transit services adjacent to the project are shown in **Figure 14**.

Figure 14: Nearby Transit Service



Source: San Diego Metropolitan Transit System

A summary of peak hour and off-peak transit services for weekdays is shown in **Table 16** with weekend services shown in **Table 17**.

TABLE 16: WEEKDAY TRANSIT SERVICE OPERATIONS AND FREQUENCY

Bus Route	Weekday (Mon-Fri) Service Operations (Off-Peak Service Frequency Range)	7-9 AM Peak Hour Service Frequency	4-6 PM Peak Hour Service Frequency
Bus Route 8	≈ 5:00 AM to ≈ 1:00 AM (≈ 20-30 min.)	20 minutes	20 minutes
Bus Route 9	≈ 6:00 AM to ≈ 10:30 PM (≈ 20-30 min.)	30 minutes	20 minutes
Bus Route 10	≈ 5:00 AM to ≈ 12:00 AM (≈ 15-30 min.)	15 minutes	15 minutes
Bus Route 28	≈ 5:30 AM to ≈ 11:00 PM (≈ 30 min.)	20 minutes	30 minutes
Bus Route 30	≈ 5:00 AM to ≈ 12:30 AM (≈ 20-40 min.)	15 minutes	15 minutes
Bus Route 35	≈ 5:30 AM to ≈ 11:00 PM (≈ 20-30 min.)	20 minutes	20 minutes
Bus Route 44	≈ 5:00 AM to ≈ 11:30 PM (≈ 15-30 minutes)	15 minutes*	15 minutes
Bus Route 83	≈ 6:30 AM to ≈ 6:30 PM (≈ 70 min.)	70 minutes	70 minutes
Bus Route 84	**	**	**
Bus Route 88	≈ 6:00 AM to ≈ 9:00 PM (≈ 30 min.)	30 minutes	30 minutes
Bus Route 105	≈ 5:00 AM to ≈ 10:30 PM (≈ 30-60 min.)	30 minutes	30 minutes

* While Mesa College is in session during fall and spring semesters, Route 44 has a 7-9am peak hour frequency of 5-10 minutes.

** Bus Route 84 departs the Old Town Transit Center once at 6:13am.

TABLE 17: WEEKEND TRANSIT SERVICE OPERATIONS AND FREQUENCY

Bus Route	Saturday Service Operations (Service Frequency Range)	Sunday Service Operations (Service Frequency Range)
Bus Route 8	≈ 6:00 AM to ≈ 12:30 AM (≈ 20-30 min.)	≈ 6:00 AM to ≈ 10:30 PM (≈ 20-30 min.)
Bus Route 9	≈ 6:30 AM to ≈ 10:00 PM (≈ 30 min.)	≈ 7:30 AM to ≈ 9:00 PM (≈ 30 min.)
Bus Route 10	≈ 5:30 AM to ≈ 12:00 AM (≈ 20-30 min.)	≈ 6:00 AM to ≈ 9:30 PM (≈ 30 min.)
Bus Route 28	≈ 6:00 AM to ≈ 10:30 PM (≈ 30 min.)	≈ 6:30 AM to ≈ 8:00 PM (≈ 60 min.)
Bus Route 30	≈ 5:30 AM to ≈ 12:30 AM (≈ 30 min.)	≈ 6:00 AM to ≈ 12:00 AM (≈ 30 min.)
Bus Route 35	≈ 6:30 AM to ≈ 11:00 PM (≈ 30 min.)	≈ 6:30 AM to ≈ 9:30 PM (≈ 30 min.)
Bus Route 44	≈ 6:00 AM to ≈ 11:00 PM (≈ 30 min.)	≈ 6:00 AM to ≈ 10:00 PM (≈ 30 min.)
Bus Route 83	NA	NA
Bus Route 84	NA	NA
Bus Route 88	≈ 6:00 AM to ≈ 8:30 PM (≈ 30 min.)	NA
Bus Route 105	≈ 6:00 AM to ≈ 8:30 PM (≈ 60 min.)	≈ 7:00 AM to ≈ 8:30 PM (≈ 60 min.)

The transit analysis also includes identifying the closest bus stops to the project site. If the stops are within ½ mile walking distance of the project access, the condition of the stop amenities must be describe/evaluated. Bus stops with a ½ mile walking distance and the Old Town Transit Center were included in this analysis as shown in **Figure 15**.

The City of San Diego *Transportation Study Manual*, September 2022 states that off-site improvements should be considered as follows:

Transit Priority Treatments/Improvements

- o The project should consider transit priority treatments when operational analysis determines a transit movement would experience LOS E or worse.
- o The project should consider transit priority treatments identified within the Community Plan for the study area.

Proposed Transit Stops:

- o The project should consider accommodating transit stops to serve existing or proposed transit services, including those identified in the Community Plan, RTIP and/or RTP within the study area. The project should coordinate any identified transit stops with SANDAG, the Metropolitan Transit System (MTS) and/or the North County Transit District (NCTD).

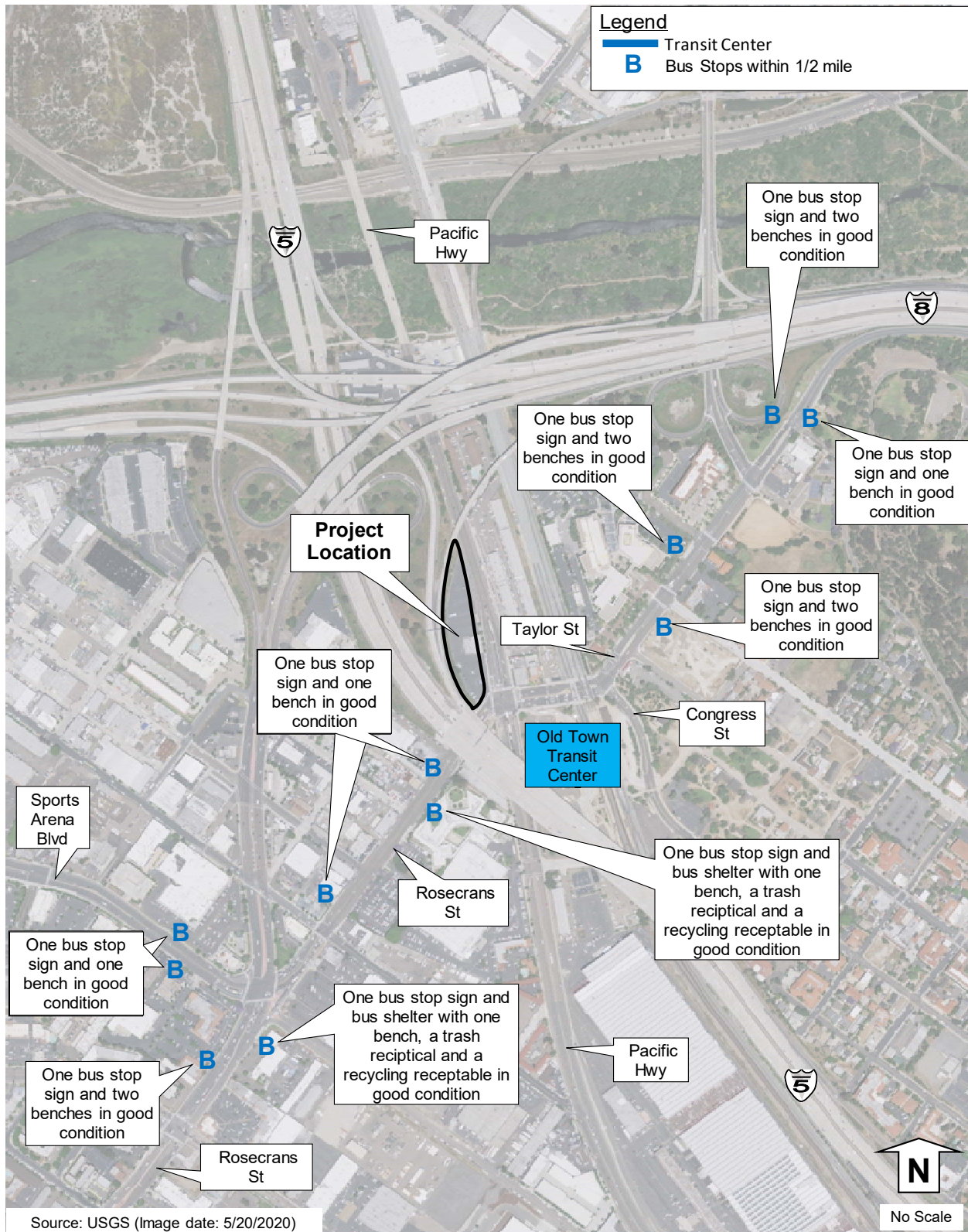
Transit Stop Amenities:

- o The project should coordinate with MTS and/or the NCTD, as applicable, to determine additional or upgraded transit stop amenities.

The SANDAG 2050 Regional Transportation Plan identifies proposed high speed rail and express light rail transit adjacent/near the project site as part of the 2050 Revenue Constrained Transit Network.

Based on the TSM criteria, no transit improvements are required or proposed.

Figure 15: Bus Stop Analysis (1/2 Mile Walking Distance)



6.0 Project Access & Circulation

Vehicular access is proposed from a right-in/right-out only driveway on Pacific Highway that will serve a gated parking structure. Additionally, service vehicles will have access to a right-in only driveway on Rosecrans St for a loading area within the site, and exit-only driveway on Pacific Highway at the north end of the project site. Eight existing driveways (6 on Pacific Highway and 2 on Rosecrans Street) will be closed and replaced with full height curb, gutter, and sidewalk.

The parking structure will have a gated entrance with an automated key operating system and accessed only by the residents who have assigned parking. The location of the gate is 40 feet from the back side of the sidewalk to the face of the gate. This allows for queuing and is compliant with the SDMC Section 142.0560(j)(4) and Diagram 142-05A. Turnaround is not proposed for entry to the parking structure, due to the assigned parking arrangement. To avoid vehicle backup for vehicles that are unexpected, there will be a key/access console to allow contact to the leasing office allowing entrance and turnaround within the parking structure.

On-site circulation for tenants and guests is from the main right-in/right-out only driveway on Pacific Coast Highway.

On-site circulation for loading and deliveries is along the back side of the building. The one-way ingress driveway on Rosecrans St has a gate approximately 78 feet from the property line at the back of sidewalk. The egress driveway is also gated approximately 25 feet from the property line at the back of sidewalk.

7.0 Parking / Loading

Project parking is proposed in a parking garage. All parking modes are located within the parking garage or building. The number of required and provided parking spaces by mode are shown in **Table 18**.

TABLE 18: PROJECT PARKING SUMMARY

Parking Mode	Minimum Required Parking	Proposed Parking
Vehicle	0	234
Vehicle Accessible	6	6
Motorcycle	23	23
Bicycle	96	97

Source: Carrier Johnson Architects

The project is in a Parking Standards Transportation Planning Area (PSTPA); therefore, the Owner/Permittee is required to provide at least 2 points worth of transportation amenities. This is accomplished by providing a bike repair station near the site entrance along Pacific Coast Hwy. Because the proposed development consists of multiple dwelling units within a Parking Standards TPA that provides transportation amenity requirements, Mobility Choice regulations do not apply per Section 143.1102(g) of the SDMC.

8.0 Systemic Safety Analysis

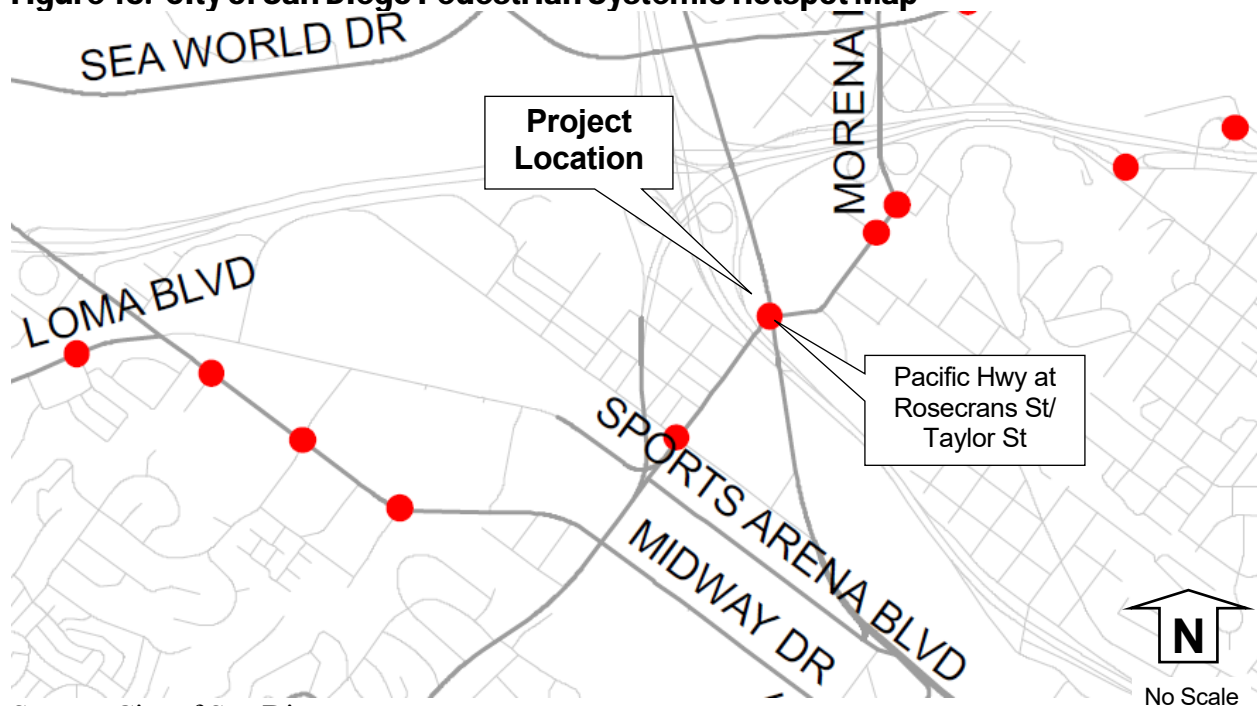
The City of San Diego Systemic Safety: The Data-Driven Path to Vision Zero (April 2019) policy promotes safe roadway design with a goal toward preventing collisions. As part of that goal, a systemic safety review provides an assessment of hotspots and possible countermeasures to align with Vision Zero. The City of San Diego *Transportation Study Manual* states on page 40:

“Study intersections should be compared to the City of San Diego Systemic Safety: The Data-Driven Path to Vision Zero report to determine if a study intersection meets any hot spot criteria identified in Appendix C: Identification of Systemic Hotspots of the report. If a study intersection meets any of the criteria, the applicant should evaluate any potential countermeasures and coordinate with the Development Services Department Transportation Development Section staff to determine appropriate intersection improvements.”

8.1 Pedestrian Systemic Safety Review

The City of San Diego pedestrian hotspot map includes intersections that have historical safety concerns. The City’s hot spot map is shown in **Figure 16**.

Figure 16: City of San Diego Pedestrian Systemic Hotspot Map



Source: City of San Diego

The pedestrian hotspot analysis was applied to determine if countermeasure should be implemented at the intersection of Pacific Highway/Rosecrans St/Taylor St because it is a study intersection and identified on the City’s Hotspot Map. The criteria require application of Average Daily Traffic

(ADT) volumes for both the major and minor approaches. The major and minor ADTs were obtained from City of San Diego traffic data included in **Appendix K**. The pedestrian systemic safety review requires all criteria to be satisfied to consider implementing a countermeasure, which was not satisfied for the study intersection as shown in **Table 19**.

TABLE 19: PEDESTRIAN SYSTEMIC SAFETY REVIEW

Intersection	Pedestrian Footprint #1 Criteria			Pedestrian Footprint #2 Criteria			Pedestrian Footprint #2 Criteria		
	Sig?	One-Way 3 Ln x 4 Ln	Major Rd ADT: 7,001-15,000	Sig?	4 Ln x 2 Ln	Major Road ADT: 7,001-25,000	Sig?	4 Ln x 2 Ln	Major Road ADT: 15,001-25,000
#3 Pacific Hwy at Rosecrans St	Yes	No	Yes	Yes	No	Yes	Yes	No	No

Notes: Sig? = Signalized (yes or no). One-Way 3 Ln x 4 Ln = 3 lane (1-way) roadway intersects with a 4 lane (2-way) roadway. 4 Ln x 2 Ln = 4 lane (2-way) roadway intersects with a 2 lane (2-way) roadway. BOLD and shaded indicates footprint criteria satisfied to consider implementing a countermeasure.

None of the pedestrian safety review criteria are satisfied; therefore, no countermeasures are recommended. The intersection of Pacific Hwy/Rosecrans St/Taylor St currently has existing countermeasures that include high visibility crosswalks and pedestrian countdown signal heads (photos included in **Appendix L**).

8.2 Bicycle Systemic Safety Review

All the study intersections were evaluated to find out if any of the bicycle systemic safety criteria would be satisfied to determine if countermeasure should be implemented. The bicycle systemic safety review findings are shown in **Table 20**.

TABLE 20: BICYCLE SYSTEMIC SAFETY REVIEW

Intersection	Bicycle Footprint #1 Criteria		Bicycle Footprint #2 Criteria	
	Signalized?	4 Ln x 2 Ln? OR 4 Ln x 4 Ln?	SSSC?	2 Ln x 2 Ln?
#1 Pacific Hwy at Anna Ave	No	No	Yes	No (a)
#2 Pacific Hwy at Project Driveway	No	No (b)	Yes	No
#3 Pacific Hwy at Rosecrans St	YES	YES	No	No

Notes: 4 Ln x 2 Ln = 4 lane (2-way) roadway intersects with a 2 lane (2-way) roadway. 4 Ln x 4 Ln = 4 lane (2-way) roadway intersects with a 4 lane (2-way) roadway. SSSC = Side Street Stop Control. (a) Criterion is for crossing a full intersection. West leg is a gated ingress only private driveway; therefore, this criterion of crossing a full intersection from the SSSC leg is not applicable. (b) Criterion is for crossing a full intersection. There is no east leg; therefore, this criterion of crossing a full intersection from the SSSC leg is not applicable. BOLD and shaded indicates footprint criteria satisfied to consider implementing a countermeasure.

The intersection of Pacific Hwy/Rosecrans St/Taylor St meets the Bicycle Footprint #1 systemic criteria for potential countermeasures. Potential bicycle countermeasures include: 1) Bike loop detectors, 2) Public safety messaging campaign, and 3) Bicycle red light running enforcement. The Class II bike lanes on Pacific Highway/Rosecrans St/Taylor St currently have bike loop detectors and green colored pavement (photos included in **Appendix M**). A possible countermeasure is a public safety messaging campaign; however, such a campaign is beyond the scope of this project.

8.3 Vehicle Systemic Safety Review

All the study intersections were evaluated to find out if any of the vehicle systemic safety criteria would be satisfied to determine if countermeasures should be implemented. The vehicle systemic safety review findings are shown in **Table 21**.

TABLE 21: VEHICLE SYSTEMIC SAFETY REVIEW

Intersection	Vehicle Footprint #1 Criteria				Vehicle Footprint #2 Criteria			
	Sig?	4 Ln x 2 Ln?	Major >15k ADT	Minor ≤7k ADT	Sig?	6 Ln x 4 Ln?	Major >15k ADT	Minor >7k ADT
#1 Pacific Hwy at Anna Ave	No	No	No	Yes	No	No	No	No
#2 Pacific Hwy at Project Driveway	No	No (a)	No	Yes	No	No	No	No
#3 Pacific Hwy at Rosecrans St	Yes	No	No	No	Yes	No	No	Yes

Table continued

Intersection	Vehicle Footprint #3 Criteria			Vehicle Footprint #4 Criteria			
	Sig?	4 Ln x 4 Ln?	Minor >7k ADT	Sig?	3 Ln (1-way) x 3 Ln (1-way)?	Major >15k ADT	Minor >7k ADT
#1 Pacific Hwy at Anna Ave	No	No	No	No	No	No	No
#2 Pacific Hwy at Project Driveway	No	No	No	No	No	No	No
#3 Pacific Hwy at Rosecrans St	YES	YES	YES	Yes	No	No	Yes

Notes: Sig? = Signalized (yes or no).

4 Ln x 2 Ln = 4 lane (2-way) roadway intersects with a 2 lane (2-way) roadway.

4 Ln x 4 Ln = 4 lane (2-way) roadway intersects with a 4 lane (2-way) roadway.

(a) There is no east leg; therefore, this criterion of crossing a full intersection is not applicable.

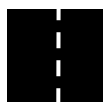
BOLD and shaded indicates all criteria satisfied to consider implementing a countermeasure.

The intersection of Pacific Hwy/Rosecrans St/Taylor St meets the Vehicle Footprint #3 systemic criteria for potential countermeasures. Potential countermeasures include: 1) Signal hardware updates such as signal heads with backplates that have retroreflective borders for better visibility, 2) Convert the signalized intersection to a roundabout, 3) Intersection control awareness campaign, or 4) Vehicle red light enforcement. Each approach currently has Type E Modified front loops (pictures in **Appendix N**). The recommended vehicle countermeasure is for the project to upgrade and install signal heads with backplates that have retroreflective borders for better visibility for each approach at the intersection of Pacific Hwy/Rosecrans St/Taylor St.

