Kimley»Horn

May 31, 2022

Revised July 11, 2022

Mr. Brandon Layman
Property Development Manager
Raising Canes' Restaurants, LLC
6800 Bishop Road
Plano, TX 75024

SUBJECT: TRANSPORTATION DEMAND MANAGEMENT PLAN FOR RAISING CANE'S RESTAURANT AT THE NORTHEAST CORNER OF 9TH STREET & PALM AVENUE, IN THE CITY OF IMPERIAL BEACH, CALIFORNIA

Dear Mr. Layman:

Transmitted herein is a Transportation Demand Management (TDM) Plan for the proposed *Raising Cane's Restaurant (refer to as "the restaurant" hereinafter),* a high turnover, restaurant with outdoor patio seating with drive through service, at the northeast corner of the intersection of 9th Street and Palm Avenue, in the City of Imperial Beach, California. This TDM Plan was prepared by **Kimley-Horn and Associates**, Orange, California, and developed in conjunction with a Local Transportation Analysis for the *Raising Cane's* (report dated July 2022). The report was commissioned by Raising Cane's Restaurants, LLC and prepared by **Kimley-Horn and Associates**.

Description of Proposed Raising Cane's Restaurant

The proposed *Raising Cane's* in Imperial Beach will be developed at the existing Union Bank location. The existing building and site parking lot will be demolished and reconfigured as part of this project. Figure 1 illustrates the location of the proposed Raising Cane's.

The proposed restaurant will provide customer ordering via walk-up and an outdoor patio area for seating. There is no interior customer seating area aside from access to customer restrooms. The building is 1,918 square feet of interior space, and has an additional 722 square feet of covered outdoor patio area. The restaurant will seat a total of up to 48 outdoor seating. The restaurant will serve breakfast, lunch, and dinner, and the proposed hours of operation are 9:00 A.M. to 03:30 A.M. Monday to Sunday. The average number of employees per shift is estimated to be 10, although more employees could be brought on to handle special events or peak hours of business.

Description of Property

The 0.61-acre property will contain one 1,918 square feet proposed building with 16 parking spaces, including 2 handicapped parking spaces. All parking spaces on site will

be designated for exclusive use by *Raising Cane's*. The property is accessed regionally via 9th Street and Palm Avenue. Commercial development surrounds the site.

TDM Site Development Standards

The purpose and intent of the City of Imperial Beach Transportation Demand Management comes from the City of Imperial Beach General Plan/Local Coastal Program Land Use Plan Policies Section 3.5.11 which require employers to provide incentives for their employees including providing public transit passes or subsidies, rideshare/ride hailing subsidies, implementation of ridesharing programs, preferred parking for carpool/vanpool, and on-site shower facilities. The 'Innovative Technologies and Strategies' section of the City of Imperial Beach General Plan/Local Coastal Program Land Use Plan states the implementation of programs and strategies that manage and reduce traffic congestion by encouraging the use of transportation alternatives. It is recommended in Policies Section 3.1.23 to collaborate with SANDAG and pursue local measures to encourage application of TDM strategies to reduce vehicle miles travelled, parking demand and greenhouse gas emissions, while increasing active transportation. The provisions set forth in the Land Use Plan regarding the TDM apply to commercial and mixed-use districts.

Parking for Carpool Vehicles

The property contains 16 on-site parking spaces for customers and employees. Carpooling, while encouraged, cannot be mandated or enforced, and would prove impractical to achieve with any degree of success. Thus designating "Carpool Only" parking spaces would prove ineffective and negatively impact the availability of parking for customers and employees.

However as required by 2019 CALGreen Chapter 5 Nonresidential Mandatory Measures – Section 5.106.5.3 "In new projects or additions or alterations that add 10 or more vehicular parking space, provide designated parking for any combination of low-emitting, fuel-efficient, carpool/vanpool vehicles." Per the City's municipal code, *Raising Cane's* is required to provide 21 parking stalls. As a result, *Raising Cane's* is required to provide 3 designated "Clean air / Vanpool / EV" stalls per 2019 CALGreen Table 5.106.5.2.

A traffic study was conducted which includes a parking analysis for the property because proposed conditions show less than 21 parking stalls. The traffic study can be found in Appendix B.

Although the designation of stalls for "Carpool Only" use would prove ineffective and negatively impact the availability of parking for customers and employees, the combined designation will encourage the use of carpool without negatively impact the availability of parking for customers and employees. The location of the proposed designated stalls is included in Figure 2.

Shower and Locker Facilities

Since the property is a food service establishment, it is not recommended that shower and locker facilities be required. Providing these amenities is not feasible for businesses with limited space and limited resources, and could cause health and safety issues for restaurants, such as the *Raising Cane's.*

Bicycle Parking

The property generates bicycle traffic, buffered bike lanes are provided on Palm Avenue in the immediate vicinity of the project site. Per the Palm Avenue Master Plan, bike lanes are shown to be proposed within the intersection of Palm Ave and SR-75.

On-site, permanent anchored bicycle racks within 200 feet of visitor's entrances, readily available to passers-by, for 5 percent of new visitors motorized vehicle parking spaces being added; 3 new bicycle racks with two (2) bike capacity each will be installed on *Raising Cane's* development as noted in Figure 2.

Additionally, one (1) long term covered, lockable enclosure with permanently anchored racks for one (1) bicycle will be installed on the Raising Cane's development as noted in Figure 2. The intent of this is to propose the use of bicycles for employees as an alternative means of transportation.

Commuter Information Areas

The use of alternative modes of transportation can be encouraged by providing information and incentives. However, offering incentives to employees to use alternative modes of transportation cannot be imposed on these businesses without potential cost and liability implications.

Per SANDAG, an iCommute employer service program has been implemented to provide free assistance to local businesses, helping them develop and implement customized employee commuter benefit programs that lower costs, increase productivity, and help the environment. *Raising Cane's* can contact iCommute for a 30 min needs assessment where one will be guided through the stages of participation.

A Guaranteed Ride Home (GRH) program is also provided as a safety net for commuters who carpool, vanpool, take transit, walk or bike to work. GRH provides a free ride home up to three times per year in the event of a personal or family emergency, unexpected overtime, carpool or vanpool ride being unavailable, vehicle breakdown or being stranded at work due to a bike problem. The employee must be pre-enrolled in the program.

It should be noted that an abundance of information on transit use, bikeways, etc., is readily available from public sources such as the San Diego Metropolitan Transit System (SDMTS) and the City of Imperial Beach. SDMTS's route schedules and online public transit trip planners are available at www.sdmts.com. Other sources of information on

regional transit include Amtrak at www.amtrak.com, and the Administrative Services Department of the City of Imperial Beach at www.imperialbeachca.gov. This information could be placed on bulletin boards that may be available in some establishments like the proposed *Raising Cane's.*

Passenger Loading Areas

Providing designated passenger loading areas within the property is impractical due to constraints within the lot and parking requirements and could lead to internal circulation and parking problems by creating potential congestion points, and customer abuse. *Raising Cane's* customers who elect to use the restaurant's walk-in service instead of the drive-through generally do not order food for take-out and will eat at the restaurant's outdoor patio seating. Thus, a dedicated loading passenger loading area for the *Raising Cane's* would be ill advised as it would reduce the parking area available for customer / employee parking and see seldom use.

Parking for Vanpool Vehicles

For the same reason that designated carpool parking is not recommended, designated parking for vanpool vehicles should not be implemented in the property. The employee population with identical work hours required for effective vanpooling is extremely limited. Restaurants in particular operate in staggered shifts that are not conducive to employee carpooling or vanpooling. As noted in the "Parking for Carpool Vehicles" section above 3 "EV / Vanpool / Clean Air" stalls are provided in accordance to 2019 CALGreen Chapter 5.

SANDAG has a Vanpool Program which provides commuter groups of five or more with a cost-effective alternative to driving alone. SANDAG contracts with three vanpool vendors that provide vehicles, maintenance and insurance and also provides up to a $400 monthly subsidy to qualified vanpools, reducing the lease cost. SANDAG information and details should be provided to the employees upon initiation of employment.

The designation of stalls for "Vanpool Only" use would prove ineffective and negatively impact the availability of parking for customers and employees. The combined designation will encourage the use of carpool without negatively impacting the availability of parking for customers and employees. The location of the proposed designated stalls is included in Figure 2.

Bus Stops

Two (2) existing Bus Routes operate within walking distance of the site. SDMTS Bus Route 933/934 (Iris Ave TC – Imperial Beach) operates on Palm Avenue and stops across the street from the proposed *Raising Cane's* in the eastbound direction on the northern side of the 76 gas station and on the opposite side heading in the westbound direction, the Bus Stop is located in front of the Jack in the Box along Palm Avenue. SDMTS Bus Route 901 (Iris Ave TC – Coronado – Downtown) operates on 9th Street and continues north on Silver Strand Blvd in the northbound direction with a Bus Stop in front of Jack in

the Box, the same one mentioned prior. Appendix A contains the bus schedules for these two SDMTS routes. Public transportation information and details should be provided to the employees upon initiation of employment. The location of the existing bus stops on Palm Avenue is included in Figure 2.

Promoting Alternative Transportation

A key to promoting employee and patron use of alternative transportation is informing and educating prospective users of the availability and benefits of alternative transportation, and by providing functional improvements that benefit users directly. The educational and promotional function is the responsibility of the tenants, who should provide information to employees and customers.

Public Transit Use

Transit currently services the site in the form of SDMTS Bus service, so public transit is a viable commute option for employees. SDMTS Bus Route (Iris Ave TC – Imperial Beach) operates on Palm Avenue and Bus Route (Iris Ave TC – Coronado – Downtown) on 9th Street and Silver Strand Blvd near to the subject site. A brief description of both bus routes are as follows:

- ***Route 933/934*** – The service frequency on this route, which is designated as the Imperial Beach route, is generally every 30 mins – 1 hr in the eastbound and westbound direction. This route runs primarily along Palm Avenue, but also services Imperial Beach Pier, Kaiser Permanente, Mar Vista High School, Montgomery High School, Naval Auxiliary Landing Field, Palm Promenade and Southwest High School. The route runs Monday – Sunday.
- ***Route 901*** – The service frequency on this route, which is designated as the Imperial Beach to San Diego Downtown route is generally every 15 – 30 minutes in the southbound and northbound direction. The route runs from Coronado Avenue and north up Silver Strand Blvd past the San Diego Bay which then passes the Coronado Bay Bridge to Downtown. The route services Coronado Cays, Coronado City Hall, Hotel del Coronado, NAS North Island, Naval Base Coronado, and PETCO Park. The route runs Monday – Sunday.

Current SDMTS bus and trolley schedules and maps can be obtained online at www.sdmts.com or by dialing 619-233-3004. Increasing the use of public transit is the most practical of the TDM strategies as it represents a total removal of passenger vehicle trips from the streets and highways system, and the elimination of the use of parking spaces at the destination point. However, increasing transit ridership is mainly an economic decision for most and a matter of convenience to others. While there are no fixed-rail transit systems in operation in the vicinity of the property, dissemination of information regarding bus routes and schedules may encourage some people to use public transit.

Another key to promoting employee use of alternative transportation is to provide

incentives to help them obtain transit passes. Raising Cane's will offer Commuter Benefits which will allow crew members to defer pre-tax funds towards their purchasing of transit cards.

Bicycle Use

Bicycles are alternative modes of transportation to the use of passenger vehicles and have the opportunity to be highly utilized. Palm Avenue has buffered bicycle lanes and bicycle racks will be provided on-site to encourage the use of bicycles as a mode of transportation. Inclement weather is rare in the south bay area of San Diego therefore it should not be a factor to decrease bicycle usage.

SANDAG has a Bike Encouragement Program which supports the regional bike network and facilitates bike commuting by hosting Bike to Work Day events, funding mini-grants in support of Bike Month events, offering complimentary employer bike services and producing the San Diego Regional Bike Map. Further information will be provided to the employer regarding the program.

TDM Plan Summary

TDM strategies can be used to reduce passenger vehicle trips and parking demand. After consideration of the various TDM strategies available to affect such reductions, the following components have been deemed most appropriate for the property, and should be incorporated into the overall TDM Plan:

- Secure bicycle storage racks should be provided for at least (2) bicycles. A long-term bicycle parking rack should also be provided for (1) bicycle. These storage racks should be provided at the *Raising Cane's*.
- Clean air / Vanpool / EV parking spaces to be provided per the 2019 CALGreen standards but also to encourage carpooling for employees.
- Disseminate information on the two SDMTS bus routes within a short walking distance of the *Raising Cane's*. Bus Routes 933/934 and 901 provide convenient access to the property along 9th Street and Palm Avenue.

In Closing

In closing, this TDM Plan, if implemented, will provide incentives, such as free or subsidized transit passes, and information to employees and patrons of the property to consider and use alternative modes of transportation.

Sincerely yours,
Kimley-Horn and Associates

Amelia Beltran, P.E.
Registered Civil Engineer No. C87468

APPENDIX A

SDMTS Bus Routes

- 933/934
- 901

Exact fare, please *Favor de pagar la cantidad exacta*

Fares *Tarifas*	**Adult** *Adulto*	**Senior/Disabled/ Medicare/Youth*** *Personas Mayores/con Discapacidades/Medicare/Jóvenes**
ONE-WAY FARES *Tarifas Sencillas*	**$2.50**	**$1.25**
EARNED DAY PASS *Pase del Día Ganado*	**$6.00**	**$3.00**
MONTH PASS *Pase mensual*	**$72.00**	**$23.00**

Load money into your PRONTO account to earn Day Passes and Month Passes. Tap your PRONTO card ($2) or scan your PRONTO mobile app (free) to ride. *Carga dinero a tu cuenta de PRONTO para ganar Pases del Día y Pases Mensuales. Toca tu tarjeta PRONTO ($2) o escanea tu aplicación móvil PRONTO (gratis) para viajar.*

- **One-ways with PRONTO receive free transfers for two hours. No free transfers for cash.** *Los viajes de ida con PRONTO reciben transbordes gratuitos por dos horas. No se permiten transbordes gratuitos con pagos en efectivo.*
- **Day Passes not sold in advance. Earned with PRONTO.** *Los pases diarios no se venden por adelantado. Se obtienen con PRONTO.*
- **A month pass can be purchased in advanced or earned with PRONTO. Good from first day to last day of the month.** *El Pase Mensual se puede comprar por adelantado o se obtiene mientras viaja con PRONTO. Válido desde el primer día hasta el último día del mes.*

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. Youth Eligibility: Ages 6-18
Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959. Elegibilidad para Jóvenes: edades 6-18

For more information, visit: / *Para más información, visite:* **sdmts.com/fares**

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** **or/ó** **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** **or/ó** **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com.**

Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a ***sdmts.com.***

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 30, 2022

933 934

Iris Transit Center – Seacoast

via Imperial Beach Boulevard or Palm Avenue

DESTINATIONS

- Imperial Beach Pier
- Kaiser Permanente
- Mar Vista High School
- Montgomery High School
- Naval Auxiliary Landing Field
- Palm Promenade (Walmart)
- Southwest High School

TROLLEY CONNECTIONS

- Iris Avenue
- Palm Avenue

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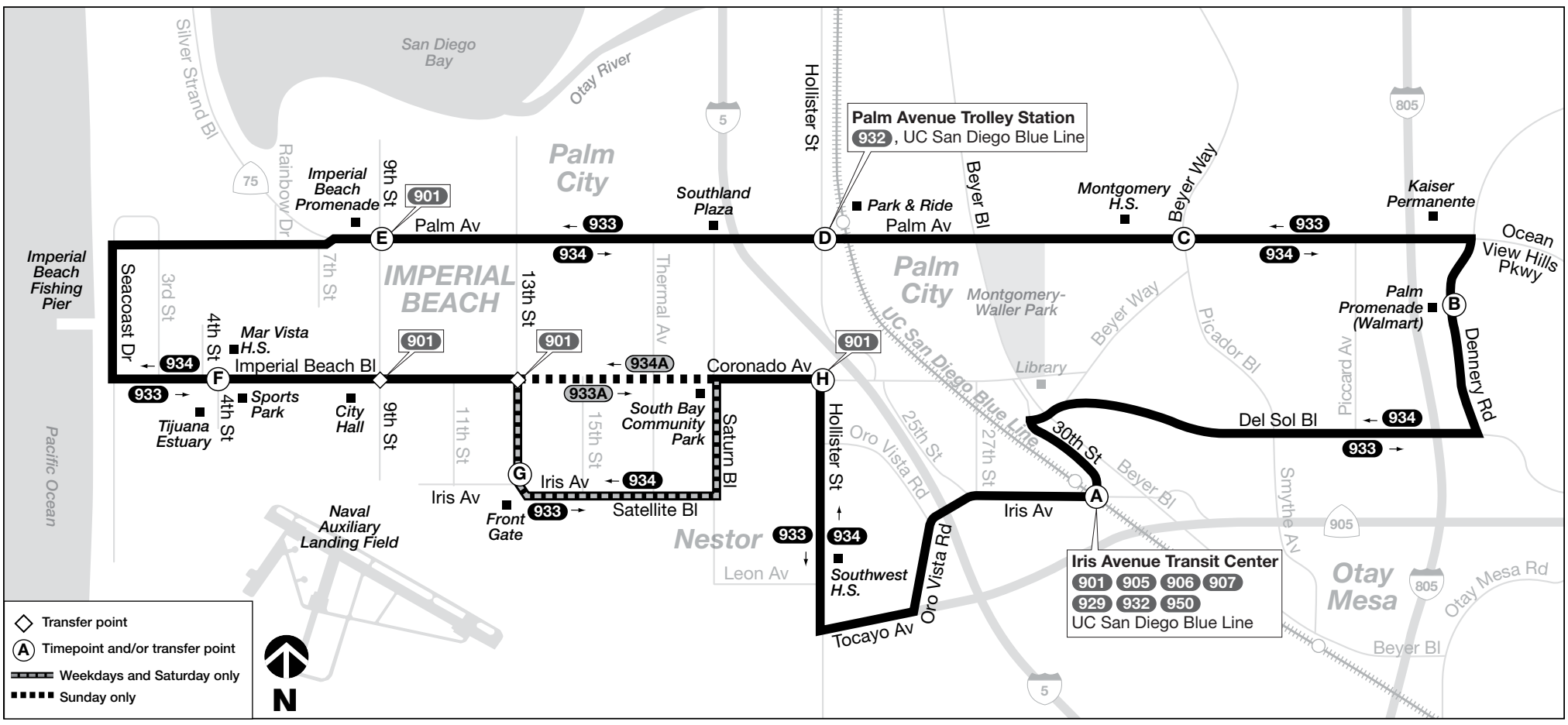
sdmts.com
Route Alerts, Updated Schedules, Connections & More

Alternative formats available upon request. Please call: (619) 557-4555 / ***Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555***



The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

Route 933A – Sunday / *domingo*

Otay Mesa ➡ Palm City ➡ Imperial Beach ➡ Nestor ➡ Otay Mesa

Ⓐ Iris Ave. Transit Center **DEPART**	Ⓑ Dennery Rd. @ Walmart	Ⓒ Palm Av. & Beyer Way	Ⓓ Palm Av. Trolley Station	Ⓔ Palm Av. & 9th St.	Ⓕ Imperial Beach Bl. & 4th St.	Ⓖ 13th St. & Iris Av.	Ⓗ Coronado Av. & Hollister St.	Ⓐ Iris Ave. Transit Center **ARRIVE**
5:14a	5:23a	5:30a	5:35a	5:42a	5:49a	—	5:58a	6:08a
6:14	6:23	6:30	6:35	6:42	6:49	—	6:58	7:09
7:15	7:24	7:32	7:37	7:45	7:53	—	8:02	8:13
8:15	8:24	8:32	8:37	8:46	8:54	—	9:03	9:14
9:00	9:10	9:18	9:23	9:32	9:40	—	9:49	10:01
9:45	9:55	10:03	10:08	10:17	10:25	—	10:34	10:46
10:15	10:25	10:33	10:38	10:47	10:55	—	11:04	11:16
10:45	10:55	11:03	11:08	11:17	11:25	—	11:34	11:46
11:14	11:24	11:32	11:37	11:46	11:54	—	12:04p	12:16p
11:43	11:53	12:01p	12:06p	12:15p	12:24p	—	12:34	12:46
12:13p	12:23p	12:31	12:36	12:45	12:54	—	1:04	1:16
12:43	12:53	1:01	1:06	1:15	1:24	—	1:34	1:46
1:13	1:23	1:31	1:36	1:45	1:54	—	2:04	2:16
1:45	1:56	2:04	2:09	2:19	2:28	—	2:38	2:50
2:14	2:25	2:34	2:39	2:49	2:58	—	3:08	3:21
2:44	2:55	3:04	3:09	3:19	3:28	—	3:38	3:51
3:14	3:25	3:34	3:39	3:49	3:58	—	4:08	4:21
3:44	3:55	4:04	4:09	4:19	4:28	—	4:37	4:50
4:14	4:25	4:34	4:39	4:49	4:58	—	5:07	5:20
5:15	5:26	5:35	5:40	5:50	5:59	—	6:08	6:20
6:29	6:39	6:47	6:52	7:02	7:10	—	7:19	7:30
7:31	7:41	7:48	7:53	8:01	8:09	—	8:18	8:28
8:28	8:38	8:45	8:50	8:57	9:05	—	9:14	9:24

Route 934A – Sunday / *domingo*

Otay Mesa ➡ Nestor ➡ Imperial Beach ➡ Palm City ➡ Otay Mesa

Ⓐ Iris Ave. Transit Center **DEPART**	Ⓗ Coronado Av. & Hollister St.	Ⓖ 13th St. & Iris Av.	Ⓕ Imperial Beach Bl. & 4th St.	Ⓔ Palm Av. & 9th St.	Ⓓ Palm Av. Trolley Station	Ⓒ Palm Av. & Beyer Way	Ⓑ Dennery Rd. @ Walmart	Ⓐ Iris Ave. Transit Center **ARRIVE**
—	—	—	—	6:57a	7:06a	7:11a	7:17a	7:29a
7:29a	7:38a	—	7:47a	7:56	8:05	8:10	8:16	8:28
8:29	8:38	—	8:47	8:56	9:05	9:10	9:16	9:28
9:29	9:38	—	9:47	9:56	10:06	10:11	10:18	10:30
10:29	10:38	—	10:47	10:56	11:06	11:11	11:18	11:30
10:59	11:08	—	11:17	11:26	11:36	11:41	11:48	12:00p
11:29	11:38	—	11:47	11:57	12:08p	12:13p	12:20p	12:32
11:59	12:08p	—	12:17p	12:27p	12:39	12:44	12:51	1:03
12:29	12:38	—	12:48	12:58	1:10	1:15	1:22	1:34
12:59	1:08	—	1:18	1:28	1:40	1:45	1:52	2:04
1:29	1:38	—	1:48	1:58	2:10	2:15	2:22	2:34
1:59	2:08	—	2:18	2:28	2:40	2:45	2:53	3:05
2:29	2:38	—	2:48	2:58	3:10	3:15	3:23	3:35
2:59	3:08	—	3:18	3:28	3:40	3:45	3:53	4:05
3:29	3:38	—	3:48	3:58	4:10	4:15	4:23	4:35
3:59	4:08	—	4:18	4:28	4:38	4:43	4:51	5:03
4:59	5:08	—	5:18	5:28	5:38	5:43	5:51	6:03
5:59	6:08	—	6:17	6:26	6:36	6:41	6:49	7:00
7:00	7:09	—	7:18	7:26	7:35	7:40	7:47	7:58
8:06	8:14	—	8:23	8:31	8:38	8:43	8:49	9:00
9:06	9:14	—	9:23	9:31	9:38	9:43	9:49	10:00