8.4 Systemic Safety Review Recommended Countermeasures

In summary, the systemic safety review identified the following locations that match the criteria for recommended improvements:

- 1) The intersection of Pacific Hwy/Rosecrans St/Taylor St meets the Bicycle Footprint #1 systemic criteria for potential countermeasures. The Class II bike lanes on Pacific Highway/Rosecrans St/Taylor St currently have bike loop detectors and green colored pavement along Pacific Highway approaching Rosecrans St/Taylor St. A possible countermeasure is a public safety messaging campaign; however, such a campaign is beyond the scope of this project. Therefore, no countermeasure is proposed.
- 2) The intersection of Pacific Hwy/Rosecrans St/Taylor St meets the Vehicle Footprint #3 systemic criteria for potential countermeasures. The recommended vehicle countermeasure is for the project to upgrade and install signal heads with backplates that have retroreflective borders for better visibility for each approach.



Appendix A

City of San Diego Roadway Segment Capacity Table

Transportation Study Manual (TSM)

DATE: 09/19/2022

Roadway Segment LOS by Classification and Average Daily Traffic (ADT)

Table Appendix F-1 provides street classifications and associated LOS thresholds dependent on the roadway's average daily traffic (ADT).

TABLE APPENDIX F-1

ROADWAY CLASSIFICATIONS, LOS, AND AVERAGE DAILY TRAFFIC (ADT)

STREET CLASSIFICATION	LANES	LEVEL OF SERVICE				
		A	B	C	D	E
Expressway	8 lanes	40,000	56,000	80,000	93,500	107,000
Expressway	7 lanes	35,000	49,000	70,000	82,000	93,500
Expressway	6 lanes	30,000	42,000	60,000	70,000	80,000
Prime Arterial ¹	8 lanes	35,000	50,000	70,000	75,000	80,000
Prime Arterial ¹	7 lanes	30,000	42,500	60,000	65,000	70,000
Prime Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Prime Arterial ¹⁰	5 lanes	20,000	28,000	40,000	45,000	50,000
Prime Arterial ¹¹	4 lanes	17,500	24,500	35,000	40,000	45,000
Major Arterial ²	7 lanes	22,500	31,500	45,000	50,000	55,000
Major Arterial	6 lanes	20,000	28,000	40,000	45,000	50,000
Major Arterial ³	5 lanes	17,500	24,500	35,000	40,000	45,000
Major Arterial	4 lanes	15,000	21,000	30,000	35,000	40,000
Major Arterial	3 lanes	11,250	15,750	22,500	26,250	30,000
Major Arterial	2 lanes	7,500	10,500	15,000	17,500	20,000
Major Arterial (one-way) ⁴	3 lanes	12,500	16,500	22,500	25,000	27,500
Major Arterial (one-way) ⁵	2 lanes	10,000	13,000	17,500	20,000	22,500

STREET CLASSIFICATION	LANES	LEVEL OF SERVICE				
		A	B	C	D	E
Collector (with two-way left turn lane)	5 lanes	12,500	17,500	25,000	30,750	37,500
Collector (with two-way left turn lane)	4 lanes	10,000	14,000	20,000	25,000	30,000
Collector (with two-way left turn lane)	3 lanes	7,500	10,500	15,000	18,750	22,500
Collector (with two-way left turn lane)	2 lanes	5,000	7,000	10,000	13,000	15,000
Collector (without two-way left turn lane)	4 lanes	5,000	7,000	10,000	13,000	15,000
Collector (without two-way left turn lane) ⁶	3 lanes	4,000	5,000	7,500	10,000	11,000
Collector (without two-way left turn lane)	2 lanes	2,500	3,500	5,000	6,500	8,000
Collector (with no fronting property)	2 lanes	4,000	5,500	7,500	9,000	10,000
Collector (one-way) ⁷	3 lanes	11,000	14,000	19,000	22,500	26,000
Collector (one-way) ⁸	2 lanes	7,500	9,500	12,500	15,000	17,500
Collector (one-way) ⁹	1 lane	2,500	3,500	5,000	6,500	7,500
Sub-Collector (Single-family)	2 lanes	--	--	2,200	--	--

Notes:

The volumes and the average daily level of service listed above are only intended as a general planning guideline. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

¹Calculated assuming that each additional lane above a 6-Ln Arterial adds 5,000 ADT for LOS A, 7,500 ADT for LOS B and 10,000 ADT for LOS C, D, and E

²Calculated assuming that ADT is 1/2 way between steps of a 6-Ln Major Arterial & 6 Ln Prime Arterial

³Calculated assuming that ADT is 1/2 way between steps of a 4-Ln Major Arterial & 6 Ln Major Arterial

⁴Calculated using: Capacity = 0.5 (6-Ln Major (2-way) + Added Capacity of 2,500 ADT)

⁵Calculated using: Capacity = 0.5 (4-Ln Major (2-way) + Added Capacity of 2,500 ADT)

⁶Calculated using: Capacity = 4-Ln Collector (no center lane) * (3/4)

⁷Calculated using: Capacity = 2-Ln Collector (one-way) * (3/2)

⁸Calculated using: Capacity = 0.5 (4-Ln Collector w/continuous left turn lane) + Added Capacity of 2,500 ADT)

⁹Calculated using: Capacity = 0.5 (2-Ln Collector w/ continuous left turn lane). Capacity took into account parking friction from both sides of roadway

¹⁰ Calculated by applying same differences between 8-Ln Prime & 7-Ln Prime & 7-Ln Prime & 6-Ln Prime

¹¹ Calculated assuming ratio between 6-Ln Prime & 6-Ln Major applied to 4-Ln Major

Appendix B

Excerpts from City of San Diego TSM for Roadway Improvement Criteria

Transportation Study Manual (TSM)

DATE: 09/19/2022

Roadway Segment Analysis

Roadway segment analysis should be evaluated for any roadway segment that has identified improvements (including planned new circulation element roadways) in the Community Plan and the project is expected to add 1,000 or more daily final primary trips (cumulative trips) if consistent with the Community Plan, or 500 or more daily final primary trips (cumulative trips) if inconsistent with the Community Plan. Roadways should be evaluated using **Appendix F: Roadway Segment LOS by Classification and Average Daily Traffic (ADT)**. The intent of this analysis is to determine if the project results in the need to implement roadway improvements as identified in the Community Plan. The functional classification of the roadway segment should be evaluated in this analysis.

Freeway Interchange Analysis

Freeway analysis should focus on off-ramp queuing spillbacks onto freeway mainline. Studies should normally document changes in off-ramp maximum queues and propose mitigation for queues that spill back onto mainline (or exacerbate conditions already or projected to be) occurring. Freeway interchange analysis should be coordinated with Caltrans.

Identifying Off-Site Improvements

Off-site improvements to accommodate project traffic that address access, circulation and safety for all modes should be determined using the following analysis methods for each type of improvement:

Pedestrian Facilities

- Closing Sidewalk Gaps/Removing Obstructions:
 - The project should construct sidewalks to close sidewalk gaps adjacent to the project site.
 - The project should remove sidewalk obstructions that constrain pedestrian access route to less than four feet adjacent to the project site.
 - The project should construct curb ramps/meet accessibility standards for any intersections adjacent to the project site.
- Accommodating Pedestrian Demand:
 - The project should consider adding traffic calming and pedestrian-related signal timing changes (such as pedestrian hybrid beacons, leading pedestrian interval signal timing, etc.) to accommodate an increase in pedestrian demand on roadways and intersections adjacent to the project site.

Bicycle Facilities

- Accommodating Bicycle Demand:
 - The project should construct (or reserve space for) any planned bicycle facility per the Community Plan or Bicycle Master Plan.
 - The project should consider upgrading adjacent bicycle facilities by adding upgraded treatments (such as green bike lane paint, buffers, etc. where appropriate) to accommodate an increase in bicycle demand.

Transit Facilities

- Transit Priority Treatments/Improvements
 - The project should consider transit priority treatments when operational analysis determines a transit movement would experience LOS E or worse.
 - The project should consider transit priority treatments identified within the Community Plan for the study area.
- Proposed Transit Stops:
 - The project should consider accommodating transit stops to serve existing or proposed transit services, including those identified in the Community Plan, RTIP and/or RTP within the study area. The project should coordinate any identified transit stops with SANDAG, the Metropolitan Transit System (MTS) and/or the North County Transit District (NCTD).
- Transit Stop Amenities:
 - The project should coordinate with MTS and/or the NCTD, as applicable, to determine additional or upgraded transit stop amenities.

Signalized Intersections

- Adding or lengthening a turn lane:
 - Considerations for intersection improvements:

When considering intersection improvements for circulation, access, and safety for all modes, factors that should be considered include, but are not limited to, conflicting pedestrian movements, existing and proposed bicycle facilities, transit priority, protected or permissive turn movement phasing, number of lanes, speed of prevailing traffic and expected queue lengths.
 - Left Turn Lane:

- No Existing Left-Turn Lane: If the project adds traffic to an individual left turn movement causing the total number of peak hour left turns to exceed 100, consider adding a left turn lane.⁸
 - Existing Single Left-Turn Lane: If the project adds traffic to an individual left turn movement causing the total number of peak hour left turns to exceed 300, consider adding a second left turn lane.
 - Right Turn Lane:
 - No Existing Right-Turn Lane: If the addition of a right turn lane will not negatively affect other roadway users, will maintain a comfortable roadway environment, AND the project adds traffic to an individual right turn movement causing the total number of peak hour right turns to exceed 500, consider adding a right turn lane.
 - Existing Single Right-Turn Lane: If the addition of a right turn lane will not negatively affect other roadway users, will maintain a comfortable roadway environment, AND the project adds traffic to an individual right turn movement causing the total number of peak hour right turns to exceed 800, consider adding a second right turn lane. In addition to the considerations previously stated, dual-right turn (or more) treatments may require supplementary improvements including but not limited to no right-turn on red with blank-out signs, lead pedestrian intervals (LPIs) for pedestrians and cycle track treatment for bicyclists.
 - Lengthening a Turn Pocket:
 - If the project adds traffic to a turning movement and causes the 95th percentile queue to exceed the available turn pocket length, consider lengthening the turn pocket.
- Signal Timing Improvements/Signal Modifications:
 - Determined based on intersection operations analysis as follows:

⁸ FHWA, *Signalized Intersections: Informational Guide*, August 2004. This source also provides additional factors which can be used to determine the need of a single left turn lane or additional left turn lanes including, left-turn volumes on the major and minor approaches, number of lanes, and vehicles per hour.

- Within a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes an intersection to degrade to LOS F, or if the project adds traffic to a signal already operating at LOS F.
- Outside of a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes an intersection to degrade to LOS E or F, or if the project adds traffic to a signal already operating at LOS E or F.
- Types of signal improvements that can be considered are:
 - Updating signal split times
 - Transit signal priority improvements
 - Right turn overlap phasing
 - Signal phasing changes
 - Intelligent Transportation Systems (ITS) improvements

Unsignalized Intersections

- Considerations for intersection improvements:
 - When considering intersection improvements for circulation, access, and safety for all modes, factors that should be considered include, but are not limited to, conflicting pedestrian movements, existing and proposed bicycle facilities, transit priority, protected or permissive turn movement phasing, number of lanes, speed of prevailing traffic and expected queue lengths.
- Constructing a Roundabout or Traffic Signal at an all-way stop-controlled intersection: If the project causes the operations at an all-way stop-controlled intersection to degrade (see below), perform an intersection control evaluation that includes a signal warrant analysis and a roundabout LOS analysis. Prepare a roundabout conceptual layout (prepared by a consultant qualified/experienced in roundabout design) to determine the geometric impact of a roundabout. Coordinate with Development Services Department Transportation Development Section staff on appropriate intersection control improvement. Staff may request additional lifecycle safety and mobility
 - The intersection control evaluation should be prepared if the project causes an all-way stop-controlled intersection to degrade as follows:
 - Within a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes an all-way stop-controlled intersection located to degrade to LOS F, or if the project adds traffic to an all-way stop-controlled intersection already operating at LOS F.

- Outside of a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes an all-way stop-controlled intersection to degrade to LOS E or F, or if the project adds traffic to a adds traffic to an all-way stop controlled intersection already operating at LOS E or F.
- Constructing a Roundabout or Traffic Signal at a side-street stop-controlled intersection: If the project causes the operations at a side-street stop-controlled intersection to degrade (see below), perform an intersection control evaluation that includes a signal warrant analysis and a roundabout LOS analysis. Prepare a roundabout conceptual layout (prepared by a consultant qualified/experienced in roundabout design) to determine the geometric impact of a roundabout. Coordinate with Development Services Department Transportation Development Section staff on appropriate intersection control improvement. Staff may request additional lifecycle safety and mobility
 - The intersection control evaluation should be prepared If the project causes a side-street stop-controlled intersection to degrade as follows:
 - Within a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes the **worst movement** of a side-street stop-controlled intersection to degrade to LOS F, or if the project adds traffic to the **worst movement** of a side-street stop-controlled intersection that is already operating at LOS F.
 - Outside of a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes the **worst movement** of a side-street stop-controlled intersection to degrade to LOS E or F, or if the project adds traffic to the **worst movement** of a side-street stop-controlled intersection that is already operating at LOS E or F.
- Improvements to a Roundabout Intersection
 - If the project causes a roundabout intersection to degrade determined based on operations analysis as follows:
 - Within a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes an intersection to degrade to LOS F, or if the project adds traffic to a roundabout already operating at LOS F.
 - Outside of a 1/2 mile path of travel of a *Major Transit Stop*: If the project causes an intersection to degrade to LOS E or F, or if the project adds traffic to a roundabout already operating at LOS E or F.
 - Determine improvements to the roundabout to reduce vehicle delay, such as metering traffic during peak hours or other geometric improvements - such

as adding a right turn bypass lane or multilane segments within the roundabout.

Roadway Segments

- Improvements identified in the community plan (including upgrading to ultimate classification):
 - If the project adds greater than 50% of total daily vehicle trips on the segment, the project should consider implementing the improvement as identified in the community plan.
 - If the project adds less than or equal to 50% of total daily vehicle trips on the segment, the project should evaluate its fair share towards the improvement.
- Planned new circulation element roadways:
 - If the project adds greater than 50% of total daily vehicle trips on the segment, the project should consider implementing the improvement as identified in the community plan.
 - If the project adds less than or equal to 50% of total daily vehicle trips on the segment, the project should evaluate its fair share towards the improvement.

In addition, the project should make improvements to study intersections and roadways to preserve consistency with Community Plan/PFFP/IFS identified improvements. The project applicant will have responsibility for the implementation of identified improvements.

The improvement types listed above are typical mobility improvements. Other types of mobility improvements may be proposed by the applicant or considered thorough coordination with the Development Services Departments Transportation Development Section staff.

Appendix C

Excerpts from Old Town San Diego and Midway-Pacific Highway Community Plans



OLD TOWN SAN DIEGO

Community Plan



The City of San Diego



Approval of the Old Town San Diego Community Plan

Description	Date Approved by Planning Commission & Report Number	Date Approved by City Council & Resolution Number
Adoption of the Old Town San Diego Community Plan	July 26, 2018 Report No. PC-18-015	October 29, 2018 R-312027

4.2 Bicycling

Bicycle routes reinforce the connections between visitor destinations, parks, the Core, the Old Town Transit Center and the San Diego River Park, as shown in Figure 4-2. The bicycle route types are defined in Box 4-2, and are based on the City’s Bicycle Master Plan. Old Town San Diego’s street network is primarily composed of narrow streets, many with vehicle parking on both sides of the street, which limits the potential to install marked bicycle lanes. However, San Diego Avenue, Congress Street, and Juan Street have adequate width to support bicycles sharing a lane with motor vehicles. The Community Plan envisions the creation of an improved bicycle environment along Pacific Highway and Taylor Street within the existing right-of-way to provide connections to the regional bicycle network including the San Diego River bicycle path. Bicycle improvements along existing streets could include the incorporation of bicycle-oriented wayfinding signs and bicycle parking that are consistent with the community’s historical character, as addressed in the Urban Design Element.



Improving bicycle facilities in Old Town will increase the community’s popularity as a recreational and commuter bicycling destination.

POLICIES

- ME-2.1** Provide bicycle connections between historic and cultural attractions, the Old Town Transit Center, the regional bicycle network, and the San Diego River Park as shown in Figure 4-2.
- ME-2.2** Provide bicycle facilities and amenities that enhance the bicycle environment and are consistent with the community’s historic character.
- ME-2.3** Coordinate with Caltrans to improve bicycle connections to adjacent communities and reduce conflicts with motor vehicles at the freeway underpasses at Morena Boulevard, Pacific Highway, and Rosecrans Street and at the Old Town Avenue bridge.
- ME-2.4** Implement additional bicycle facilities in conjunction with relocation of existing on-street parking spaces, where feasible, including a Class II facility along Congress Street between San Diego Avenue and Taylor Street.

BOX 4-2: BICYCLE ROUTE CLASSIFICATIONS

Class I – Bicycle Path

Routes that are physically separated from vehicular traffic and are constructed in the roadway or have exclusive right-of-way.

Class II – Bicycle Lane

Routes that provide exclusive or preferential bicycle travel with pavement striping and signage on the side of the roadway.

Class III – Bicycle Route

Routes that provide shared use with motor vehicle traffic within the same travel lane.

Class IV – Cycle Track

Bikeways that are located in the roadway right-of-way but separated from vehicle lanes by physical barriers or buffers.

FIGURE 4-1: PLANNED PEDESTRIAN FACILITIES

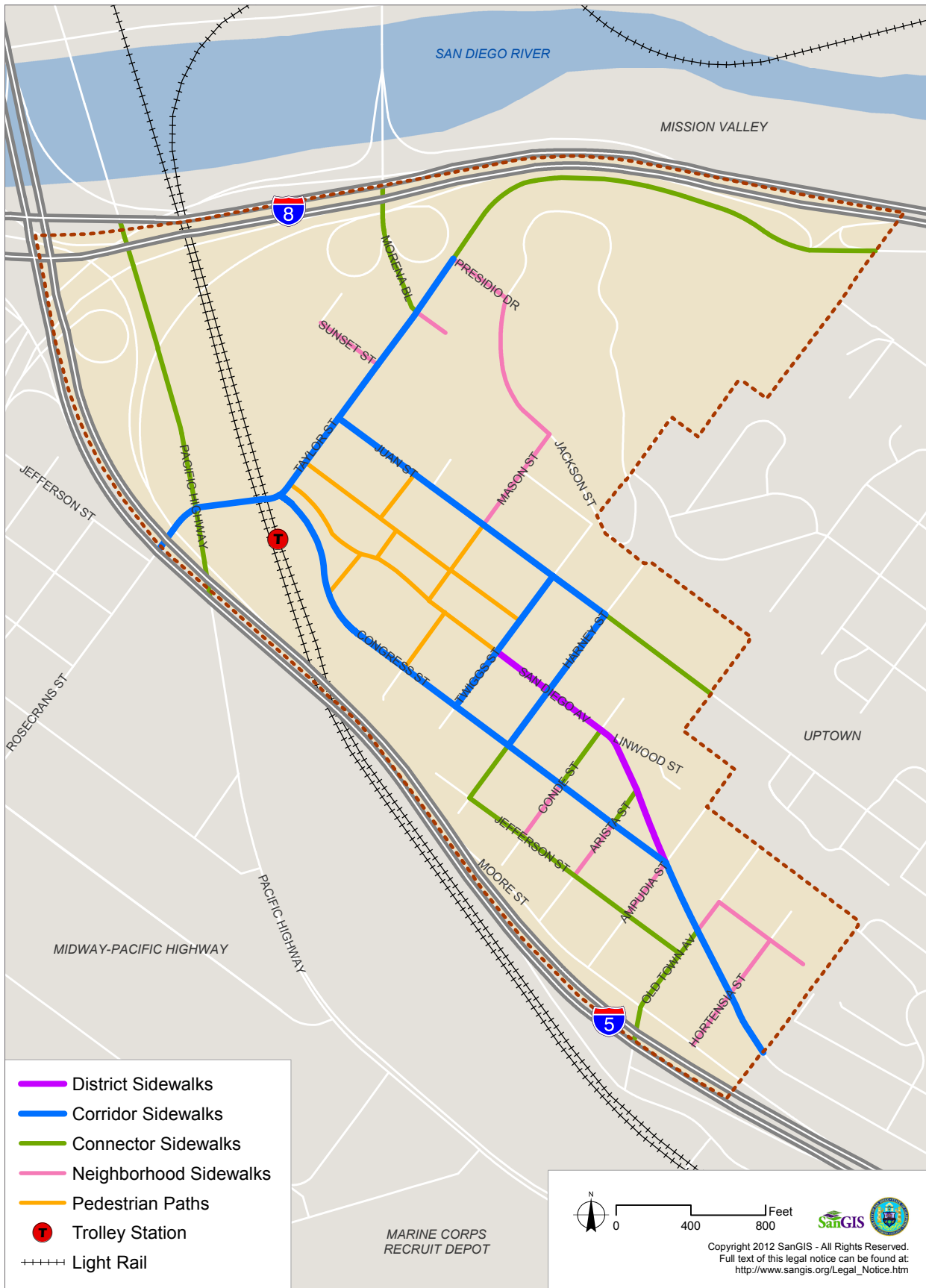
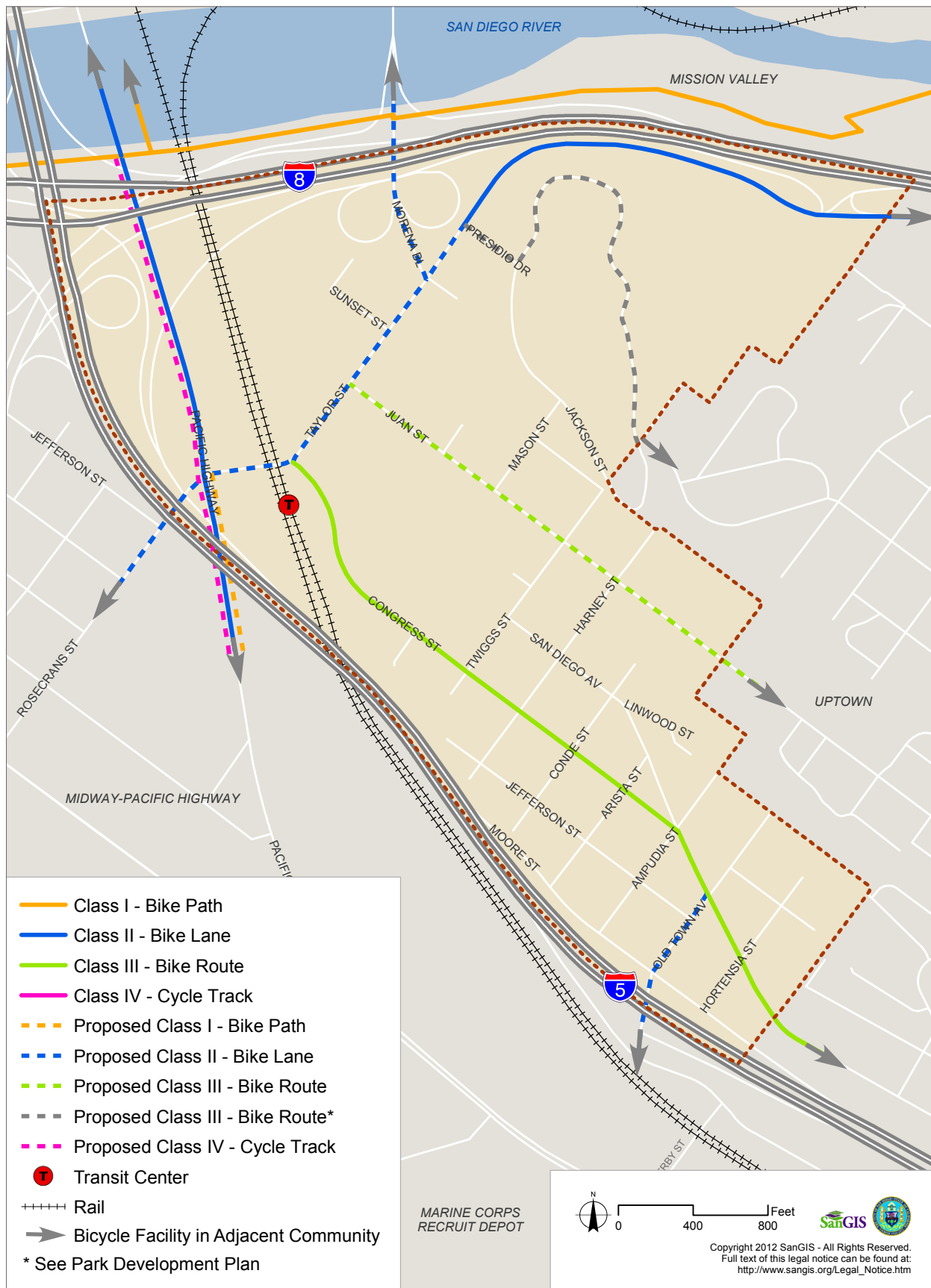