Route 933 – Monday through Friday / *lunes a viernes*

Otay Mesa ➡ Palm City ➡ Imperial Beach ➡ Nestor ➡ Otay Mesa

Ⓐ Iris Ave. Transit Center **DEPART**	Ⓑ Dennery Rd. @ Walmart	Ⓒ Palm Av. & Beyer Way	Ⓓ Palm Av. Trolley Station	Ⓔ Palm Av. & 9th St.	Ⓕ Imperial Beach Bl. & 4th St.	Ⓖ 13th St. & Iris Av.	Ⓗ Coronado Av. & Hollister St.	Ⓐ Iris Ave. Transit Center **ARRIVE**
4:40a	4:49a	4:56a	5:01a	5:07a	5:13a	5:19a	5:25a	5:35a
4:54	5:03	5:10	5:15	5:21	5:27	5:33	5:39	5:50
5:09	5:18	5:25	5:30	5:37	5:44	5:50	5:56	6:08
5:24	5:33	5:40	5:45	5:52	5:59	6:05	6:11	6:23
5:43	5:52	5:59	6:04	6:11	6:19	6:25	6:31	6:44
5:58	6:07	6:14	6:19	6:27	6:35	6:41	6:48	7:02
6:13	6:22	6:29	6:35	6:43	6:51	6:57	7:04	7:18
6:28	6:38	6:46	6:52	7:00	7:09	7:15	7:22	7:36
6:43	6:53	7:01	7:07	7:15	7:24	7:30	7:37	7:51
6:58	7:08	7:17	7:23	7:32	7:41	7:47	7:54	8:08
7:13	7:23	7:32	7:38	7:47	7:56	8:02	8:09	8:23
7:28	7:38	7:47	7:53	8:02	8:11	8:17	8:24	8:38
7:43	7:53	8:02	8:08	8:17	8:26	8:32	8:39	8:53
7:58	8:08	8:17	8:23	8:32	8:41	8:47	8:54	9:08
8:13	8:23	8:32	8:38	8:47	8:56	9:02	9:09	9:23
8:28	8:38	8:46	8:52	9:01	9:09	9:15	9:22	9:36
8:43	8:53	9:01	9:06	9:15	9:23	9:29	9:36	9:49
8:58	9:08	9:16	9:21	9:30	9:38	9:44	9:51	10:04
9:13	9:23	9:31	9:36	9:45	9:53	9:59	10:06	10:19
9:28	9:38	9:46	9:51	10:00	10:08	10:14	10:21	10:34
9:43	9:53	10:01	10:06	10:15	10:23	10:29	10:36	10:49
9:58	10:08	10:16	10:21	10:30	10:38	10:44	10:51	11:04
10:13	10:23	10:31	10:36	10:45	10:53	10:59	11:06	11:19
10:28	10:38	10:46	10:51	11:00	11:08	11:14	11:21	11:34
10:43	10:53	11:01	11:06	11:15	11:23	11:29	11:36	11:49
10:58	11:08	11:16	11:21	11:30	11:38	11:44	11:51	**12:04p**
11:13	11:23	11:31	11:36	11:45	11:53	11:59	**12:06p**	**12:19**
11:28	11:38	11:46	11:51	**12:00p**	**12:08p**	**12:14p**	**12:21**	**12:34**
11:43	11:53	**12:01p**	**12:06p**	**12:15**	**12:23**	**12:29**	**12:36**	**12:49**
11:58	**12:08p**	**12:16**	**12:21**	**12:30**	**12:38**	**12:44**	**12:51**	**1:04**
12:13p	**12:23**	**12:31**	**12:36**	**12:45**	**12:53**	**12:59**	**1:06**	**1:19**
12:28	**12:38**	**12:46**	**12:51**	**1:00**	**1:08**	**1:14**	**1:21**	**1:34**
12:43	**12:53**	**1:01**	**1:06**	**1:15**	**1:23**	**1:29**	**1:36**	**1:49**
12:58	**1:08**	**1:16**	**1:21**	**1:30**	**1:38**	**1:44**	**1:51**	**2:04**
1:13	**1:23**	**1:31**	**1:36**	**1:45**	**1:53**	**1:59**	**2:06**	**2:19**
1:28	**1:38**	**1:46**	**1:51**	**2:00**	**2:08**	**2:14**	**2:21**	**2:34**
1:43	**1:54**	**2:02**	**2:07**	**2:17**	**2:25**	**2:31**	**2:39**	**2:52**
1:58	**2:09**	**2:17**	**2:22**	**2:32**	**2:40**	**2:47**	**2:56**	**3:10**
2:13	**2:24**	**2:33**	**2:38**	**2:48**	**2:57**	**3:04**	**3:13**	**3:27**
2:28	**2:39**	**2:48**	**2:53**	**3:03**	**3:12**	**3:19**	**3:28**	**3:42**
2:43	**2:54**	**3:03**	**3:09**	**3:19**	**3:28**	**3:36**	**3:45**	**4:00**
2:58	**3:09**	**3:18**	**3:24**	**3:34**	**3:43**	**3:51**	**4:00**	**4:15**
3:13	**3:24**	**3:33**	**3:39**	**3:49**	**3:58**	**4:06**	**4:15**	**4:30**
3:28	**3:39**	**3:48**	**3:54**	**4:04**	**4:13**	**4:21**	**4:30**	**4:45**
3:43	**3:54**	**4:03**	**4:09**	**4:19**	**4:28**	**4:36**	**4:45**	**5:00**
3:58	**4:09**	**4:18**	**4:24**	**4:34**	**4:43**	**4:51**	**5:00**	**5:15**
4:13	**4:24**	**4:33**	**4:39**	**4:49**	**4:58**	**5:06**	**5:15**	**5:30**
4:28	**4:39**	**4:48**	**4:54**	**5:04**	**5:13**	**5:21**	**5:30**	**5:45**
4:43	**4:54**	**5:03**	**5:09**	**5:20**	**5:28**	**5:35**	**5:43**	**5:57**
4:58	**5:09**	**5:18**	**5:24**	**5:35**	**5:43**	**5:50**	**5:58**	**6:12**
5:13	**5:24**	**5:33**	**5:39**	**5:50**	**5:58**	**6:05**	**6:13**	**6:27**
5:28	**5:39**	**5:48**	**5:55**	**6:06**	**6:14**	**6:21**	**6:29**	**6:44**
5:43	**5:54**	**6:03**	**6:09**	**6:19**	**6:27**	**6:33**	**6:41**	**6:54**
5:58	**6:09**	**6:17**	**6:22**	**6:32**	**6:40**	**6:46**	**6:53**	**7:04**
6:13	**6:24**	**6:32**	**6:37**	**6:47**	**6:55**	**7:01**	**7:08**	**7:19**
6:30	**6:41**	**6:49**	**6:54**	**7:03**	**7:11**	**7:17**	**7:24**	**7:34**
6:53	**7:03**	**7:11**	**7:16**	**7:24**	**7:32**	**7:38**	**7:45**	**7:55**
7:13	**7:23**	**7:31**	**7:36**	**7:44**	**7:52**	**7:58**	**8:05**	**8:15**
7:43	**7:53**	**8:00**	**8:05**	**8:13**	**8:21**	**8:27**	**8:33**	**8:43**
8:14	**8:24**	**8:31**	**8:36**	**8:44**	**8:52**	**8:58**	**9:04**	**9:14**
8:44	**8:54**	**9:01**	**9:06**	**9:13**	**9:21**	**9:27**	**9:33**	**9:43**
9:44	**9:54**	**10:01**	**10:06**	**10:13**	**10:21**	**10:27**	**10:33**	**10:43**
10:43	**10:52**	**10:58**	**11:03**	**11:10**	**11:17**	**11:23**	**11:29**	**11:39**
11:35	**11:44**	**11:50**	**11:55**	12:01a	12:08a	12:14a	12:20a	12:30a

Route 934 – Monday through Friday / *lunes a viernes*

Otay Mesa ➡ Nestor ➡ Imperial Beach ➡ Palm City ➡ Otay Mesa

Ⓐ Iris Ave. Transit Center **DEPART**	Ⓗ Coronado Av. & Hollister St.	Ⓖ 13th St. & Iris Av.	Ⓕ Imperial Beach Bl. & 4th St.	Ⓔ Palm Av. & 9th St.	Ⓓ Palm Av. Trolley Station	Ⓒ Palm Av. & Beyer Way	Ⓑ Dennery Rd. @ Walmart	Ⓐ Iris Ave. Transit Center **ARRIVE**
4:40a	4:47a	4:53a	4:59a	5:07a	5:14a	5:19a	5:25a	5:36a
4:55	5:02	5:08	5:14	5:22	5:29	5:34	5:40	5:51
5:09	5:16	5:22	5:28	5:36	5:43	5:48	5:54	6:05
5:23	5:30	5:36	5:42	5:50	5:57	6:02	6:08	6:19
5:38	5:46	5:52	5:58	6:06	6:14	6:19	6:25	6:36
5:53	6:01	6:07	6:13	6:21	6:30	6:35	6:41	6:52
6:08	6:16	6:23	6:30	6:38	6:47	6:53	6:59	7:11
6:23	6:32	6:39	6:47	6:55	7:05	7:11	7:17	7:29
6:38	6:48	6:55	7:03	7:11	7:21	7:27	7:34	7:46
6:53	7:03	7:10	7:18	7:26	7:36	7:42	7:49	8:01
7:08	7:18	7:25	7:33	7:41	7:51	7:57	8:04	8:16
7:23	7:33	7:40	7:48	7:56	8:06	8:12	8:19	8:31
7:38	7:48	7:55	8:03	8:11	8:21	8:26	8:33	8:45
7:53	8:03	8:10	8:18	8:26	8:36	8:41	8:48	9:00
8:08	8:17	8:24	8:31	8:39	8:49	8:54	9:01	9:13
8:23	8:32	8:39	8:46	8:54	9:04	9:09	9:16	9:28
8:38	8:47	8:54	9:01	9:09	9:19	9:24	9:31	9:43
8:53	9:02	9:09	9:16	9:24	9:34	9:39	9:46	9:58
9:08	9:17	9:24	9:31	9:39	9:49	9:54	10:01	10:13
9:23	9:32	9:39	9:46	9:54	10:04	10:09	10:16	10:28
9:38	9:47	9:54	10:01	10:09	10:19	10:24	10:31	10:43
9:53	10:02	10:09	10:16	10:24	10:34	10:39	10:46	10:58
10:08	10:17	10:24	10:31	10:39	10:49	10:54	11:01	11:13
10:23	10:32	10:39	10:46	10:54	11:04	11:09	11:16	11:28
10:38	10:47	10:54	11:01	11:09	11:19	11:24	11:31	11:43
10:53	11:02	11:09	11:16	11:24	11:34	11:39	11:46	11:58
11:08	11:17	11:24	11:31	11:39	11:49	11:54	**12:01p**	**12:13p**
11:23	11:32	11:39	11:46	11:54	**12:04p**	**12:09p**	**12:16**	**12:28**
11:38	11:47	11:54	**12:01p**	**12:09p**	**12:20**	**12:26**	**12:33**	**12:45**
11:53	**12:02p**	**12:09p**	**12:16**	**12:24**	**12:35**	**12:41**	**12:48**	**1:00**
12:08p	**12:17**	**12:24**	**12:31**	**12:39**	**12:50**	**12:56**	**1:03**	**1:15**
12:23	**12:32**	**12:39**	**12:46**	**12:54**	**1:05**	**1:11**	**1:18**	**1:30**
12:38	**12:47**	**12:54**	**1:01**	**1:09**	**1:20**	**1:26**	**1:33**	**1:45**
12:53	**1:02**	**1:09**	**1:16**	**1:24**	**1:35**	**1:41**	**1:48**	**2:00**
1:08	**1:17**	**1:24**	**1:31**	**1:39**	**1:50**	**1:56**	**2:03**	**2:15**
1:23	**1:32**	**1:39**	**1:46**	**1:54**	**2:05**	**2:11**	**2:18**	**2:30**
1:38	**1:47**	**1:56**	**2:03**	**2:11**	**2:24**	**2:30**	**2:38**	**2:50**
1:53	**2:02**	**2:11**	**2:18**	**2:27**	**2:41**	**2:47**	**2:55**	**3:07**
2:08	**2:17**	**2:26**	**2:33**	**2:42**	**2:56**	**3:02**	**3:10**	**3:22**
2:23	**2:32**	**2:41**	**2:49**	**2:58**	**3:13**	**3:19**	**3:27**	**3:40**
2:38	**2:47**	**2:56**	**3:04**	**3:13**	**3:28**	**3:34**	**3:42**	**3:55**
2:53	**3:02**	**3:11**	**3:18**	**3:27**	**3:42**	**3:48**	**3:56**	**4:09**
3:08	**3:17**	**3:26**	**3:33**	**3:42**	**3:57**	**4:03**	**4:11**	**4:24**
3:23	**3:32**	**3:41**	**3:48**	**3:57**	**4:12**	**4:18**	**4:26**	**4:39**
3:38	**3:47**	**3:56**	**4:03**	**4:12**	**4:27**	**4:33**	**4:41**	**4:54**
3:53	**4:02**	**4:11**	**4:18**	**4:27**	**4:40**	**4:46**	**4:54**	**5:07**
4:08	**4:17**	**4:26**	**4:33**	**4:42**	**4:55**	**5:01**	**5:09**	**5:22**
4:23	**4:32**	**4:41**	**4:48**	**4:57**	**5:10**	**5:16**	**5:24**	**5:37**
4:38	**4:47**	**4:56**	**5:03**	**5:12**	**5:25**	**5:31**	**5:39**	**5:52**
4:53	**5:02**	**5:11**	**5:18**	**5:27**	**5:39**	**5:45**	**5:53**	**6:06**
5:08	**5:17**	**5:26**	**5:33**	**5:42**	**5:54**	**6:00**	**6:08**	**6:21**
5:23	**5:32**	**5:40**	**5:46**	**5:55**	**6:07**	**6:13**	**6:21**	**6:34**
5:38	**5:47**	**5:55**	**6:01**	**6:10**	**6:21**	**6:27**	**6:35**	**6:47**
5:53	**6:02**	**6:10**	**6:16**	**6:24**	**6:35**	**6:40**	**6:48**	**7:00**
6:08	**6:17**	**6:24**	**6:30**	**6:38**	**6:48**	**6:53**	**7:01**	**7:12**
6:23	**6:32**	**6:39**	**6:45**	**6:53**	**7:03**	**7:08**	**7:16**	**7:27**
6:38	**6:47**	**6:54**	**7:00**	**7:08**	**7:18**	**7:23**	**7:31**	**7:42**
6:53	**7:02**	**7:09**	**7:15**	**7:23**	**7:31**	**7:36**	**7:43**	**7:54**
7:09	**7:18**	**7:25**	**7:31**	**7:39**	**7:47**	**7:52**	**7:59**	**8:10**
7:44	**7:53**	**8:00**	**8:06**	**8:14**	**8:21**	**8:26**	**8:33**	**8:44**
8:14	**8:23**	**8:30**	**8:36**	**8:44**	**8:51**	—	—	—
8:45	**8:53**	**9:00**	**9:06**	**9:14**	**9:21**	**9:26**	**9:32**	**9:43**
9:46	**9:54**	**10:01**	**10:07**	**10:15**	**10:22**	**10:27**	**10:33**	**10:44**
10:46	**10:54**	**11:01**	**11:07**	**11:15**	**11:22**	**11:27**	**11:33**	**11:44**
12:05a	12:12a	12:19a	12:24a	12:32a	12:39a	12:44a	12:50a	1:01a

Route 933 – Saturday / *sábado*

Otay Mesa ➡ Palm City ➡ Imperial Beach ➡ Nestor ➡ Otay Mesa

Ⓐ Iris Ave. Transit Center **DEPART**	Ⓑ Dennery Rd. @ Walmart	Ⓒ Palm Av. & Beyer Way	Ⓓ Palm Av. Trolley Station	Ⓔ Palm Av. & 9th St.	Ⓕ Imperial Beach Bl. & 4th St.	Ⓖ 13th St. & Iris Av.	Ⓗ Coronado Av. & Hollister St.	Ⓐ Iris Ave. Transit Center **ARRIVE**
4:59a	5:08a	5:15a	5:20a	5:26a	5:32a	5:38a	5:44a	5:54a
5:59	6:08	6:15	6:20	6:27	6:34	6:40	6:47	6:58
6:29	6:38	6:45	6:50	6:57	7:04	7:10	7:17	7:28
6:59	7:08	7:16	7:21	7:29	7:37	7:43	7:50	8:01
7:29	7:38	7:46	7:51	7:59	8:07	8:13	8:20	8:31
7:52	8:01	8:09	8:14	8:22	8:30	8:36	8:43	8:54
8:16	8:25	8:33	8:38	8:47	8:55	9:01	9:08	9:19
8:38	8:47	8:55	9:00	9:09	9:17	9:23	9:30	9:41
8:58	9:07	9:15	9:20	9:29	9:37	9:43	9:50	10:01
9:18	9:28	9:36	9:41	9:50	9:58	10:04	10:11	10:23
9:38	9:48	9:56	10:01	10:10	10:18	10:24	10:31	10:43
9:58	10:08	10:16	10:21	10:30	10:38	10:44	10:51	11:03
10:18	10:28	10:36	10:41	10:50	10:58	11:04	11:11	11:23
10:38	10:48	10:56	11:01	11:10	11:18	11:24	11:31	11:43
10:58	11:08	11:16	11:21	11:30	11:38	11:44	11:51	**12:03p**
11:18	11:28	11:36	11:41	11:50	11:58	**12:04p**	**12:11p**	**12:23**
11:38	11:48	11:56	**12:01p**	**12:10p**	**12:19p**	**12:25**	**12:32**	**12:44**
11:58	**12:08p**	**12:16p**	**12:21**	**12:30**	**12:39**	**12:45**	**12:52**	**1:04**
12:18p	**12:28**	**12:36**	**12:41**	**12:50**	**12:59**	**1:05**	**1:12**	**1:24**
12:38	**12:48**	**12:56**	**1:01**	**1:10**	**1:19**	**1:25**	**1:32**	**1:44**
12:58	**1:08**	**1:16**	**1:21**	**1:30**	**1:39**	**1:45**	**1:52**	**2:04**
1:18	**1:28**	**1:36**	**1:41**	**1:50**	**1:59**	**2:05**	**2:12**	**2:24**
1:38	**1:49**	**1:57**	**2:02**	**2:12**	**2:21**	**2:27**	**2:34**	**2:46**
1:58	**2:09**	**2:17**	**2:22**	**2:32**	**2:41**	**2:47**	**2:54**	**3:06**
2:18	**2:29**	**2:38**	**2:43**	**2:53**	**3:02**	**3:08**	**3:15**	**3:28**
2:38	**2:49**	**2:58**	**3:03**	**3:13**	**3:22**	**3:28**	**3:35**	**3:48**
2:58	**3:09**	**3:18**	**3:23**	**3:33**	**3:42**	**3:48**	**3:55**	**4:08**
3:18	**3:29**	**3:38**	**3:43**	**3:53**	**4:02**	**4:08**	**4:15**	**4:28**
3:38	**3:49**	**3:58**	**4:03**	**4:13**	**4:22**	**4:28**	**4:35**	**4:48**
3:58	**4:09**	**4:18**	**4:23**	**4:33**	**4:42**	**4:48**	**4:55**	**5:08**
4:18	**4:29**	**4:38**	**4:43**	**4:53**	**5:02**	**5:08**	**5:15**	**5:28**
4:38	**4:49**	**4:58**	**5:03**	**5:13**	**5:22**	**5:28**	**5:35**	**5:47**
4:58	**5:09**	**5:18**	**5:23**	**5:33**	**5:42**	**5:48**	**5:55**	**6:07**
5:18	**5:29**	**5:38**	**5:43**	**5:53**	**6:02**	**6:08**	**6:15**	**6:27**
5:38	**5:48**	**5:56**	**6:01**	**6:11**	**6:19**	**6:25**	**6:32**	**6:43**
5:58	**6:08**	**6:16**	**6:21**	**6:31**	**6:39**	**6:45**	**6:52**	**7:03**
6:20	**6:30**	**6:38**	**6:43**	**6:53**	**7:01**	**7:07**	**7:14**	**7:25**
6:44	**6:54**	**7:02**	**7:07**	**7:16**	**7:24**	**7:30**	**7:36**	**7:46**
7:13	**7:23**	**7:30**	**7:35**	**7:43**	**7:51**	**7:57**	**8:03**	**8:13**
7:43	**7:53**	**8:00**	**8:05**	**8:13**	**8:21**	**8:27**	**8:33**	**8:43**
8:14	**8:24**	**8:31**	**8:36**	**8:43**	**8:51**	**8:57**	**9:03**	**9:13**
8:44	**8:54**	**9:01**	**9:06**	**9:13**	**9:21**	**9:27**	**9:33**	**9:43**
9:44	**9:54**	**10:01**	**10:00**	**10:06**	**10:13**	**10:21**	**10:27**	**10:37**
10:43	**10:52**	**10:58**	**11:03**	**11:10**	**11:17**	**11:23**	**11:29**	**11:39**
11:35	**11:44**	**11:50**	**11:55**	12:01a	12:08a	12:14a	12:20a	12:30a

Route 934 – Saturday / *sábado*

Otay Mesa ➡ Nestor ➡ Imperial Beach ➡ Palm City ➡ Otay Mesa

Ⓐ Iris Ave. Transit Center **DEPART**	Ⓗ Coronado Av. & Hollister St.	Ⓖ 13th St. & Iris Av.	Ⓕ Imperial Beach Bl. & 4th St.	Ⓔ Palm Av. & 9th St.	Ⓓ Palm Av. Trolley Station	Ⓒ Palm Av. & Beyer Way	Ⓑ Dennery Rd. @ Walmart	Ⓐ Iris Ave. Transit Center **ARRIVE**
5:29a	5:36a	5:42a	5:48a	5:55a	6:02a	6:06a	6:12a	6:22a
6:00	6:07	6:13	6:19	6:27	6:35	6:40	6:46	6:57
6:30	6:38	6:44	6:51	6:59	7:08	7:13	7:19	7:31
7:00	7:09	7:15	7:22	7:31	7:40	7:45	7:51	8:03
7:20	7:29	7:35	7:42	7:51	8:00	8:05	8:11	8:23
7:38	7:47	7:53	8:00	8:09	8:18	8:23	8:29	8:41
7:58	8:07	8:13	8:20	8:29	8:38	8:43	8:49	9:01
8:18	8:27	8:33	8:40	8:49	8:58	9:03	9:09	9:21
8:38	8:47	8:53	9:00	9:09	9:18	9:23	9:29	9:41
8:58	9:07	9:13	9:20	9:29	9:38	9:43	9:49	10:01
9:18	9:27	9:34	9:41	9:50	10:00	10:05	10:12	10:24
9:38	9:47	9:54	10:01	10:10	10:20	10:25	10:32	10:44
9:58	10:07	10:14	10:21	10:30	10:40	10:45	10:52	11:04
10:18	10:27	10:34	10:41	10:50	11:00	11:05	11:12	11:24
10:38	10:47	10:54	11:01	11:10	11:20	11:25	11:32	11:44
10:58	11:07	11:14	11:21	11:30	11:40	11:45	11:52	**12:04p**
11:18	11:27	11:34	11:41	11:51	**12:02p**	**12:07p**	**12:14p**	**12:26**
11:38	11:47	11:54	**12:01p**	**12:11p**	**12:23**	**12:28**	**12:35**	**12:47**
11:58	**12:07p**	**12:14p**	**12:21**	**12:31**	**12:43**	**12:48**	**12:55**	**1:07**
12:18p	**12:27**	**12:34**	**12:41**	**12:51**	**1:03**	**1:08**	**1:15**	**1:27**
12:38	**12:47**	**12:54**	**1:01**	**1:11**	**1:23**	**1:28**	**1:35**	**1:47**
12:58	**1:07**	**1:14**	**1:21**	**1:31**	**1:43**	**1:48**	**1:55**	**2:07**
1:18	**1:27**	**1:34**	**1:41**	**1:51**	**2:03**	**2:08**	**2:15**	**2:27**
1:38	**1:47**	**1:54**	**2:01**	**2:11**	**2:23**	**2:28**	**2:36**	**2:48**
1:58	**2:07**	**2:14**	**2:21**	**2:31**	**2:43**	**2:48**	**2:56**	**3:08**
2:18	**2:27**	**2:34**	**2:41**	**2:51**	**3:03**	**3:08**	**3:16**	**3:28**
2:38	**2:47**	**2:54**	**3:01**	**3:11**	**3:23**	**3:28**	**3:36**	**3:48**
2:58	**3:07**	**3:14**	**3:21**	**3:31**	**3:43**	**3:48**	**3:56**	**4:08**
3:18	**3:27**	**3:34**	**3:41**	**3:51**	**4:03**	**4:08**	**4:16**	**4:28**
3:38	**3:47**	**3:54**	**4:01**	**4:11**	**4:23**	**4:28**	**4:36**	**4:48**
3:58	**4:07**	**4:14**	**4:21**	**4:31**	**4:41**	**4:46**	**4:54**	**5:06**
4:18	**4:27**	**4:34**	**4:41**	**4:51**	**5:01**	**5:06**	**5:14**	**5:26**
4:38	**4:47**	**4:54**	**5:01**	**5:11**	**5:21**	**5:26**	**5:34**	**5:46**
4:58	**5:07**	**5:14**	**5:21**	**5:31**	**5:41**	**5:46**	**5:54**	**6:06**
5:18	**5:27**	**5:34**	**5:40**	**5:50**	**6:00**	**6:05**	**6:13**	**6:25**
5:38	**5:47**	**5:54**	**6:00**	**6:10**	**6:20**	**6:25**	**6:33**	**6:45**
5:58	**6:07**	**6:14**	**6:20**	**6:29**	**6:39**	**6:44**	**6:52**	**7:03**
6:18	**6:27**	**6:34**	**6:40**	**6:49**	**6:59**	**7:04**	**7:12**	**7:23**
6:38	**6:47**	**6:54**	**7:00**	**7:09**	**7:19**	**7:24**	**7:32**	**7:43**
6:58	**7:07**	**7:14**	**7:20**	**7:29**	**7:38**	**7:43**	**7:50**	**8:01**
7:29	**7:38**	**7:45**	**7:51**	**7:59**	**8:08**	**8:13**	**8:20**	**8:31**
7:58	**8:07**	**8:13**	**8:19**	**8:27**	**8:35**	—	—	—
8:45	**8:53**	**8:59**	**9:05**	**9:13**	**9:21**	**9:26**	**9:32**	**9:43**
9:46	**9:54**	**10:00**	**10:06**	**10:14**	**10:21**	**10:26**	**10:32**	**10:43**
10:46	**10:54**	**11:00**	**11:06**	**11:14**	**11:21**	**11:26**	**11:32**	**11:43**
12:05a	12:12a	12:18a	12:23a	12:31a	12:38a	12:43a	12:49a	1:00a

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone.
Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/ó **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
*Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a **sdmts.com**.*

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective SEPTEMBER 1, 2019

901

Iris Ave. Transit Center – Downtown SD

via Imperial Beach / Coronado

DESTINATIONS
- Coronado Cays
- Coronado City Hall
- Hotel del Coronado
- NAS North Island
- Naval Base Coronado
- PETCO Park

TROLLEY CONNECTIONS
- Iris Av.
- 12th & Imperial
- Downtown

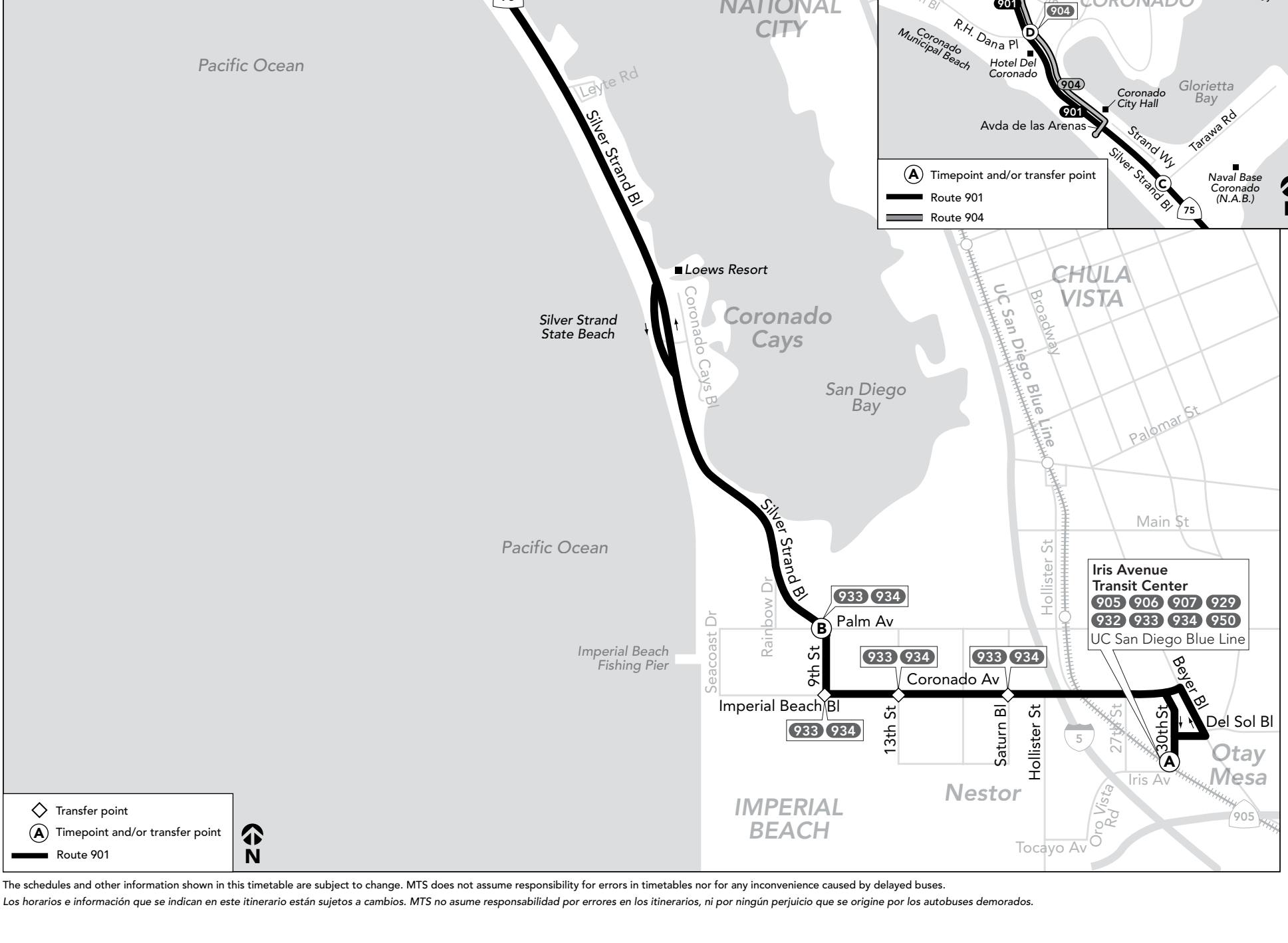
09/19

sdmts.com
Route Alerts, Updated Schedules, Connections & More

Routes 901 and 904

Downtown area detail

Coronado detail



The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 901 – Monday through Friday / *lunes a viernes*

Imperial Beach ➡ Coronado ➡ Downtown San Diego

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ Palm Av. & 9th St.	Ⓒ Naval Base Coronado (NAB)	Ⓓ Hotel del Coronado	Ⓔ NASNI (Front Gate)	Ⓕ National Av. & Cesar Chavez Pkwy.	Ⓖ 12th & Imperial Transit Center	Ⓗ Broadway & 5th Av.	Ⓘ Broadway & 1st Av. **ARRIVE**
4:23a	4:37a	4:47a	4:50a	5:01a	5:09a	5:16a	5:27a	5:31a
4:38	4:52	5:02	5:05	5:16	5:24	5:31	5:42	5:46
4:53	5:07	5:17	5:20	5:31	5:39	5:46	5:57	6:01
5:08	5:23	5:33	5:37	5:48	5:56	6:03	6:14	6:18
5:23	5:38	5:48	5:52	6:03	6:11	6:18	6:29	6:33
5:38	5:53	6:03	6:07	6:18	6:26	6:33	6:44	6:48
5:53	6:08	6:19	6:23	6:34	6:42	6:49	7:00	7:04
6:08	6:24	6:35	6:39	6:50	6:58	7:05	7:16	7:21
6:23	6:40	6:52	6:56	7:07	7:15	7:22	7:33	7:38
6:40	6:58	7:11	7:15	7:26	7:34	7:41	7:52	7:58
6:57	7:15	7:28	7:32	7:43	7:51	7:58	8:09	8:15
7:14	7:32	7:45	7:49	8:00	8:08	8:15	8:26	8:32
7:31	7:49	8:02	8:06	8:17	8:25	8:32	8:43	8:49
7:46	8:04	8:16	8:20	8:31	8:39	8:46	8:57	9:03
8:16	8:34	8:45	8:49	8:59	9:07	9:14	9:25	9:31
8:45	9:03	9:14	9:18	9:28	9:36	9:43	9:54	9:59
9:15	9:33	9:44	9:48	9:58	10:06	10:13	10:24	10:29
9:45	10:03	10:14	10:18	10:28	10:36	10:43	10:54	10:59
10:15	10:33	10:44	10:48	10:58	11:06	11:13	11:24	11:29
10:45	11:03	11:14	11:18	11:28	11:36	11:43	11:54	11:59
11:15	11:33	11:44	11:48	11:58	**12:06p**	**12:13p**	**12:24p**	**12:29p**
11:45	**12:03p**	**12:14p**	**12:18p**	**12:28p**	**12:36**	**12:43**	**12:54**	**1:00**
12:14p	**12:32**	**12:43**	**12:47**	**12:57**	**1:06**	**1:14**	**1:25**	**1:31**
12:44	**1:02**	**1:13**	**1:17**	**1:28**	**1:38**	**1:47**	**1:58**	**2:04**
1:14	**1:32**	**1:43**	**1:47**	**1:59**	**2:10**	**2:20**	**2:31**	**2:37**
1:44	**2:02**	**2:13**	**2:17**	**2:29**	**2:41**	**2:52**	**3:03**	**3:09**
2:08	**2:26**	**2:37**	**2:41**	**2:53**	**3:05**	**3:16**	**3:27**	**3:33**
2:23	**2:41**	**2:52**	**2:56**	**3:08**	**3:20**	**3:31**	**3:42**	**3:48**
2:38	**2:56**	**3:07**	**3:11**	**3:23**	**3:35**	**3:46**	**3:57**	**4:03**
2:53	**3:11**	**3:22**	**3:26**	**3:38**	**3:50**	**4:01**	**4:12**	**4:18**
3:08	**3:26**	**3:37**	**3:41**	**3:53**	**4:05**	**4:16**	**4:27**	**4:33**
3:23	**3:41**	**3:52**	**3:56**	**4:08**	**4:20**	**4:31**	**4:42**	**4:48**
3:38	**3:56**	**4:07**	**4:11**	**4:23**	**4:34**	**4:44**	**4:55**	**5:01**
3:53	**4:11**	**4:22**	**4:26**	**4:38**	**4:49**	**4:59**	**5:10**	**5:16**
4:08	**4:26**	**4:37**	**4:41**	**4:53**	**5:04**	**5:14**	**5:25**	**5:31**
4:23	**4:41**	**4:52**	**4:56**	**5:08**	**5:19**	**5:29**	**5:40**	**5:46**
4:45	**5:03**	**5:13**	**5:17**	**5:28**	**5:38**	**5:48**	**5:59**	**6:05**
5:15	**5:33**	**5:43**	**5:47**	**5:58**	**6:07**	**6:16**	**6:27**	**6:33**
5:45	**6:02**	**6:12**	**6:16**	**6:27**	**6:36**	**6:44**	**6:55**	**7:01**
6:15	**6:32**	**6:42**	**6:46**	**6:56**	**7:04**	**7:11**	**7:22**	**7:27**
6:45	**7:01**	**7:11**	**7:15**	**7:24**	**7:32**	**7:38**	**7:49**	**7:54**
7:15	**7:30**	**7:40**	**7:44**	**7:53**	**8:01**	**8:07**	**8:17**	**8:22**
8:08	**8:23**	**8:33**	**8:37**	**8:46**	**8:54**	**9:00**	**9:10**	**9:15**
9:08	**9:23**	**9:33**	**9:37**	**9:45**	**9:53**	**9:59**	**10:08**	**10:13**
10:10	**10:24**	**10:34**	**10:37**	**10:45**	**10:53**	**10:59**	**11:08**	**11:13**
11:10	**11:24**	**11:34**	**11:37**	**11:45**	**11:53**	**11:59**	12:08a	12:12a

Downtown San Diego ➡ Coronado ➡ Imperial Beach

Ⓙ Front St. & B St. **DEPART**	Ⓗ Broadway & 3rd Av.	Ⓖ 12th & Imperial Transit Center	Ⓕ Cesar Chavez Pkwy. & National Av.	Ⓔ NASNI (Front Gate)	Ⓓ Hotel Del Coronado	Ⓒ Naval Base Coronado (NAB)	Ⓑ 9th St. & Palm Av.	Ⓐ Iris Avenue Transit Center **ARRIVE**	
5:08a	5:10a	5:20a	5:23a	5:34a	5:44a	5:47a	5:58a	6:14a	
5:39	5:41	5:51	5:54	6:05	6:15	6:18	6:29	6:45	
5:54	5:56	6:06	6:09	6:20	6:30	6:33	6:44	7:00	
6:07	6:10	6:20	6:23	6:34	6:44	6:47	6:58	7:14	
6:21	6:24	6:34	6:37	6:48	6:58	7:01	7:12	7:28	
6:36	6:39	6:49	6:52	7:03	7:13	7:16	7:27	7:43	
6:51	6:54	7:04	7:07	7:18	7:28	7:31	7:42	7:58	
7:05	7:08	7:19	7:23	7:32	7:41	7:44	7:55	8:12	
7:20	7:23	7:34	7:38	7:47	7:56	7:59	8:10	8:27	
7:35	7:38	7:49	7:53	8:02	8:11	8:14	8:25	8:42	
7:50	7:53	8:04	8:08	8:17	8:26	8:29	8:40	8:57	
8:05	8:08	8:19	8:23	8:32	8:41	8:44	8:55	9:12	
8:20	8:23	8:34	8:38	8:47	8:56	8:59	9:10	9:27	
8:50	8:53	9:04	9:08	9:17	9:26	9:29	9:40	9:57	
9:20	9:23	9:34	9:38	9:47	9:56	9:59	10:10	10:27	
9:50	9:53	10:04	10:08	10:17	10:26	10:29	10:40	10:57	
10:20	10:23	10:34	10:38	10:47	10:56	10:59	11:10	11:27	
10:50	10:53	11:04	11:08	11:17	11:26	11:29	11:40	11:57	
11:20	11:23	11:34	11:38	11:47	11:56	11:59	**12:10p**	**12:27p**	
11:50	11:53	**12:04p**	**12:08p**	**12:17p**	**12:26p**	**12:29p**	**12:40**	**12:57**	
12:20p	**12:23p**	**12:34**	**12:38**	**12:47**	**12:56**	**12:59**	**1:11**	**1:29**	
12:49	**12:52**	**1:04**	**1:08**	**1:17**	**1:27**	**1:31**	**1:43**	**2:01**	
1:19	**1:22**	**1:34**	**1:38**	**1:47**	**1:58**	**2:02**	**2:14**	**2:33**	
1:48	**1:52**	**2:04**	**2:08**	**2:17**	**2:30**	**2:34**	**2:46**	**3:05**	
2:03	**2:07**	**2:19**	**2:23**	**2:32**	**2:45**	**2:49**	**3:01**	**3:20**	
2:18	**2:22**	**2:34**	**2:38**	**2:47**	**3:02**	**3:06**	**3:18**	**3:38**	
2:33	**2:37**	**2:49**	**2:53**	**3:02**	**3:17**	**3:21**	**3:33**	**3:53**	
2:49	**2:53**	**3:05**	**3:09**	**3:18**	**3:33**	**3:37**	**3:49**	**4:09**	
3:04	**3:08**	**3:20**	**3:24**	**3:33**	**3:48**	**3:52**	**4:04**	**4:24**	
3:19	**3:23**	**3:35**	**3:39**	**3:48**	**4:01**	**4:05**	**4:17**	**4:37**	
3:33	**3:37**	**3:49**	**3:53**	**4:02**	**4:15**	**4:19**	**4:31**	**4:51**	
3:48	**3:52**	**4:04**	**4:08**	**4:17**	**4:30**	**4:34**	**4:46**	**5:06**	
4:03	**4:07**	**4:19**	**4:23**	**4:32**	**4:45**	**4:49**	**5:01**	**5:21**	
4:18	**4:22**	**4:34**	**4:38**	**4:47**	**4:58**	**5:02**	**5:14**	**5:33**	
4:33	**4:37**	**4:49**	**4:53**	**5:02**	**5:13**	**5:17**	**5:29**	**5:48**	
4:48	**4:52**	**5:04**	**5:08**	**5:17**	**5:27**	**5:31**	**5:43**	**6:01**	
5:03	**5:07**	**5:19**	**5:23**	**5:32**	**5:42**	**5:46**	**5:58**	**6:16**	
5:18	**5:22**	**5:34**	**5:38**	**5:47**	**5:57**	**6:01**	**6:13**	**6:31**	
5:48	**5:52**	**6:04**	**6:08**	**6:17**	**6:27**	**6:31**	**6:43**	**7:01**	
6:18	**6:22**	**6:34**	**6:37**	**6:46**	**6:55**	**6:58**	**7:10**	**7:28**	
6:49	**6:52**	**7:04**	**7:07**	**7:16**	**7:25**	**7:28**	**7:39**	**7:57**	
7:25	**7:28**	**7:40**	**7:43**	**7:52**	**8:01**	**8:04**	**8:15**	**8:33**	
8:26	**8:29**	**8:40**	**8:43**	**8:52**	**9:00**	**9:03**	**9:14**	**9:31**	
9:26	**9:29**	**9:40**	**9:43**	**9:52**	**10:00**	**10:03**	**10:14**	**10:31**	
10:21	**10:24**	**10:34**	**10:37**	**10:46**	**10:53**	**10:56**	**11:07**	**11:23**	
11:21	**11:24**	**11:34**	**11:37**	**11:45**	**11:52**	**11:55**	12:05a	12:20a	**B**
12:21a	12:24a	12:34a	12:37a	12:45a	12:52a	12:55a	1:05	1:20	**B**
1:21	1:24	1:34	1:37	1:45	1:52	1:55	2:05	2:20	**B**

Route 901 – Saturday / *sábado*

Imperial Beach ➡ Coronado ➡ Downtown San Diego

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ Palm Av. & 9th St.	Ⓒ Naval Base Coronado (NAB)	Ⓓ Hotel del Coronado	Ⓔ NASNI (Front Gate)	Ⓕ National Av. & Cesar Chavez Pkwy.	Ⓖ 12th & Imperial Transit Center	Ⓗ Broadway & 5th Av.	Ⓘ Broadway & 1st Av. **ARRIVE**
5:15a	5:29a	5:39a	5:42a	5:50a	5:58a	6:04a	6:13a	6:17a
6:15	6:30	6:40	6:43	6:52	7:00	7:06	7:15	7:19
6:45	7:00	7:10	7:13	7:22	7:30	7:36	7:45	7:49
7:15	7:31	7:42	7:46	7:56	8:04	8:10	8:20	8:25
7:45	8:01	8:12	8:16	8:26	8:34	8:40	8:50	8:55
8:15	8:31	8:42	8:46	8:56	9:04	9:10	9:20	9:25
8:45	9:01	9:12	9:16	9:26	9:34	9:40	9:50	9:55
9:15	9:31	9:42	9:46	9:56	10:04	10:10	10:20	10:25
9:45	10:02	10:13	10:17	10:28	10:36	10:42	10:53	10:58
10:15	10:32	10:43	10:47	10:58	11:06	11:12	11:23	11:28
10:45	11:02	11:13	11:17	11:28	11:36	11:42	11:53	11:58
11:15	11:32	11:43	11:47	11:58	**12:06p**	**12:12p**	**12:23p**	**12:28p**
11:45	**12:02p**	**12:13p**	**12:17p**	**12:28p**	**12:36**	**12:42**	**12:53**	**12:59**
12:15p	**12:32**	**12:43**	**12:47**	**12:59**	**1:07**	**1:14**	**1:25**	**1:31**
12:45	**1:03**	**1:14**	**1:18**	**1:30**	**1:39**	**1:46**	**1:57**	**2:03**
1:15	**1:33**	**1:44**	**1:48**	**2:00**	**2:09**	**2:16**	**2:27**	**2:33**
1:45	**2:03**	**2:14**	**2:18**	**2:30**	**2:39**	**2:46**	**2:57**	**3:03**
2:15	**2:33**	**2:44**	**2:48**	**3:00**	**3:09**	**3:16**	**3:27**	**3:33**
2:45	**3:03**	**3:14**	**3:18**	**3:30**	**3:39**	**3:46**	**3:57**	**4:03**
3:15	**3:33**	**3:44**	**3:48**	**4:00**	**4:09**	**4:16**	**4:27**	**4:33**
3:45	**4:03**	**4:14**	**4:18**	**4:30**	**4:39**	**4:46**	**4:57**	**5:03**
4:15	**4:31**	**4:42**	**4:46**	**4:58**	**5:07**	**5:14**	**5:25**	**5:31**
4:45	**5:01**	**5:12**	**5:16**	**5:28**	**5:37**	**5:44**	**5:55**	**6:01**
5:15	**5:31**	**5:42**	**5:46**	**5:58**	**6:07**	**6:14**	**6:25**	**6:31**
5:45	**6:01**	**6:11**	**6:15**	**6:26**	**6:34**	**6:40**	**6:51**	**6:57**
6:15	**6:31**	**6:41**	**6:45**	**6:56**	**7:04**	**7:10**	**7:21**	**7:27**
7:08	**7:24**	**7:34**	**7:38**	**7:49**	**7:57**	**8:03**	**8:14**	**8:19**
8:08	**8:23**	**8:33**	**8:37**	**8:47**	**8:55**	**9:01**	**9:11**	**9:16**
9:08	**9:23**	**9:33**	**9:37**	**9:45**	**9:53**	**9:59**	**10:08**	**10:13**
10:10	**10:23**	**10:33**	**10:36**	**10:44**	**10:52**	**10:58**	**11:07**	**11:12**
11:10	**11:23**	**11:33**	**11:36**	**11:44**	**11:52**	**11:58**	12:07a	12:11a

Downtown San Diego ➡ Coronado ➡ Imperial Beach

Ⓙ Front St. & B St. **DEPART**	Ⓗ Broadway & 3rd Av.	Ⓖ 12th & Imperial Transit Center	Ⓕ Cesar Chavez Pkwy. & National Av.	Ⓔ NASNI (Front Gate)	Ⓓ Hotel Del Coronado	Ⓒ Naval Base Coronado (NAB)	Ⓑ 9th St. & Palm Av.	Ⓐ Iris Avenue Transit Center **ARRIVE**	
5:29a	5:31a	5:40a	5:43a	5:52a	5:59a	6:02a	6:12a	6:26a	
6:28	6:31	6:40	6:43	6:52	7:00	7:03	7:13	7:28	
6:58	7:01	7:10	7:13	7:22	7:30	7:33	7:43	7:58	
7:27	7:30	7:40	7:43	7:52	8:01	8:04	8:15	8:31	
7:57	8:00	8:10	8:13	8:22	8:31	8:34	8:45	9:01	
8:21	8:24	8:35	8:38	8:47	8:57	9:00	9:11	9:27	
8:51	8:54	9:05	9:08	9:17	9:27	9:30	9:41	9:57	
9:21	9:24	9:35	9:38	9:47	9:57	10:00	10:11	10:27	
9:51	9:54	10:05	10:08	10:17	10:27	10:30	10:41	10:57	
10:21	10:24	10:35	10:38	10:47	10:57	11:00	11:11	11:27	
10:51	10:54	11:05	11:08	11:17	11:27	11:30	11:41	11:57	
11:21	11:24	11:35	11:38	11:47	11:57	**12:00p**	**12:11p**	**12:27p**	
11:51	11:54	**12:05p**	**12:08p**	**12:17p**	**12:28p**	**12:31**	**12:42**	**12:58**	
12:21p	**12:24p**	**12:35**	**12:38**	**12:47**	**12:58**	**1:01**	**1:12**	**1:28**	
12:51	**12:54**	**1:05**	**1:08**	**1:17**	**1:29**	**1:33**	**1:45**	**2:01**	
1:21	**1:24**	**1:35**	**1:38**	**1:47**	**1:59**	**2:03**	**2:15**	**2:31**	
1:51	**1:54**	**2:05**	**2:08**	**2:17**	**2:29**	**2:33**	**2:45**	**3:01**	
2:21	**2:24**	**2:35**	**2:38**	**2:47**	**2:59**	**3:03**	**3:15**	**3:31**	
2:51	**2:54**	**3:05**	**3:08**	**3:17**	**3:29**	**3:33**	**3:45**	**4:01**	
3:21	**3:24**	**3:35**	**3:38**	**3:47**	**3:59**	**4:03**	**4:15**	**4:31**	
3:51	**3:54**	**4:05**	**4:08**	**4:17**	**4:29**	**4:33**	**4:45**	**5:01**	
4:21	**4:24**	**4:35**	**4:38**	**4:47**	**4:59**	**5:03**	**5:15**	**5:31**	
4:51	**4:54**	**5:05**	**5:08**	**5:17**	**5:29**	**5:33**	**5:45**	**6:01**	
5:21	**5:24**	**5:35**	**5:38**	**5:47**	**5:59**	**6:03**	**6:15**	**6:31**	
5:51	**5:54**	**6:05**	**6:08**	**6:17**	**6:28**	**6:31**	**6:43**	**6:58**	
6:21	**6:24**	**6:35**	**6:38**	**6:47**	**6:58**	**7:01**	**7:13**	**7:28**	
7:26	**7:29**	**7:40**	**7:43**	**7:52**	**8:02**	**8:05**	**8:16**	**8:31**	
8:27	**8:30**	**8:40**	**8:43**	**8:52**	**9:01**	**9:04**	**9:15**	**9:30**	
9:27	**9:30**	**9:40**	**9:43**	**9:52**	**10:01**	**10:04**	**10:15**	**10:30**	
10:21	**10:24**	**10:34**	**10:37**	**10:45**	**10:53**	**10:56**	**11:06**	**11:20**	
11:22	**11:25**	**11:34**	**11:37**	**11:45**	**11:52**	**11:55**	12:05a	12:19a	**B**
12:22a	12:25a	12:34a	12:37a	12:45a	12:52a	12:55a	1:05	1:19	**B**
1:22	1:25	1:34	1:37	1:45	1:52	1:55	2:05	2:19	**B**

Route 901 – Sunday / *domingo*

Imperial Beach ➡ Coronado ➡ San Diego

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ Palm Av. & 9th St.	Ⓒ Naval Base Coronado (NAB)	Ⓓ Hotel del Coronado	Ⓔ NASNI (Front Gate)	Ⓕ National Av. & Cesar Chavez Pkwy.	Ⓖ 12th & Imperial Transit Center	Ⓗ Broadway & 5th Av.	Ⓘ Broadway & 1st Av. **ARRIVE**
5:15a	5:29a	5:39a	5:42a	5:50a	5:58a	6:04a	—	—
6:15	6:30	6:40	6:43	6:52	7:00	7:06	—	—
7:15	7:31	7:42	7:46	7:56	8:04	8:10	—	—
8:15	8:31	8:42	8:46	8:56	9:04	9:10	—	—
9:15	9:31	9:42	9:46	9:56	10:04	10:10	—	—
10:15	10:32	10:43	10:47	10:58	11:06	11:12	—	—
11:15	11:32	11:43	11:47	11:58	**12:06p**	**12:12p**	—	—
12:15p	**12:32p**	**12:43p**	**12:47p**	**12:59p**	**1:07**	**1:14**	—	—
1:15	**1:33**	**1:44**	**1:48**	**2:00**	**2:09**	**2:16**	—	—
2:15	**2:33**	**2:44**	**2:48**	**3:00**	**3:09**	**3:16**	—	—
3:15	**3:33**	**3:44**	**3:48**	**4:00**	**4:09**	**4:16**	—	—
4:15	**4:31**	**4:42**	**4:46**	**4:58**	**5:07**	**5:14**	—	—
5:15	**5:31**	**5:42**	**5:46**	**5:58**	**6:07**	**6:14**	—	—
6:15	**6:31**	**6:41**	**6:45**	**6:56**	**7:04**	**7:10**	—	—
7:15	**7:30**	**7:40**	**7:44**	**7:54**	**8:02**	**8:08**	—	—
8:15	**8:30**	**8:40**	**8:44**	**8:54**	**9:02**	**9:08**	—	—

San Diego ➡ Coronado ➡ Imperial Beach

Ⓙ Front St. & B St. **DEPART**	Ⓗ Broadway & 3rd Av.	Ⓖ 12th & Imperial Transit Center	Ⓕ Cesar Chavez Pkwy. & National Av.	Ⓔ NASNI (Front Gate)	Ⓓ Hotel Del Coronado	Ⓒ Naval Base Coronado (NAB)	Ⓑ 9th St. & Palm Av.	Ⓐ Iris Avenue Transit Center **ARRIVE**
—	—	6:40a	6:43a	6:52a	7:00a	7:03a	7:13a	7:28a
—	—	7:40	7:43	7:52	8:01	8:04	8:15	8:31
—	—	8:35	8:38	8:47	8:57	9:00	9:11	9:27
—	—	9:35	9:38	9:47	9:57	10:00	10:11	10:27
—	—	10:35	10:38	10:47	10:57	11:00	11:11	11:27
—	—	11:35	11:38	11:47	11:57	**12:00p**	**12:11p**	**12:27p**
—	—	**12:35p**	**12:38p**	**12:47p**	**12:58p**	**1:01**	**1:12**	**1:28**
—	—	**1:35**	**1:38**	**1:47**	**1:59**	**2:03**	**2:15**	**2:31**
—	—	**2:35**	**2:38**	**2:47**	**2:59**	**3:03**	**3:15**	**3:31**
—	—	**3:35**	**3:38**	**3:47**	**3:59**	**4:03**	**4:15**	**4:31**
—	—	**4:35**	**4:38**	**4:47**	**4:59**	**5:03**	**5:15**	**5:31**
—	—	**5:35**	**5:38**	**5:47**	**5:59**	**6:03**	**6:15**	**6:31**
—	—	**6:35**	**6:38**	**6:47**	**6:58**	**7:01**	**7:13**	**7:28**
—	—	**7:40**	**7:43**	**7:52**	**8:02**	**8:05**	**8:16**	**8:31**
—	—	**8:40**	**8:43**	**8:52**	**9:01**	**9:04**	**9:15**	**9:30**
—	—	**9:40**	**9:43**	**9:52**	**10:01**	**10:04**	**10:15**	**10:30**
—	—	**11:07**	**11:10**	**11:18**	**11:25**	**11:28**	**11:38**	**11:52**

B = Trip continues as Route 906 to San Ysidro International Border. / El viaje continúa como la ruta 906 hacia la garita internacional de San Ysidro.

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

APPENDIX B

Traffic Study

Local Transportation Assessment

for:

Raising Cane's
Project Details

In the City of Imperial Beach

July 2022

Kimley»Horn

LOCAL TRANSPORTATION ASSESSMENT
FOR THE PROPOSED
RAISING CANE'S PROJECT
IN THE CITY OF IMPERIAL BEACH

Prepared by:

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Orange, California 92868

July 2022

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LOCAL TRANSPORTATION ASSESSMENT
FOR THE PROPOSED
RAISING CANE'S PROJECT
IN THE CITY OF IMPERIAL BEACH

EXECUTIVE SUMMARY

This Local Transportation Assessment (LTA) has been prepared to evaluate the project-related traffic effects associated with the proposed Raising Cane's project in the City of Imperial Beach. This LTA has been conducted in coordination with the City of Imperial Beach and in accordance with the City of Imperial Beach *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020).

The project has been evaluated during the weekday midday peak and evening peak hours for the following conditions:

- Existing Conditions
- Existing Plus Project
- Opening Year 2023 (Existing + Ambient Growth + Cumulative Projects)
- Opening Year 2023 Plus Project

Under Existing Conditions, all study intersections currently operate at an acceptable Level of Service (LOS).

The project is estimated to generate approximately 1,097 net new vehicle trips on a daily basis, 52 net new trips during the midday peak hour, and 52 net new trips during the PM peak hour.

Project-related traffic volumes were added to Existing Conditions to establish the conditions for the Existing Plus Project scenario. With the addition of project traffic to Existing Conditions, all study intersections would continue to operate at an acceptable LOS.

An annual ambient growth rate of 2% and cumulative project traffic were added to Existing Conditions to develop Opening Year 2023 Cumulative without Project forecasts.

Under Opening Year 2023 Cumulative, all study intersections would continue to operate at an acceptable LOS.