FIGURE 4-2: EXISTING AND PLANNED BICYCLE FACILITIES



4.3 Transit

The Old Town Transit Center is a focal point for transit access for Old Town San Diego and adjacent communities (see Box 4-3). The Community Plan envisions maintaining and enhancing the transit-rider experience through the installation of amenities including additional shelters, seating, lighting, paving, and landscaping consistent with Old Town’s historical character from the 1846-1872 Early American Period. The Transit Center’s surface parking is shared by transit riders and Old Town San Diego State Historic Park visitors. The Parking section provides policies regarding development of a parking structure that will provide additional capacity for park-and-ride transit riders and Old Town State Historic Park visitors.

The Taylor Street at-grade rail crossing is a location where rail-based transit services operations can conflict with pedestrian, bicycle, and vehicle circulation. Conflicts at this intersection include the wait time during train crossings. The Community Plan envisions reducing conflicts at the Taylor Street intersection through near-term improvements, including signal timing changes and pedestrian crossing arms. Grade separation of the rail crossing is a long-term option that could include partial grade separation for pedestrians and bicyclists or full grade separation for automobiles (see the Streets and Freeways section for related policies).

POLICIES

- ME-3.1** Coordinate with SANDAG, MTS, and NCTD to support and incorporate transit infrastructure and service enhancements for the Old Town Transit Center in the Regional Plan as funded improvements that complement the community’s historical character.
- ME-3.2** Enhance the environment at the Old Town Transit Center through installation of additional shelters, additional seating, lighting, bicycle parking and lockers, and landscaping consistent with the 1846-1872 Early American Period.
- ME-3.3** Coordinate with MTS and NCTD to ensure accessibility and compatibility between transit operations and private and public development and infrastructure projects.

- ME-3.4** Coordinate with MTS to improve bus stops on Taylor Street near Hotel Circle South.
- ME-3.5** Coordinate with MTS to support the installation of benches and shelters that reflect Old Town’s pre-1872 character at the bus stops along Taylor Street.
- ME-3.6** Coordinate with MTS to discourage the placement of advertising at benches and shelters at the Old Town Transit Center and bus stops within Old Town.
- ME-3.7** Support the implementation of transit priority measures within Old Town, including the Taylor Street / Pacific Highway / Rosecrans Street intersection.

BOX 4-3: TRANSIT SYSTEM

San Diego Trolley

The San Diego Trolley, operated by the Metropolitan Transit System (MTS), connects Old Town to Mission Valley, San Diego State University, El Cajon, and Santee in the east, and to Midway - Pacific Highway, Downtown, National City, Chula Vista, and San Ysidro in the south. Trolley service will be extended from Old Town San Diego to the University of California San Diego and the University community.

Coaster

The Coaster, operated by North County Transit District (NCTD), is a commuter rail service connecting the Oceanside Transit Center, Carlsbad Village, Carlsbad Poinsettia, Encinitas, Solana Beach, Sorrento Valley, Old Town San Diego, and Downtown.

Rapid Bus

Rapid bus operated by MTS will provide a higher-speed service, which will be available at the Old Town Transit Center.

Local Bus

Local bus routes are operated by MTS with stops at the Old Town Transit Center and on Taylor Street.

Amtrak

Amtrak provides passenger rail service from San Diego to several destinations throughout the state and country. The main route serving San Diego is the Pacific Surfliner which connects major cities along California’s coast.

4.4 Streets and Freeways

The community's existing grid network of streets, shown in Figure 4-3, reflects the historic layout of the Old Town San Diego settlement and will be maintained. Enhancements to the community's streets and freeway connections can optimize vehicle circulation, improve the multimodal environment, improve connections and accessibility to community destinations and adjacent communities, and reduce conflicts between transportation modes.

The permanent closures of local streets are generally not consistent with the community character, unless the street closure will enhance the pedestrian environment or preserve subsurface archaeological resources. Street widening is also not consistent with the community character. Operational controls such as street signs and intersection controls can be implemented to assist in the management of vehicle circulation without street widening. Street widths or lane widths could be reduced in order to construct enhanced pedestrian or bicycle facilities if it would not result in a net loss of on-street parking or if on-street parking can be relocated to a new or expanded public off-street facility.

Freeway access points within Old Town are also recommended for improvement. Commuters traveling primarily from the Midway-Pacific Highway community use Taylor Street to access the I-8 freeway. The Community Plan envisions freeway access improvements within the Midway-Pacific Highway community and at the Morena Boulevard interchange, and the closure of the Taylor Street I-8 freeway ramps, to reduce congestion and cut-through traffic in Old Town. At the Old Town Avenue freeway interchange and bridge, desired improvements include enhancements to the pedestrian and bicycle environment to facilitate access to Old Town. Should Caltrans renovate or reconstruct the Old Town Avenue bridge, the bridge is envisioned to incorporate wider sidewalks, bicycle lanes, and bridge design elements that highlight Old Town and its heritage. The Community Plan also recommends improving vehicular access at the I-5 southbound on- and off-ramps at Old Town Avenue, which could include reconstructing the ramps and modifying the



The odd-angled intersection of San Diego Avenue and Congress Street is recommended for improvements to improve access and safety, which could include a roundabout.

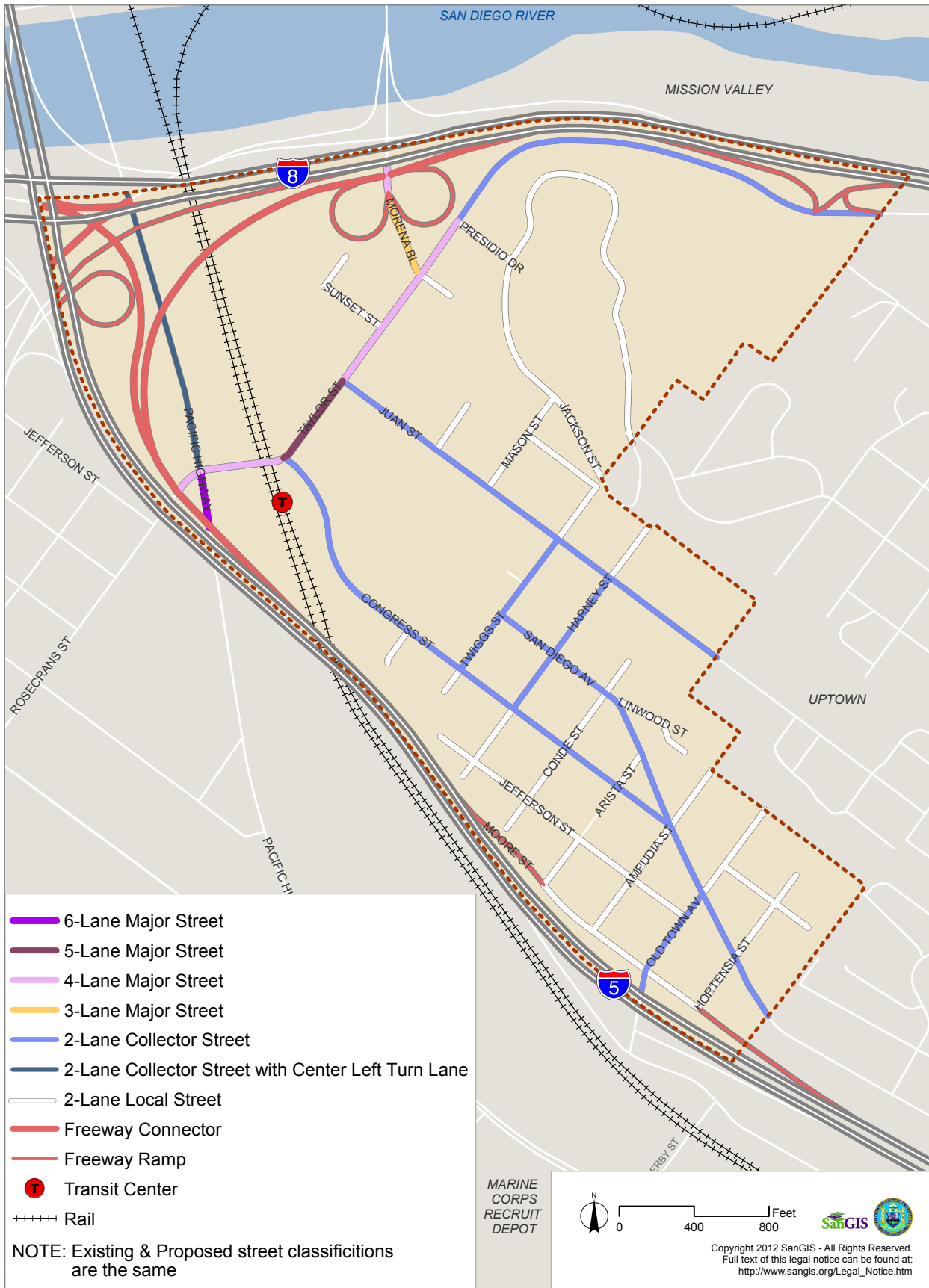
auxiliary lane length along I-5. In conjunction with these improvements, enhanced crosswalks at the intersections with Moore Street and Hancock Street will support pedestrian and bicycle activity and safety.

Street and freeway access improvements in Old Town San Diego will be designed to be consistent with the vision for key community street corridors found in the Urban Design Element. Streetscape design, which unifies the various components of a street, will establish street theme consistent with Old Town's character.

POLICIES

- ME-4.1** Consider the implementation of operational improvements to streets that assist in the management of vehicular circulation and enhance the pedestrian and bicycle environment without widening streets.
- ME-4.2** Maintain the existing grid network of streets.
- ME-4.3** Maintain the existing curb-to-curb width of streets except where pedestrian improvements would narrow curb-to-curb width.
- ME-4.4** Consider implementing a roundabout or other improvements at the intersection of San Diego Avenue, Congress Street, and Ampudia Street, to improve multimodal mobility and safety.

FIGURE 4-4: EXISTING AND PLANNED STREET CLASSIFICATIONS



- ME-4.5 Consider implementation of one-way streets in limited circumstances, where these would meet the goals of the Community Plan.
 - a. Ensure that any proposed implementation of one-way streets does not alter the grid block pattern.
 - b. Ensure that any proposed implementation of one-way streets maintains public access.
- ME-4.6 Coordinate with SANDAG and Caltrans to improve freeway on- and off-ramps through redesign and/or reconfiguration to reduce congestion and cut-through traffic on local streets in a manner that does not detract from the community's historic character.
 - a. Support closing the I-8 on- and off-ramps at Taylor Street in order to reduce cut-through traffic and congestion.
 - b. Support improving access to I-8 within the Midway-Pacific Highway Community in order to reduce cut-through traffic and congestion in Old Town.
 - c. Support improvements to Caltrans right-of-way adjacent to on- and off-ramps that increase screening of the freeway and incorporate landscaping and/or gateway elements consistent with the Urban Design Element.
- ME-4.7 Coordinate with Caltrans and SANDAG to incorporate wider sidewalks, bicycle lanes, and design elements related to Old Town's heritage on the Old Town Avenue bridge should it be renovated or reconstructed.
- ME-4.8 Support an engineering feasibility study to evaluate intersection reconfiguration or alternative traffic control (e.g., roundabout) to improve the Old Town Avenue/Moore Street intersection and the closely spaced Old Town Avenue/Hancock Street/I-5 Southbound Ramps intersection.

- ME-4.9 Coordinate with SANDAG, CPUC, MTS, and NCTD to evaluate enhancements for the at-grade railroad crossing at Taylor Street, including grade separation, that would improve pedestrian, bicyclist and vehicular circulation and safety.
 - a. Ensure that grade separation does not affect the Old Town State Historic Park.
 - b. Ensure that grade separation does not negatively affect access to Congress Street or Juan Street.
 - c. Ensure that grade separation does not result in the elevation of Taylor Street.
 - d. Ensure that grade separation does not result in increased curb-to-curb width along Taylor Street east of Congress Street.
- ME-4.10 Seek regional, state, and federal funding for improvements that address motor vehicle congestion at the Pacific Highway and Taylor Street intersection due to the rail crossing gates.
- ME-4.11 Seek regional, state, and federal funding for improvements at the Taylor Street at-grade rail crossing to address pedestrian and bicyclist safety and accessibility.



The at-grade rail crossing at the Transit Center on Taylor Street can be improved to reduce crossing delays and enhance safety.

FIGURE 4-5: RECOMMENDED MOBILITY IMPROVEMENTS





Midway - Pacific Highway Community Plan





ACKNOWLEDGMENTS

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CONSULTANT TEAM

AECOM – Urban Design, Environmental Impact Report, Prehistoric Cultural Resources Survey Report
Chen Ryan Associates – Mobility Report, Traffic Impact Study
Galvin Preservation Associates – Historic Resources Reconnaissance Survey
Keyser Marston Associates – Market Assessment Report
Kimley-Horn and Associates – Mobility Analysis
Wilson Geosciences – Seismic and Geologic Technical Background Report
Ninyo & Moore – Hazardous Materials Technical Study
Fehr & Peers – Existing Conditions Mobility Report
San Diego Natural History Museum – Paleontological Resource Assessment

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APPROVAL OF THE MIDWAY-PACIFIC HIGHWAY COMMUNITY PLAN

DESCRIPTION	DATE APPROVED BY PLANNING COMMISSION & REPORT NUMBER	DATE ADOPTED BY CITY COUNCIL & RESOLUTION NUMBER	DATE CERTIFIED BY COASTAL COMMISSION & CERTIFICATION NUMBER
Adoption of Midway-Pacific Highway Community Plan	April 26, 2018 PC-18-014	September 17, 2018 R-311973	March 7, 2019 LCP-6-CCP-18-0094-4