Project-related traffic volumes were added to Opening Year 2023 Cumulative forecasts to establish the conditions for the Opening Year 2023 Cumulative Plus Project scenario. With the addition of project traffic to Opening Year 2023 Cumulative forecasts, all study intersections would continue to operate at an acceptable LOS.

Vehicular access provisions for the project site would be provided via one existing full-movement driveway on Ninth Street and one existing right-in-right-out (RIRO) only driveway on Palm Avenue. All project driveways would be unsignalized.

The proposed project would provide a drive-through lane with two order boards. The drive-through would provide two side-by-side entry lanes to the dual order boards, and then merge into a single drive-through lane prior to the pay and pick-up windows. The proposed project would provide a total drive-through queue length of approximately 200 feet, for a drive-through queueing capacity of 10 vehicles, assuming 20 feet per vehicle, from the beginning of the drive-through lanes to the pick-up window.

Under peak drive-through conditions, the project would allow for an additional pay and pick-up lane, which would provide an additional queue length of 100 feet, or 5 vehicles. Overall, the project site provides a total queuing capacity of 300 feet, for a drive-through queuing capacity of 15 vehicles.

Per the City of Imperial Beach Municipal code, the proposed parking requirement for the project is 21 parking spaces. The site provides 16 parking spaces; therefore, the site would have a deficit of 5 parking spaces compared to City code.

A parking study was conducted to determine whether or not the proposed parking supply will adequately accommodate the parking demands of the project.

Parking data was collected at two comparable Raising Cane's sites, from 11:00 AM to 1:00 PM and 4:00 PM to 6:00 PM on a typical weekday, and weekend.

Based on the parking data collected, the peak parking demand was observed to be 7.378 parking spaces per thousand square feet (KSF) of restaurant development.

Applying the peak observed parking ratio of 7.378 spaces per KSF to the proposed project would result in a parking requirement of 14 spaces.

Based on the parking analysis, the proposed parking supply will adequately accommodate the parking demands of the Raising Cane's project.

LOCAL TRANSPORTATION ASSESSMENT
FOR THE PROPOSED
RAISING CANE'S PROJECT
IN THE CITY OF IMPERIAL BEACH

INTRODUCTION

This Local Transportation Assessment (LTA) has been prepared to evaluate the project-related traffic effects associated with the proposed Raising Cane's fast-food restaurant located on the northeast corner of Ninth Street and Palm Avenue in the City of Imperial Beach.

This study has been conducted in coordination with the City of Imperial Beach and in accordance with the City of Imperial Beach *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020). This study includes an evaluation of project-related effects on the surrounding roadway system, a drive-through queuing analysis, and a parking analysis. Where necessary, circulation system improvements have been identified at study locations.

PROJECT DESCRIPTION

The project site is located on the northeast corner of Ninth Street and Palm Avenue in the City of Imperial Beach and is shown in its regional setting in Figure 1. The project site is currently occupied by an approximately 4,867-square-foot bank building. The project will involve the demolition of the existing commercial bank building and the construction of a 1,918-square-foot Raising Cane's restaurant building with a drive-through. The operating hours for walk-in and drive-through service will be from 9:00 am to 3:30 am Monday through Sunday. The project site plan is provided in Figure 2.

Vehicular access provisions for the project site would be provided via one existing full-movement driveway on Ninth Street and one existing right-in-right-out (RIRO) only driveway on Palm Avenue. All project driveways would be unsignalized.

The proposed project would provide a drive-through lane with two order boards. The drive-through would provide two side-by-side entry lanes and two order boards, and then merge into a single drive-through lane prior to the pay and pick-up window. Under peak drive-through conditions, the project would allow for an additional pay and pick-up lane.

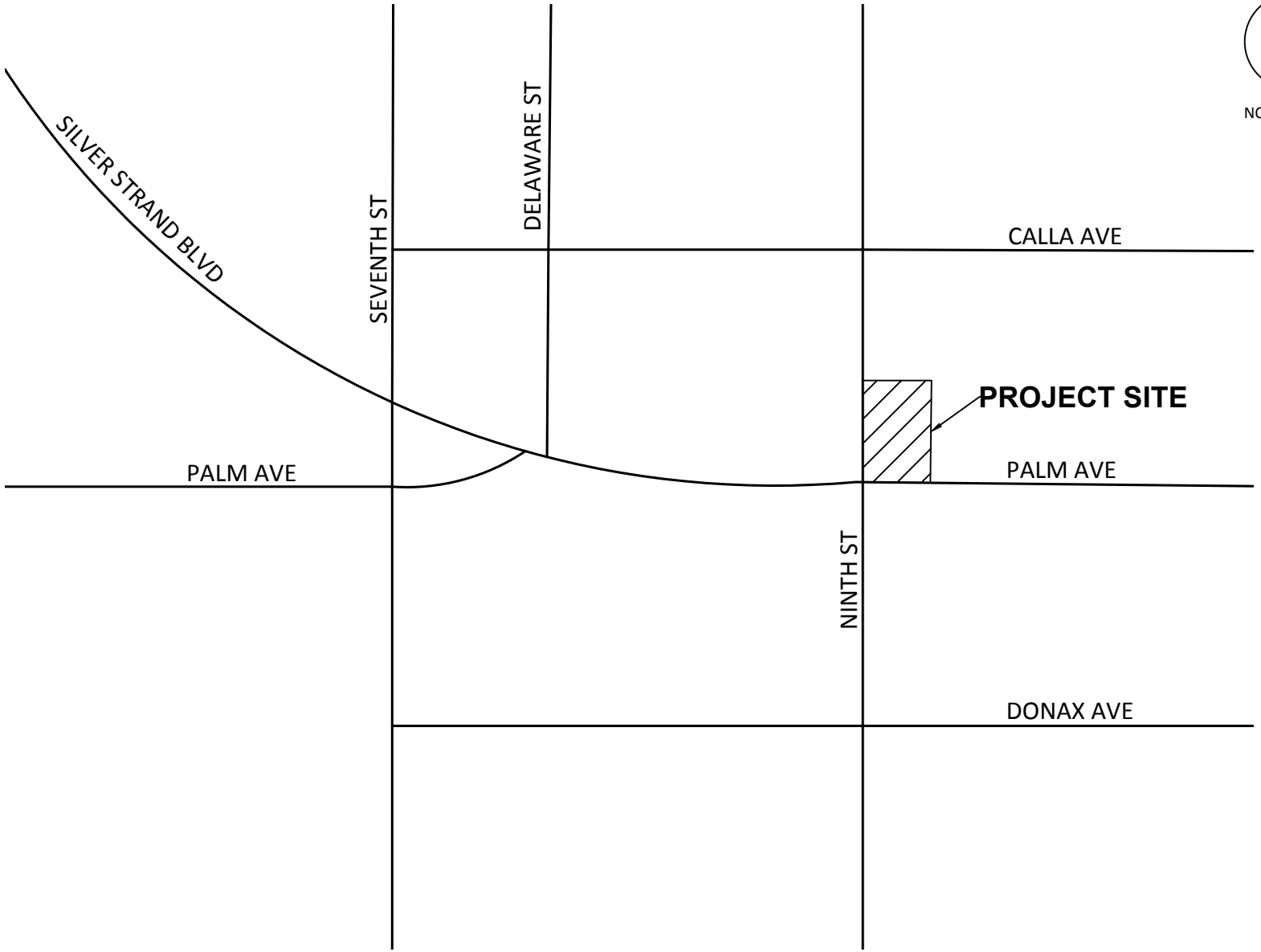
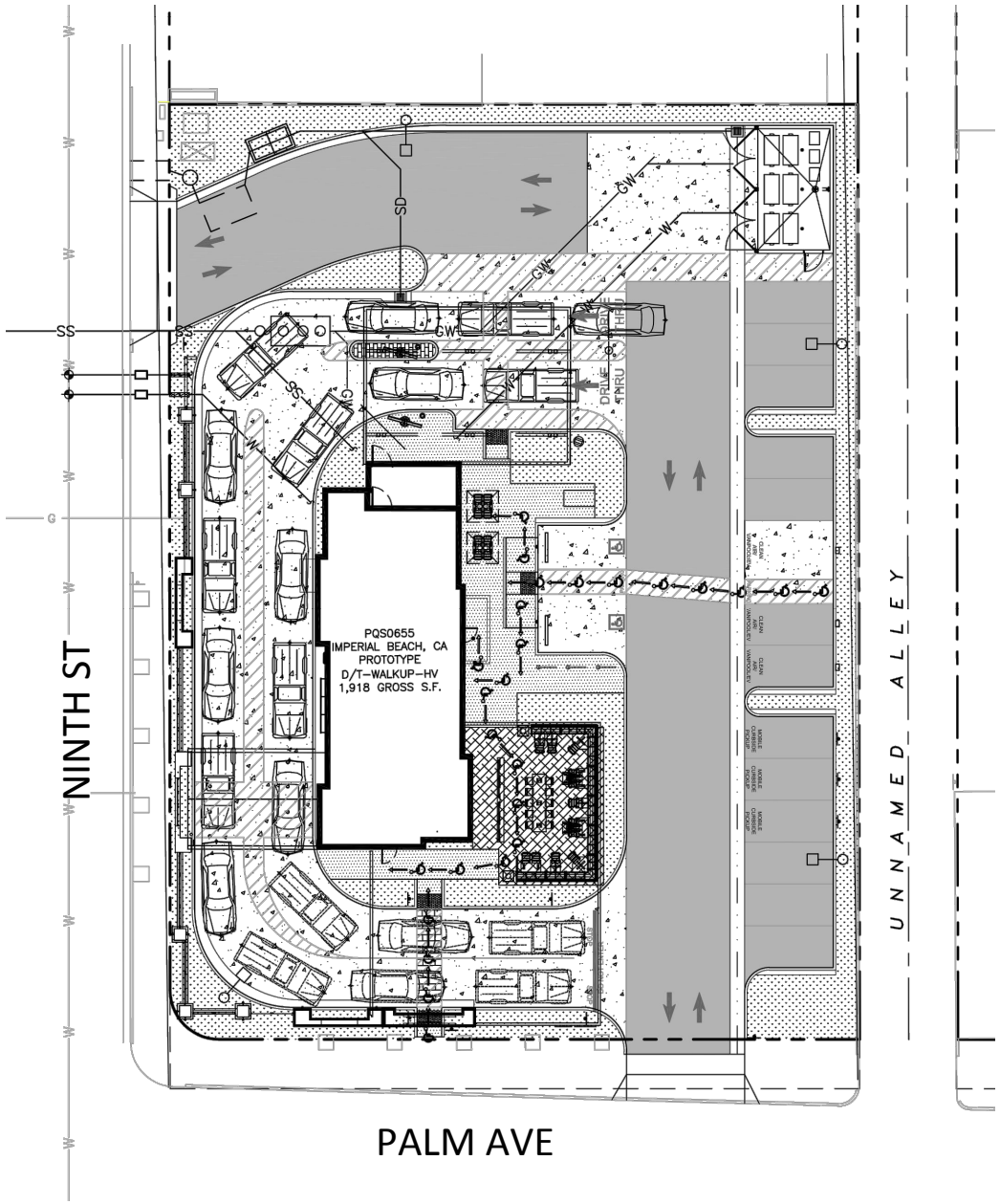


FIGURE 1
VICINITY MAP



NOT TO SCALE

FIGURE 2
PROJECT SITE PLAN

LEVEL OF SERVICE (LOS) ANALYSIS

This LTA has been prepared in coordination with the City of Imperial Beach and in accordance with the City of Imperial Beach *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020).

Analysis Scenarios

The project will be evaluated for the following conditions:

- Existing Conditions
- Existing Plus Project
- Opening Year 2023 (Existing + Ambient Growth + Cumulative Projects)
- Opening Year 2023 Plus Project

Since Raising Cane's is not open during the morning peak hour, the intersection analysis will be conducted for the midday and evening peak hours only.

Study Locations

The LTA will be conducted at the following study intersections:

1. Palm Avenue at Ninth Street
D1. Palm Avenue at Project Driveway 1
D2. Ninth Street at Project Driveway 2

The study locations were established in consultation with City staff through the Scoping Agreement process. A copy of the approved Scoping Agreement is provided in *Appendix A*.

Analysis Methodology

Peak hour intersection operations at signalized and unsignalized intersections were evaluated using the methods prescribed in the Highway Capacity Manual (HCM) 6th Edition, consistent with the requirements of the City of Imperial Beach.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including number of lanes, volume of traffic, cycle length, and signal timing and phasing.

For unsignalized intersections, the HCM methodology analysis determines the average total delay for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made.

The HCM delay forecast translates to a Level of Service designation, ranging from LOS A to LOS F. A summary description of each Level of Service and the corresponding delay is provided in the following chart.

LEVEL OF SERVICE DESCRIPTIONS HCM METHODOLOGY			
LOS	Average Delay (sec / vehicle)		Description
	Signalized	Unsignalized	
A	< 10.0	< 10.0	LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	> 10.0 - 20.0	> 10.0 - 15.0	LOS B represents stable flow, but the presence of others in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	> 20.0 - 35.0	> 15.0 - 25.0	LOS C is in the range of stable flow but marks the beginning of operation in which individual users become affected by interaction with others in the traffic stream.
D	> 35.0 - 55.0	> 25.0 - 35.0	LOS D represents high-density, but stable flow. Speed and freedom to maneuver are restricted, and the driver experiences a generally poor level of comfort and convenience.
E	> 55.0 - 80.0	> 35.0 - 50.0	LOS E represents operating conditions at or near the capacity of the intersection. All speeds are reduced to a low, but relatively uniform level. Small increases in flow will cause breakdowns in traffic movement.
F	> 80.0	> 50.0	LOS F represents forced, or breakdown flow. This condition occurs when the amount of traffic approaching the intersection exceeds the volume which can pass through the intersection, resulting in queues and congestion.

Performance Criteria

The City of Imperial Beach Level of Service standard for intersection operation is Level of Service D or better. If the project traffic causes operations at an intersection to go from acceptable to unacceptable, the project would have a significant effect at the intersection.

AREA CONDITIONS

Existing Street System

Regional access to the site is provided by the Interstate 5 Freeway (I-5), located approximately a half mile east of the project site. The following provides a description of the roadways providing access to the project site.

Palm Avenue is an east-west roadway that provides three lanes in each direction within the project vicinity. The posted speed limit is 40 mph. On-street parking is permitted on both sides of the street, east of Ninth Street. Palm Avenue is designated as an Arterial Thoroughfare in the City of Imperial Beach General Plan.

Ninth Street is a north-south roadway that provides two lanes in each direction within the project vicinity. The posted speed limit is 35 mph. On-street parking is permitted on both sides of the street. Ninth Street is designated as a Multimodal Boulevard in the City of Imperial Beach General Plan.

Transit Service

Transit service to the project area is provided by the San Diego Metropolitan Transit System (MTS), which serves San Diego County. The bus stop closest to the project site is located at the intersection of Palm Avenue and Ninth Street. A description of the bus routes serving the project area is provided below.

MTS Route 933/934 (Otay Mesa to Imperial Beach) operates between Otay Mesa and Imperial Beach along Palm Avenue. Route 933/934 operates Monday through Friday from approximately 4:40 AM to 12:30 AM with approximately 15-minute headways, Saturday from approximately 5:00 AM to 12:30 AM with approximately 30-minute headways, and Sunday from approximately 5:15 AM to 9:24 PM with approximately 1-hour headways.

MTS Route 901 (Imperial Beach to Downtown San Diego) operates between Imperial Beach and Downtown San Diego along Silver Strand Boulevard. Route 901 operates Monday through Friday from approximately 4:20 AM to 12:15 AM with approximately 15-minute headways, Saturday from approximately 5:15 AM to 12:15 AM with approximately 30-minute headways, and Sunday from 5:15 AM to 9:00 PM with approximately 1-hour headways.

EXISTING OPERATING CONDITIONS

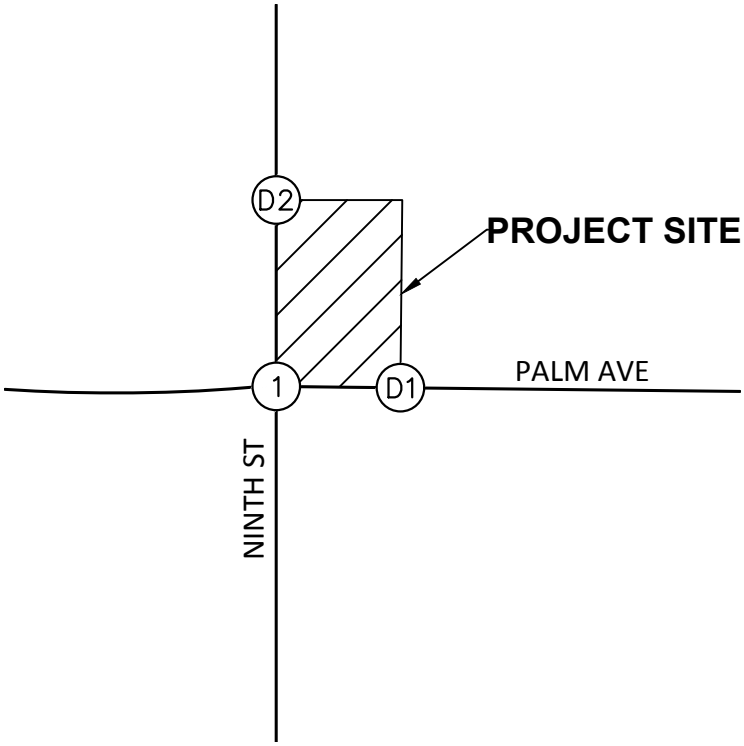
Existing Traffic Volumes

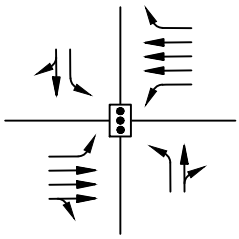
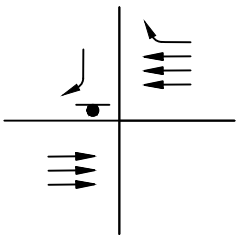
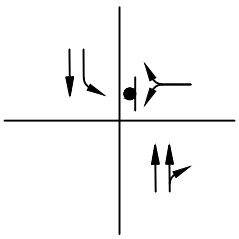
Existing midday and evening peak hour turning movement counts for the study intersections were collected in February 2022. Existing lane configurations and traffic volumes are presented on Figures **3** and 4, respectively. Peak hour intersection traffic count worksheets are provided in *Appendix B*.

Peak Hour Intersection Operations

Intersection Level of Service analysis was conducted for the midday peak hour and PM peak hour using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on Table 1. Review of this table indicates all study intersections currently operate at an acceptable Level of Service. Intersection analysis worksheets are provided in *Appendix C*.

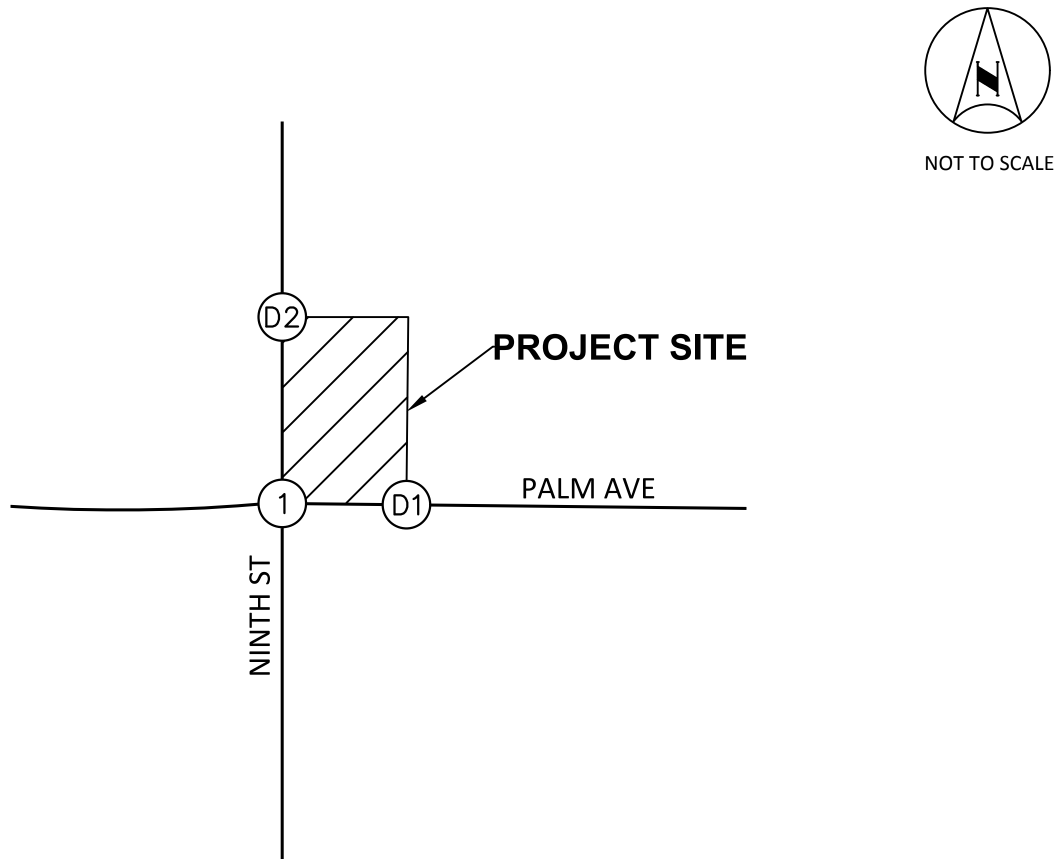
NOT TO SCALE

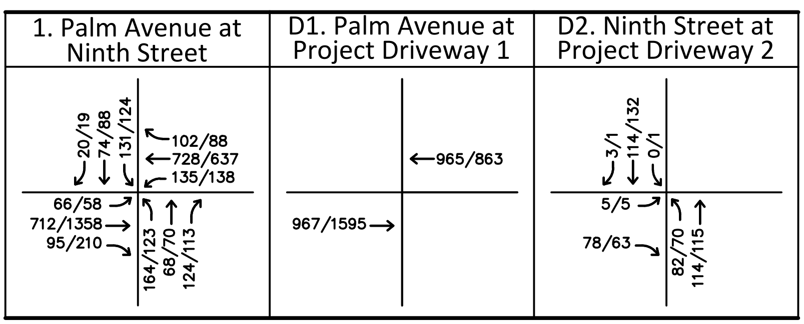


1. Palm Avenue at Ninth Street	D1. Palm Avenue at Project Driveway 1	D2. Ninth Street at Project Driveway 2
		

LEGEND:
- (X) = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL





LEGEND:

(X) = Study Intersection

XX/YY = MD/PM Peak Hour Turning Movement Volumes

FIGURE 4
EXISTING TRAFFIC VOLUMES

Kimley»Horn

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	MD Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Palm Avenue at Ninth Street	S	23.7	C	23.7	C

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

PROJECT TRAFFIC

Project Trip Generation

Trip generation estimates for the existing and proposed uses are based on the SANDAG *Brief Guide of Vehicular Traffic Generation rate for the San Diego Region* (April 2002). Pass-by reduction factors were applied to the existing and proposed land uses.

The trip generation rates and the resulting trip generation estimates for the proposed Raising Cane's project are summarized on Table 2. After applying pass-by reduction factors, the project is estimated to generate approximately 1,097 net new vehicle trips on a daily basis, 52 net new vehicle trips during the midday peak hour, and 52 net new vehicle trips during the PM peak hour.

Trip Distribution and Assignment

Trip distribution assumptions for the project were based on proximity to regional and local roadways and existing travel patterns. Trip distribution percentages at each study intersection were applied to the project trip generation to determine the project trips through each intersection. The project trip distribution and resulting project-related peak hour trips to be added to the surrounding street system are shown on Figure 5.

EXISTING PLUS PROJECT CONDITION

This section addresses the potential effects associated with adding project-related trips to Existing Condition traffic volumes. The Existing Plus Project scenario is a hypothetical scenario which assumes that the Project would be fully implemented at the present time, with no other changes to area traffic volumes or to the street network serving the site. This analysis assumes full development of the Project and full absorption of Project traffic on the circulation system at the present time.

Peak Hour Intersection Operations

Project-related trips were added to existing traffic volumes to develop forecasts for the Existing Plus Project scenario. The resulting midday peak hour and PM peak hour traffic volumes are shown on Figure 6. The results of the intersection analysis for Existing Plus Project conditions are shown on Table 3. Review of this table indicates all study intersections would continue to operate at an acceptable Level of Service. Intersection analysis worksheets are provided in *Appendix C*.

TABLE 2
SUMMARY OF PROJECT TRIP GENERATION
IMPERIAL BEACH RAISING CANE'S

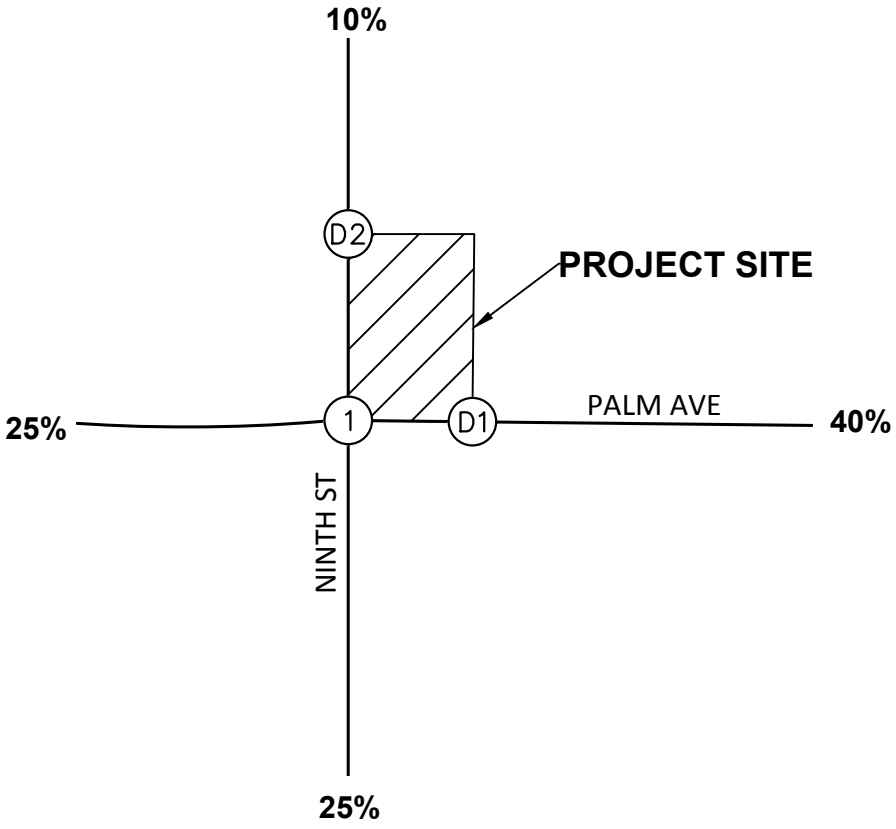
Land Use	SANDAG Code	Unit	Trip Generation Rates [1]						
			Daily	Midday Peak Hour [2]			PM Peak Hour		
				In	Out	Total	In	Out	Total
Bank with Drive-Through	222	KSF	200.000	6.000	4.000	10.000	10.000	10.000	20.000
Fast-Food Restaurant w/ Drive-thru	396	KSF	650.000	22.750	22.750	45.500	22.750	22.750	45.500

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	Midday Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
EXISTING USE									
Bank with Drive-Through	4.867	KSF	974	29	20	49	49	49	97
Pass-by Trips (23% Daily; 25% MD; 25% PM) [3]			-224	-7	-5	-12	-12	-12	-24
Total Existing Trips			750	22	15	37	37	36	73
PROPOSED USE									
Fast-Food Restaurant w/ Drive-thru	1.918	KSF	1,247	44	44	87	44	44	87
Pass-by Trips (12% Daily; 40% MD; 40% PM) [3]			-150	-18	-18	-35	-18	-18	-35
Total Net Trips for Proposed Conditions			1,097	26	26	52	26	26	52
Net Difference (Proposed Minus Existing)			347	4	12	16	-10	-10	-21

[1] Source: SANDAG Brief Guide of Vehicular Traffic Generation rates for the San Diego Region

[2] AM Peak Hour of Generator average rate used for Midday Peak Hour

[3] Source: SANDAG Brief Guide of Vehicular Traffic Generation rates for the San Diego Region



NOT TO SCALE

1. Palm Avenue at Ninth Street	D1. Palm Avenue at Project Driveway 1	D2. Ninth Street at Project Driveway 2
18/17 ↙ ←7/7 ←7/8	23/24 ↙ ↖19/19 ←9/–9	3/3 ↙ ↖3/3 ←18/17
16/16 ↘ –9/–9 →	9/8 →	22/22 ↗
6/6 ↑		

LEGEND:

(X) = Study Intersection

XX/YY = MD/PM Peak Hour Turning Movement Volumes

XX% = Project Trip Distribution

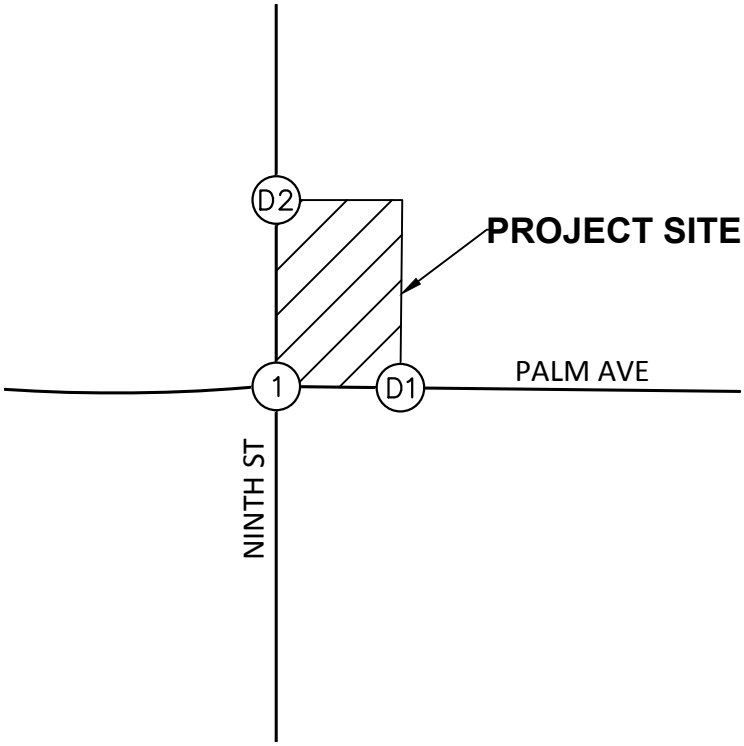
FIGURE 5
TRIP DISTRIBUTION AND PROJECT-RELATED TRAFFIC VOLUMES

TABLE 3
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT CONDITIONS

Int. #	Intersection	MD Peak Hour						PM Peak Hour					
		Without Project		With Project		Change Delay	Project-Related Effect?	Without Project		With Project		Change Delay	Project-Related Effect?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Palm Avenue at Ninth Street	23.7	C	24.8	C	1.1	No	23.7	C	25.0	C	1.3	No
D1	Palm Avenue at Project Driveway 1	-	-	13.7	B	-	No	-	-	13.0	B	-	No
D2	Ninth Street at Project Driveway 2	-	-	11.5	B	-	No	-	-	11.4	B	-	No

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

NOT TO SCALE



1. Palm Avenue at Ninth Street	D1. Palm Avenue at Project Driveway 1	D2. Ninth Street at Project Driveway 2
20/19 ↙, 74/88 ↓, 149/141 ↙, 102/88 ↖, 735/644 ←, 142/146 ↖, 82/74 ↘, 703/1349 →, 95/210 ↙, 164/123 ↗, 74/76 ↑, 124/113 ↗	23/24 ↙, 19/19 ↖, 956/854 ←, 976/1603 →	3/1 ↙, 114/132 ←, 3/4 ↘, 3/3 ↖, 18/17 ←, 5/5 ↘, 78/63 ↓, 82/70 ↖, 114/115 ↑, 22/22 ↗

LEGEND:

(X) = Study Intersection

XX/YY = MD/PM Peak Hour Turning Movement Volumes

FIGURE 6
EXISTING PLUS PROJECT TRAFFIC VOLUMES

OPENING YEAR 2023 CONDITIONS

The project Opening Year is anticipated to be 2023. Opening Year 2023 Cumulative traffic forecasts have been developed by adding an ambient growth rate of two percent per year to existing traffic volumes. In addition to ambient growth, traffic from Cumulative Projects in the project vicinity were added to the Opening Year forecasts to develop Opening Year 2023 Cumulative conditions. Cumulative Projects consist of any project that has been approved and is not yet occupied, and projects that are in various stages of the application and approval process but have not yet been approved.

Information regarding Cumulative Projects in the area was obtained using nearby traffic studies. A summary of Cumulative Projects, including associated trip generation is provided in Table 4. The trip generation estimates for the Cumulative Projects were obtained from approved traffic studies, where available and were developed by Kimley-Horn if approved traffic studies were not available. The locations of the Cumulative Projects are shown on Figure 7.

Trip distribution and assignment for the Cumulative Projects were obtained from approved traffic studies, where available; and were developed by Kimley-Horn if approved traffic studies were not available. Traffic volumes associated with the Cumulative Projects were compiled for each of the study intersections and are shown on Figure 8. The Cumulative Projects traffic volumes were added to the Opening Year 2023 traffic volumes. The resulting traffic volumes for Opening Year 2023 Cumulative conditions are shown on Figure 9.

Peak Hour Intersection Operations

The results of the Opening Year 2023 Cumulative peak hour intersection analysis are summarized on Table 5. Review of this table shows that, with the addition of ambient growth and cumulative traffic, all study intersections would continue to operate at an acceptable Level of Service under Opening Year 2023 Cumulative conditions. Intersection analysis worksheets are provided in *Appendix C*.

OPENING YEAR 2023 PLUS PROJECT CONDITIONS

Project-related traffic volumes for the project were added to the Year 2023 forecasts to develop Year 2023 Plus Project traffic forecast volumes. The resulting traffic volumes are shown on Figure 10.

Peak Hour Intersection Operations

The results of the Opening Year 2023 Cumulative Plus Project peak hour intersection analysis are shown on Table 6. Review of this table indicates that, with the addition of project traffic, all study intersections would continue to operate at an acceptable Level of Service. Intersection analysis worksheets are provided in *Appendix C*.

TABLE 4
SUMMARY OF CUMULATIVE PROJECTS

Proj #	Description	Land Use	Quantity	Units	Trip Generation Estimates						
					Daily	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
1	Navy Coastal Campus	Military	--	N/A	1,250	98	10	108	22	89	111
2	IB Resort	Hotel	100	Room	1,000	36	24	60	48	32	80
3	684-686 Ocean Lane	Single-Family Dwelling Units	2.000	DU	20	1	1	2	1	1	2
4	812 Ocean Lane	Single-Family Dwelling Units	2	DU	20	1	1	2	1	1	2
5	Hampshire at Bayside Landing	Multi-Family Dwelling Units	187	DU	222	4	14	18	14	6	20
6	Breakwater Commercial Center	Hotel	101	Room	909	29	44	73	49	33	82
7	1166 Holly Avenue	Single-Family Dwelling Units	15.000	DU	150	4	8	12	10	5	15
8	805 Ocean Lane	Restaurant	1	KSF	144	1	1	2	8	4	12
9	495 Palm Avenue	Single-Family Dwelling Units	10	DU	100	2	6	8	7	3	10
10	236 Palm Avenue	Mixed-Use	--	N/A	197	4	8	12	12	8	20
11	Siesta Residential	Multi-Family Dwelling Units	65.000	DU	340	8	27	35	20	14	34
12	740 Palm Avenue	Mixed-Use	--	N/A	278	4	8	12	12	8	20
13	Blue Wave IB	Mixed-Use	--	N/A	1,316	23	43	66	75	38	113
Total Project Trips					5,946	215	195	410	279	242	521

DU = Dwelling Unit, KSF = 1,000 square feet, FP = Fueling Position

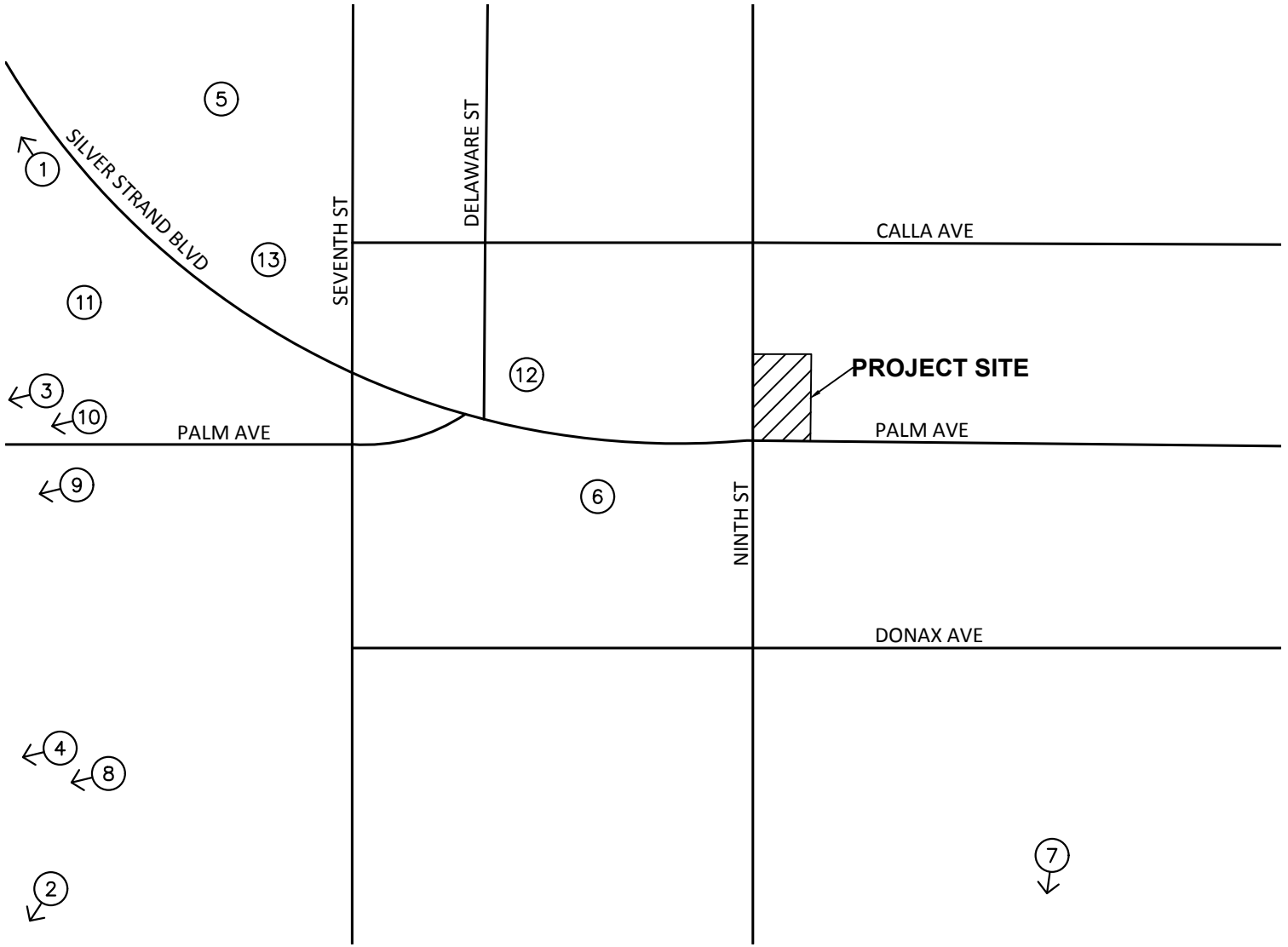
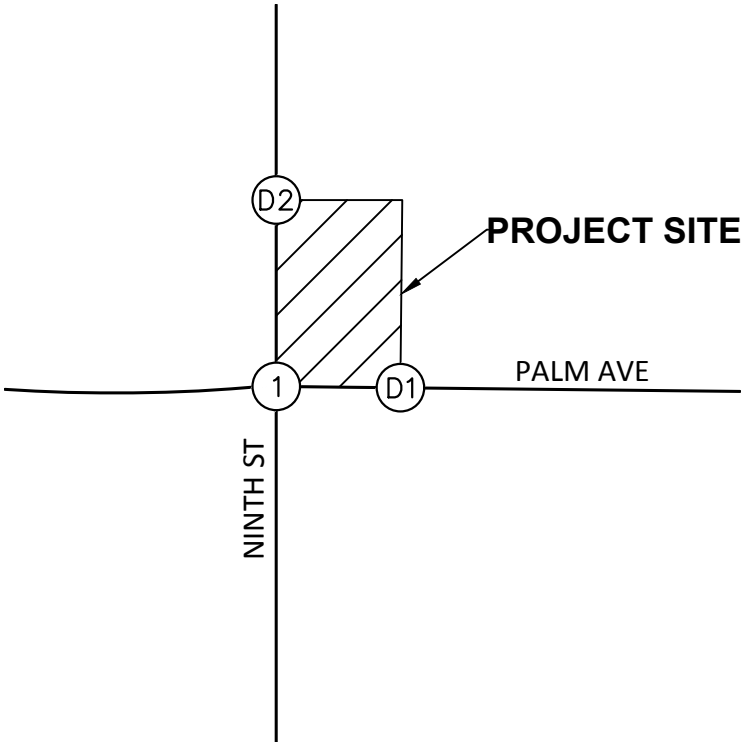


FIGURE 7
LOCATION OF CUMULATIVE PROJECTS

NOT TO SCALE



1. Palm Avenue at Ninth Street	D1. Palm Avenue at Project Driveway 1	D2. Ninth Street at Project Driveway 2
0/2 ↙ 8/9 ↙ ↖ 4/3 ←145/95 2/1 ↘ 68/152 → 0/1 ↘ 1/0 ↗	←149/98 76/161→	←8/11 6/4 →

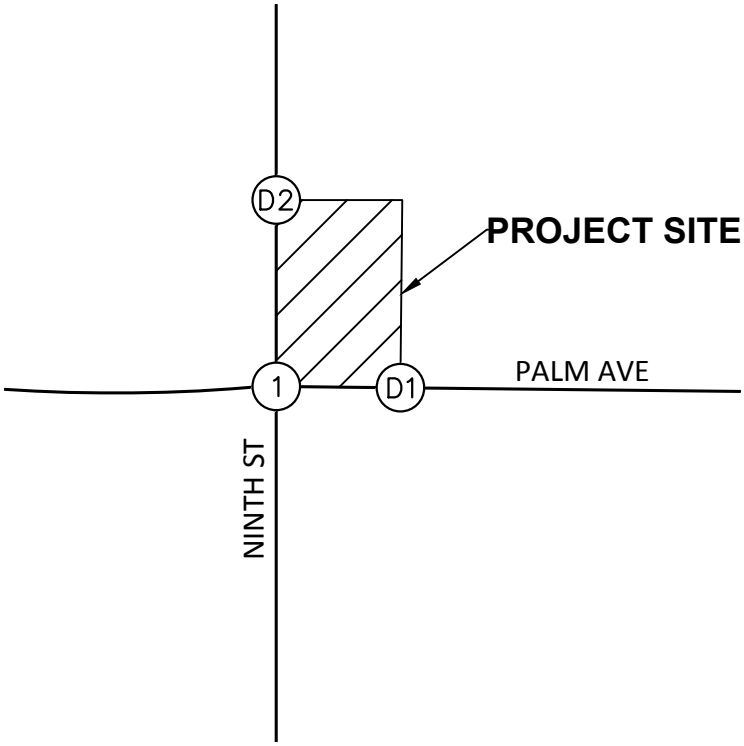
LEGEND:

(X) = Study Intersection

XX/YY = MD/PM Peak Hour Turning Movement Volumes

FIGURE 8
CUMULATIVE PROJECT TRAFFIC VOLUMES

NOT TO SCALE



1. Palm Avenue at Ninth Street	D1. Palm Avenue at Project Driveway 1	D2. Ninth Street at Project Driveway 2
20/21 ↙ 75/90 ↓ 142/135 ↘ 108/93 ← 888/745 ← 138/141 ↖ 69/60 → 794/1537 → 97/215 ↘ 168/125 ↑ 69/71 ↑ 126/115 ↑	← 1133/978 1062/1788 →	3/1 ↙ 124/146 ← 0/1 ↘ 5/5 → 80/64 ↘ 84/71 ↑ 122/121 ↑

LEGEND:

(X) = Study Intersection

XX/YY = MD/PM Peak Hour Turning Movement Volumes

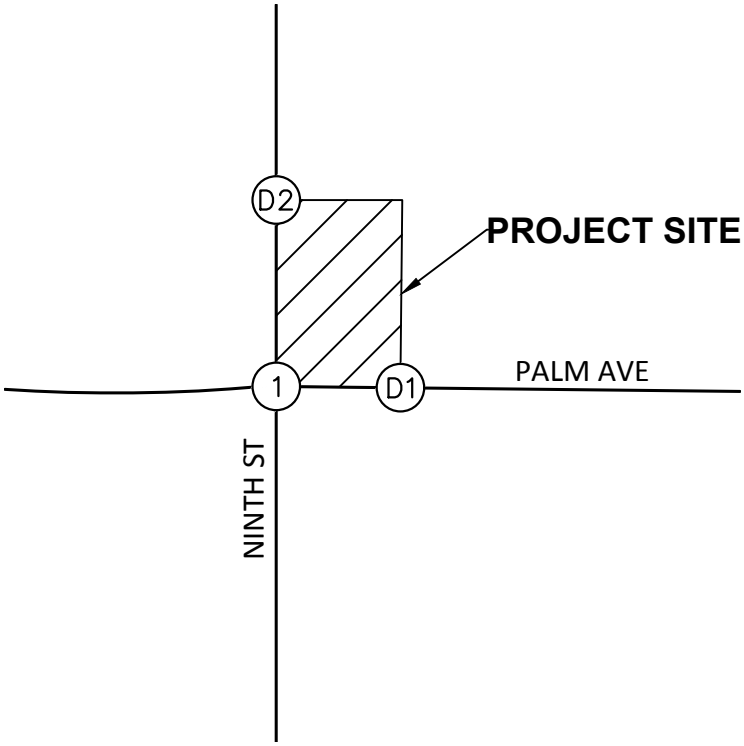
FIGURE 9
OPENING YEAR 2023 TRAFFIC VOLUMES

TABLE 5
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2023

Int. #	Intersection	Traffic Control	MD Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Palm Avenue at Ninth Street	S	23.5	C	24.6	C

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

NOT TO SCALE



1. Palm Avenue at Ninth Street	D1. Palm Avenue at Project Driveway 1	D2. Ninth Street at Project Driveway 2
20/21, 75/90, 160/152, 108/93, 895/752, 145/149, 85/76, 785/1528, 97/215, 168/125, 75/77, 126/115	23/24, 19/19, 1124/969, 1071/1796	3/1, 124/146, 3/4, 3/3, 18/17, 5/5, 80/64, 84/71, 122/121, 22/22

LEGEND:

(X) = Study Intersection

XX/YY = MD/PM Peak Hour Turning Movement Volumes

FIGURE 10
OPENING YEAR 2023 PLUS PROJECT TRAFFIC VOLUMES

TABLE 6
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2023 PLUS PROJECT

Int. #	Intersection	MD Peak Hour						PM Peak Hour					
		Without Project		With Project		Change Delay	Project-Related Effect?	Without Project		With Project		Change Delay	Project-Related Effect?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Palm Avenue at Ninth Street	23.5	C	24.6	C	1.1	No	24.6	C	26.3	C	1.7	No
D1	Palm Avenue at Project Driveway 1	-	-	15.0	B	-	No	-	-	13.8	B	-	No
D2	Ninth Street at Project Driveway 2	-	-	11.8	B	-	No	-	-	11.7	B	-	No

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

RECOMMENDED IMPROVEMENTS

Based on the Level of Service standards and requirements for improvements noted earlier in the report (see page 7), no improvements are required for the project.

DRIVE-THROUGH QUEUING ANALYSIS

The City has requested that a drive-through (DT) queuing analysis be conducted for the proposed project, to evaluate the adequacy of the drive-through lane queuing capacity.

The opening to the drive-through lane would be located at the northeastern corner of the proposed building, and the drive-through lane would wrap around the north and west sides of the building in a counter-clockwise direction. The drive-through would provide two side-by-side entry lanes and two order boards, which would allow Raising Cane's to take orders from two customers at the same time. After the order boards, the two lanes would merge into a single drive-through lane prior to the pay and pick-up window.

There will be approximately 100 feet (approximately 50 feet per lane) of total queuing capacity from the drive-through entrance to the two order boards and approximately 100 feet from the order boards to the pick-up window. This would provide a total drive-through queue length of approximately 200 feet, for a drive-through queueing capacity of 10 vehicles, assuming 20 feet per vehicle, from the beginning of the drive-through lanes to the pay and pick-up window.

Under peak drive-through conditions, the project site would allow for an additional pay and pick-up lane, which would provide an additional queue length of 100 feet, or 5 vehicles. Overall, the project site would provide a total queuing capacity of 300 feet, for a drive-through queuing capacity of 15 vehicles.

Queuing Data Collection

Based on correspondence with City staff, drive-through queuing observations and counts were conducted at the following existing drive-through Raising Cane's sites in February 2022:

- City of Santee: 8867 Cuyamaca Street (~4,473 SF; DT Lane Capacity: 24 vehicles)
- City of San Diego: 8223 Mira Mesa Boulevard (~3,975 SF; DT Lane Capacity: 18 vehicles)

These sites were selected for queuing data collection because of the following site characteristics that are similar to the proposed project:

- A Raising Cane's restaurant with a drive-through lane
- Located in San Diego County
- Located adjacent to or within a large commercial center

The drive-through activity was observed during the following times for the Raising Cane's sites on a typical weekday and Saturday:

- 11:00 AM – 2:00 PM (lunchtime)
- 4:00 PM – 7:00 PM (commute peak hour/dinnertime)

A copy of the queuing data collection worksheets is provided in *Appendix D*.

The results of the observations for a typical weekday and Saturday are summarized on Tables 7 and 8, respectively. The data summaries on Tables 7 and 8 present the number of vehicles in the drive-through lane, broken down into 15-minute periods, based on the observed average queue, 85th percentile queue, and the peak queue for each of the data collection periods.

Queuing Observations

The queuing activity was observed to vary with an ebb and flow pattern throughout the data collection periods. The following vehicle movement and queuing observations of the drive-through operations at the study locations were made:

Santee Site

- The peak 15 minutes during the weekday lunch-time peak was from 1:00 PM to 1:15 PM, with an average queue of 18 vehicles and a peak queue of 21 vehicles.
- The peak 15 minutes during the weekday dinner-time peak was from 5:45 PM to 6:00 PM, with an average queue of 23 vehicles and a peak queue of 28 vehicles.
- The peak 15 minutes during the Saturday lunch-time peak was from 12:30 PM to 12:45 PM, with an average queue of 23 vehicles and a peak queue of 26 vehicles.
- The peak 15 minutes during the Saturday dinner-time peak was from 6:15 PM to 6:30 PM, with an average queue of 20 vehicles and a peak queue of 23 vehicles.

San Diego Site

- The peak 15 minutes during the weekday lunch-time peak was from 1:00 PM to 1:15 PM, with an average queue of 13 vehicles and a peak queue of 16 vehicles.
- The peak 15 minutes during the weekday dinner-time peak was from 5:45 PM to 6:00 PM, with an average queue of 15 vehicles and a peak queue of 16 vehicles.
- The peak 15 minutes during the Saturday lunch-time peak was from 12:45 PM to 1:00 PM, with an average queue of 11 vehicles and a peak queue of 15 vehicles.
- The peak 15 minutes during the Saturday dinner-time peak was from 5:00 PM to 5:15 PM, with an average queue of 8 vehicles and a peak queue of 12 vehicles.

TABLE 7

SUMMARY OF DRIVE-THROUGH QUEUING DATA COLLECTION
RAISING CANE'S - TYPICAL WEEKDAY
AVERAGE, 85TH PERCENTILE, AND PEAK QUEUES

Time Period	Number of Drive-through Vehicles in the Queue					
	Average Queue		85th %-ile [1] Queue		Peak Queue	
	Santee	San Diego	Santee	San Diego	Santee	San Diego
Lunch						
11:00-11:15 AM	3.9	3.9	6.0	5.8	7	7
11:15-11:30 AM	10.4	11.4	15.0	13.0	16	14
11:30-11:45 AM	14.4	12.5	15.9	15.0	17	16
11:45-12:00 PM	16.0	10.5	17.9	12.9	18	16
12:00-12:15 PM	15.5	11.1	17.0	13.0	18	14
12:15-12:30 PM	15.7	12.7	16.9	14.0	18	15
12:30-12:45 PM	15.9	11.4	16.9	14.9	19	15
12:45-1:00 PM	15.7	5.7	18.8	7.9	19	9
1:00-1:15 PM	18.3	13.4	20.9	15.0	21	16
1:15-1:30 PM	14.9	10.1	17.0	13.9	19	16
1:30-1:45 PM	11.9	5.3	15.0	7.0	16	7
1:45-2:00 PM	8.5	5.6	10.9	7.0	14	8
Highest Value	18.3	13.4	20.9	15.0	21	16
Dinner						
4:00-4:15 PM	2.4	12.0	3.8	13.0	7	14
4:15-4:30 PM	6.3	8.4	8.9	13.9	12	15
4:30-4:45 PM	11.3	1.1	13.0	2.0	14	3
4:45-5:00 PM	10.6	1.4	12.0	2.9	15	5
5:00-5:15 PM	13.5	6.9	15.9	9.0	16	10
5:15-5:30 PM	15.6	10.1	18.9	11.0	20	13
5:30-5:45 PM	17.3	13.1	20.9	15.0	22	16
5:45-6:00 PM	22.9	14.9	25.0	16.0	28	16
6:00-6:15 PM	18.4	13.4	19.9	15.9	21	16
6:15-6:30 PM	19.0	7.8	20.9	9.0	22	10
6:30-6:45 PM	19.3	7.1	21.9	8.0	23	9
6:45-7:00 PM	21.5	8.1	23.0	9.0	23	10
Highest Value	22.9	14.9	25.0	16.0	28	16

Notes: [1] 85th percentile = The queue will be less than the queue shown 85% of the time.