FIGURE 3-1: PLANNED PEDESTRIAN FACILITIES

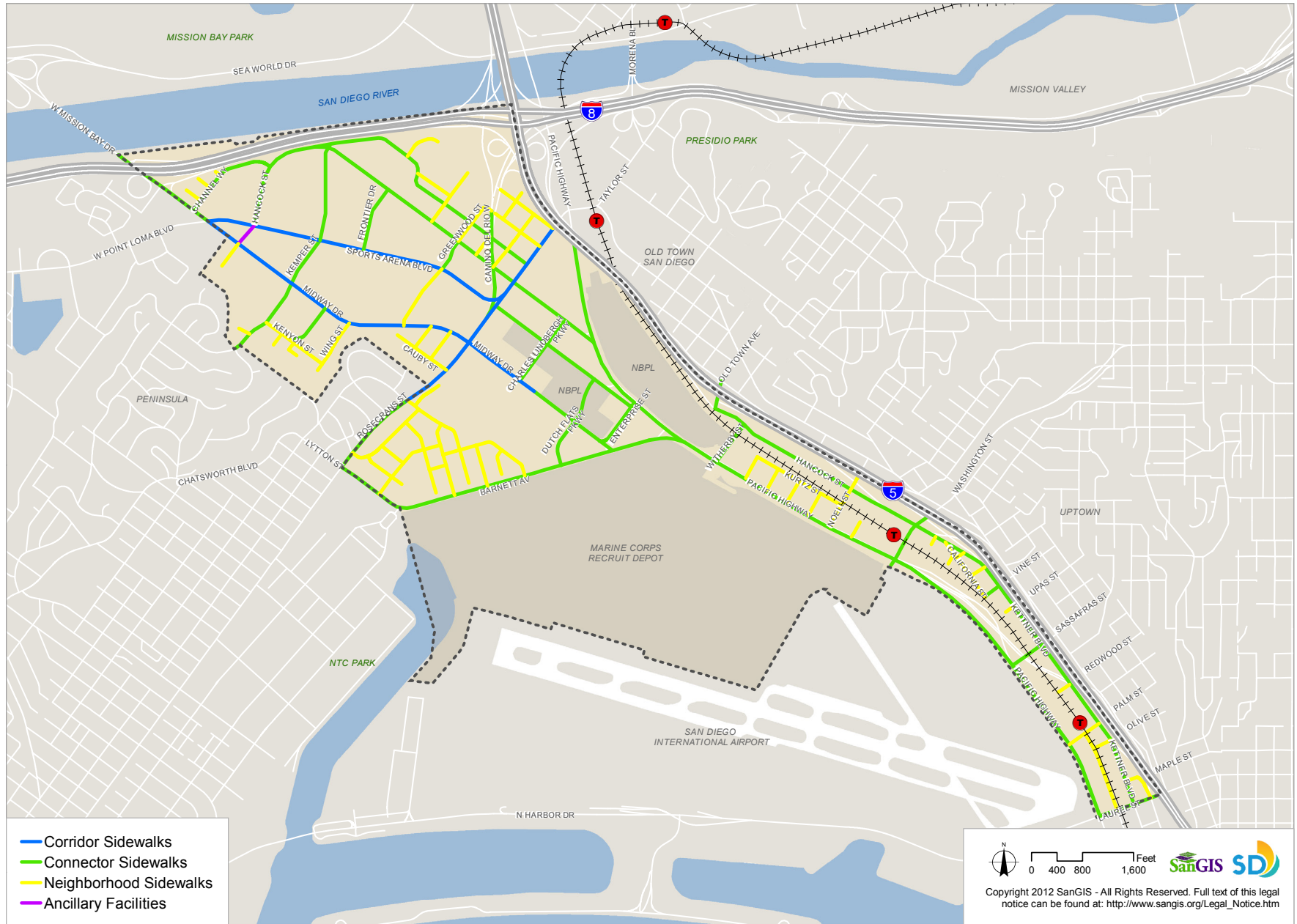


FIGURE 3-3: EXISTING AND PLANNED BICYCLE FACILITIES



FIGURE 3-4: PLANNED TRANSIT FACILITIES

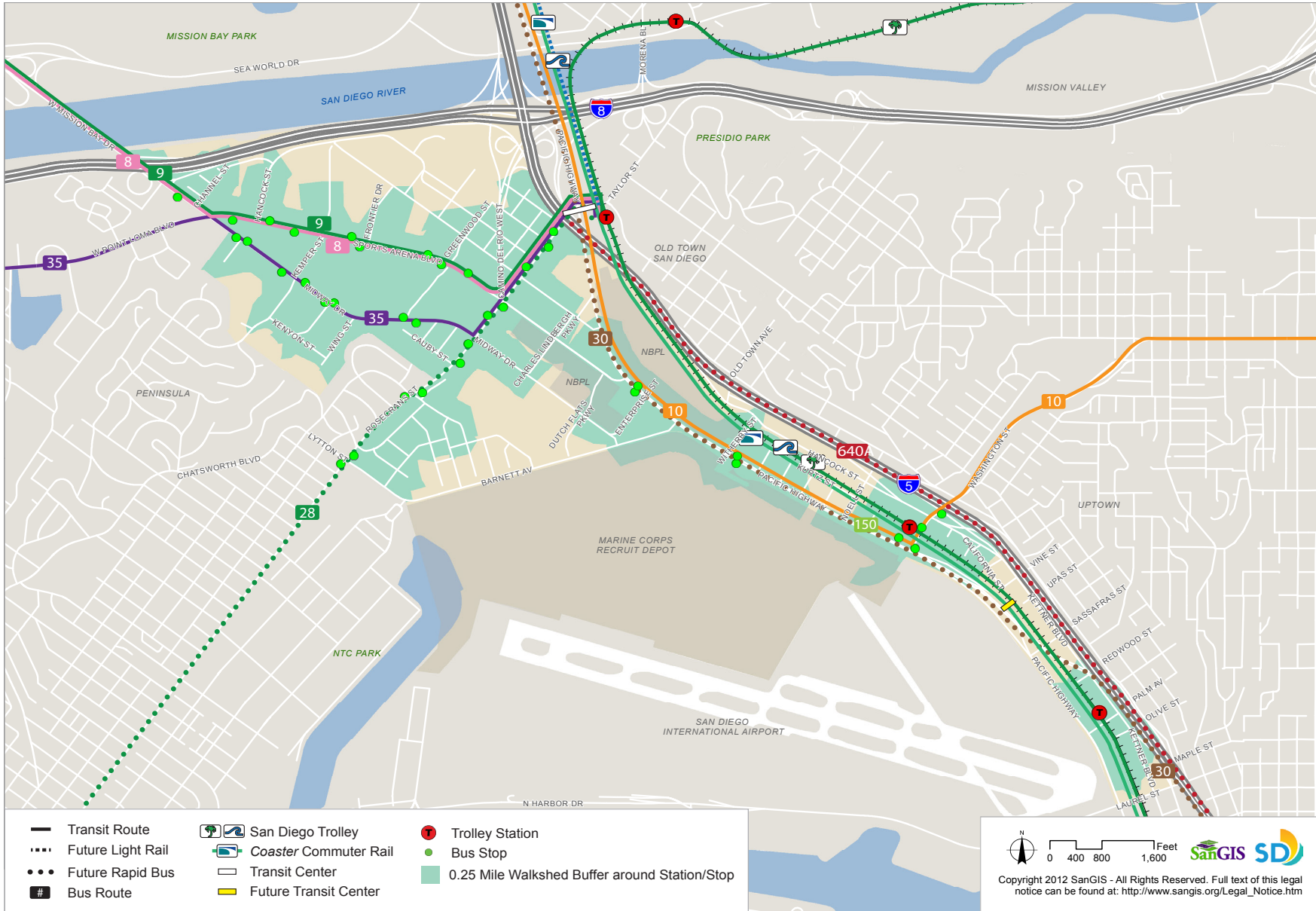
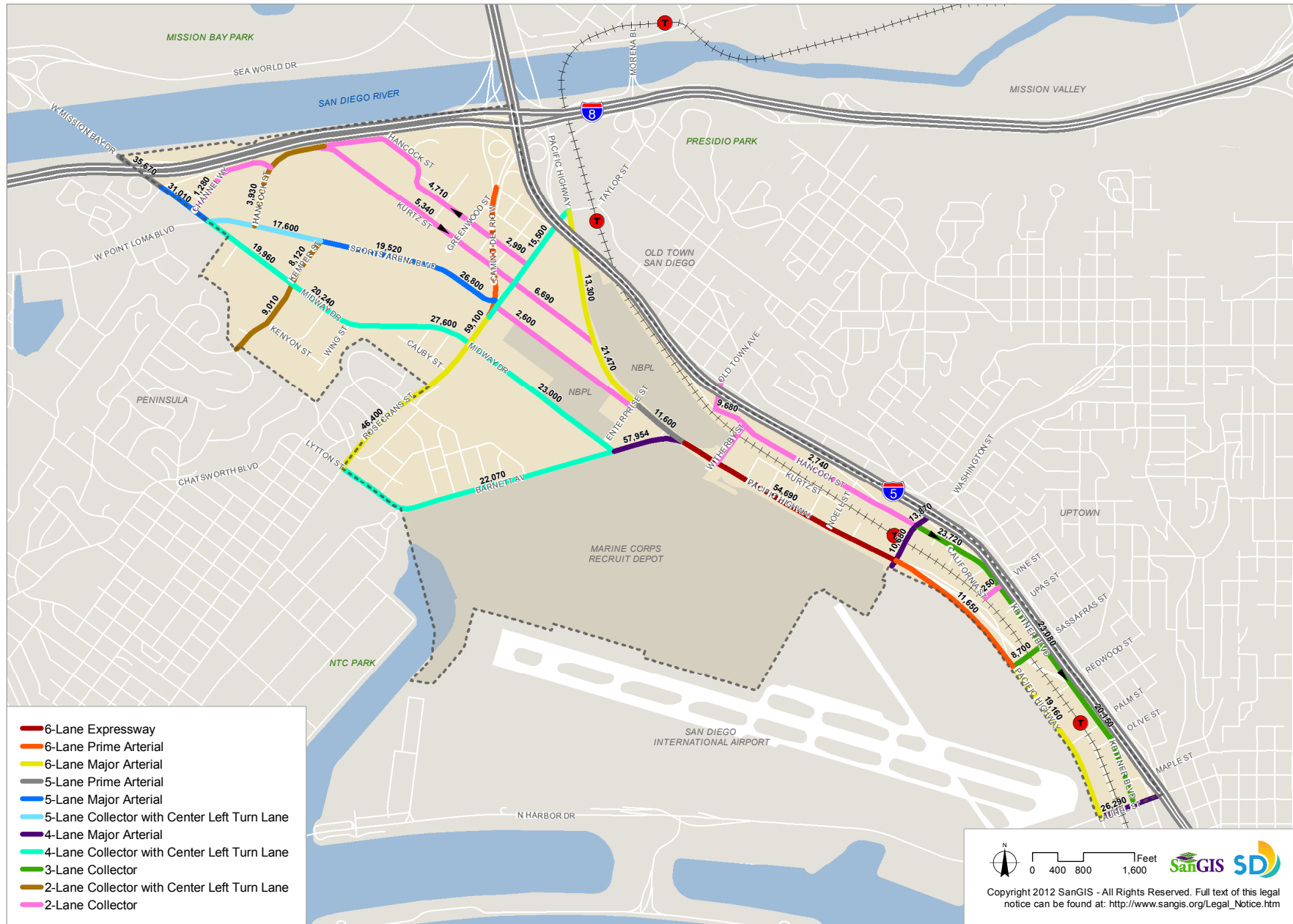




FIGURE 3-5: EXISTING (2017) STREET CLASSIFICATIONS



Appendix D

Count Data



PO Box 1178
 Corona, CA 92880
 951-268-6288

Location: San Diego
 N/S: Pacific Highway
 E/W: Anna Avenue

Date: 2/9/2023
 Day: THURSDAY
 Project # 143-23126

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
 Peak Hour: 8:00 AM to 9:00 AM

Vehicle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Anna Avenue Eastbound			Anna Avenue Westbound			TOTAL
	NL	NT	NR	S Uturn	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	1	21	0	1	17	0	0	0	0	1	0	0	41
7:15 AM	2	21	9	5	29	0	0	0	0	1	0	1	68
7:30 AM	0	15	1	4	32	0	0	0	0	0	0	3	55
7:45 AM	0	32	4	4	36	0	0	0	0	0	0	2	78
8:00 AM	0	35	10	7	26	0	0	0	0	2	0	4	84
8:15 AM	0	20	3	0	29	0	0	0	0	1	0	2	55
8:30 AM	0	29	5	4	24	0	0	0	0	1	0	4	67
8:45 AM	1	32	3	6	31	0	0	0	0	3	0	6	82
TOTAL VOLUMES:	4	205	35	31	224	0	0	0	0	9	0	22	530

AM Peak Hr Begins at: 800 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	1	116	21	17	110	0	0	0	0	7	0	16	288

PEAK HR FACTOR:	0.767	0.858	0.000	0.639	0.857
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Bicycle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Anna Avenue Eastbound			Anna Avenue Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
7:15 AM	0	3	0	0	2	0	0	0	0	0	0	0	5
7:30 AM	0	5	0	0	2	0	0	0	0	0	0	0	7
7:45 AM	0	3	0	0	4	0	0	0	0	0	0	0	7
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
8:15 AM	0	3	0	0	3	0	0	0	0	0	0	0	6
8:30 AM	0	0	1	0	1	0	0	0	0	1	0	0	3
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	4
TOTAL VOLUMES:	0	20	1	0	17	0	0	0	0	1	0	0	39

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	7	1	0	8	0	0	0	0	1	0	0	17

Pedestrian Counts

	Pacific Highway North Leg			Pacific Highway South Leg			Anna Avenue East Leg			Anna Avenue West Leg			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	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
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	3	3	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	8	8	0	0	0	0	8

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	6	0	6



PO Box 1178
Corona, CA 92880
951-268-6288

Location: San Diego
N/S: Pacific Highway
E/W: Anna Avenue

Date: 2/9/2023
Day: THURSDAY
Project # 143-23126

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Vehicle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Anna Avenue Eastbound			Anna Avenue Westbound			TOTAL	
	NL	NT	NR	S Uturn	ST	SR	EL	ET	ER	WL	WT	WR		
4:00 PM	0	37	6	1	71	0	0	0	0	0	9	0	0	124
4:15 PM	0	48	6	1	65	0	0	0	0	0	3	0	0	123
4:30 PM	1	41	1	4	82	0	0	0	0	0	3	0	0	132
4:45 PM	0	40	0	3	80	0	0	0	0	0	3	0	0	126
5:00 PM	1	36	2	1	87	0	0	0	0	0	0	0	1	128
5:15 PM	1	52	1	1	88	0	0	0	0	0	4	0	1	148
5:30 PM	0	23	3	2	97	0	0	0	0	0	3	0	0	128
5:45 PM	0	23	5	1	84	0	0	0	0	0	4	0	0	117
TOTAL VOLUMES:	3	300	24	14	654	0	0	0	0	0	29	0	2	1026

PM Peak Hr Begins at: 4:30 PM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	3	169	4	9	337	0	0	0	0	10	0	2	534

PEAK HR FACTOR:	0.815	0.972	0.000	0.600	0.902
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Bicycle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Anna Avenue Eastbound			Anna Avenue Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	8	0	0	3	0	0	0	0	0	0	0	11
4:15 PM	0	3	0	0	4	0	0	0	0	0	0	0	7
4:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	7	0	0	0	0	0	0	0	7
5:00 PM	0	3	0	0	6	0	0	0	0	0	0	0	9
5:15 PM	0	2	0	0	2	0	0	0	0	1	0	0	5
5:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	20	0	0	27	0	0	0	0	1	0	0	48

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	5	0	0	18	0	0	0	0	1	0	0	24

Pedestrian Counts

	Pacific Highway North Leg		Pacific Highway South Leg		Anna Avenue East Leg		Anna Avenue West Leg		TOTAL
	North Leg	South Leg	East Leg	West Leg	East Leg	West Leg	East Leg	West Leg	
4:00 PM	0	0	0	0	0	0	2	0	2
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	1	1	1	1	1	1	3
4:45 PM	0	0	0	2	2	0	0	0	2
5:00 PM	0	0	0	0	1	2	2	0	3
5:15 PM	0	0	0	0	1	0	0	0	1
5:30 PM	0	0	0	0	1	2	2	3	3
5:45 PM	0	0	0	0	0	3	10	3	17
TOTAL VOLUMES:	0	1	6	6	10	10	10	17	17

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	0	1	5	3	9



PO Box 1178
 Corona, CA 92880
 951-268-6288

Location: San Diego
 N/S: Pacific Highway
 E/W: Rosecrans St/Taylor St

Date: 2/9/2023
 Day: THURSDAY
 Project # 143-23126

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
 Peak Hour: 7:45 AM to 8:45 AM

Vehicle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Rosecrans St/Taylor St Eastbound			Rosecrans St/Taylor St Westbound			TOTAL
	NL	NT	NR	S Uturn	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	19	15	20	5	10	7	5	22	11	33	28	14	189
7:15 AM	13	13	11	7	14	9	7	33	18	48	29	8	210
7:30 AM	19	20	29	7	27	22	2	29	18	56	35	8	272
7:45 AM	21	19	20	6	14	22	8	47	20	54	46	18	295
8:00 AM	26	31	26	12	19	12	11	39	7	36	48	19	286
8:15 AM	7	12	22	4	7	13	9	50	14	57	49	11	255
8:30 AM	16	21	27	9	22	16	14	54	16	44	50	12	301
8:45 AM	16	16	21	8	15	14	7	56	16	35	45	16	265
TOTAL VOLUMES:	137	147	176	58	128	115	63	330	120	363	330	106	2073

AM Peak Hr Begins at: 7:45 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	70	83	95	31	62	63	42	190	57	191	193	60	1137

PEAK HR FACTOR:	0.747	0.830	0.860	0.941	0.944
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Bicycle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Rosecrans St/Taylor St Eastbound			Rosecrans St/Taylor St Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	2
7:15 AM	0	0	0	1	1	0	0	1	0	0	1	3	7
7:30 AM	0	0	0	0	1	1	0	1	0	2	3	2	10
7:45 AM	0	1	0	1	2	1	0	2	0	1	4	3	15
8:00 AM	0	0	0	1	0	1	0	2	0	0	1	2	7
8:15 AM	0	1	0	0	1	0	1	1	1	0	3	2	10
8:30 AM	0	0	0	2	0	1	0	2	1	0	1	0	7
8:45 AM	0	0	0	0	2	1	0	2	0	2	2	1	10
TOTAL VOLUMES:	0	2	0	5	7	6	1	11	2	5	16	13	68

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	2	0	4	3	3	1	7	2	1	9	7	39

Pedestrian Counts

	Pacific Highway North Leg		Pacific Highway South Leg		Rosecrans St/Taylor St East Leg		Rosecrans St/Taylor St West Leg		TOTAL
	NL	NT	SL	ST	EL	ET	WL	WT	
7:00 AM	4	0	27	0	1	0	0	0	32
7:15 AM	1	0	25	0	3	1	1	1	30
7:30 AM	4	0	19	0	4	2	2	2	29
7:45 AM	2	0	12	0	0	3	3	3	17
8:00 AM	7	0	13	0	2	4	4	4	26
8:15 AM	2	0	24	0	0	2	2	2	28
8:30 AM	4	0	20	0	4	3	3	3	31
8:45 AM	4	0	14	0	2	5	5	5	25
TOTAL VOLUMES:	28	0	154	0	16	20	20	20	218

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	15	69	6	12	102



PO Box 1178
Corona, CA 92880
951-268-6288

Location: San Diego
N/S: Pacific Highway
E/W: Rosecrans St/Taylor St

Date: 2/9/2023
Day: THURSDAY
Project # 143-23126

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Vehicle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Rosecrans St/Taylor St Eastbound			Rosecrans St/Taylor St Westbound			TOTAL
	NL	NT	NR	S Uturn	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	24	29	115	29	33	24	9	143	22	34	53	14	529
4:15 PM	21	24	71	19	34	13	11	107	31	39	55	22	447
4:30 PM	39	20	79	14	57	23	12	91	43	34	35	16	463
4:45 PM	29	24	123	24	67	17	16	110	18	46	36	13	523
5:00 PM	22	21	132	26	55	22	15	94	23	42	46	13	511
5:15 PM	31	21	103	24	47	19	7	62	13	43	55	18	443
5:30 PM	38	17	101	28	53	33	5	99	24	45	47	12	502
5:45 PM	28	19	93	27	43	20	4	70	26	32	47	8	417
TOTAL VOLUMES:	232	175	817	191	389	171	79	776	200	315	374	116	3835

PM Peak Hr Begins at: 4:45 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	120	83	459	102	222	91	43	365	78	176	184	56	1979

PEAK HR FACTOR:	0.940	0.910	0.844	0.897	0.946
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Bicycle Counts

	Pacific Highway Northbound			Pacific Highway Southbound			Rosecrans St/Taylor St Eastbound			Rosecrans St/Taylor St Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	2	1	2	2	1	0	1	0	0	0	3	12
4:15 PM	0	1	2	3	1	1	0	1	0	0	3	0	12
4:30 PM	0	0	1	3	0	2	0	3	0	1	2	1	13
4:45 PM	0	1	0	0	0	3	0	1	0	0	0	1	6
5:00 PM	0	0	0	3	1	0	0	0	0	0	0	2	6
5:15 PM	1	2	0	3	0	3	0	1	0	0	0	1	11
5:30 PM	0	0	0	1	0	0	0	2	0	0	0	1	4
5:45 PM	0	0	0	0	1	0	1	1	0	0	1	1	5
TOTAL VOLUMES:	1	6	4	15	5	10	1	10	0	1	6	10	69

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	1	3	0	7	1	6	0	4	0	0	0	5	27

Pedestrian Counts

	Pacific Highway North Leg		Pacific Highway South Leg		Rosecrans St/Taylor St East Leg		Rosecrans St/Taylor St West Leg		TOTAL
	NL	NT	SL	ST	EL	ET	WL	WT	
4:00 PM	4	4	20	2	1	1	2	2	27
4:15 PM	7	1	23	3	5	5	0	0	35
4:30 PM	2	2	32	2	2	2	3	3	36
4:45 PM	1	1	32	2	2	2	3	3	39
5:00 PM	1	1	21	3	3	3	2	1	25
5:15 PM	3	3	33	3	10	10	1	1	39
5:30 PM	1	1	32	3	0	0	3	3	46
5:45 PM	20	20	226	24	24	24	14	14	37
TOTAL VOLUMES:	20	20	226	24	24	24	14	14	284

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	7	118	17	7	149



City of San Diego
 Pacific Highway
 S/ Anna Avenue

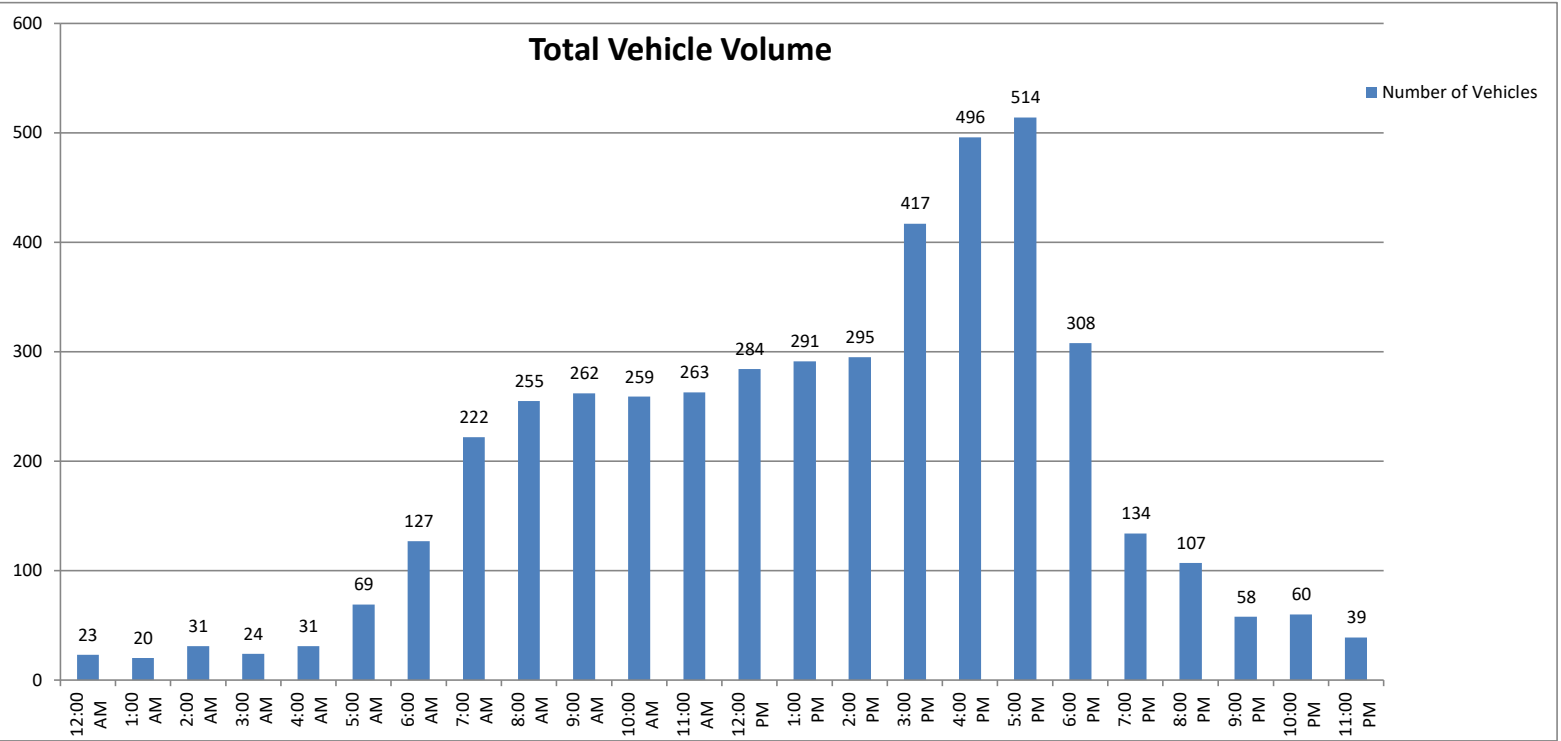
File Name 001
 Site Code: 143-23126
 24 Hour Directional Volume Count

Date: 2/9/2023	Northbound				Southbound				Combined Totals	
	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Morning	Afternoon
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	2	41			3	35				
12:15	4	45			3	28				
12:30	0	34			4	32				
12:45	4	37	10	157	3	32	13	127	23	284
1:00	3	38			5	25				
1:15	2	57			1	40				
1:30	2	33			2	36				
1:45	3	39	10	167	2	23	10	124	20	291
2:00	5	39			3	26				
2:15	5	45			3	28				
2:30	5	34			5	36				
2:45	4	37	19	155	1	50	12	140	31	295
3:00	4	45			5	41				
3:15	0	38			5	59				
3:30	6	51			1	54				
3:45	2	58	12	192	1	71	12	225	24	417
4:00	1	43			0	80				
4:15	4	54			4	68				
4:30	3	43			4	85				
4:45	12	40	20	180	3	83	11	316	31	496
5:00	5	39			8	87				
5:15	9	54			10	92				
5:30	5	26			13	100				
5:45	9	28	28	147	10	88	41	367	69	514
6:00	12	26			18	56				
6:15	11	26			10	62				
6:30	12	18			27	60				
6:45	16	24	51	94	21	36	76	214	127	308
7:00	22	19			18	25				
7:15	32	14			30	21				
7:30	16	18			32	13				
7:45	36	17	106	68	36	7	116	66	222	134
8:00	45	12			28	14				
8:15	23	18			30	9				
8:30	34	18			25	9				
8:45	36	18	138	66	34	9	117	41	255	107
9:00	35	10			28	8				
9:15	35	10			25	7				
9:30	36	2			26	6				
9:45	43	11	149	33	34	4	113	25	262	58
10:00	32	10			34	7				
10:15	31	10			34	7				
10:30	28	8			33	5				
10:45	33	9	124	37	34	4	135	23	259	60
11:00	29	5			40	4				
11:15	34	5			33	5				
11:30	29	6			37	4				
11:45	38	3	130	19	23	7	133	20	263	39
Totals	797	1315			789	1688				
Combined Totals		2112				2477				
ADT										4589
AM Peak Hour	900	AM			1045	AM				
Volume	149				144					
P.H.F.	0.866				0.900					
PM Peak Hour		330	PM			500	PM			
Volume		206				367				
P.H.F.		0.888				0.918				
Percentage	37.7%	62.3%			31.9%	68.1%				



24 Hour Volume Plot
Pacific Highway
S/ Anna Avenue
 2/9/2023

Start Time	2/9/2023
12:00 AM	23
1:00 AM	20
2:00 AM	31
3:00 AM	24
4:00 AM	31
5:00 AM	69
6:00 AM	127
7:00 AM	222
8:00 AM	255
9:00 AM	262
10:00 AM	259
11:00 AM	263
12:00 PM	284
1:00 PM	291
2:00 PM	295
3:00 PM	417
4:00 PM	496
5:00 PM	514
6:00 PM	308
7:00 PM	134
8:00 PM	107
9:00 PM	58
10:00 PM	60
11:00 PM	39
Total	4589



Volumes represent the combined totals for both directions



City of San Diego
 Pacific Highway
 N/ Rosecrans Avenue

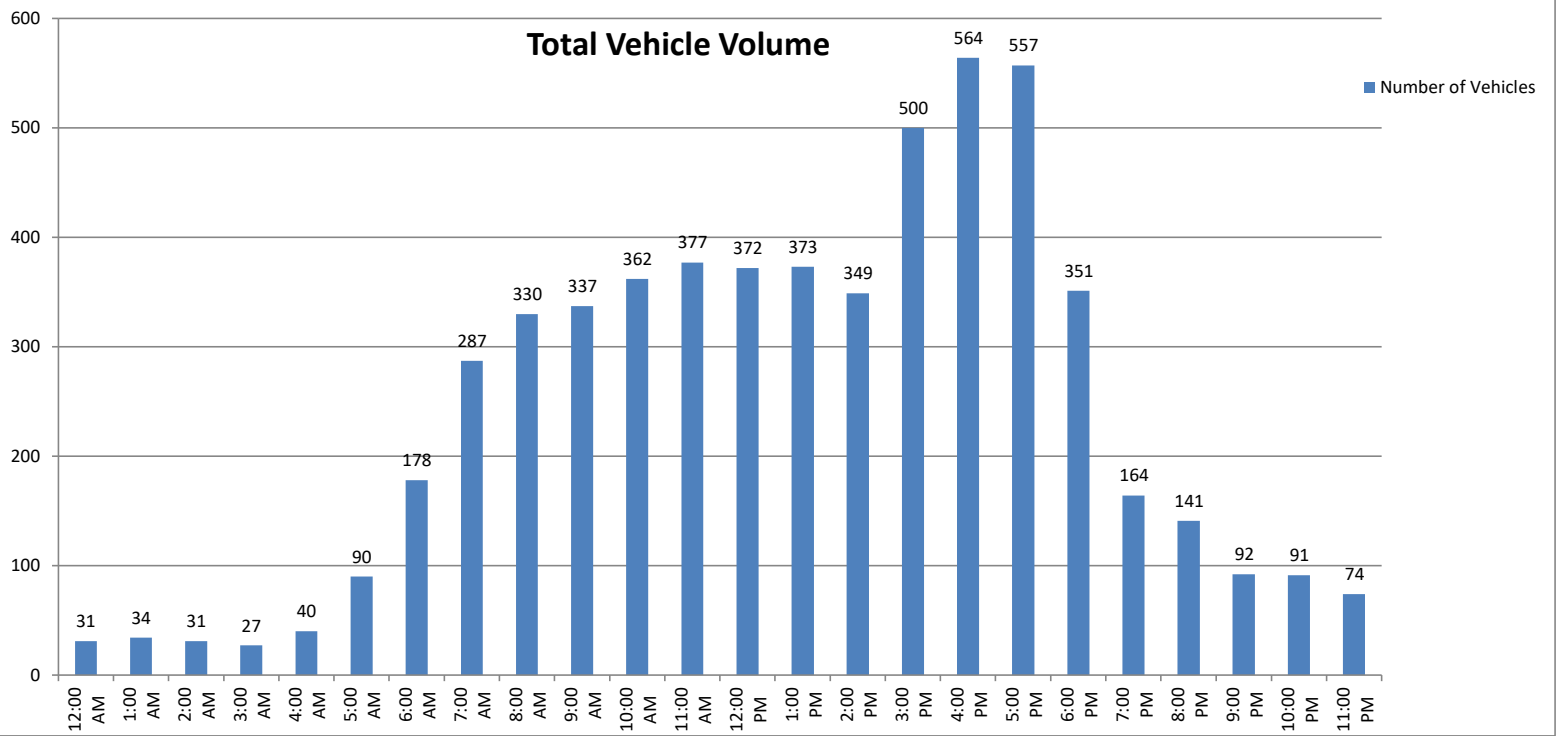
File Name 002
 Site Code: 143-23126
 24 Hour Directional Volume Count

Date: 2/9/2023	Northbound				Southbound				Combined Totals	
	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Morning	Afternoon
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	5	46			3	40				
12:15	4	56			4	34				
12:30	3	51			5	43				
12:45	4	50	16	203	3	52	15	169	31	372
1:00	3	48			5	54				
1:15	6	57			3	37				
1:30	4	45			3	48				
1:45	6	46	19	196	4	38	15	177	34	373
2:00	5	41			4	39				
2:15	6	46			1	40				
2:30	4	36			4	38				
2:45	5	49	20	172	2	60	11	177	31	349
3:00	4	57			5	60				
3:15	0	42			6	65				
3:30	6	66			2	48				
3:45	2	62	12	227	2	100	15	273	27	500
4:00	1	52			0	86				
4:15	5	57			4	66				
4:30	4	48			4	94				
4:45	14	53	24	210	8	108	16	354	40	564
5:00	5	49			7	103				
5:15	15	46			10	90				
5:30	4	34			13	114				
5:45	19	31	43	160	17	90	47	397	90	557
6:00	22	32			20	57				
6:15	22	32			12	76				
6:30	27	25			25	61				
6:45	28	20	99	109	22	48	79	242	178	351
7:00	34	19			22	25				
7:15	28	22			30	19				
7:30	30	20			56	25				
7:45	45	20	137	81	42	14	150	83	287	164
8:00	61	18			43	19				
8:15	32	21			24	13				
8:30	47	28			47	11				
8:45	39	17	179	84	37	14	151	57	330	141
9:00	46	18			36	14				
9:15	48	11			37	13				
9:30	38	5			41	8				
9:45	47	16	179	50	44	7	158	42	337	92
10:00	55	18			43	12				
10:15	39	9			50	12				
10:30	39	15			48	6				
10:45	40	13	173	55	48	6	189	36	362	91
11:00	40	9			59	15				
11:15	48	10			49	7				
11:30	41	9			51	10				
11:45	47	6	176	34	42	8	201	40	377	74
Totals	1077	1581			1047	2047				
Combined Totals		2658				3094				
ADT										5752
AM Peak Hour	915	AM			1045	AM				
Volume	188				207					
P.H.F.	0.855				0.877					
PM Peak Hour		330	PM			445	PM			
Volume		237				415				
P.H.F.		0.898				0.910				
Percentage	40.5%	59.5%			33.8%	66.2%				



24 Hour Volume Plot
Pacific Highway
N/ Rosecrans Avenue
 2/9/2023

Start Time	2/9/2023
12:00 AM	31
1:00 AM	34
2:00 AM	31
3:00 AM	27
4:00 AM	40
5:00 AM	90
6:00 AM	178
7:00 AM	287
8:00 AM	330
9:00 AM	337
10:00 AM	362
11:00 AM	377
12:00 PM	372
1:00 PM	373
2:00 PM	349
3:00 PM	500
4:00 PM	564
5:00 PM	557
6:00 PM	351
7:00 PM	164
8:00 PM	141
9:00 PM	92
10:00 PM	91
11:00 PM	74
Total	5752



Volumes represent the combined totals for both directions

Appendix E

Signal Timing Sheets

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: PACIFIC HWY
E/W Street Name: ROSECRANS/TAYLOR

Last Database Change:

Change Record		
Timing Sheet By	Approved By	Date
M2S	M2S	

Free Lag <C/1+F+0> _2_4_6_8

- Notes:
- 1- Adjust Railroad timing to check bus detection during limited service.
 - 2- Make sure Detector ASSIGN fields are correctly set to remove DET SET2 for all phase 2 detection except within the bus lane and phase 2 ped.
 - 3- RR2 input calls Special Event Sequence 1 and Calls DET SET2.
 - 4- Overlap 3: Bus Indication is phase 2 and EB (ph2) vehicle indications are the overlapping phase.

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	10	<C/0+0+0>
Zone Number	10	<C/0+0+1>
Area Number	2	<C/0+0+2>
Area Address	161	<C/0+0+3>
QuicNet Channel	COM84	(QuicNet)

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVL P CHG Red	0.0	<F/1+0+3>

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable
Outputs at E/127+A+E & F)

Start / Revert Times

Row	ROSECRANS PACIFIC HWY TAYLOR PACIFIC HWY								
	Phase								
	1	2	3	4	5	6	7	8	
0									
1									
2									
3									
4									
5	Veh Extension	2.0	3.5	2.0	2.0	2.0	2.2	2.0	3.0
6	Max Gap	2.0	3.5	2.0	2.0	2.0	2.2	2.0	3.0
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit	30	40	30	40	30	40	30	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1		1		1		1
C	Cond Serv Check								
D	Reduce Every		0.9		1.7		1.5		1.1
E	Yellow Change	3.4	3.9	3.4	4.7	3.4	3.9	3.4	4.7
F	Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Phase Timing - Bank 1 <F/1+Phase+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

	9	A	B	C	D	E
Phase 1						RR-1 Delay
Phase 2						RR-1 Clear
Phase 3						EV-A Delay
Phase 4						EV-A Clear
Phase 5						EV-B Delay
Phase 6						EV-B Clear
Phase 7						EV-C Delay
Phase 8						EV-C Clear
						EV-D Delay
						EV-D Clear
Max Initial						RR-2 Delay
Alternate Walk						RR-2 Clear
Alternate FDW						View EV Delay
Alternate Initial						View EV Clear
Alternate Extension						View RR Delay
						View RR Clear

Alternate Timing <F/1+Column+Phase>

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall	-2-6	3
Ped Recall		4
View Set Pads	_2_4_6_8	5
Rest in Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_4_8	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	-12345678-	D
Yellow Start	_2_6	E
First Phases	_4_8	F

Phase Functions <F/1+F+Row>

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

		Overlap							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Overlap Name ---->								
0	Load Switch Number			10					
1	Veh Set 1 - Phases	1 8	23	2					
2	Veh Set 2 - Phases		3						
3	Veh Set 3 - Phases								
4	Neg Veh Phases	2 7	1 4	1 34 78					
5	Neg Ped Phases	2 8	2 4	4 8					
6	Green Omit Phases	8	2						
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change	4.7	3.9	3.9					
F	Red Clear	2.0	2.0	2.0					

Overlap Assignments <E/29+Column+Row>

- Extra 1 Flags**
 1 = TBC Type 1
 2 = NEMA Ext. Coord
 3 = Auto Daylight Savings
 4 = Solid FDW on EV
 5 = Extended Status
 6 = International Ped
 7 = Flash - Clear Outputs
 8 = Spltt Ring

- Extra 2 Flags**
 1 = AWB During Initial
 2 = Reserved
 3 = Disable Min Walk
 4 = QuicNet System
 5 = Ignore P/P on EV
 6 = Manual Hold in FDW
 7 = Allow QuicNet PE
 8 = Flash Grm B4 Yellow

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7

Preempt Priority
<E/125+C+Row>
 (* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

- Flash to PE & PE Non-Lock**
 1 = EV A 5 = RR 1
 2 = EV B 6 = RR 2
 3 = EV C 7 = SE 1
 4 = EV D 8 = SE 2

- IC Select Flags**
 1 =
 2 = Modem
 3 = 7-Wire Slave
 4 =
 5 =
 6 = Simplex Master
 7 =
 8 = Offset Interrupter

	2	Row
Phase 1	10	0
Phase 2	10	1
Phase 3	10	2
Phase 4	10	3
Phase 5	10	4
Phase 6	10	5
Phase 7	10	6
Phase 8	10	7

Coordination Transition Minimums
<C/5+2+Row>

INTERSECTION: PACIFIC HY @ ROSECRANS ST/TAYLOR ST

Column Numbers ---->		0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U* ADV	39	45 7	2	1 3 8		1.8
1	6J2U ADV	40	45 7	6	123 8		1.8
2	4I6U ADV	41	45 7	4	123 8		1.8
3	8J6U ADV	42	45 7	8	123 8		1.8
4	2I2L* ADV	43	45 7	2	1 3 8		1.8
5	6J2L RT	44	45 7	6	123 8		
6	4I6L ADV	45	45 7	4	123 8		1.8
7	8J6L ADV	46	45 7	8	123 8		1.8
8	2I4* ST	47	45 7	2	1 3 8		
9	6J4	48	67	6	123		
A	4I8 ST	49	45 7	4	123 8		
B	8J8 ST	50	45 7	8	123 8		
C	5J1 LT	55	45 7	5	123 8		
D	1I1 LT	56	45 7	1	123 8		
E	7J5 LT	57	45 7	7	123 8		
F	3I5 LT	58	45 7	3	123 8		

Detector #
1
17
10
22
2
18
11
23
7 & 8
14
26
9
20 & 21
15 & 16
27

Column Numbers ---->		Ped / Phase / Overlap								Row
		1	2	3	4	5	6	7	8	
Walk										0
Don't Walk										1
Phase Green										2
Phase Yellow										3
Phase Red										4
Overlap Green		35	36	96						5
Overlap Yellow		37	38	95						6
Overlap Red				94						7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type | 30 <E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes) | 60 <D/0+0+1>
Max ON (minutes) | 7 <D/0+0+2>
Chatter Fail Time | 0 <D/0+0+4>

Detector Failure Monitor

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 = Overlap
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

* REMOVE DET SET 2

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

Column Numbers ---->		4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	5J9U	59	45 7	5	123		
1	2I9U* RT	60	45 7	2	1 3 8		
2	7J9L	61	45 7	7	123		
3	2I9L BUS	62	45 7	2	123		
4	2I3U* ADV	63	45 7	2	1 3 8		1.8
5	6J3U ST	64	45 7	6	123 8		
6	4I7U RT	65	45 7	4	123 8		
7	8J7U RT	66	45 7	8	123 8		
8	2P I12U	67	2	2	123		
9	6P I13U	68	2	6	123		
A	4P I12L	69	2	4	123		
B	8P I13L	70	2	8	123		
C	2I3L* ADV	76	45 7	2	1 3 8		1.8
D	6J3L	77	45 7	6	123		
E	4I7L BIKE	78	45 7	4	123 8		
F	8J7L BIKE	79	45 7	8	123 8		

Detector #
5
6
3
19
12
24
4
13
25

Detector Assignments <E/126+Column+Row> <D/0+Column+Row>

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

		Plan								
Column Numbers ---->		1	2	3	4	5	6	7	8	9
Row	Plan Name ---->									
0	Cycle Length									
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1									
B	Offset 2									
C	Offset 3									
D	Perm 1 - End									
E	Hold Release									
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Coord Extra

1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	E	Row
0		0
1	Plan 1 - Sync	1
2	Plan 2 - Sync	2
3	Plan 3 - Sync	3
4	Plan 4 - Sync	4
5	Plan 5 - Sync	5
6	Plan 6 - Sync	6
7	Plan 7 - Sync	7
8	Plan 8 - Sync	8
9	Plan 9 - Sync	9
A	NEMA Sync	A
B	NEMA Hold	B
C		C
D		D
E	Coord Extra	E
F		F

Sync Phases <C/1+E+Row>

Row										
0	Ped Adjustment									
1	Perm 2 - Start									
2	Perm 2 - End									
3	Perm 3 - Start									
4	Perm 3 - End									
5	Reservice Time									
6	Reservice Phases									
7										
8	Pretimed Phases									
9	Max Recall									
A	Perm 1 Veh Phase									
B	Perm 1 Ped Phase									
C	Perm 2 Veh Phase									
D	Perm 2 Ped Phase									
E	Perm 3 Veh Phase									
F	Perm 3 Ped Phase									

Coordination - Bank 2 <C/2+Plan+Row>

Row	F	Row
0	Free Lag	0
1	Plan 1 - Lag	1
2	Plan 2 - Lag	2
3	Plan 3 - Lag	3
4	Plan 4 - Lag	4
5	Plan 5 - Lag	5
6	Plan 6 - Lag	6
7	Plan 7 - Lag	7
8	Plan 8 - Lag	8
9	Plan 9 - Lag	9
A	External Lag	A
B	Lag Hold	B
C		C
D		D
E		E
F		F

Lag Phases <C/1+F+Row>

Coordination Timing By:
Date:

INTERSECTION: PACIFIC HY @ ROSECRANS ST/TAYLOR ST

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row	
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A	71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B	72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C	73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D	74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time	Free (7-Wire)	RR-1	51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense	Flash (7-Wire)	RR-2	52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1		7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	52	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag		9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	200	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	13	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)		C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)		D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)		E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row	
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	200	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1		Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher		Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR		Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer		Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved		Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1		Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2		Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3		Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4		Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4		Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5		Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6		NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4		NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1		OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2		OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: PACIFIC HY @ ROSECRANS ST/TAYLOR ST

		Phase							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Phase Names ---->								
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
Phase 1	---	---	---	---	---
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Alternate Timing

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthing

Transition Type | **0.3** <C/5+1+9>
TBC Transition

Hawk Select | **0** <F/1+0+4>
Hawk Select 200 = Mid-Block, 201 = Hawk

Address | **0** <C/1+0+6>
 Select Parity | **0** <C/1+0+5>
AB3418 Comm 2 0 = No Parity, 1 = Even

Begin Month | **3** <C/5+2+A>
 Begin Week | **2** <C/5+2+B>
 End Month | **11** <C/5+2+C>
 End Week | **1** <C/5+2+D>

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Daylight Savings Time

Time B4 Yellow | **0.0** <F/1+C+E>
 Phase Number | **0** <F/1+C+F>
Advance Warning Beacon - Sign 1

Time B4 Yellow | **0.0** <F/1+D+E>
 Phase Number | **0** <F/1+D+F>
Advance Warning Beacon - Sign 2

Offset Time | **0** <C/5+2+E>
 Max Cycle Time | **20** <C/5+2+F>
Yellow Yield Coordination

Omit Alarm | **#NAME?**
Local Alarm Disable <C/5+F+0>

IEN Status | **1** <C/5+1+B>
 Synch Time | **0.0** <C/5+1+C>
Other Parameters

		Phase							
Column Numbers ---->		1	2	3	4	5	6	7	8
Row	Phase Names ---->								
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
Phase 1	---	---	---	---	---
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Alternate Timing

INTERSECTION: PACIFIC HWY @ ROSECRANS ST/TAYLOR ST

Row	6	7	8	9	A	B	C	D	E	F
	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 1

<C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6	7	8	9	A	B	C	D	E	F
	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1	1 6	20		1 6	2345 78		1 6	1 6	2 4 6 8	
2		0								
3		1				1 6		2345 78		
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 2

<C+0+E=28>

Notes:

3 <E/28+5+F>
Limited Service Interval

Min Time (seconds) **4** <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) **10** <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) **0** <F/1+0+A>
Min Time Between Same Preempts
 (Does Not Apply To Railroad Preempt)

Low Pri. Channel **#NAME?** <E/125+C+8>
Disable Low Priority Channel

- Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
 <F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Headway Schedule <C+0+9=2.1>

Headway Time
 (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Appendix F

Existing LOS and Queuing Worksheets

AM Existing
1: Pacific Hwy & Private Dwy/Anna Ave

HCM 6th TWSC

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	7	0	16	1	116	21	17	110	0
Future Vol, veh/h	0	0	0	7	0	16	1	116	21	17	110	0
Conflicting Peds, #/hr	0	0	0	0	0	10	0	0	10	10	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	64	64	64	78	78	78	86	86	86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	11	0	25	1	149	27	20	128	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	343	356	128	343	343	183	128	0	0	186	0	0
Stage 1	168	168	-	175	175	-	-	-	-	-	-	-
Stage 2	175	188	-	168	168	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	609	568	919	609	578	857	1452	-	-	1382	-	-
Stage 1	832	758	-	824	752	-	-	-	-	-	-	-
Stage 2	824	743	-	832	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	579	554	919	597	564	843	1452	-	-	1370	-	-
Mov Cap-2 Maneuver	579	554	-	597	564	-	-	-	-	-	-	-
Stage 1	831	747	-	817	745	-	-	-	-	-	-	-
Stage 2	792	736	-	820	747	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		9.9		0.1		1	
HCM LOS	A		A					

























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1452	-	-	-	597	843	1370
HCM Lane V/C Ratio	0.001	-	-	-	0.018	0.03	0.014
HCM Control Delay (s)	7.5	-	-	0	11.1	9.4	7.7
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	0

LOS Engineering, Inc.