TABLE 8

SUMMARY OF DRIVE-THROUGH QUEUING DATA COLLECTION
RAISING CANE'S - TYPICAL WEEKEND
AVERAGE, 85TH PERCENTILE, AND PEAK QUEUES

Time Period	Number of Drive-through Vehicles in the Queue					
	Average Queue		85th %-ile [1] Queue		Peak Queue	
	Santee	San Diego	Santee	San Diego	Santee	San Diego
Lunch						
11:00-11:15 AM	10.0	3.0	13.5	4.8	16	7
11:15-11:30 AM	14.4	5.3	18.0	6.0	19	7
11:30-11:45 AM	18.3	2.3	21.9	4.9	23	5
11:45-12:00 PM	20.5	3.6	21.0	4.0	22	6
12:00-12:15 PM	16.9	6.4	19.0	7.9	22	9
12:15-12:30 PM	20.7	6.9	22.0	9.0	22	9
12:30-12:45 PM	22.9	5.9	25.0	8.0	26	9
12:45-1:00 PM	23.1	10.5	24.0	12.9	25	15
1:00-1:15 PM	22.6	10.7	24.0	11.9	25	13
1:15-1:30 PM	21.5	11.3	23.0	12.0	26	12
1:30-1:45 PM	22.3	6.4	24.0	8.9	25	9
1:45-2:00 PM	19.9	7.4	22.0	9.0	23	10
Highest Value	23.1	11.3	25.0	12.9	26	15
Dinner						
4:00-4:15 PM	14.1	8.1	15.0	10.0	16	10
4:15-4:30 PM	15.5	4.7	16.0	7.0	17	8
4:30-4:45 PM	11.7	3.8	14.0	6.0	15	7
4:45-5:00 PM	17.5	4.2	20.9	5.0	21	6
5:00-5:15 PM	17.8	8.3	20.9	10.8	22	12
5:15-5:30 PM	18.3	4.5	20.9	7.0	21	7
5:30-5:45 PM	11.3	5.1	13.9	9.9	17	11
5:45-6:00 PM	19.1	9.5	20.0	10.9	21	11
6:00-6:15 PM	20.1	8.1	21.0	9.0	22	10
6:15-6:30 PM	20.3	4.2	22.0	6.9	23	7
6:30-6:45 PM	19.8	4.3	21.0	6.8	22	10
6:45-7:00 PM	18.9	5.3	20.0	6.0	20	8
Highest Value	20.3	9.5	22.0	10.9	23	12

Notes: [1] 85th percentile = The queue will be less than the queue shown 85% of the time.

General Observations

- At the Raising Cane's sites, spillovers outside the drive-through lane opening were observed to occur occasionally and to last briefly.

- Some customers were observed to pull into the site; evaluate the wait time, based on the vehicle queue; and choose to park and go into the building, rather than join the existing queue.

- Based on the drive-through queuing data, the average of the peak observed queues at both sites would be 20 vehicles and the average of the maximum peak queue at both sites would be 22 vehicles. The proposed site would have a drive-through queuing capacity of 15 vehicles.

- The site would have an additional on-site queuing capacity of 145 feet in the drive aisle connecting to Palm Avenue, and 120 feet in the drive aisle connecting to Ninth Street, resulting in an additional on-site queuing capacity of 265 feet, or 13 vehicles, assuming 20 feet per vehicle.

- The project site would have an on-site queuing capacity of 28 vehicles; therefore, the proposed capacity would be able to accommodate the expected peak demand.

- Spillover queuing may impact site ingress/egress, traffic circulation through the site, and temporarily block access to parking spaces. It is recommended that Raising Cane's work with the City to develop a Traffic Management Plan (TMP) to manage drive-through queuing during peak operating conditions.

Side-by-Side Operational Features

The proposed side-by-side configuration would begin with a two drive-through lanes at the northeast corner of the building. Each drive-through lane would have its own order board. After the order boards, the two lanes would merge back into one lane for the pay and pick-up window.

While regular customers who are familiar with the menu choices typically would complete the order part of the process in less than the average time, infrequent or new customers are more likely to dwell at the menu board before making their choices, slowing down the process for everyone behind them. As a result, the order board is considered to be the most significant bottleneck in the drive-through process.

The side-by-side ordering configuration, as proposed by Raising Cane's, would provide two lanes with a separate order board for each lane. This will increase the number of customers processed through the order board portion of the drive-through, and "keep the line moving" even if one customer takes a longer-than-average time to make their menu selections, allowing the restaurant to continue to take and complete orders from the other order lane.

The newest customer to arrive at the drive-through entrance will naturally choose the empty lane or the shorter line, so that one customer who takes a longer time to order at one order board can be by-passed, thereby not holding up the entire drive-through line.

With the added efficiency of having two order boards and the ability to by-pass customers taking a longer-than-average time to order at the other order board, the service rate would increase, compared to a single order board, as more orders can be processed. The cooks would receive the orders at a more efficient rate, which allows them to continue cooking the food, rather than waiting for the slower customer to finish ordering. Because of added efficiency in the cooking area, the efficiency at the pick-up window would increase, compared to a single drive-through lane, because the food would be processed by the cooking area at a more efficient rate.

Unique Features

Raising Cane's implements hand-held ordering which involves an employee using a hand-held tablet to take orders and payments in the line ahead of the order window. Hand-held ordering can be executed with three to five employees during the peak time periods. Employees will "leapfrog" one another in the drive-through lane, allowing orders to come in twice as fast. Hand-held ordering ensures accuracy of orders, allows more time for the kitchen to prepare the order prior to the customer reaching the pick-up window, and removes the payment process at the window. In addition to hand-held ordering Raising Cane's has implemented mobile ordering which helps to manage the drive-through queue.

Other unique features that assist Raising Cane's with processing vehicles efficiently through the drive-through include the following:

- A focused menu with limited items allows for efficient ordering
- On-site cameras that allow Raising Cane's to start preparing more food once they see vehicles parking or pulling into the drive-through

The unique features noted above allow Raising Cane's to process vehicles and prepare orders more efficiently, increases the number of customers that can be processed at the drive-through and decreases the amount of time customers spend in the drive-through.

ON-SITE PARKING ASSESSMENT

The proposed Project would provide 11 standard parking spaces, 3 of which will be used for mobile curbside pick-up, 3 EV/Vanpool parking spaces with EV charging stations, and 2 accessible parking spaces for a total of 16 parking spaces. The City of Imperial Beach Municipal Code Section 19.48.050 "Off-Street Parking – Required spaces – Standalone commercial and other uses" outlines the minimum number of parking spaces per square foot by land use. This section of the Municipal Code can be found in *Appendix E.* These requirements were used to determine the adequacy of the number of parking spaces within the project site and are shown in Table 9.

For drive-through establishments, one parking space is required for each 50 SF of net floor area. The parking analysis was based on the site's net seating area of 776 SF, resulting in a required number of spaces of 21. The project proposes to provide 16 parking spaces; resulting in a deficit of 5 parking spaces, compared to City code. The following parking analysis has been conducted to determine whether the proposed parking supply will adequately accommodate the parking demands of the project.

PARKING ANALYSIS

Parking Data Collection

To determine the adequacy of the proposed parking supply for the proposed project, parking data was collected at two existing Raising Cane's restaurants in San Diego County:

- 8867 Cuyamaca Street (Santee Site)
- 8223 Mira Mesa Boulevard (San Diego Site)

These locations were selected because they are within San Diego County, both are comparable in size to the proposed project, and both are located in a similar setting. The Santee Site and San Diego Site restaurant buildings are 4,473 square feet and 3,975 square feet, respectively.

Figure 11 provides an aerial image of the two comparable sites and their respective parking areas. The Santee Site has a parking supply of 34 spaces. The San Diego Site has a parking supply of 39 spaces.

Parking data collection was conducted in the parking areas of these two sites from 11:00 AM to 2:00 PM and 4:00 PM to 7:00 PM on Thursday, February 10, 2022, and Saturday February 12, 2022. The number of parked cars in each parking lot were counted and tabulated at the start of each hour. The parking data collection worksheets are provided in *Appendix F*. A summary of the parking data collected at the two sites is provided in Table 10.

Review of the parking data for the Santee Site indicates a peak of 33 parked vehicles at 4:00 PM on Thursday, February 10, 2022.

The parking data for the San Diego Site indicates a peak of 20 parked vehicles at 1:00 PM on Thursday, February 10, 2022.

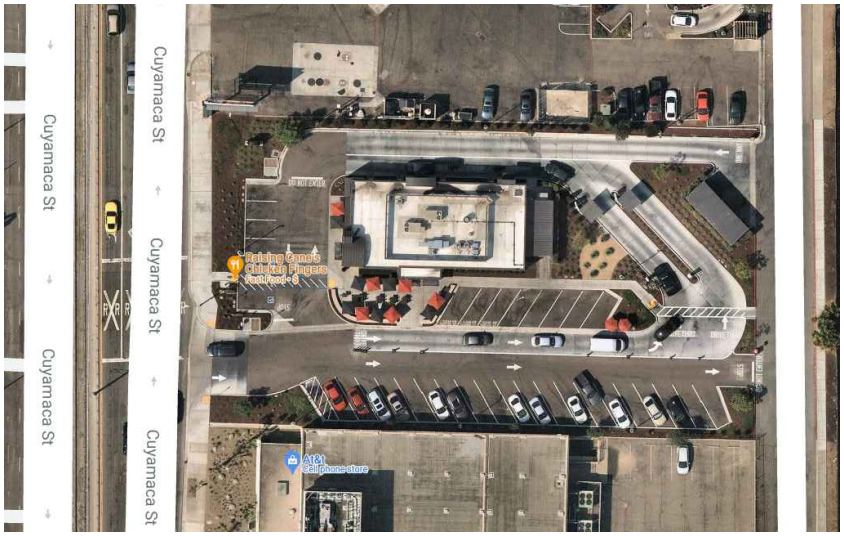
The two sites exhibited differences in parking accumulation patterns throughout the day, as well as differences in the number of occupied spaces compared to the size of the buildings. The differences in the parking patterns between the two sites could be the result of differences in a number of operating characteristics, size of workforce, shift schedules, etc.

Forecasted Parking Requirement for the Proposed Raising Canes

Actual parking demand ratios for the Santee and San Diego sites are derived by dividing the peak number of occupied parking spaces by the square footage of the building, as shown on Table 11. The derived parking ratios ranged between 7.837 parking spaces per thousand square feet (KSF) of building area for the Santee site, and 5.031 spaces per KSF for the San Diego site.

The number of parking spaces forecasted to be needed for the proposed project is then forecasted, based on the parking ratios derived from the collected parking data. Applying the peak observed parking ratio of 7.378 spaces per KSF to the proposed 1,918 square-foot facility would result in a forecasted parking need of 14 spaces. The on-site parking supply of 16 spaces would exceed the forecasted peak parking requirement for the project by 2 spaces, for a parking surplus of 14%. Based on the forecasted peak parking requirement, the proposed parking supply will adequately accommodate the parking demands of the proposed Raising Cane's project.

SANTEE SITE



NOT TO SCALE

SAN DIEGO SITE

FIGURE 11
COMPARABLE SITE LOCATIONS

TABLE 9
SUMMARY OF PARKING REQUIREMENTS
IMPERIAL BEACH RAISING CANE'S

Building / Use	Unit	Quantity/ Capacity	Parking Code [1]	Required Parking
Restaurant	SF	776	0.020	16
	Employees	10	0.500	5
	TOTAL Parking Required			21
	TOTAL Parking Provided			16
	Parking Surplus (Deficit)			(5)

[1] Source: City of Imperial Beach Municipal Code, Section 19.48.050

TABLE 10
IMPERIAL BEACH RAISING CANE'S PROJECT
SUMMARY OF PARKING DATA COLLECTION

Time		Occupied Parking Spaces	
		Santee Parking Supply: 34	San Diego Parking Supply: 39
Thursday, February 10, 2022	11:00 AM	21	7
	12:00 PM	28	9
	1:00 PM	30	20
	4:00 PM	33	9
	5:00 PM	24	8
	6:00 PM	27	11
Saturday, February 12, 2022	11:00 AM	24	8
	12:00 PM	31	15
	1:00 PM	26	16
	4:00 PM	27	8
	5:00 PM	28	14
	6:00 PM	24	11

TABLE 11
IMPERIAL BEACH RAISING CANE'S PROJECT
OBSERVED PARKING RATIOS AND
PARKING DEMAND FOR PROPOSED PROJECT

OBSERVED PARKING RATIOS					
Building	Area (KSF)	Tuesday 5/10		Wednesday 5/11	
		Peak Parking Demand	Parking Ratio per KSF	Peak Parking Demand	Parking Ratio per KSF
Santee Site	4.473	33	7.378	31	6.930
San Diego Site	3.975	20	5.031	16	4.025

FORECASTED PEAK PARKING DEMAND FOR PROPOSED RESTAURANT		
Proposed Raising Cane's SF: 1.918	Tuesday 5/10	Wednesday 5/11
Based on Santee Site Parking Ratio	14	13
Based on San Diego Site Parking Ratio	10	8
Estimated Parking Demand		14
Proposed Parking Supply		16
Parking Surplus (Deficit)		2
Parking Surplus (Deficit) Percentage of Required		14%

SITE ACCESS AND CIRCULATION

Direct vehicular access provisions for the project site would be provided via one existing full-movement driveway on Ninth Street and one existing right-in-right-out (RIRO) only driveway on Palm Avenue. Parking is accessed from the internal drive aisles. Vehicles have room to maneuver in and out of parking stalls and circulate internally to the site parking. The drive-through entrance and exit are separated from the parking aisle to eliminate potential drive-through queue impacts from blocking parking.

PEDESTRIAN AND BICYCLE CIRCULATION

There is an existing Class II Bike Lane on Palm Avenue east of Ninth Street. There are existing sidewalks along the project frontage and within the project vicinity on Palm Avenue and Ninth Street.

The project plans to provide pedestrian and bicycle access to the site via a proposed ADA walkway that connects directly to the existing sidewalk on Palm Avenue.

VEHICLE MILES TRAVELED (VMT) ANALYSIS

Senate Bill (SB) 743 was approved by the California legislature in September 2013, requiring changes to the California Environmental Quality Act (CEQA) methodology, specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "level of service" (LOS) for evaluating transportation projects. OPR published the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) in December 2018 providing recommendations for the preparation of transportation impact analysis under SB 743, suggesting Vehicle Miles Traveled (VMT) to replace LOS as the primary measure of transportation impacts.

The project includes a 1,918 square-foot fast-food restaurant with drive-through. The projects listed in Table 7-1 of City of Imperial Beach's *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020) are presumed to be considered VMT-reducing projects. The projects listed are either locally serving or are based on substantial evidence provided by the Office of Planning and Research (OPR) Technical Advisory Committee supporting SB 743 implementation. The Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) identifies that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce vehicle miles traveled (VMT).

The City of Imperial Beach *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020) provides guidance on VMT screening criteria for projects.

The City guidelines specify that a project shall be screened out if it satisfies any of the following criteria:

- Transit Priority Area (TPA) Screening
- Smart Growth Opportunity Area Screening
- Low VMT Area Screening

VEHICLE MILES TRAVELED (VMT) ANALYSIS

Transit Priority Area (TPA) Screening

Projects located within a TPA must be able to access the transit station within a ½ mile walking distance of 6-minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 217). A high-quality transit corridor may also be considered if a corridor with fixed route bus service intervals no longer than 15 minutes during peak commute hours (OPR, 2017). Based on the Transit Priority Area (TPA) map provided in Appendix B of the City's guidelines, the project is located within a TPA, therefore, the TPA Screening threshold is met.

Smart Growth Opportunity Area Screening

Based on the Smart Growth Opportunity Area map provided in Appendix B of the City's guidelines, the project is located within a Mixed-Use Transit Corridor of the Smart Growth Opportunity Area, therefore, the Smart Growth Opportunity Area Screening is met.

Low VMT Area Screening

A project can be identified as being located in a Low VMT Area if the project is located in an area with a regional mean of less than 85%. Review of the SANDAG VMT Screening Map indicates the project is located in an area with a regional mean of 86%, therefore, the Low VMT Area Screening is not met.

Generally, retail development including stores less than 50,000 square feet is considered local serving. The proposed project is less than 50,000 square feet and is not anticipated to lead to longer trips; thus, reducing VMT.

Based on the project being located in a Transit Priority Area, Smart Growth Opportunity Area, as well as being considered local serving retail, the project would be screened out of a VMT analysis. The City may presume such development creates a less than significant transportation impact; therefore, no further VMT analysis is required.

APPENDIX A

SCOPING AGREEMENT

PROJECT INFORMATION FORM (PIF)

THE FOLLOWING IS TO BE COMPLETED BY THE PROJECT APPLICANT:

PROJECT INFORMATION FORM			
1.	**PROJECT DESCRIPTION:** 1,918-square-foot restaurant building with a drive-through facility		
2.	**PROJECT LOCATION:** NEC of Palm Ave. and Ninth St.		
3.	**LAND USE:** Commercial - City of Imperial Beach General Plan **SIZE/DENSITY:** _____		
4.	**ZONING AND LAND USE CONSISTENT WITH ADOPTED GENERAL PLAN?**	☑ Yes	☐ No
5.	**PROJECT LOCATED IN TRANSIT PRIORITY AREA[1] , SMART GROWTH OPPORTUNITY AREA[2], OR LOW VMT AREA[3]?**	☑ Yes	☐ No
6.	**PROJECT TRIP GENERATION:** 347 **ADT** (net new)	☐ < 200 ADT ☑ ≥ 200 ADT ☐ ≥ 1,000 ADT ☐ ≥ 2,400 ADT	
	ATTACHMENTS		
A.	**PROJECT LOCATION MAP**	☑ Attached	
B.	**PROJECT TRIP DISTRIBUTION**	☑ Attached	
C.	**PROJECT TRIP ASSIGNMENT**	☑ Attached	

1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017). See Appendix B.
(2) See Appendix B.
(3) Based on the most recent SANDAG SB 743 Screening Map. Example shown in Appendix C.

TO BE COMPLETED BY CITY STAFF AND RETURNED TO PROJECT APPLICANT

PROJECT STUDY REQUIREMENTS				
1)	**Does the project require a CEQA VMT analysis?** **A. If yes, does the project require a SANDAG Model Run?**	☐ Yes ☐ Yes	☐ No ☐ No	☐ Incomplete[(1)]
2a)	**Does the project require a Local Transportation Study?**	☐ Yes	☐ No	☐ Incomplete[(1)]
	OR			
2b)	**Does the project require a Local Transportation Assessment?**	☐ Yes	☐ No	☐ Incomplete[(1)]

[(1)] Incomplete application or additional information is needed to determine study requirements.

Kimley»Horn

February 23, 2022

Ms. Meagan Openshaw
Senior Planner
City of Imperial Beach
825 Imperial Beach Boulevard
Imperial Beach, CA 91932

RE: *Scoping Letter Agreement for a Local Transportation Assessment (LTA) for the Proposed Raising Cane's Project in the City of Imperial Beach*

Dear Ms. Openshaw:

Kimley-Horn and Associates, Inc. is submitting this Scoping Letter Agreement to the City of Imperial Beach to provide a Local Transportation Assessment (LTA) for the proposed Raising Cane's Project in the City of Imperial Beach. The proposed LTA scope for the project is presented below.

PROJECT DESCRIPTION

The project site is located on the northeast corner of Ninth Street and Palm Avenue in the City of Imperial Beach. The project site is currently occupied by an approximately 4,867-square-foot bank building. The project will involve the demolition of the existing commercial bank building and the construction of a 1,918-square-foot Raising Cane's restaurant building with a drive-through. The operating hours for walk-in and drive-through service will be from 9:00 am to 3:30 am Monday through Sunday. A copy of the project site plan is provided on Attachment 1.

Vehicular access provisions for the project site would be provided via the one existing full-movement driveway on Ninth Street and one existing right-in-right-out (RIRO) only driveway on Palm Avenue. All project driveways would be unsignalized.

SCOPE OF TRAFFIC IMPACT STUDY

This scope is based on the City of Imperial Beach *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020).

Trip Generation

Trip generation estimates for the existing bank and proposed Raising Cane's restaurant are based on the SANDAG *Brief Guide of Vehicular Traffic Generation rates for the San Diego Region* (April 2002). Pass-by reduction factors were applied to the existing and proposed land uses.

The trip rates and the estimated trip estimates for the existing and proposed uses are shown in Attachment 2. After applying pass-by reduction factors and existing use credit, the project is estimated to generate approximately 347 net new vehicle trips on a daily basis, with 16 net new trips in the Midday peak hour, and 21 net fewer trips in the PM peak hour. The project will not be open during the AM peak hour.

Trip Distribution

Project distribution assumptions were developed based on existing travel patterns, and the likely origins and destinations of site employees and patrons. Trip distribution assumptions are shown on Attachment 3.

Study Scenarios

- Existing Conditions
- Existing Plus Project
- Opening Year 2023 (Existing + Ambient Growth + Cumulative Projects)
- Opening Year 2023 Plus Project

Suggested Study Area

The following is a list of suggested study intersections to be included in the study, as shown on Attachment 3 (previously mentioned):

1. Palm Avenue at Ninth Street (signalized)
D1. Palm Avenue at Project Driveway 1 (unsignalized)
D2. Ninth Street at Project Driveway 2 (unsignalized)

Historic traffic counts conducted within the last two years shall be used. If historic counts are unavailable, new counts will be conducted.

Level of Service Methodology

Peak hour intersection operations at signalized and unsignalized intersections were evaluated using the methods prescribed in the Highway Capacity Manual (HCM) 6th Edition, consistent with the requirements of the City of Imperial Beach. The City of Imperial Beach Level of Service standard for intersection operation is Level of Service D or better. If the project traffic causes operations at an intersection to go from acceptable to unacceptable, the project would have a significant effect at the intersection.

Site Access and Circulation

Project site access and circulation for vehicular, pedestrian, bicycle, and transit connection will be evaluated. The evaluation will review the Project's connection with nearby transit stops, bicycle infrastructure for both directions on all roads adjacent to the Project, and pedestrian facilities surrounding the Project.

VMT Approach

The project includes a 1,918 square-foot fast-food restaurant with drive-through. The projects listed in Table 7-1 of City of Imperial Beach's *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020) are presumed to be considered VMT-reducing projects. The projects listed are either locally serving or are based on substantial evidence provided by the Office of Planning and Research (OPR) Technical Advisory Committee supporting SB 743 implementation. The Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) identifies that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce vehicle miles traveled (VMT).

The City of Imperial Beach *Transportation Impact Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (October 2020) provides guidance on VMT screening criteria for projects. The City guidelines specify that a project shall be screened out if it satisfies any of the following criteria:

- Transit Priority Area (TPA) Screening
- Smart Growth Opportunity Area Screening
- Low VMT Area Screening

Transit Priority Area (TPA) Screening

Projects located within a TPA must be able to access the transit station within a ½ mile walking distance of 6-minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either bus or rail transit service, or the intersection of two or more major us routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 217). A high-quality transit corridor may also be considered if a corridor with fixed route bus service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).

Based on the Transit Priority Area (TPA) map provided in Appendix B of the City's guidelines, the project is located within a TPA, therefore, the TPA Screening threshold is met.

Smart Growth Opportunity Area Screening

Based on the Smart Growth Opportunity Area map provided in Appendix B of the City's guidelines, the project is located within a Mixed-Use Transit Corridor of the Smart Growth Opportunity Area, therefore, the Smart Growth Opportunity Area Screening is met.

Low VMT Area Screening

A project can be identified as being located in a Low VMT Area if the project is located in an area with a regional mean of less than 85%. Review of the SANDAG VMT Screening Map indicates the project is located in an area with a regional mean of 86%, therefore, the Low VMT Area Screening is not met.

Generally, retail development including stores less than 50,000 square feet is considered local serving. The proposed project is less than 50,000 square feet and is not anticipated to lead to longer trips; thus, reducing VMT.

Based on the project being located in a Transit Priority Area, Smart Growth Opportunity Area, as well as being considered local serving retail, the project would be screened out of a VMT analysis. The City may presume such development creates a less than significant transportation impact; therefore, no further VMT analysis is required.

Drive-Through Queuing Analysis

A drive-through queuing analysis will be conducted for the proposed project, to evaluate the adequacy of the proposed drive-through lane queuing capacity. The opening to the drive-through lane would be located at the northeast corner of the proposed building and would wrap along the north, west, and south sides of the building. The drive-through would provide two side-by-side entry lanes and two order boards, which would allow Raising Cane's to take orders from two customers at the same time. After the order boards, the two lanes would merge back into a single drive-through lane prior to the pay and pick-up window. There will be approximately 100 feet of total queuing lane capacity (approximately 50 feet per lane) from the opening of the two drive-through lanes to the two order boards and approximately 100 feet from the order boards to the pick-up window. This would provide a total drive-through queue length of approximately 200 feet, for a drive-through queuing capacity of 10 vehicles, assuming 20 feet per vehicle, from the beginning of the drive-through lanes to the pick-up window.

It should be noted that under peak drive-through conditions the project site would allow for an additional pay and pick-up lane, which would provide an additional queue length of 100 feet, or 5 vehicles. Overall, the project site provides a total queuing capacity of 300 feet, for a drive-through queuing capacity of 15 vehicles.

Drive-through queuing will be compared to empirical data collected at two existing Raising Cane's restaurants during the weekday and weekend lunch (11am-2pm) and dinner periods (4pm-7pm). Based on correspondence with City staff, empirical drive-through queuing data will be collecting at the following Raising Cane's locations:

- City of Santee: 8867 Cuyamaca Street
  - See Attachment 4A for aerial image
  - ~4,473-square-foot (SF) building
  - DT Lane Capacity: 24 vehicles
- City of San Diego: 8223 Mira Mesa Boulevard
  - See Attachment 4B for aerial image
  - ~3,975-SF building
  - DT Lane Capacity: 18 vehicles

Please contact me if you have any questions or comments.