AM Existing

3: Pacific Hwy & Rosecrans St/Taylor St

HCM 6th Signalized Intersection Summary

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	190	57	191	193	60	70	83	95	31	62	63
Future Volume (veh/h)	42	190	57	191	193	60	70	83	95	31	62	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.94	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	49	221	66	203	205	64	93	111	127	37	75	76
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.75	0.75	0.75	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	1258	618	253	762	624	116	892	862	94	757	311
Arrive On Green	0.04	0.36	0.36	0.07	0.41	0.41	0.07	0.25	0.25	0.03	0.21	0.21
Sat Flow, veh/h	1767	3526	1443	3428	1856	1519	1767	3526	2599	3428	3526	1448
Grp Volume(v), veh/h	49	221	66	203	205	64	93	111	127	37	75	76
Grp Sat Flow(s),veh/h/ln	1767	1763	1443	1714	1856	1519	1767	1763	1300	1714	1763	1448
Q Serve(g_s), s	2.4	3.7	2.4	5.0	6.3	2.2	4.4	2.1	3.0	0.9	1.5	3.7
Cycle Q Clear(g_c), s	2.4	3.7	2.4	5.0	6.3	2.2	4.4	2.1	3.0	0.9	1.5	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	1258	618	253	762	624	116	892	862	94	757	311
V/C Ratio(X)	0.79	0.18	0.11	0.80	0.27	0.10	0.80	0.12	0.15	0.39	0.10	0.24
Avail Cap(c_a), veh/h	184	1708	802	253	871	713	116	1795	1527	164	1733	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	18.9	14.9	39.0	16.7	15.5	39.4	24.6	20.4	40.9	26.9	27.8
Incr Delay (d2), s/veh	19.3	0.1	0.1	16.9	0.2	0.1	32.2	0.1	0.1	2.7	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.5	0.7	2.7	2.6	0.7	2.9	0.8	0.8	0.4	0.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	18.9	15.0	55.9	16.9	15.6	71.5	24.7	20.4	43.5	27.0	28.2
LnGrp LOS	E	B	B	E	B	B	E	C	C	D	C	C
Approach Vol, veh/h		336			472			331			188	
Approach Delay, s/veh		24.2			33.5			36.2			30.7	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	36.4	11.0	25.1	8.4	41.0	7.7	28.3				
Change Period (Y+Rc), s	6.7	5.9	5.4	6.7	5.4	5.9	5.4	6.7				
Max Green Setting (Gmax), s	6.3	41.4	5.6	42.0	8.9	40.1	4.1	43.5				
Max Q Clear Time (g_c+I1), s	7.0	5.7	6.4	5.7	4.4	8.3	2.9	5.0				
Green Ext Time (p_c), s	0.0	1.8	0.0	0.7	0.0	1.4	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay				31.4								
HCM 6th LOS				C								

PM Existing
1: Pacific Hwy & Private Dwy/Anna Ave

HCM 6th TWSC

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	10	0	2	3	169	4	9	337	0
Future Vol, veh/h	0	0	0	10	0	2	3	169	4	9	337	0
Conflicting Peds, #/hr	0	0	1	1	0	5	5	0	5	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	60	60	60	82	82	82	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	17	0	3	4	206	5	9	347	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	592	594	353	588	592	219	352	0	0	216	0	0
Stage 1	370	370	-	222	222	-	-	-	-	-	-	-
Stage 2	222	224	-	366	370	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	416	417	688	419	418	818	1201	-	-	1348	-	-
Stage 1	648	618	-	778	718	-	-	-	-	-	-	-
Stage 2	778	716	-	651	618	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	408	409	685	414	410	811	1196	-	-	1342	-	-
Mov Cap-2 Maneuver	408	409	-	414	410	-	-	-	-	-	-	-
Stage 1	643	611	-	773	713	-	-	-	-	-	-	-
Stage 2	769	711	-	646	611	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		13.3		0.1		0.2	
HCM LOS	A		B					

























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	-	414	811	1342
HCM Lane V/C Ratio	0.003	-	-	-	0.04	0.004	0.007
HCM Control Delay (s)	8	-	-	0	14.1	9.5	7.7
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	0

LOS Engineering, Inc.

PM Existing

3: Pacific Hwy & Rosecrans St/Taylor St

HCM 6th Signalized Intersection Summary

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	365	78	176	184	56	120	83	459	102	222	91
Future Volume (veh/h)	43	365	78	176	184	56	120	83	459	102	222	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		0.98	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	51	435	93	196	204	62	128	88	488	112	244	100
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	65	1263	639	264	763	631	158	947	905	173	810	335
Arrive On Green	0.04	0.36	0.36	0.08	0.41	0.41	0.09	0.27	0.27	0.05	0.23	0.23
Sat Flow, veh/h	1767	3526	1391	3428	1856	1534	1767	3526	2575	3428	3526	1458
Grp Volume(v), veh/h	51	435	93	196	204	62	128	88	488	112	244	100
Grp Sat Flow(s),veh/h/ln	1767	1763	1391	1714	1856	1534	1767	1763	1287	1714	1763	1458
Q Serve(g_s), s	2.9	9.1	4.0	5.6	7.3	2.5	7.1	1.9	15.4	3.2	5.8	5.7
Cycle Q Clear(g_c), s	2.9	9.1	4.0	5.6	7.3	2.5	7.1	1.9	15.4	3.2	5.8	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	1263	639	264	763	631	158	947	905	173	810	335
V/C Ratio(X)	0.78	0.34	0.15	0.74	0.27	0.10	0.81	0.09	0.54	0.65	0.30	0.30
Avail Cap(c_a), veh/h	165	1417	699	344	783	647	225	1617	1394	297	1473	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	23.6	16.4	45.4	19.6	18.2	44.9	27.6	26.6	46.8	32.0	32.0
Incr Delay (d2), s/veh	17.8	0.2	0.1	6.1	0.2	0.1	13.7	0.0	0.5	4.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.8	1.2	2.6	3.2	0.8	3.6	0.8	4.5	1.4	2.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	23.8	16.5	51.5	19.8	18.2	58.6	27.6	27.1	50.9	32.2	32.5
LnGrp LOS	E	C	B	D	B	B	E	C	C	D	C	C
Approach Vol, veh/h		579			462			704			456	
Approach Delay, s/veh		26.3			33.0			32.9			36.9	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	41.9	14.4	29.8	9.1	47.2	10.5	33.7				
Change Period (Y+Rc), s	6.7	5.9	5.4	6.7	5.4	5.9	5.4	6.7				
Max Green Setting (Gmax), s	10.1	40.4	12.8	42.0	9.4	42.4	8.7	46.1				
Max Q Clear Time (g_c+I1), s	7.6	11.1	9.1	7.8	4.9	9.3	5.2	17.4				
Green Ext Time (p_c), s	0.1	3.5	0.1	1.8	0.0	1.4	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay				32.0								
HCM 6th LOS				C								

Intersection: 1: Pacific Hwy & Private Dwy/Anna Ave

Movement	WB	SB
Directions Served	LT	L
Maximum Queue (ft)	30	30
Average Queue (ft)	6	4
95th Queue (ft)	26	20
Link Distance (ft)	158	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		65
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Pacific Hwy & Project Dwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	R	R
Maximum Queue (ft)	65	214	138	56	162	175	228	33	107	110	68	19
Average Queue (ft)	26	67	15	16	70	131	69	7	45	43	20	1
95th Queue (ft)	56	138	58	38	176	184	157	21	89	94	49	6
Link Distance (ft)		591	591				393	393		700		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			320	150	150			135		250	250
Storage Blk Time (%)		0			0	10	0					
Queuing Penalty (veh)		0			1	20	0					

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R
Maximum Queue (ft)	68	105	88	44	66
Average Queue (ft)	5	21	27	6	29
95th Queue (ft)	27	56	62	25	59
Link Distance (ft)			166	166	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	230	230			60
Storage Blk Time (%)				0	1
Queuing Penalty (veh)				0	0

Network Summary

Network wide Queuing Penalty: 21

Intersection: 1: Pacific Hwy & Private Dwy/Anna Ave

Movement	WB	NB	SB
Directions Served	LT	L	L
Maximum Queue (ft)	53	30	31
Average Queue (ft)	7	3	3
95th Queue (ft)	30	18	18
Link Distance (ft)	158		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	65
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 2: Pacific Hwy & Project Dwy

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	53	29
Average Queue (ft)	5	2
95th Queue (ft)	25	14
Link Distance (ft)	50	50
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	T	R
Maximum Queue (ft)	67	257	178	78	162	173	184	45	151	89	336	275
Average Queue (ft)	29	138	73	23	61	127	68	12	79	43	11	129
95th Queue (ft)	57	207	163	54	170	181	146	33	129	89	111	216
Link Distance (ft)		591	591				393	393		700	700	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			320	150	150			135			250
Storage Blk Time (%)		1			0	5	1		1			0
Queuing Penalty (veh)		0			1	9	2		0			0

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	262	116	125	176	146	85
Average Queue (ft)	67	34	66	74	59	58
95th Queue (ft)	178	87	109	128	114	95
Link Distance (ft)				172	172	
Upstream Blk Time (%)	0					
Queuing Penalty (veh)	0					
Storage Bay Dist (ft)	250	230	230			60
Storage Blk Time (%)	0			0	6	15
Queuing Penalty (veh)	0			0	5	17

Network Summary

Network wide Queuing Penalty: 34

Appendix G

Existing Project Site Driveway Count



City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 1
 Date: Tuesday, December 20, 2022
 Court Type: Driveway

0:00	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	1	0	1
5:45	0	0	0
6:00	1	1	2
6:15	0	0	0
6:30	6	0	6
6:45	3	0	3
7:00	0	1	1
7:15	0	0	0
7:30	1	1	2
7:45	1	1	2
8:00	2	0	2
8:15	1	1	2
8:30	0	3	3
8:45	2	7	9
9:00	1	3	4
9:15	4	3	7
9:30	5	4	9
9:45	7	0	7
10:00	3	9	12
10:15	2	3	5
10:30	7	4	11
10:45	5	3	8
11:00	7	2	9
11:15	3	3	6
11:30	0	5	5
11:45	3	6	9
12:00	3	6	9
12:15	1	3	4
12:30	0	0	0
12:45	0	2	2
13:00	0	1	1
13:15	0	2	2
13:30	0	1	1
13:45	0	0	0
14:00	0	0	0
14:15	0	1	1
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	1	1	2
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	74	67	141

Counts Unlimited, Inc.
 PO Box 1178
 Corona, CA 92778
 (951) 268-6268



City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 2
 Date: Tuesday, December 20, 2022
 Court Type: Driveway

Time	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	1	0	1
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	3	0	3
6:45	7	2	9
7:00	4	0	4
7:15	3	1	4
7:30	1	1	2
7:45	5	4	9
8:00	5	3	8
8:15	7	4	11
8:30	4	4	8
8:45	6	5	11
9:00	4	7	11
9:15	8	1	9
9:30	6	3	9
9:45	9	8	17
10:00	6	12	18
10:15	5	3	8
10:30	4	8	12
10:45	3	6	9
11:00	3	6	9
11:15	5	2	7
11:30	7	7	14
11:45	4	4	8
12:00	10	4	14
12:15	1	8	9
12:30	1	7	8
12:45	2	6	8
13:00	1	1	2
13:15	1	1	2
13:30	0	0	0
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	126	118	244

Counts Unlimited, Inc.
 PO Box 1178
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 (951) 268-6268

Time	5	34	TOTAL
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	0	0	0
6:45	0	0	0
7:00	0	0	0
7:15	0	0	0
7:30	0	0	0
7:45	0	0	0
8:00	0	0	0
8:15	0	1	1
8:30	0	0	0
8:45	0	3	3
9:00	0	2	2
9:15	1	4	5
9:30	0	0	0
9:45	0	1	1
10:00	0	0	0
10:15	0	6	6
10:30	0	1	1
10:45	0	2	2
11:00	1	3	4
11:15	0	1	1
11:30	0	2	2
11:45	0	0	0
12:00	0	1	1
12:15	0	1	1
12:30	0	0	0
12:45	1	0	1
13:00	0	0	0
13:15	0	0	0
13:30	0	0	0
13:45	1	1	2
14:00	0	2	2
14:15	1	1	2
14:30	0	1	1
14:45	0	1	1
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
Entering	0	0	0
Exiting	0	0	0
Total	0	0	0

City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 4
 Date: Tuesday, December 20, 2022
 Court Type: Driveway





City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 5
 Date: Tuesday, December 20, 2022
 Court Type: Driveway

0:00	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	1	1
6:00	0	0	0
6:15	0	0	0
6:30	1	0	1
6:45	0	0	0
7:00	0	0	0
7:15	1	0	1
7:30	0	0	0
7:45	0	0	0
8:00	0	1	1
8:15	0	2	2
8:30	0	0	0
8:45	2	1	3
9:00	1	1	2
9:15	0	2	2
9:30	0	0	0
9:45	0	1	1
10:00	1	1	2
10:15	0	1	1
10:30	0	0	0
10:45	0	0	0
11:00	0	0	0
11:15	0	0	0
11:30	0	0	0
11:45	2	1	3
12:00	2	1	3
12:15	0	1	1
12:30	0	2	2
12:45	0	1	1
13:00	0	1	1
13:15	0	0	0
13:30	0	0	0
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	10	17	27

Counts Unlimited, Inc.
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 (951) 268-6268



City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 6
 Date: Tuesday, December 20, 2022
 Court Type: Driveway

0:00	Entering	Exiting	Total
0:00	0	0	0
0:15	1	2	1
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	1	1	0
5:00	1	0	1
5:15	2	0	2
5:30	3	0	3
5:45	1	1	0
6:00	0	1	1
6:15	1	0	1
6:30	1	1	0
6:45	1	0	1
7:00	0	0	0
7:15	0	0	0
7:30	0	0	0
7:45	0	0	0
8:00	0	0	0
8:15	0	0	0
8:30	0	0	0
8:45	0	0	0
9:00	0	0	0
9:15	0	2	2
9:30	0	0	0
9:45	1	0	1
10:00	0	0	0
10:15	0	0	0
10:30	0	2	2
10:45	1	0	1
11:00	0	1	1
11:15	0	0	0
11:30	0	0	0
11:45	0	1	1
12:00	0	1	1
12:15	0	1	1
12:30	0	1	1
12:45	0	0	0
13:00	0	0	0
13:15	0	0	0
13:30	0	0	0
13:45	1	0	1
14:00	0	4	4
14:15	1	2	1
14:30	0	3	3
14:45	0	3	3
15:00	0	0	0
15:15	1	1	0
15:30	1	1	0
15:45	0	1	1
16:00	1	3	4
16:15	1	1	1
16:30	0	0	0
16:45	1	2	3
17:00	0	2	2
17:15	1	0	1
17:30	0	0	0
17:45	0	2	2
18:00	2	4	2
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	1	1	0
19:45	0	2	2
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	2	2
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	1	1	0
TOTAL	22	44	66

Counts Unlimited, Inc.
 PO Box 1178
 Corona, CA 92718
 (951) 268-6268

Time	69	73	TOTAL
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	0	0	0
6:45	2	0	2
7:00	2	0	2
7:15	3	0	3
7:30	1	0	1
7:45	4	0	4
8:00	4	0	4
8:15	3	0	3
8:30	1	1	2
8:45	3	0	3
9:00	5	0	5
9:15	5	0	5
9:30	4	0	4
9:45	4	0	4
10:00	2	0	2
10:15	5	0	5
10:30	1	1	2
10:45	3	1	4
11:00	5	0	5
11:15	3	0	3
11:30	0	0	0
11:45	3	0	3
12:00	0	0	0
12:15	0	0	0
12:30	2	1	3
12:45	1	0	1
13:00	1	0	1
13:15	0	0	0
13:30	2	0	2
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0

City: San Diego
 Cross Street: Taylor Street
 Driveway #: 7
 Date: Tuesday, December 20, 2022
 Count Type: Driveway





City: San Diego
 Cross Street: Pacific Hwy & Taylor Street
 Driveway #: 1 Through 8
 Date: Tuesday, December 20, 2022
 Count Type: Driveway

Enter/Exit	Enter	Exit	Total
01:00	0	0	0
01:15	1	1	2
01:30	0	0	0
01:45	0	0	0
02:00	0	0	0
02:15	0	0	0
02:30	0	0	0
02:45	0	0	0
03:00	0	0	0
03:15	0	0	0
03:30	0	0	0
03:45	0	0	0
04:00	0	0	0
04:15	0	0	0
04:30	0	0	0
04:45	1	0	1
05:00	1	0	1
05:15	2	0	2
05:30	5	0	5
05:45	0	2	2
06:00	1	2	3
06:15	1	0	1
06:30	11	2	12
06:45	14	2	16
07:00	17	10	27
07:15	8	3	11
07:30	6	4	10
07:45	16	7	23
08:00	13	6	19
08:15	13	12	25
08:30	7	9	16
08:45	22	16	38
09:00	14	13	27
09:15	18	14	32
09:30	19	10	29
09:45	24	13	37
10:00	15	11	26
10:15	14	11	25
10:30	14	22	36
10:45	13	18	31
11:00	20	19	39
11:15	12	7	19
11:30	12	17	29
11:45	13	13	26
12:00	18	20	38
12:15	3	19	22
12:30	3	16	19
12:45	6	12	18
13:00	2	7	9
13:15	2	5	7
13:30	2	1	3
13:45	2	1	3
14:00	0	6	6
14:15	2	3	5
14:30	0	4	4
14:45	1	4	5
15:00	1	0	1
15:15	2	1	3
15:30	0	1	1
15:45	0	1	1
16:00	7	4	11
16:15	1	3	4
16:30	1	2	3
16:45	1	3	4
17:00	0	2	2
17:15	1	0	1
17:30	0	0	0
17:45	0	2	2
18:00	2	2	4
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	1	0	1
19:30	1	2	3
19:45	0	2	2
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	2	2
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	1	1	2
TOTAL	372	378	750

AM	In	Out
Total	30	10
	64	20
	77	29
	83	34
98	55	43

PM	In	Out
Total	10	7
	3	6
	8	5
	6	2
	5	4



City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 2
 Date: Wednesday, December 21, 2022
 Court Type: Driveway

Time	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	2	0	2
5:45	0	0	0
6:00	0	0	0
6:15	3	0	3
6:30	1	0	1
6:45	12	0	12
7:00	6	0	6
7:15	0	3	3
7:30	5	6	11
7:45	8	0	8
8:00	8	8	16
8:15	3	1	4
8:30	4	3	7
8:45	7	3	10
9:00	2	3	5
9:15	7	10	17
9:30	6	5	11
9:45	9	3	12
10:00	3	6	9
10:15	5	6	11
10:30	6	7	13
10:45	2	7	9
11:00	7	8	15
11:15	2	6	8
11:30	0	4	4
11:45	3	5	8
12:00	7	14	21
12:15	4	1	5
12:30	2	6	8
12:45	0	1	1
13:00	1	3	4
13:15	0	2	2
13:30	0	0	0
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0