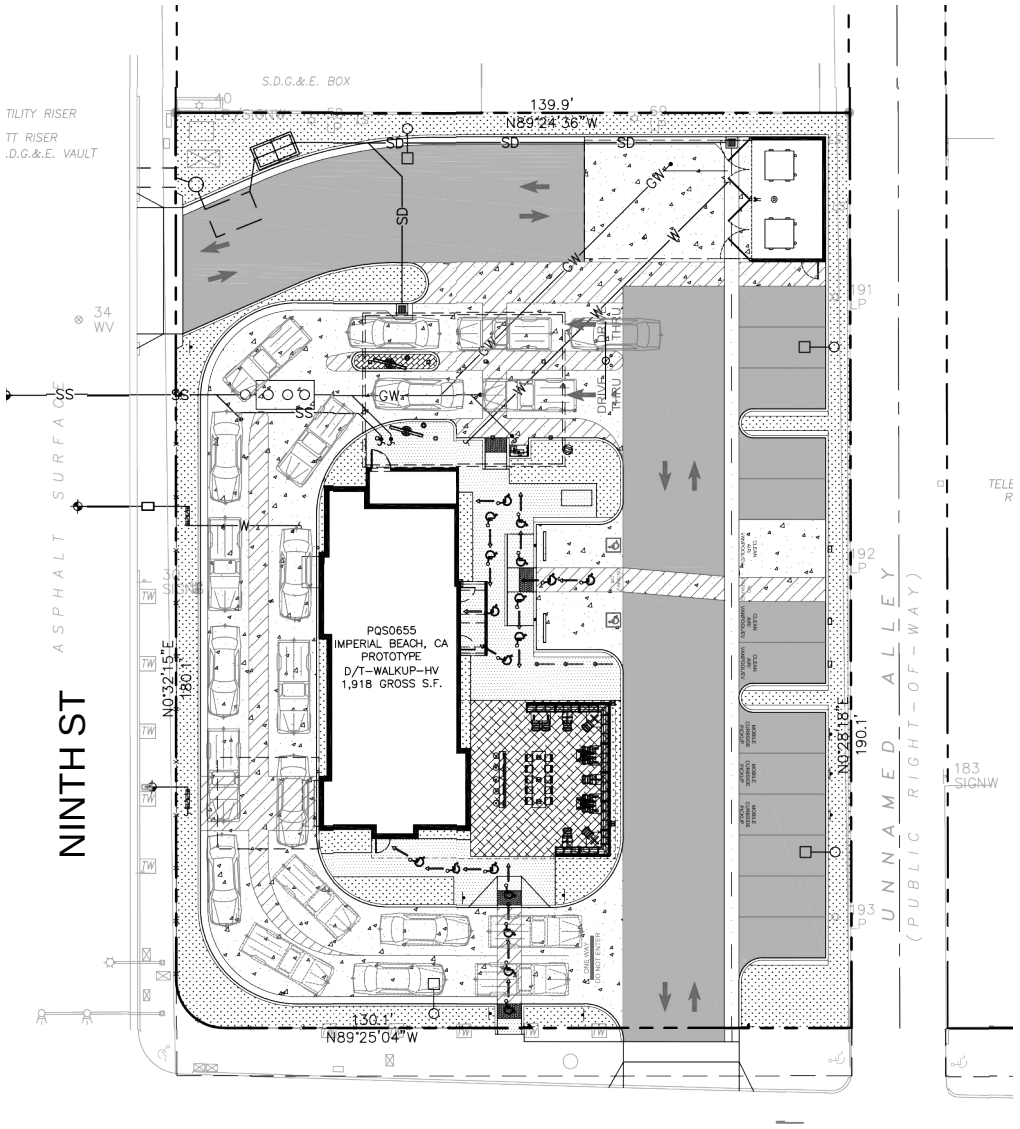
Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Trevor Briggs, P.E.
Project Engineer

APPROVED:

By: _____.
Meagan Openshaw
Senior Planner, City of Imperial Beach



ATTACHMENT 1
PROJECT SITE PLAN

Kimley»Horn

ATTACHMENT 2
SUMMARY OF PROJECT TRIP GENERATION
IMPERIAL BEACH RAISING CANE'S

Land Use	SANDAG Code	Unit	Trip Generation Rates [1]						
			Daily	Midday Peak Hour [2]			PM Peak Hour		
				In	Out	Total	In	Out	Total
Bank with Drive-Through	222	KSF	200.000	6.000	4.000	10.000	10.000	10.000	20.000
Fast-Food Restaurant w/ Drive-thru	396	KSF	650.000	22.750	22.750	45.500	22.750	22.750	45.500

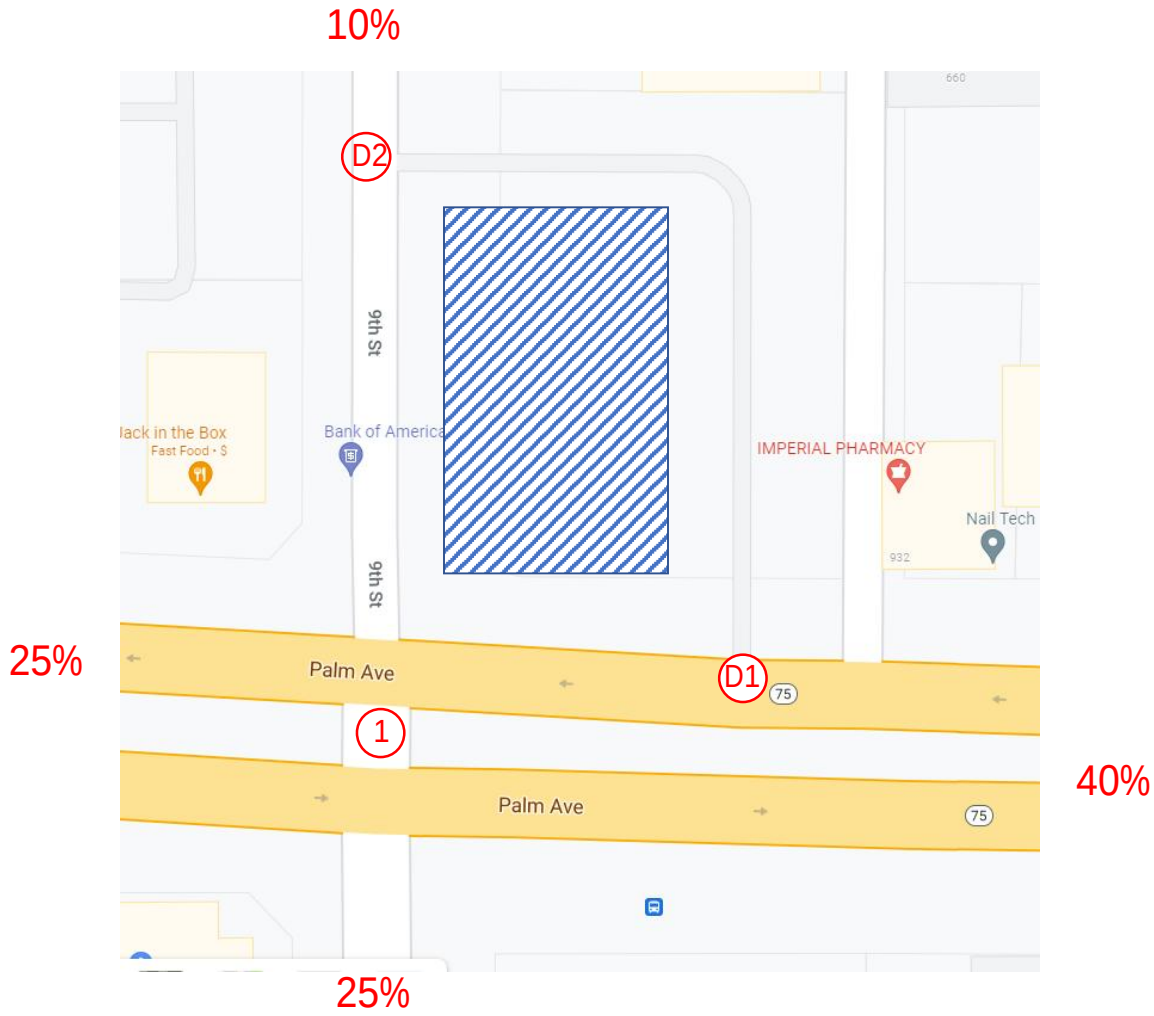
Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	Midday Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
EXISTING USE									
Bank with Drive-Through	4.867	KSF	974	29	20	49	49	49	97
Pass-by Trips (23% Daily; 25% MD; 25% PM) [3]			-224	-7	-5	-12	-12	-12	-24
Total Existing Trips			750	22	15	37	37	36	73
PROPOSED USE									
Fast-Food Restaurant w/ Drive-thru	1.918	KSF	1,247	44	44	87	44	44	87
Pass-by Trips (12% Daily; 40% MD; 40% PM) [3]			-150	-18	-18	-35	-18	-18	-35
Total Net Trips for Proposed Conditions			1,097	26	26	52	26	26	52
Net Difference (Proposed Minus Existing)			347	4	12	16	-10	-10	-21

[1] Source: SANDAG Brief Guide of Vehicular Traffic Generation rates for the San Diego Region

[2] AM Peak Hour of Generator average rate used for Midday Peak Hour

[3] Source: SANDAG Brief Guide of Vehicular Traffic Generation rates for the San Diego Region

ATTACHMENT 3 – STUDY AREA AND TRIP DISTRIBUTION



Legend:

= Project Site

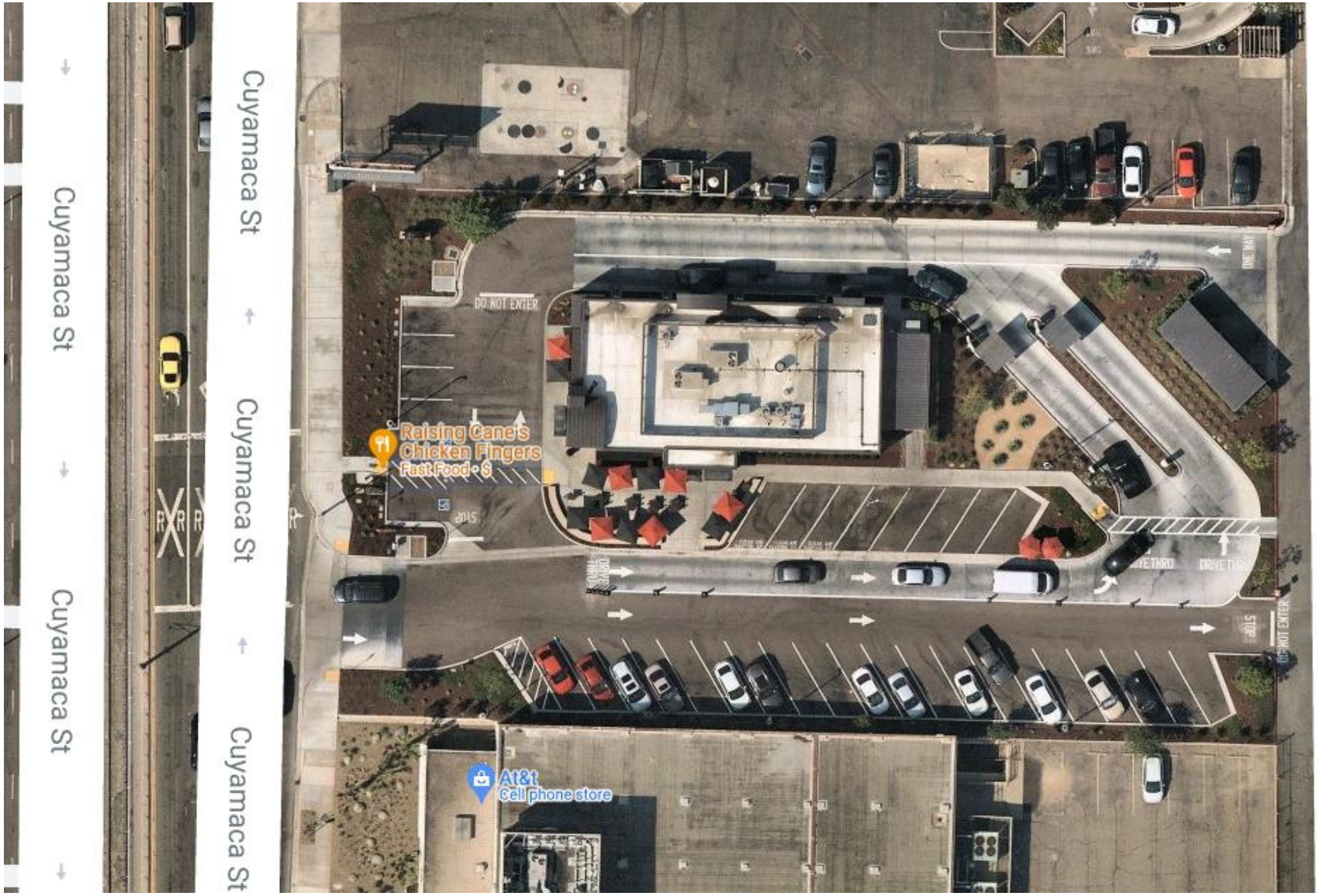
= Study Intersection

XX% = Trip Distribution

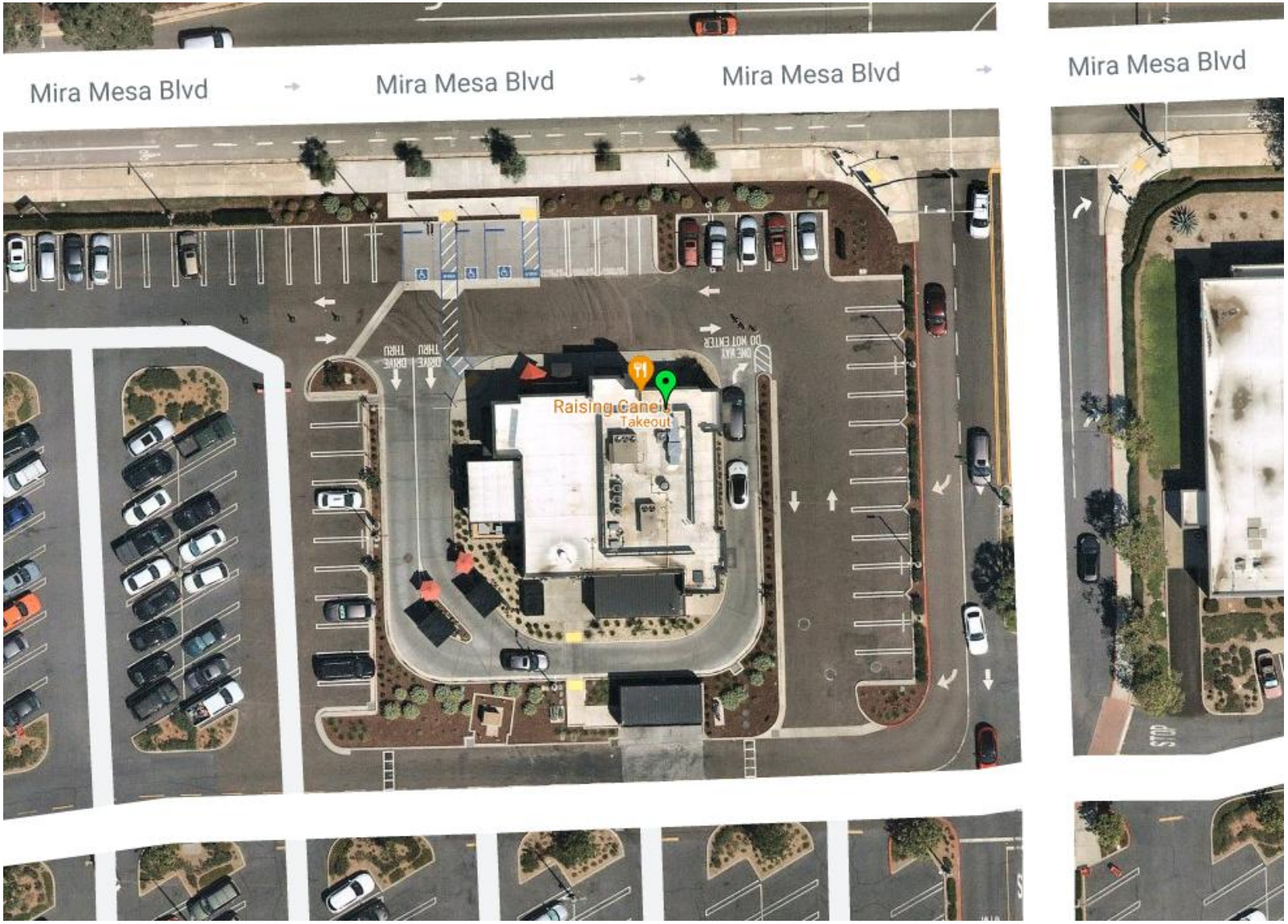
Study Intersections:

1. Palm Avenue at Ninth Street
D1. Palm Avenue at Project Driveway 1
D2. Ninth Street at Project Driveway 2

ATTACHMENT 4A – DRIVE-THROUGH SURVEY SITE (8867 CUYAMACA STREET)



ATTACHMENT 4B – DRIVE-THROUGH SURVEY SITE (8223 MIRA MESA BOULEVARD)



APPENDIX **B**

TRAFFIC DATA COLLECTION SHEETS

National Data & Surveying Services Intersection Turning Movement Count

Location: 9th St & Palm Ave
City: Imperial Beach
Control: Signalized

Project ID: 22-040016-001
Date: 2/3/2022

Data - Totals

NS/EW Streets:	9th St				9th St				Palm Ave				Palm Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	43	11	19	0	20	10	3	0	0	103	7	3	15	289	6	1	530
7:15 AM	60	14	28	0	21	25	6	0	4	169	15	2	17	425	11	3	800
7:30 AM	61	14	50	0	19	7	8	0	11	157	22	4	15	307	13	0	688
7:45 AM	55	13	39	0	29	20	1	0	6	141	13	5	27	385	15	6	755
8:00 AM	74	24	32	0	22	27	8	0	6	112	18	5	29	321	17	8	703
8:15 AM	56	17	37	0	19	13	7	0	3	145	17	5	27	418	14	7	785
8:30 AM	57	18	32	0	22	12	6	0	2	133	19	7	23	323	20	5	679
8:45 AM	44	12	26	0	21	8	8	0	1	130	15	5	31	289	18	12	620
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	450	123	263	0	173	122	47	0	33	1090	126	36	184	2757	114	42	5560
APPROACH %'s :	53.83%	14.71%	31.46%	0.00%	50.58%	35.67%	13.74%	0.00%	2.57%	84.82%	9.81%	2.80%	5.94%	89.02%	3.68%	1.36%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	250	65	149	0	91	79	23	0	27	579	68	16	88	1438	56	17	2946
PEAK HR FACTOR :	0.845	0.677	0.745	0.000	0.784	0.731	0.719	0.000	0.614	0.857	0.773	0.800	0.759	0.846	0.824	0.531	0.921
	0.892				0.846				0.889				0.877				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	38	13	31	0	24	19	3	0	7	159	22	1	24	159	18	6	524
11:15 AM	26	8	30	0	30	7	3	0	9	178	12	3	16	177	19	4	522
11:30 AM	42	18	19	0	26	12	5	0	9	170	17	6	25	163	29	6	547
11:45 AM	28	10	30	0	20	15	8	0	6	175	19	8	27	213	27	4	590
12:00 PM	50	13	38	0	27	17	8	0	7	193	25	14	25	157	21	8	603
12:15 PM	35	15	26	0	34	15	3	0	10	187	26	2	30	199	25	5	612
12:30 PM	39	20	30	0	35	21	4	0	13	173	20	3	22	190	27	4	601
12:45 PM	40	20	30	0	35	21	5	0	13	159	24	4	36	182	29	5	603
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	298	117	234	0	231	127	39	0	74	1394	165	41	205	1440	195	42	4602
APPROACH %'s :	45.92%	18.03%	36.06%	0.00%	58.19%	31.99%	9.82%	0.00%	4.42%	83.27%	9.86%	2.45%	10.89%	76.51%	10.36%	2.23%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	164	68	124	0	131	74	20	0	43	712	95	23	113	728	102	22	2419
PEAK HR FACTOR :	0.820	0.850	0.816	0.000	0.936	0.881	0.625	0.000	0.827	0.922	0.913	0.411	0.785	0.915	0.879	0.688	0.988
	0.881				0.922				0.913				0.931				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	40	19	30	0	29	17	5	0	15	337	49	5	29	173	19	7	774
4:15 PM	29	17	30	0	28	19	3	0	8	377	53	6	30	166	23	3	792
4:30 PM	28	13	30	0	41	27	7	0	7	337	55	4	33	141	22	3	748
4:45 PM	26	21	23	0	26	25	4	0	9	307	53	4	27	157	24	6	712
5:00 PM	18	15	36	0	30	22	3	0	12	293	41	6	41	168	26	5	716
5:15 PM	27	16	22	0	28	19	3	0	10	250	40	3	34	168	18	5	643
5:30 PM	22	14	31	0	15	20	4	0	9	240	42	6	32	153	15	5	608
5:45 PM	26	12	17	0	24	20	5	0	14	239	29	5	28	147	17	6	589
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	216	127	219	0	221	169	34	0	84	2380	362	39	254	1273	164	40	5582
APPROACH %'s :	38.43%	22.60%	38.97%	0.00%	52.12%	39.86%	8.02%	0.00%	2.93%	83.07%	12.64%	1.36%	14.67%	73.54%	9.47%	2.31%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	123	70	113	0	124	88	19	0	39	1358	210	19	119	637	88	19	3026
PEAK HR FACTOR :	0.769	0.833	0.942	0.000	0.756	0.815	0.679	0.000	0.650	0.901	0.955	0.792	0.902	0.921	0.917	0.679	0.955
	0.860				0.770				0.916				0.946				

National Data & Surveying Services Intersection Turning Movement Count

Location: 9th St & Palm Ave
City: Imperial Beach
Control: Signalized

Project ID: 22-040016-001
Date: 2/3/2022

Data - Bikes

NS/EW Streets:	9th St				9th St				Palm Ave				Palm Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
7:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	0	3	0	0	1	0	0	2	0	0	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	3	0	0	1	0	0	2	0	0	0	7
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.875
	0.250				0.750				0.250				0.250				

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
12:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2	1	0	0	1	0	0	1	5	2	0	0	2	1	0	15
APPROACH %'s :	0.00%	66.67%	33.33%	0.00%	0.00%	100.00%	0.00%	0.00%	12.50%	62.50%	25.00%	0.00%	0.00%	66.67%	33.33%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	1	0	0	1	0	0	1	3	2	0	0	1	0	0	9
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.250	0.750	0.500	0.000	0.000	0.250	0.000	0.000	0.750
	0.250				0.250				0.500				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	3
4:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	2	1	0	7
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:15 PM	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	2	1	0	1	1	1	0	5	3	0	0	2	2	1	0	23
APPROACH %'s :	57.14%	28.57%	14.29%	0.00%	33.33%	33.33%	33.33%	0.00%	62.50%	37.50%	0.00%	0.00%	40.00%	40.00%	20.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	3	1	1	0	1	1	0	0	3	1	0	0	2	2	1	0	16
PEAK HR FACTOR :	0.375	0.250	0.250	0.000	0.250	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.250	0.250	0.250	0.000	0.571
	0.417				0.250				0.333				0.250				

National Data & Surveying Services Intersection Turning Movement Count

Location: 9th St & Palm Ave
City: Imperial Beach

Project ID: 22-040016-001
Date: 2/3/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	9th St		9th St		Palm Ave		Palm Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	1	0	0	1	0	5	8
7:15 AM	0	1	0	0	0	0	1	9	11
7:30 AM	1	3	0	1	1	4	0	8	18
7:45 AM	0	1	0	0	0	0	1	2	4
8:00 AM	2	1	0	0	1	1	3	2	10
8:15 AM	1	0	0	1	1	1	2	1	7
8:30 AM	2	0	0	3	0	4	1	4	14
8:45 AM	0	5	2	0	6	0	0	3	16
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	6	12	3	5	9	11	8	34	88
APPROACH %'s :	33.33%	66.67%	37.50%	62.50%	45.00%	55.00%	19.05%	80.95%	
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	3	6	0	1	2	5	5	21	43
PEAK HR FACTOR :	0.375	0.500		0.250	0.500	0.313	0.417	0.583	0.597
	0.563		0.250		0.350		0.650		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	0	1	4	0	0	0	3	4	12
11:15 AM	0	3	5	2	1	0	4	3	18
11:30 AM	0	1	2	0	1	0	4	3	11
11:45 AM	2	1	2	4	1	3	1	2	16
12:00 PM	2	4	2	2	2	0	1	7	20
12:15 PM	0	0	6	2	1	1	5	0	15
12:30 PM	1	3	3	1	0	1	0	3	12
12:45 PM	0	1	6	1	0	0	7	7	22
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	5	14	30	12	6	5	25	29	126
APPROACH %'s :	26.32%	73.68%	71.43%	28.57%	54.55%	45.45%	46.30%	53.70%	
PEAK HR :	12:00 PM - 01:00 PM								TOTAL
PEAK HR VOL :	3	8	17	6	3	2	13	17	69
PEAK HR FACTOR :	0.375	0.500	0.708	0.750	0.375	0.500	0.464	0.607	0.784
	0.458		0.719		0.625		0.536		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	4	6	0	2	0	1	2	1	16
4:15 PM	1	0	2	2	0	2	2	3	12
4:30 PM	2	2	1	0	2	1	5	4	17
4:45 PM	1	0	1	1	1	3	4	4	15
5:00 PM	1	0	10	3	3	0	3	6	26
5:15 PM	2	0	5	3	0	0	11	12	33
5:30 PM	1	0	4	3	0	2	7	2	19
5:45 PM	0	1	6	0	0	0	9	5	21
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	12	9	29	14	6	9	43	37	159
APPROACH %'s :	57.14%	42.86%	67.44%	32.56%	40.00%	60.00%	53.75%	46.25%	
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	8	8	4	5	3	7	13	12	60
PEAK HR FACTOR :	0.500	0.333	0.500	0.625	0.375	0.583	0.650	0.750	0.882
	0.400		0.563		0.625		0.694		

Prepared by National Data & Surveying Services

9th St & Palm Ave

Peak Hour Turning Movement Count

ID: 22-040016-001
City: Imperial Beach

Day: Thursday
Date: 2/3/2022

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	12:00 PM - 01:00 PM
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	11:00 AM - 01:00 PM
PM	4:00 PM - 06:00 PM

SOUTHBOUND (9th St)

AM	23	79	91	0	148	AM
NOON	20	74	131	0	213	NOON
PM	19	88	124	0	197	PM

EASTBOUND (Palm Ave)

AM	NOON	PM		
1727	935	798	⇦	
16	23	19	↩	0
27	43	39	↱	1
579	712	1358	→	3
68	95	210	↴	0
AM	NOON	PM		

WESTBOUND (Palm Ave)

PM	NOON	AM		
88	102	56	↰	1
637	728	1438	←	3
119	113	88	↰	1
19	22	17	↩	0
1614	989	836	⇨	
PM	NOON	AM		

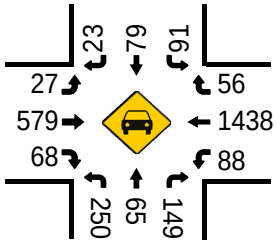
NORTHBOUND (9th St)