Counts Unlimited, Inc.
 PO Box 1178
 Corona, CA 92718
 (951) 268-6268

Time	56	12	TOTAL
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	0	0	0
6:45	0	0	0
7:00	3	0	3
7:15	1	1	2
7:30	7	1	8
7:45	3	0	3
8:00	0	1	1
8:15	3	3	6
8:30	5	1	6
8:45	2	0	2
9:00	4	1	5
9:15	1	1	2
9:30	1	0	1
9:45	2	2	4
10:00	2	0	2
10:15	3	1	4
10:30	0	0	0
10:45	1	0	1
11:00	3	1	4
11:15	3	0	3
11:30	1	1	2
11:45	1	0	1
12:00	0	1	1
12:15	1	0	1
12:30	2	2	4
12:45	1	1	2
13:00	5	0	5
13:15	1	1	2
13:30	0	0	0
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	68	56	124

City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 3
 Date: Wednesday, December 21, 2022
 Court Type: Driveway



Time	16	12	4	TOTAL
0:00	0	0	0	0
0:15	0	0	0	0
0:30	0	0	0	0
0:45	0	0	0	0
1:00	0	0	0	0
1:15	0	0	0	0
1:30	0	0	0	0
1:45	0	0	0	0
2:00	0	0	0	0
2:15	0	0	0	0
2:30	0	0	0	0
2:45	0	0	0	0
3:00	0	0	0	0
3:15	0	0	0	0
3:30	0	0	0	0
3:45	0	0	0	0
4:00	0	0	0	0
4:15	0	0	0	0
4:30	0	0	0	0
4:45	0	0	0	0
5:00	0	0	0	0
5:15	0	0	0	0
5:30	0	0	0	0
5:45	0	0	0	0
6:00	0	0	0	0
6:15	0	0	0	0
6:30	0	0	0	0
6:45	0	0	0	0
7:00	0	0	0	0
7:15	0	0	0	0
7:30	0	0	0	0
7:45	0	0	0	0
8:00	1	0	0	1
8:15	0	0	0	0
8:30	0	0	0	0
8:45	0	0	0	0
9:00	0	0	0	0
9:15	0	0	0	0
9:30	0	0	0	0
9:45	0	0	0	0
10:00	0	0	0	0
10:15	0	0	0	0
10:30	0	0	0	0
10:45	0	0	0	0
11:00	0	0	0	0
11:15	0	0	0	0
11:30	0	0	0	0
11:45	0	0	0	0
12:00	0	0	0	0
12:15	0	0	0	0
12:30	0	0	0	0
12:45	0	0	0	0
13:00	1	0	0	1
13:15	0	0	0	0
13:30	0	0	0	0
13:45	0	0	0	0
14:00	0	0	0	0
14:15	0	0	0	0
14:30	0	0	0	0
14:45	0	0	0	0
15:00	0	0	0	0
15:15	0	0	0	0
15:30	0	0	0	0
15:45	0	0	0	0
16:00	0	0	0	0
16:15	0	0	0	0
16:30	0	0	0	0
16:45	0	0	0	0
17:00	0	0	0	0
17:15	0	0	0	0
17:30	0	0	0	0
17:45	0	0	0	0
18:00	0	0	0	0
18:15	0	0	0	0
18:30	0	0	0	0
18:45	0	0	0	0
19:00	0	0	0	0
19:15	0	0	0	0
19:30	0	0	0	0
19:45	0	0	0	0
20:00	0	0	0	0
20:15	0	0	0	0
20:30	0	0	0	0
20:45	0	0	0	0
21:00	0	0	0	0
21:15	0	0	0	0
21:30	0	0	0	0
21:45	0	0	0	0
22:00	0	0	0	0
22:15	0	0	0	0
22:30	0	0	0	0
22:45	0	0	0	0
23:00	0	0	0	0
23:15	0	0	0	0
23:30	0	0	0	0
23:45	0	0	0	0

City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 5
 Date: Wednesday, December 21, 2022
 Court Type: Driveway





City: San Diego
 Cross Street: Pacific Highway
 Driveway #: 6
 Date: Wednesday, December 21, 2022
 Court Type: Driveway

0:00	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	1	0	1
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	3	0	3
5:30	1	0	1
5:45	1	0	1
6:00	1	0	1
6:15	1	0	1
6:30	1	0	1
6:45	1	0	1
7:00	0	0	0
7:15	1	0	1
7:30	0	0	0
7:45	0	0	0
8:00	0	0	0
8:15	0	0	0
8:30	0	1	1
8:45	0	1	1
9:00	0	2	2
9:15	0	1	1
9:30	0	1	1
9:45	0	0	0
10:00	1	2	3
10:15	0	3	3
10:30	0	1	1
10:45	0	1	1
11:00	0	0	0
11:15	1	2	3
11:30	0	1	1
11:45	0	1	1
12:00	0	0	0
12:15	0	0	0
12:30	0	1	1
12:45	0	0	0
13:00	0	1	1
13:15	1	0	1
13:30	0	0	0
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	1	0	1
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	13	35	48

Counts Unlimited, Inc.
 PO Box 1178
 Corona, CA 92778
 (951) 268-6268



City: San Diego
 Cross Street: Taylor Street
 Driveway #: 7
 Date: Wednesday, December 21, 2022
 Court Type: Driveway

0:00	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	0	0	0
6:45	0	1	1
7:00	1	0	1
7:15	1	0	1
7:30	7	0	7
7:45	4	0	4
8:00	5	0	5
8:15	0	1	1
8:30	1	0	1
8:45	5	1	6
9:00	0	1	1
9:15	3	1	4
9:30	3	0	3
9:45	3	0	3
10:00	4	1	5
10:15	3	0	3
10:30	2	0	2
10:45	4	2	6
11:00	1	0	1
11:15	1	0	1
11:30	1	1	2
11:45	0	0	0
12:00	0	0	0
12:15	4	1	5
12:30	0	1	1
12:45	0	0	0
13:00	3	0	3
13:15	1	0	1
13:30	0	0	0
13:45	0	0	0
14:00	0	0	0
14:15	0	0	0
14:30	0	0	0
14:45	0	0	0
15:00	0	0	0
15:15	0	0	0
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	57	9	66

Counts Unlimited, Inc.
 PO Box 1178
 Corona, CA 92778
 (951) 268-6268



City: San Diego
 Cross Street: Taylor Street
 Driveway #: 8
 Date: Wednesday, December 21, 2022
 Court Type: Driveway

0:00	Entering	Exiting	Total
0:00	0	0	0
0:15	0	0	0
0:30	0	0	0
0:45	0	0	0
1:00	0	0	0
1:15	0	0	0
1:30	0	0	0
1:45	0	0	0
2:00	0	0	0
2:15	0	0	0
2:30	0	0	0
2:45	0	0	0
3:00	0	0	0
3:15	0	0	0
3:30	0	0	0
3:45	0	0	0
4:00	0	0	0
4:15	0	0	0
4:30	0	0	0
4:45	0	0	0
5:00	0	0	0
5:15	0	0	0
5:30	0	0	0
5:45	0	0	0
6:00	0	0	0
6:15	0	0	0
6:30	1	0	1
6:45	1	0	1
7:00	5	0	5
7:15	1	0	1
7:30	3	0	3
7:45	5	4	9
8:00	3	1	4
8:15	3	0	3
8:30	2	2	4
8:45	4	3	7
9:00	2	0	2
9:15	6	5	11
9:30	3	4	7
9:45	2	0	2
10:00	2	2	4
10:15	1	4	5
10:30	0	1	1
10:45	1	3	4
11:00	3	0	3
11:15	1	0	1
11:30	3	0	3
11:45	2	4	6
12:00	2	4	6
12:15	3	1	4
12:30	2	3	5
12:45	3	0	3
13:00	2	3	5
13:15	1	0	1
13:30	1	0	1
13:45	0	0	0
14:00	0	1	1
14:15	0	0	0
14:30	0	1	1
14:45	0	0	0
15:00	0	0	0
15:15	1	0	1
15:30	0	0	0
15:45	0	0	0
16:00	0	0	0
16:15	0	0	0
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
18:00	0	0	0
18:15	0	0	0
18:30	0	0	0
18:45	0	0	0
19:00	0	0	0
19:15	0	0	0
19:30	0	0	0
19:45	0	0	0
20:00	0	0	0
20:15	0	0	0
20:30	0	0	0
20:45	0	0	0
21:00	0	0	0
21:15	0	0	0
21:30	0	0	0
21:45	0	0	0
22:00	0	0	0
22:15	0	0	0
22:30	0	0	0
22:45	0	0	0
23:00	0	0	0
23:15	0	0	0
23:30	0	0	0
23:45	0	0	0
TOTAL	69	44	113

Counts Unlimited, Inc.
 PO Box 1178
 Corona, CA 92778
 (951) 268-6268



City: San Diego
 Cross Street: Pacific Hwy & Taylor Street
 Driveway #: 1 Through 8
 Date: Wednesday, December 21, 2022
 Count Type: Driveway

	Entering	Exiting	Total	
0:00	0	0	0	
0:15	0	0	0	
0:30	0	0	0	
0:45	0	0	0	
1:00	0	0	0	
1:15	0	0	0	
1:30	0	0	0	
1:45	0	0	0	
2:00	0	0	0	
2:15	0	0	0	
2:30	0	0	0	
2:45	0	0	0	
3:00	0	0	0	
3:15	0	0	0	
3:30	0	0	0	
3:45	1	0	1	
4:00	0	0	0	
4:15	0	0	0	
4:30	0	0	0	
4:45	0	0	0	
5:00	3	0	3	
5:15	3	0	3	
5:30	1	0	1	
5:45	1	0	1	
6:00	1	1	2	
6:15	5	1	6	
6:30	5	2	7	
6:45	18	1	19	
7:00	18	1	19	AM
7:15	10	5	15	Total
7:30	21	16	37	97
7:45	19	7	26	113
8:00	23	7	30	122
8:15	15	19	34	78
8:30	15	12	27	44
8:45	20	12	32	72
9:00	5	13	18	114
9:15	19	24	43	
9:30	16	14	30	
9:45	19	5	24	
10:00	14	19	33	
10:15	12	17	29	
10:30	14	11	25	
10:45	10	15	25	
11:00	12	21	33	
11:15	7	16	23	
11:30	4	19	23	
11:45	6	11	17	
12:00	12	11	23	
12:15	13	10	23	
12:30	5	13	18	
12:45	3	3	6	
13:00	9	16	25	
13:15	3	11	14	
13:30	2	5	7	
13:45	0	6	6	
14:00	1	2	3	
14:15	0	5	5	
14:30	3	2	5	
14:45	2	2	4	
15:00	2	1	3	
15:15	1	0	1	
15:30	0	0	0	
15:45	0	2	2	
16:00	0	1	1	PM
16:15	0	2	2	Total
16:30	0	1	1	5
16:45	0	1	1	6
17:00	1	1	2	7
17:15	1	2	3	8
17:30	0	0	0	
17:45	0	3	3	
18:00	0	3	3	
18:15	0	0	0	
18:30	1	0	1	
18:45	0	2	2	
19:00	0	0	0	
19:15	0	0	0	
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21:45	0	0	0	
22:00	1	1	2	
22:15	0	0	0	
22:30	0	0	0	
22:45	0	0	0	
23:00	0	0	0	
23:15	0	0	0	
23:30	0	0	0	
23:45	0	0	0	
TOTAL	376	383	744	

Appendix H

Historical Traffic Data and Ambient Growth Calculations

City of San Diego traffic data for Pacific Hwy and Rosecrans adjacent to the project site was reviewed.

Rosecrans ADTs show overall decrease; therefore, they were not used for determining a growth factor.

Rosecrans St West of Pacific Hwy

City of SD ID	street_name	limits	file_no	date_count	total_count	
ROSECRANSST03070	ROSECRANS ST	JEFFERSON ST - PACIFIC HY	0307-05	6/14/2005	19940	
ROSECRANSST03310	ROSECRANS ST	JEFFERSON ST - PACIFIC HY	0331-08	8/20/2008	22950	15.1%
ROSECRANSST03222	ROSECRANS ST	JEFFERSON ST - PACIFIC HY	0322-22	6/29/2022	16220	-18.7%
Total Average Growth						-1.8%

Not used due to being a negative average growth rate.

City of San Diego has daily volumes for Pacific Highway that were collected between Sea World Dr and Rosecrans St. There are no connections to the city roadway network along this section of Pac Hwy, only connections to businesses. Therefore, all of this historical data was used to determine an average growth rate.

Pacific Hwy North of Rosecrans St

id	street_name	limits	file_no	date_count	total_count	
PACIFICHY031905	PACIFIC HY	FRIARS RD - ANNA AV	0319-05	6/14/2005	5240	
PACIFICHY009206	PACIFIC HY	ROSECRANS ST - FRIARS RD	0092-06	6/13/2006	6930	32.3%
PACIFICHY039808	PACIFIC HY	FRIARS RD - ANNA AV	0398-08	8/19/2008	6250	-9.8%
PACIFICHY040309	PACIFIC HY	ROSECRANS ST - FRIARS RD	0403-09	6/16/2009	8310	33.0%
PACIFICHY079911	PACIFIC HY	FRIARS RD - ANNA AV	0799-11	8/9/2011	7470	-10.1%
PACIFICHY086014	PACIFIC HY	FRIARS RD - ANNA AV	0860-14	8/27/2014	6437	-13.8%
PACIFICHY055815	PACIFIC HY	ROSECRANS ST - FRIARS RD	0558-15	3/5/2015	6160	-4.3%
PACIFICHY018816	PACIFIC HY	ROSECRANS ST - FRIARS RD	0188-16	6/29/2016	7086	15.0%
PACIFICHY052921	PACIFIC HY	ROSECRANS ST - SEA WORLD	0529-21	11/10/2021	7510	6.0%
PACIFICHY032622	PACIFIC HY	FRIARS RD - ANNA AV	0326-22	6/29/2022	7655	1.9%
Non City Count	Pacific Hwy	Rosecrans St to Friars Rd	NA	2/9/2023	5752	-24.9%
Total Average Growth:						2.5%

Number of years before project is forecasted to be completed in 2026: 3

Total Applied Compound Growth Rate for 3 years: 7.7%

Appendix I

Opening Year (2026) without Project LOS and Queuing Worksheets

AM Opening Year
1: Pacific Hwy & Private Dwy/Anna Ave

HCM 6th TWSC

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	8	0	17	1	125	23	18	118	0
Future Vol, veh/h	0	0	0	8	0	17	1	125	23	18	118	0
Conflicting Peds, #/hr	0	0	0	0	0	10	0	0	10	10	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	64	64	64	78	78	78	86	86	86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	13	0	27	1	160	29	21	137	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	366	380	137	366	366	195	137	0	0	199	0	0
Stage 1	179	179	-	187	187	-	-	-	-	-	-	-
Stage 2	187	201	-	179	179	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	588	551	909	588	561	844	1441	-	-	1367	-	-
Stage 1	820	749	-	812	743	-	-	-	-	-	-	-
Stage 2	812	733	-	820	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	557	538	909	576	548	830	1441	-	-	1356	-	-
Mov Cap-2 Maneuver	557	538	-	576	548	-	-	-	-	-	-	-
Stage 1	819	738	-	805	736	-	-	-	-	-	-	-
Stage 2	779	726	-	807	738	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	0		10.1		0.1		1			
HCM LOS	A		B							

























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1441	-	-	-	576	830	1356
HCM Lane V/C Ratio	0.001	-	-	-	0.022	0.032	0.015
HCM Control Delay (s)	7.5	-	-	0	11.4	9.5	7.7
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	0

LOS Engineering, Inc.

AM Opening Year

3: Pacific Hwy & Rosecrans St/Taylor St

HCM 6th Signalized Intersection Summary

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	205	61	206	208	65	75	89	102	33	67	68
Future Volume (veh/h)	45	205	61	206	208	65	75	89	102	33	67	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.94	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	52	238	71	219	221	69	100	119	136	40	81	82
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.75	0.75	0.75	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	1258	618	253	758	620	116	887	858	98	757	311
Arrive On Green	0.04	0.36	0.36	0.07	0.41	0.41	0.07	0.25	0.25	0.03	0.21	0.21
Sat Flow, veh/h	1767	3526	1443	3428	1856	1518	1767	3526	2598	3428	3526	1448
Grp Volume(v), veh/h	52	238	71	219	221	69	100	119	136	40	81	82
Grp Sat Flow(s),veh/h/ln	1767	1763	1443	1714	1856	1518	1767	1763	1299	1714	1763	1448
Q Serve(g_s), s	2.5	4.0	2.6	5.4	6.8	2.4	4.8	2.2	3.2	1.0	1.6	4.0
Cycle Q Clear(g_c), s	2.5	4.0	2.6	5.4	6.8	2.4	4.8	2.2	3.2	1.0	1.6	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1258	618	253	758	620	116	887	858	98	757	311
V/C Ratio(X)	0.78	0.19	0.11	0.87	0.29	0.11	0.86	0.13	0.16	0.41	0.11	0.26
Avail Cap(c_a), veh/h	184	1708	802	253	871	713	116	1795	1527	164	1733	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	19.0	15.0	39.2	17.0	15.7	39.6	24.8	20.5	40.8	27.0	27.9
Incr Delay (d2), s/veh	18.0	0.1	0.1	25.6	0.2	0.1	44.7	0.1	0.1	2.7	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.6	0.8	3.1	2.8	0.8	3.4	0.9	0.9	0.4	0.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	19.0	15.1	64.8	17.2	15.7	84.3	24.8	20.6	43.5	27.0	28.4
LnGrp LOS	E	B	B	E	B	B	F	C	C	D	C	C
Approach Vol, veh/h		361			509			355			203	
Approach Delay, s/veh		24.0			37.5			40.0			30.8	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	36.4	11.0	25.1	8.6	40.8	7.9	28.2				
Change Period (Y+Rc), s	6.7	5.9	5.4	6.7	5.4	5.9	5.4	6.7				
Max Green Setting (Gmax), s	6.3	41.4	5.6	42.0	8.9	40.1	4.1	43.5				
Max Q Clear Time (g_c+I1), s	7.4	6.0	6.8	6.0	4.5	8.8	3.0	5.2				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.7	0.0	1.6	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay				33.7								
HCM 6th LOS				C								

PM Opening Year
1: Pacific Hwy & Private Dwy/Anna Ave

HCM 6th TWSC

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	11	0	2	3	182	4	10	363	0
Future Vol, veh/h	0	0	0	11	0	2	3	182	4	10	363	0
Conflicting Peds, #/hr	0	0	1	1	0	5	5	0	5	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	60	60	60	82	82	82	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	18	0	3	4	222	5	10	374	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	637	639	380	633	637	235	379	0	0	232	0	0
Stage 1	399	399	-	238	238	-	-	-	-	-	-	-
Stage 2	238	240	-	395	399	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	389	393	665	391	394	802	1174	-	-	1330	-	-
Stage 1	625	600	-	763	706	-	-	-	-	-	-	-
Stage 2	763	705	-	628	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	381	386	662	386	387	795	1169	-	-	1324	-	-
Mov Cap-2 Maneuver	381	386	-	386	387	-	-	-	-	-	-	-
Stage 1	620	593	-	757	701	-	-	-	-	-	-	-
Stage 2	754	700	-	623	593	-	-	-	-	-	-	-

























Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		14		0.1		0.2	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1169	-	-	-	386	795	1324
HCM Lane V/C Ratio	0.003	-	-	-	0.047	0.004	0.008
HCM Control Delay (s)	8.1	-	-	0	14.8	9.5	7.7
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	0

LOS Engineering, Inc.

PM Opening Year
3: Pacific Hwy & Rosecrans St/Taylor St

HCM 6th Signalized Intersection Summary

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	393	84	190	198	60	129	89	494	110	239	98
Future Volume (veh/h)	46	393	84	190	198	60	129	89	494	110	239	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		0.98	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	55	468	100	211	220	67	137	95	526	121	263	108
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	71	1243	638	277	753	622	167	969	931	182	823	341
Arrive On Green	0.04	0.35	0.35	0.08	0.41	0.41	0.09	0.27	0.27	0.05	0.23	0.23
Sat Flow, veh/h	1767	3526	1388	3428	1856	1534	1767	3526	2578	3428	3526	1459
Grp Volume(v), veh/h	55	468	100	211	220	67	137	95	526	121	263	108
Grp Sat Flow(s),veh/h/ln	1767	1763	1388	1714	1856	1534	1767	1763	1289	1714	1763	1459
Q Serve(g_s), s	3.2	10.2	4.4	6.2	8.3	2.8	7.9	2.1	17.1	3.6	6.4	6.3
Cycle Q Clear(g_c), s	3.2	10.2	4.4	6.2	8.3	2.8	7.9	2.1	17.1	3.6	6.4	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	1243	638	277	753	622	167	969	931	182	823	341
V/C Ratio(X)	0.78	0.38	0.16	0.76	0.29	0.11	0.82	0.10	0.56	0.66	0.32	0.32
Avail Cap(c_a), veh/h	161	1378	691	335	761	629	219	1573	1373	289	1433	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	25.0	17.0	46.5	20.7	19.1	45.9	27.9	27.0	48.0	32.8	32.8
Incr Delay (d2), s/veh	16.4	0.2	0.1	8.2	0.2	0.1	17.0	0.0	0.5	4.1	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.3	1.3	3.0	3.6	1.0	4.1	0.8	5.0	1.6	2.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.6	25.2	17.2	54.7	20.9	19.2	62.9	28.0	27.5	52.1	33.0	33.3
LnGrp LOS	E	C	B	D	C	B	E	C	C	D	C	C
Approach Vol, veh/h		623			498			758			492	
Approach Delay, s/veh		27.5			35.0			34.0			37.8	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	42.3	15.2	30.8	9.5	47.8	10.9	35.1				
Change Period (Y+Rc), s	6.7	5.9	5.4	6.7	5.4	5.9	5.4	6.7				
Max Green Setting (Gmax), s	10.1	40.4	12.8	42.0	9.4	42.4	8.7	46.1				
Max Q Clear Time (g_c+I1), s	8.2	12.2	9.9	8.4	5.2	10.3	5.6	19.1				
Green Ext Time (p_c), s	0.1	3.8	0.1	2.0	0.0	1.6	0.1	2.9				
Intersection Summary												
HCM 6th Ctrl Delay				33.3								
HCM 6th LOS				C								

Intersection: 1: Pacific Hwy & Private Dwy/Anna Ave

Movement	WB	SB
Directions Served	LT	L
Maximum Queue (ft)	30	31
Average Queue (ft)	7	1
95th Queue (ft)	28	10
Link Distance (ft)	158	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		65
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Pacific Hwy & Project Dwy

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	26	29
Average Queue (ft)	1	1
95th Queue (ft)	8	10
Link Distance (ft)	166	56
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	T	R
Maximum Queue (ft)	136	133	65	38	162	175	281	31	156	182	43	62
Average Queue (ft)	30	74	23	15	100	143	99	7	73	45	1	22
95th Queue (ft)	77	128	52	31	195	196	201	18	143	110	14	50
Link Distance (ft)		591	591				393	393		700	700	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			320	150	150			135			250
Storage Blk Time (%)					1	18	1		8			
Queuing Penalty (veh)					1	37	2		3			

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	19	28	89	68	24	69
Average Queue (ft)	2	5	27	25	7	30
95th Queue (ft)	13	22	57	56	24	62
Link Distance (ft)				166	166	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	250	230	230			60
Storage Blk Time (%)						3
Queuing Penalty (veh)						1

Network Summary

Network wide Queuing Penalty: 45

Intersection: 1: Pacific Hwy & Private Dwy/Anna Ave

Movement	WB	NB	NB	SB	SB
Directions Served	LT	L	TR	L	TR
Maximum Queue (ft)	35	24	6	21	19
Average Queue (ft)	9	1	0	1	1
95th Queue (ft)	31	12	4	10	11
Link Distance (ft)	158		2258		473
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		50		65	
Storage Blk Time (%)		0			0
Queuing Penalty (veh)		0			0

Intersection: 2: Pacific Hwy & Project Dwy

Movement	NB	SB	SB	B11
Directions Served	T	T	TR	T
Maximum Queue (ft)	37	59	28	2
Average Queue (ft)	2	4	2	0
95th Queue (ft)	19	28	13	2
Link Distance (ft)	172	50	50	2258
Upstream Blk Time (%)		0	0	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	T	R
Maximum Queue (ft)	126	229	202	70	161	174	249	44	155	213	79	237
Average Queue (ft)	41	135	81	22	74	131	89	8	96	61	5	123
95th Queue (ft)	89	209	177	49	182	193	195	25	160	154	50	206
Link Distance (ft)		591	591				393	393		700	700	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			320	150	150			135			250
Storage Blk Time (%)		1			0	11	1		7	0		0
Queuing Penalty (veh)		0			1	21	3		3	0		0

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	196	124	136	157	157	85
Average Queue (ft)	61	37	67	79	75	54
95th Queue (ft)	163	98	116	131	140	98
Link Distance (ft)				172	172	
Upstream Blk Time (%)				0	0	
Queuing Penalty (veh)				0	1	
Storage Bay Dist (ft)	250	230	230			60
Storage Blk Time (%)	0			0	10	11
Queuing Penalty (veh)	0			0	10	13

Network Summary

Network wide Queuing Penalty: 52

Appendix J

Opening Year (2026) plus Project LOS and Queuing Worksheets

AM Opening Year + Project
1: Pacific Hwy & Private Dwy/Anna Ave

HCM 6th TWSC

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	8	0	17	1	137	23	18	118	0
Future Vol, veh/h	0	0	0	8	0	17	1	137	23	18	118	0
Conflicting Peds, #/hr	0	0	0	0	0	10	0	0	10	10	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	64	64	64	78	78	78	86	86	86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	13	0	27	1	176	29	21	137	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	382	396	137	382	382	211	137	0	0	215	0	0
Stage 1	179	179	-	203	203	-	-	-	-	-	-	-
Stage 2	203	217	-	179	179	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	574	540	909	574	549	827	1441	-	-	1349	-	-
Stage 1	820	749	-	797	732	-	-	-	-	-	-	-
Stage 2	797	721	-	820	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	544	527	909	562	535	813	1441	-	-	1338	-	-
Mov Cap-2 Maneuver	544	527	-	562	535	-	-	-	-	-	-	-
Stage 1	819	737	-	790	725	-	-	-	-	-	-	-
Stage 2	764	715	-	807	737	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	0		10.2		0			1		
HCM LOS	A		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1441	-	-	-	562	813	1338
HCM Lane V/C Ratio	0.001	-	-	-	0.022	0.033	0.016
HCM Control Delay (s)	7.5	-	-	0	11.6	9.6	7.7
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	0

LOS Engineering, Inc.

AM Opening Year + Project
2: Pacific Hwy & Project Dwy

HCM 6th TWSC

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	86	0	238	168	21
Future Vol, veh/h	0	86	0	238	168	21
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	93	0	259	183	23

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	123	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.96	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.33	-
Pot Cap-1 Maneuver	0	902	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	887	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

























Approach	EB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	-	887	-
HCM Lane V/C Ratio	-	0.105	-
HCM Control Delay (s)	-	9.5	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0.4	-

LOS Engineering, Inc.

AM Opening Year + Project
3: Pacific Hwy & Rosecrans St/Taylor St

HCM 6th Signalized Intersection Summary

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	205	61	206	208	65	75	89	102	57	79	72
Future Volume (veh/h)	45	205	61	206	208	65	75	89	102	57	79	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.94	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	52	238	71	219	221	69	100	119	136	69	95	87
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.75	0.75	0.75	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	1258	618	253	758	620	116	855	833	129	757	311
Arrive On Green	0.04	0.36	0.36	0.07	0.41	0.41	0.07	0.24	0.24	0.04	0.21	0.21
Sat Flow, veh/h	1767	3526	1443	3428	1856	1518	1767	3526	2594	3428	3526	1448
Grp Volume(v), veh/h	52	238	71	219	221	69	100	119	136	69	95	87
Grp Sat Flow(s),veh/h/ln	1767	1763	1443	1714	1856	1518	1767	1763	1297	1714	1763	1448
Q Serve(g_s), s	2.5	4.0	2.6	5.4	6.8	2.4	4.8	2.3	3.2	1.7	1.9	4.3
Cycle Q Clear(g_c), s	2.5	4.0	2.6	5.4	6.8	2.4	4.8	2.3	3.2	1.7	1.9	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	1258	618	253	758	620	116	855	833	129	757	311
V/C Ratio(X)	0.78	0.19	0.11	0.87	0.29	0.11	0.86	0.14	0.16	0.53	0.13	0.28
Avail Cap(c_a), veh/h	184	1708	802	253	871	713	116	1795	1525	164	1733	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	19.0	15.0	39.2	17.0	15.7	39.6	25.4	21.1	40.4	27.1	28.0
Incr Delay (d2), s/veh	18.0	0.1	0.1	25.6	0.2	0.1	44.7	0.1	0.1	3.4	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.6	0.8	3.1	2.8	0.8	3.4	0.9	0.9	0.7	0.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	19.0	15.1	64.8	17.2	15.7	84.3	25.4	21.2	43.8	27.1	28.5
LnGrp LOS	E	B	B	E	B	B	F	C	C	D	C	C
Approach Vol, veh/h		361			509			355			251	
Approach Delay, s/veh		24.0			37.5			40.4			32.2	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	36.4	11.0	25.1	8.6	40.8	8.6	27.4				
Change Period (Y+Rc), s	6.7	5.9	5.4	6.7	5.4	5.9	5.4	6.7				
Max Green Setting (Gmax), s	6.3	41.4	5.6	42.0	8.9	40.1	4.1	43.5				
Max Q Clear Time (g_c+I1), s	7.4	6.0	6.8	6.3	4.5	8.8	3.7	5.2				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.8	0.0	1.6	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay				34.0								
HCM 6th LOS				C								

PM Opening Year + Project
1: Pacific Hwy & Private Dwy/Anna Ave

HCM 6th TWSC

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	60	0	2	3	191	53	10	396	0
Future Vol, veh/h	0	0	0	60	0	2	3	191	53	10	396	0
Conflicting Peds, #/hr	0	0	1	1	0	5	5	0	5	5	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	50	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	60	60	60	82	82	82	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	100	0	3	4	233	65	10	408	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	712	744	414	708	712	276	413	0	0	303	0	0
Stage 1	433	433	-	279	279	-	-	-	-	-	-	-
Stage 2	279	311	-	429	433	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	346	342	636	348	356	760	1141	-	-	1252	-	-
Stage 1	599	580	-	725	678	-	-	-	-	-	-	-
Stage 2	725	656	-	602	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	339	335	633	343	349	754	1136	-	-	1247	-	-
Mov Cap-2 Maneuver	339	335	-	343	349	-	-	-	-	-	-	-
Stage 1	594	573	-	719	673	-	-	-	-	-	-	-
Stage 2	716	651	-	597	573	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		19.5		0.1		0.2	
HCM LOS	A		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1136	-	-	-	343	754	1247
HCM Lane V/C Ratio	0.003	-	-	-	0.292	0.004	0.008
HCM Control Delay (s)	8.2	-	-	0	19.8	9.8	7.9
HCM Lane LOS	A	-	-	A	C	A	A
HCM 95th %tile Q(veh)	0	-	-	-	1.2	0	0

LOS Engineering, Inc.

PM Opening Year + Project
2: Pacific Hwy & Project Dwy

HCM 6th TWSC

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	36	0	258	447	84
Future Vol, veh/h	0	36	0	258	447	84
Conflicting Peds, #/hr	0	10	0	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	39	0	280	486	91

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	309	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.96	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.33	-
Pot Cap-1 Maneuver	0	684	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	673	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

























Approach	EB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 673	-	-
HCM Lane V/C Ratio	- 0.058	-	-
HCM Control Delay (s)	- 10.7	-	-
HCM Lane LOS	- B	-	-
HCM 95th %tile Q(veh)	- 0.2	-	-

LOS Engineering, Inc.

PM Opening Year + Project
 3: Pacific Hwy & Rosecrans St/Taylor St

HCM 6th Signalized Intersection Summary

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	393	84	190	198	76	129	113	494	128	248	101
Future Volume (veh/h)	54	393	84	190	198	76	129	113	494	128	248	101
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		0.98	1.00		0.93	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	64	468	100	211	220	84	137	120	526	141	273	111
Peak Hour Factor	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	1232	633	276	734	607	167	968	930	203	845	350
Arrive On Green	0.05	0.35	0.35	0.08	0.40	0.40	0.09	0.27	0.27	0.06	0.24	0.24
Sat Flow, veh/h	1767	3526	1387	3428	1856	1533	1767	3526	2577	3428	3526	1461
Grp Volume(v), veh/h	64	468	100	211	220	84	137	120	526	141	273	111
Grp Sat Flow(s),veh/h/ln	1767	1763	1387	1714	1856	1533	1767	1763	1289	1714	1763	1461
Q Serve(g_s), s	3.7	10.4	4.5	6.3	8.5	3.7	8.0	2.7	17.3	4.2	6.7	6.5
Cycle Q Clear(g_c), s	3.7	10.4	4.5	6.3	8.5	3.7	8.0	2.7	17.3	4.2	6.7	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	1232	633	276	734	607	167	968	930	203	845	350
V/C Ratio(X)	0.78	0.38	0.16	0.77	0.30	0.14	0.82	0.12	0.57	0.69	0.32	0.32
Avail Cap(c_a), veh/h	159	1363	684	331	753	622	216	1555	1360	285	1417	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	25.5	17.4	47.1	21.7	20.2	46.5	28.5	27.3	48.2	32.8	32.7
Incr Delay (d2), s/veh	14.3	0.2	0.1	8.5	0.2	0.1	17.5	0.1	0.5	4.2	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.3	1.4	3.0	3.7	1.3	4.2	1.1	5.1	1.9	2.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	25.7	17.5	55.6	21.9	20.3	64.0	28.5	27.9	52.4	33.0	33.2
LnGrp LOS	E	C	B	E	C	C	E	C	C	D	C	C
Approach Vol, veh/h		632			515			783			525	
Approach Delay, s/veh		28.2			35.4			34.3			38.3	
Approach LOS		C			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	42.4	15.2	31.7	10.3	47.3	11.6	35.4				
Change Period (Y+Rc), s	6.7	5.9	5.4	6.7	5.4	5.9	5.4	6.7				
Max Green Setting (Gmax), s	10.1	40.4	12.8	42.0	9.4	42.4	8.7	46.1				
Max Q Clear Time (g_c+I1), s	8.3	12.4	10.0	8.7	5.7	10.5	6.2	19.3				
Green Ext Time (p_c), s	0.1	3.8	0.1	2.0	0.0	1.6	0.1	3.1				
Intersection Summary												
HCM 6th Ctrl Delay				33.8								
HCM 6th LOS				C								

Intersection: 1: Pacific Hwy & Private Dwy/Anna Ave

Movement	WB	NB	SB
Directions Served	LT	TR	L
Maximum Queue (ft)	30	76	53
Average Queue (ft)	9	3	6
95th Queue (ft)	31	25	28
Link Distance (ft)	158	2258	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			65
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		0	0

Intersection: 2: Pacific Hwy & Project Dwy

Movement	EB	NB	SB	SB
Directions Served	R	T	T	TR
Maximum Queue (ft)	89	96	74	29
Average Queue (ft)	39	3	7	2
95th Queue (ft)	68	31	34	14
Link Distance (ft)	153	166	56	56
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	R	R
Maximum Queue (ft)	128	127	120	39	162	174	389	36	113	68	64	19
Average Queue (ft)	41	65	24	14	97	141	133	9	58	28	22	1
95th Queue (ft)	88	113	65	33	205	212	276	27	103	64	44	9
Link Distance (ft)		591	591				393	393		700		
Upstream Blk Time (%)							0					
Queuing Penalty (veh)							0					
Storage Bay Dist (ft)	200			320	150	150			135		250	250
Storage Blk Time (%)					1	15	3					
Queuing Penalty (veh)					1	31	7					

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R
Maximum Queue (ft)	81	92	68	166	85
Average Queue (ft)	13	50	23	30	39
95th Queue (ft)	54	88	54	94	83
Link Distance (ft)			166	166	
Upstream Blk Time (%)				1	
Queuing Penalty (veh)				1	
Storage Bay Dist (ft)	230	230			60
Storage Blk Time (%)				0	6
Queuing Penalty (veh)				0	2

Network Summary

Network wide Queuing Penalty: 42

Intersection: 1: Pacific Hwy & Private Dwy/Anna Ave

Movement	WB	NB	SB
Directions Served	LT	L	L
Maximum Queue (ft)	57	30	30
Average Queue (ft)	31	1	1
95th Queue (ft)	50	10	10
Link Distance (ft)	158		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	65
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 2: Pacific Hwy & Project Dwy

Movement	EB	NB	SB	SB
Directions Served	R	T	T	TR
Maximum Queue (ft)	31	31	52	53
Average Queue (ft)	20	1	5	2
95th Queue (ft)	44	10	26	18
Link Distance (ft)	153	172	50	50
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	R	L	T	T	R
Maximum Queue (ft)	224	239	172	66	161	173	229	32	159	189	56	264
Average Queue (ft)	43	145	87	20	80	123	88	9	104	59	2	133
95th Queue (ft)	111	218	171	45	179	184	185	28	156	123	18	211
Link Distance (ft)		591	591				393	393		700	700	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			320	150	150			135			250
Storage Blk Time (%)		2			0	11	1		7	0		0
Queuing Penalty (veh)		1			1	22	3		4	0		0

Intersection: 3: Pacific Hwy & Rosecrans St/Taylor St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	L	L	T	T	R
Maximum Queue (ft)	220	128	171	179	172	85
Average Queue (ft)	59	31	72	94	92	58
95th Queue (ft)	165	87	125	163	164	107
Link Distance (ft)				172	172	
Upstream Blk Time (%)			0	0	1	
Queuing Penalty (veh)			0	0	3	
Storage Bay Dist (ft)	250	230	230			60
Storage Blk Time (%)			0	0	14	18
Queuing Penalty (veh)			0	0	14	22

Network Summary

Network wide Queuing Penalty: 70

Appendix K

City Average Daily Trips (ADT) Data for Systemic Analysis

City of San Diego Traffic Data

id	street_name	limits	total_count	file_no	date_count
PACIFIC HWY NORTH OF ROSECRANS					
PACIFICHY031905	PACIFIC HY	FRIARS RD - ANNA AV	5240	0319-05	6/14/2005
PACIFICHY039808	PACIFIC HY	FRIARS RD - ANNA AV	6250	0398-08	8/19/2008
PACIFICHY079911	PACIFIC HY	FRIARS RD - ANNA AV	7470	0799-11	8/9/2011
PACIFICHY086014	PACIFIC HY	FRIARS RD - ANNA AV	6437	0860-14	8/27/2014
PACIFICHYHY032622	PACIFIC HY HY	FRIARS RD - ANNA AV	7655	0326-22	6/29/2022
PACIFICHY009206	PACIFIC HY	ROSECRANS ST - FRIARS RD	6930	0092-06	6/13/2006
PACIFICHY040309	PACIFIC HY	ROSECRANS ST - FRIARS RD	8310	0403-09	6/16/2009
PACIFICHY055815	PACIFIC HY	ROSECRANS ST - FRIARS RD	6160	0558-15	3/5/2015
PACIFICHY018816	PACIFIC HY	ROSECRANS ST - FRIARS RD	7086	0188-16	6/29/2016
PACIFICHY052921	PACIFIC HY	ROSECRANS ST - SEA WORLD	7510	0529-21	11/10/2021
Average			6,905		
PACIFIC HWY SOUTH OF ROSECRANS					
PACIFICHY018716	PACIFIC HY	SMITH ST - ROSECRANS ST	13501	0187-16	6/29/2016
PACIFICHY009106	PACIFIC HY	SMITH ST - ROSECRANS ST	13980	0091-06	6/13/2006
PACIFICHY040209	PACIFIC HY	SMITH ST - ROSECRANS ST	15380	0402-09	6/16/2009
PACIFICHY042312	PACIFIC HY	SMITH ST - ROSECRANS ST	15121	0423-12	5/31/2012
PACIFICHY049715	PACIFIC HY	SMITH ST - ROSECRANS ST	14885	0497-15	6/17/2015
Average			14,573		
ROSECRANS WEST OF PACIFIC HWY					
ROSECRANSST0307	ROSECRANS ST	JEFFERSON ST - PACIFIC HY	19940	0307-05	6/14/2005
ROSECRANSST0331	ROSECRANS ST	JEFFERSON ST - PACIFIC HY	22950	0331-08	8/20/2008
ROSECRANSST0322	ROSECRANS ST	JEFFERSON ST - PACIFIC HY	16220	0322-22	6/29/2022
Average			19,703		
TAYLOR EAST OF PACIFIC HWY					
TAYLORST031505	TAYLOR ST	PACIFIC HY - CONGRESS ST	22010	0315-05	6/15/2005
TAYLORST033608	TAYLOR ST	PACIFIC HY - CONGRESS ST	22050	0336-08	8/20/2008
TAYLORST083111	TAYLOR ST	PACIFIC HY - CONGRESS ST	20195	0831-11	8/17/2011
TAYLORST105914	TAYLOR ST	PACIFIC HY - CONGRESS ST	19479	1059-14	11/25/2014
TAYLORST033322	TAYLOR ST	PACIFIC HY HY - CONGRESS ST	19307	0333-22	6/29/2022
Average			20,608		

Appendix L

Pacific Highway/Rosecrans St/Taylor St Crosswalks and Countdown Heads

Existing High Visibility Crosswalks and Pedestrian Countdown Signal Heads









Appendix M

Pacific Highway/Rosecrans St/Taylor St Bike Loop Detectors and Markings

SB Bike Lane on Pacific Hwy just north of Rosecrans Intersection.



NB Bike Lane on Pacific Hwy just south of Rosecrans Intersection (note painted over sealant outlining square detector loop detector).



SB bike loop detector noted by black sealant on bottom edge where it is not painted over.



Appendix N

Pacific Highway/Rosecrans St/Taylor St Bike Type E Loop Detectors

Type E Modified Loop Detectors at Pacific Highway/Rosecrans St/Taylor St
North Leg



East Leg



South Leg



West Leg