PM	417	0	123	70	113	PM
NOON	282	0	164	68	124	NOON
AM	235	0	250	65	149	AM

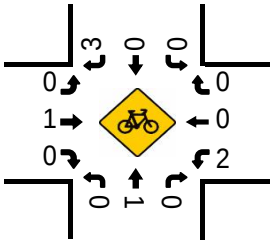
⇩	0	1	1	0
	↰	↰	↑	↱

CONTROL			
Signalized			
TEV	2946	2419	3026
	AM	NOON	PM
PHF	0.92	0.99	0.96

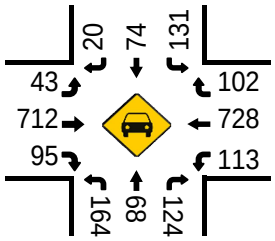
Totals (AM)



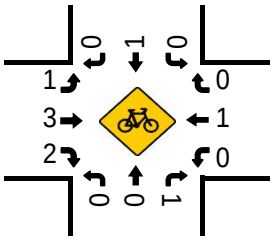
Total Bikes (AM)



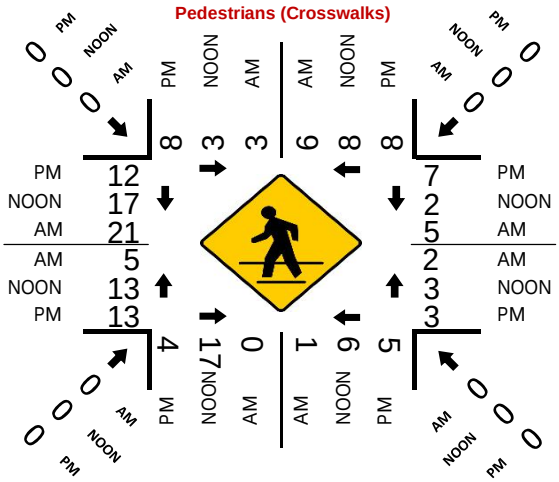
Totals (NOON)



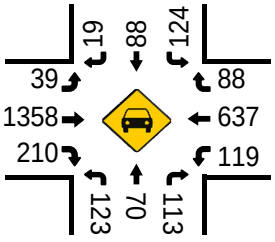
Total Bikes (NOON)



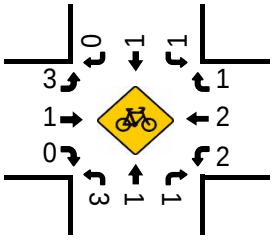
Pedestrians (Crosswalks)



Totals (PM)



Total Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: 9th St & N/O Palm Ave/Union Bank/ Imperial Beach Promenade
City: Imperial Beach
Control: No Control

Project ID: 22-040016-002
Date: 2/3/2022

Data - Totals

NS/EW Streets:	9th St				9th St				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	11	0	0	0	29	0	0	0	0	1	0	0	0	0	0	45
7:15 AM	7	20	0	0	0	45	1	0	0	0	1	0	0	0	0	0	74
7:30 AM	2	29	0	0	0	29	0	0	0	0	1	0	0	0	0	0	61
7:45 AM	8	28	0	0	0	45	1	0	0	0	6	0	0	0	0	0	88
8:00 AM	13	23	0	0	0	51	0	0	2	0	3	0	0	0	0	0	92
8:15 AM	8	20	0	0	0	30	0	0	0	0	3	0	0	0	0	0	61
8:30 AM	13	23	0	1	0	21	0	0	0	0	8	0	0	0	0	0	66
8:45 AM	13	23	0	0	0	25	0	0	0	0	7	0	0	0	0	0	68
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	68	177	0	1	0	275	2	0	2	0	30	0	0	0	0	0	555
APPROACH %'s :	27.64%	71.95%	0.00%	0.41%	0.00%	99.28%	0.72%	0.00%	6.25%	0.00%	93.75%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	30	100	0	0	0	170	2	0	2	0	11	0	0	0	0	0	315
PEAK HR FACTOR :	0.577	0.862	0.000	0.000	0.000	0.833	0.500	0.000	0.250	0.000	0.458	0.000	0.000	0.000	0.000	0.000	0.856
	0.903				0.843				0.542								

NS/EW Streets:	9th St				9th St				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	9	18	0	1	0	21	0	0	0	0	11	0	0	0	0	0	60
11:15 AM	14	31	0	0	0	22	1	0	5	0	17	0	0	0	0	0	90
11:30 AM	21	22	0	1	0	24	1	0	1	0	6	0	0	0	0	0	76
11:45 AM	22	20	0	0	0	28	2	0	0	0	16	0	0	0	0	0	88
12:00 PM	20	21	0	0	0	28	1	0	0	0	13	0	0	0	0	0	83
12:15 PM	16	32	0	0	0	25	0	0	4	0	15	0	0	0	0	0	92
12:30 PM	15	36	0	0	0	34	0	0	1	0	19	0	0	0	0	0	105
12:45 PM	31	25	0	0	0	27	2	0	0	0	31	0	0	0	0	0	116
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	148	205	0	2	0	209	7	0	11	0	128	0	0	0	0	0	710
APPROACH %'s :	41.69%	57.75%	0.00%	0.56%	0.00%	96.76%	3.24%	0.00%	7.91%	0.00%	92.09%	0.00%					
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	82	114	0	0	0	114	3	0	5	0	78	0	0	0	0	0	396
PEAK HR FACTOR :	0.661	0.792	0.000	0.000	0.000	0.838	0.375	0.000	0.313	0.000	0.629	0.000	0.000	0.000	0.000	0.000	0.853
	0.875				0.860				0.669								

NS/EW Streets:	9th St				9th St				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	20	35	0	0	0	30	0	0	2	0	10	0	0	0	0	0	97
4:15 PM	18	18	0	0	0	29	0	0	2	0	14	0	0	0	0	0	81
4:30 PM	9	26	0	0	0	45	0	1	1	0	28	0	0	0	0	0	110
4:45 PM	22	36	0	1	0	28	1	0	0	0	11	0	0	0	0	0	99
5:00 PM	12	32	0	1	0	24	1	0	1	0	14	0	0	0	0	0	85
5:15 PM	11	31	0	0	0	26	2	0	0	0	11	0	0	0	0	0	81
5:30 PM	11	20	0	1	0	22	0	0	1	0	11	0	0	0	0	0	66
5:45 PM	12	25	0	2	0	24	1	0	2	0	13	0	0	0	0	0	79
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	115	223	0	5	0	228	5	1	9	0	112	0	0	0	0	0	698
APPROACH %'s :	33.53%	65.01%	0.00%	1.46%	0.00%	97.44%	2.14%	0.43%	7.44%	0.00%	92.56%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	69	115	0	1	0	132	1	1	5	0	63	0	0	0	0	0	387
PEAK HR FACTOR :	0.784	0.799	0.000	0.250	0.000	0.733	0.250	0.250	0.625	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.880
	0.784				0.728				0.586								

National Data & Surveying Services Intersection Turning Movement Count

Location: 9th St & N/O Palm Ave/Union Bank/ Imperial Beach Promenade
City: Imperial Beach
Control: No Control

Project ID: 22-040016-002
Date: 2/3/2022

Data - Bikes

NS/EW Streets:	9th St				9th St				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				N/O Palm Ave/Union Bank/ Imperial Beach Promenade				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
	0.250				0.250												

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	0	1	0	2	0	0	0	0	0	0	0	0	0	0	6
APPROACH %'s :	0.00%	75.00%	0.00%	25.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
	0.250				0.250												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	5	0	0	0	1	2	0	0	0	1	0	0	0	0	0	9
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
PEAK HR FACTOR :	0.000	0.375	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.313
	0.375				0.250				0.250								

National Data & Surveying Services Intersection Turning Movement Count

Location: 9th St & N/O Palm Ave/Union Bank/ Imperial Beach Promenade Project ID: 22-040016-002
City: Imperial Beach Date: 2/3/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	9th St		9th St		N/O Palm Ave/Union Bank/ Imperial Beach		N/O Palm Ave/Union Bank/ Imperial Beach		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	7	7
7:15 AM	0	0	0	0	0	0	0	3	3
7:30 AM	0	0	0	0	0	0	0	3	3
7:45 AM	0	0	0	0	0	0	1	0	1
8:00 AM	0	0	0	0	1	1	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	1	0	0	0	0	1	2
8:45 AM	0	1	0	1	0	0	0	1	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	1	1	1	1	1	1	15	21
APPROACH %'s :	0.00%	100.00%	50.00%	50.00%	50.00%	50.00%	6.25%	93.75%	
PEAK HR :	07:15 AM - 08:15 AM								TOTAL
PEAK HR VOL :	0	0	0	0	1	1	1	6	9
PEAK HR FACTOR :					0.250	0.250	0.250	0.500	0.750
					0.250		0.583		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
11:00 AM	1	0	0	0	0	0	0	0	1
11:15 AM	1	0	0	0	0	0	0	1	2
11:30 AM	1	0	0	0	1	1	2	0	5
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	2	1	0	2	0	0	3	8
12:15 PM	3	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	2	0	2	4
12:45 PM	0	0	0	0	3	0	6	1	10
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	6	2	1	0	6	3	8	7	33
APPROACH %'s :	75.00%	25.00%	100.00%	0.00%	66.67%	33.33%	53.33%	46.67%	
PEAK HR :	12:00 PM - 01:00 PM								TOTAL
PEAK HR VOL :	3	2	1	0	5	2	6	6	25
PEAK HR FACTOR :	0.250	0.250	0.250		0.417	0.250	0.250	0.500	0.625
	0.417		0.250		0.583		0.429		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	1	0	1	0	1	0	2	5
4:15 PM	0	0	1	0	0	0	1	5	7
4:30 PM	0	0	0	0	1	0	1	0	2
4:45 PM	0	0	1	0	0	0	3	2	6
5:00 PM	0	0	0	0	2	1	3	3	9
5:15 PM	0	0	0	0	0	0	4	4	8
5:30 PM	0	0	0	0	0	0	1	1	2
5:45 PM	0	0	0	0	0	0	4	0	4
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	1	2	1	3	2	17	17	43
APPROACH %'s :	0.00%	100.00%	66.67%	33.33%	60.00%	40.00%	50.00%	50.00%	
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	0	1	2	1	1	1	5	9	20
PEAK HR FACTOR :		0.250	0.500	0.250	0.250	0.250	0.417	0.450	0.714
	0.250		0.750		0.500		0.583		

Prepared by National Data & Surveying Services

9th St & N/O Palm Ave/Union Bank/ Imperial Beach Promenade

Peak Hour Turning Movement Count

ID: 22-040016-002
City: Imperial Beach

Day: Thursday
Date: 2/3/2022

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	7:00 AM - 09:00 AM
12:00 PM - 01:00 PM	11:00 AM - 01:00 PM
04:00 PM - 05:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND (9th St)

	L	T	R	U		
AM	2	170	0	0	102	AM
NOON	3	114	0	0	119	NOON
PM	1	132	0	1	121	PM

EASTBOUND (N/O Palm Ave/Union Bank/ Imperial Beach Promenade)

AM	NOON	PM		
32	85	70	⇦	
0	0	0	↶	0
2	5	5	↱	0
0	0	0	→	1
11	78	63	↴	0
AM	NOON	PM		

WESTBOUND (N/O Palm Ave/Union Bank/ Imperial Beach Promenade)

PM	NOON	AM		
0	0	0	↰	0
0	0	0	←	1
0	0	0	↰	0
0	0	0	↶	0
0	0	0	⇨	
PM	NOON	AM		

NORTHBOUND (9th St)

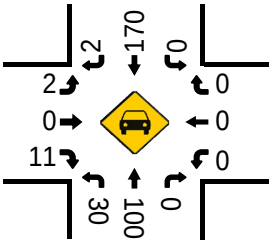
	L	T	R	U		
PM	196	1	69	115	0	PM
NOON	192	0	82	114	0	NOON
AM	181	0	30	100	0	AM

CONTROL

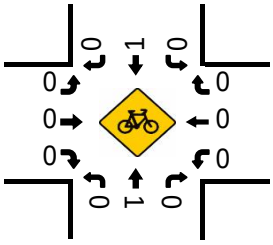
No Control

TEV	315 AM	396 NOON	387 PM
PHF	0.86	0.85	0.88

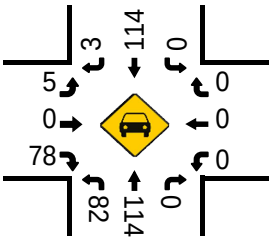
Totals (AM)



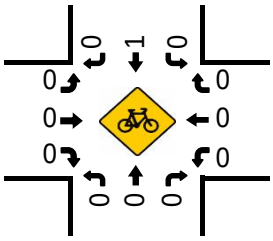
Total Bikes (AM)



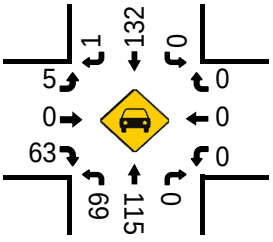
Totals (NOON)



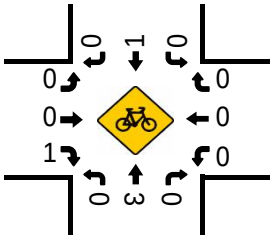
Total Bikes (NOON)



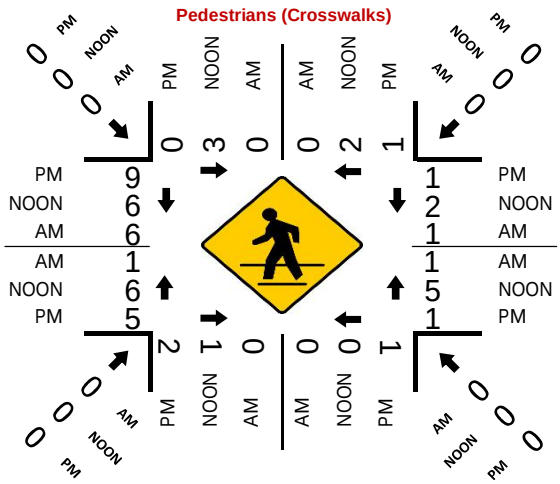
Totals (PM)



Total Bikes (PM)



Pedestrians (Crosswalks)



APPENDIX **C**

INTERSECTION ANALYSIS
WORKSHEETS

APPENDIX C-1

INTERSECTION ANALYSIS
WORKSHEETS –
EXISTING CONDITIONS

Raising Cane's Imperial Beach

Vistro File: \...\RC Imperial Beach MD.vistro
Report File: \...\1 EX MD.pdf

Scenario 1 EM MD
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	EB Left	0.422	23.7	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	EB Thru	0.010	0.0	A
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.131	10.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.422

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	164	68	124	131	74	20	66	712	95	135	728	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	164	68	124	131	74	20	66	712	95	135	728	102
Peak Hour Factor	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	17	31	33	19	5	17	180	24	34	184	26
Total Analysis Volume [veh/h]	166	69	126	133	75	20	67	721	96	137	737	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	41	0	14	36	0	9	23	0	12	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	31	0	0	27	0	0	14	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	13	8	11	4	44	44	9	49	49
g / C, Green / Cycle	0.11	0.14	0.09	0.12	0.05	0.49	0.49	0.10	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.07	0.05	0.04	0.15	0.15	0.08	0.14	0.06
s, saturation flow rate [veh/h]	1781	1679	1781	1803	1781	3560	1760	1781	5094	1589
c, Capacity [veh/h]	202	235	165	215	88	1753	867	173	2751	859
d1, Uniform Delay [s]	39.01	37.63	40.05	36.84	42.26	13.70	13.72	39.74	11.13	10.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.10	7.28	8.97	1.42	12.73	0.46	0.95	7.87	0.24	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.83	0.81	0.44	0.76	0.31	0.31	0.79	0.27	0.12
d, Delay for Lane Group [s/veh]	47.11	44.91	49.02	38.25	54.99	14.16	14.67	47.61	11.36	10.46
Lane Group LOS	D	D	D	D	D	B	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.98	4.58	3.26	2.00	1.76	3.27	3.38	3.30	2.53	1.02
50th-Percentile Queue Length [ft/ln]	99.61	114.61	81.43	50.11	44.11	81.63	84.48	82.50	63.27	25.38
95th-Percentile Queue Length [veh/ln]	7.17	8.10	5.86	3.61	3.18	5.88	6.08	5.94	4.56	1.83
95th-Percentile Queue Length [ft/ln]	179.30	202.39	146.57	90.20	79.40	146.93	152.06	148.51	113.88	45.68

Movement, Approach, & Intersection Results

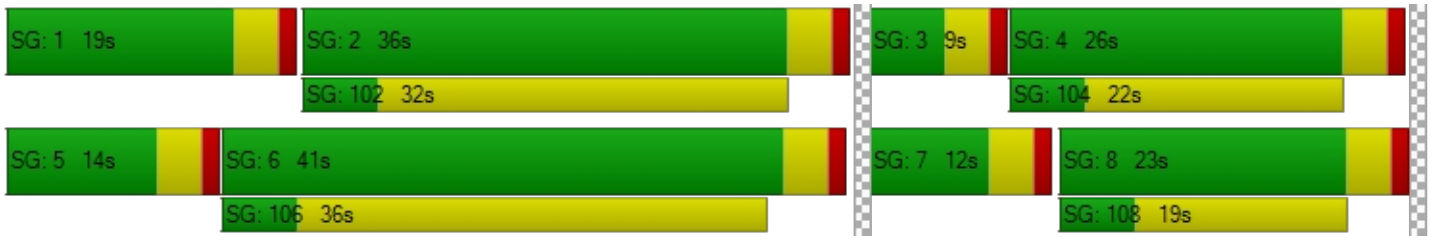
d_M, Delay for Movement [s/veh]	47.11	44.91	44.91	49.02	38.25	38.25	54.99	14.28	14.67	47.61	11.36	10.46
Movement LOS	D	D	D	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	45.92			44.54			17.41			16.35		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	23.71											
Intersection LOS	C											
Intersection V/C	0.422											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.159	2.246	2.847	3.063
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	711	422	489
d_b, Bicycle Delay [s]	15.61	18.69	28.01	25.69
l_b,int, Bicycle LOS Score for Intersection	2.155	1.936	2.046	2.097
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	967	965	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	967	965	0
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	254	254	0
Total Analysis Volume [veh/h]	0	0	0	1018	1016	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.25	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.25		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.131

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	82	114	0	0	114	3	5	0	78	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	114	0	0	114	3	5	0	78	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	33	0	0	33	1	1	0	23	0	0	0
Total Analysis Volume [veh/h]	96	134	0	0	134	4	6	0	91	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane	No			No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.16	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.80	10.06	9.21	9.85	10.55	9.28	7.23	0.00	0.00	7.39	0.00	0.00
Movement LOS	B	B	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.54	0.51	0.48	0.00	0.63	0.63	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.58	12.79	11.99	0.00	15.75	15.75	0.28	0.28	0.28	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.37			10.52			0.45			2.46		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.34											
Intersection LOS	B											

Raising Cane's Imperial Beach

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Report File: \...\1 EX PM.pdf

Scenario 1 EX PM
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	EB Left	0.578	23.7	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	EB Thru	0.017	0.0	A
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.110	10.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	123	70	113	124	88	19	58	1358	210	138	637	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	70	113	124	88	19	58	1358	210	138	637	88
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	18	30	32	23	5	15	355	55	36	167	23
Total Analysis Volume [veh/h]	129	73	118	130	92	20	61	1422	220	145	667	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	12	36	0	11	32	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	12	8	12	4	45	45	9	50	50
g / C, Green / Cycle	0.09	0.14	0.09	0.14	0.04	0.50	0.50	0.10	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.07	0.11	0.07	0.06	0.03	0.31	0.31	0.08	0.13	0.06
s, saturation flow rate [veh/h]	1781	1686	1781	1813	1781	3560	1745	1781	5094	1589
c, Capacity [veh/h]	158	232	158	250	80	1763	864	179	2805	875
d1, Uniform Delay [s]	40.27	37.74	40.30	35.67	42.49	16.61	16.62	39.63	10.46	9.65
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.69	7.15	10.03	1.26	13.57	1.68	3.42	8.40	0.20	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.82	0.82	0.45	0.76	0.62	0.63	0.81	0.24	0.11
d, Delay for Lane Group [s/veh]	49.96	44.89	50.33	36.93	56.06	18.29	20.04	48.03	10.66	9.89
Lane Group LOS	D	D	D	D	E	B	C	D	B	A
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.19	4.49	3.23	2.32	1.63	8.17	8.45	3.51	2.18	0.87
50th-Percentile Queue Length [ft/ln]	79.82	112.20	80.77	57.99	40.72	204.32	211.16	87.73	54.54	21.79
95th-Percentile Queue Length [veh/ln]	5.75	7.96	5.82	4.18	2.93	12.86	13.21	6.32	3.93	1.57
95th-Percentile Queue Length [ft/ln]	143.67	199.06	145.39	104.38	73.30	321.53	330.32	157.91	98.17	39.22

Movement, Approach, & Intersection Results

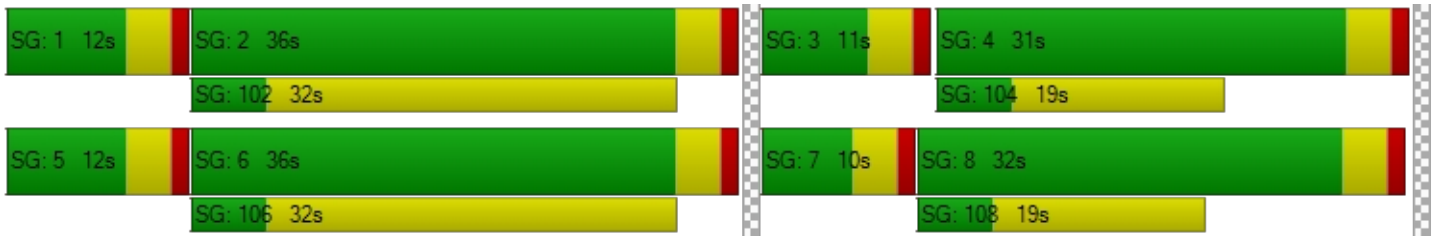
d_M, Delay for Movement [s/veh]	49.96	44.89	44.89	50.33	36.93	36.93	56.06	18.69	20.04	48.03	10.66	9.89
Movement LOS	D	D	D	D	D	D	E	B	C	D	B	A
d_A, Approach Delay [s/veh]	46.93			44.13			20.20			16.57		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	23.69											
Intersection LOS	C											
Intersection V/C	0.578											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.194	2.247	2.946	3.130
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	622	600
d_b, Bicycle Delay [s]	18.69	18.69	21.36	22.05
l_b,int, Bicycle LOS Score for Intersection	2.088	1.959	2.496	2.057
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	1595	863	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1595	863	0
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	420	227	0
Total Analysis Volume [veh/h]	0	0	0	1679	908	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	12.61	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.61		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.110

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	70	115	0	1	132	1	5	0	63	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	115	0	1	132	1	5	0	63	0	0	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	33	0	0	38	0	1	0	18	0	0	0
Total Analysis Volume [veh/h]	80	131	0	1	150	1	6	0	72	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.16	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.74	9.93	9.09	9.75	10.51	9.35	7.23	0.00	0.00	7.36	0.00	0.00
Movement LOS	B	A	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.49	0.46	0.43	0.00	0.69	0.69	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.19	11.45	10.72	0.10	17.19	17.19	0.28	0.28	0.28	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.24			10.50			0.56			2.45		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.62											
Intersection LOS	B											

APPENDIX C-2

INTERSECTION ANALYSIS
WORKSHEETS –
EXISTING PLUS PROJECT

Raising Cane's Imperial Beach

Vistro File: \...\RC Imperial Beach MD.vistro
Report File: \...\2 EX WP MD.pdf

Scenario 2 EX WP MD
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	EB Left	0.438	24.8	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	SB Right	0.055	13.7	B
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.143	11.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	164	68	124	131	74	20	66	712	95	135	728	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	9	0	0	7	0	0	7	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	9	0	0	9	-9	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	164	74	124	149	74	20	82	703	95	142	735	102
Peak Hour Factor	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	19	31	38	19	5	21	178	24	36	186	26
Total Analysis Volume [veh/h]	166	75	126	151	75	20	83	712	96	144	744	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	41	0	14	36	0	9	23	0	12	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	13	9	12	5	43	43	9	46	46
g / C, Green / Cycle	0.11	0.14	0.10	0.13	0.06	0.47	0.47	0.10	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.09	0.12	0.08	0.05	0.05	0.15	0.15	0.08	0.15	0.06
s, saturation flow rate [veh/h]	1781	1684	1781	1803	1781	3560	1759	1781	5094	1589
c, Capacity [veh/h]	202	243	184	242	108	1685	832	180	2617	817
d1, Uniform Delay [s]	38.99	37.39	39.55	35.62	41.63	14.72	14.74	39.54	12.46	11.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.00	6.96	8.81	1.04	10.69	0.50	1.03	7.84	0.27	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.83	0.82	0.39	0.77	0.32	0.32	0.80	0.28	0.13
d, Delay for Lane Group [s/veh]	46.99	44.35	48.36	36.65	52.32	15.22	15.77	47.38	12.73	11.70
Lane Group LOS	D	D	D	D	D	B	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.98	4.70	3.67	1.95	2.11	3.38	3.49	3.46	2.75	1.09
50th-Percentile Queue Length [ft/ln]	99.48	117.48	91.83	48.83	52.86	84.46	87.36	86.51	68.81	27.27
95th-Percentile Queue Length [veh/ln]	7.16	8.25	6.61	3.52	3.81	6.08	6.29	6.23	4.95	1.96
95th-Percentile Queue Length [ft/ln]	179.07	206.37	165.29	87.90	95.14	152.02	157.24	155.71	123.85	49.08

Movement, Approach, & Intersection Results

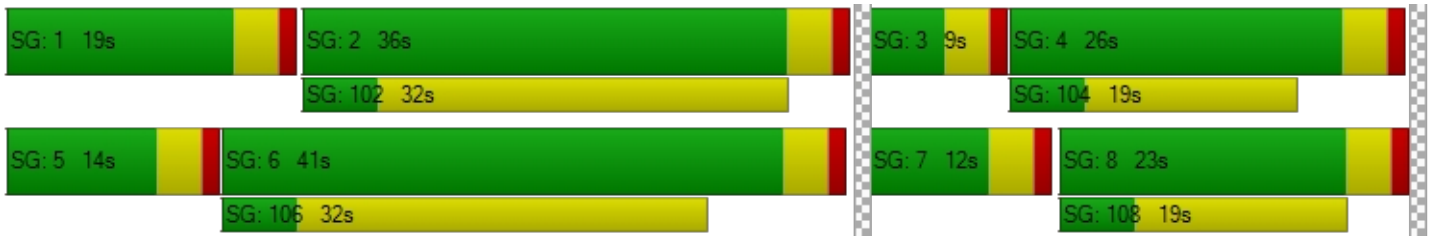
d_M, Delay for Movement [s/veh]	46.99	44.35	44.35	48.36	36.65	36.65	52.32	15.35	15.77	47.38	12.73	11.70
Movement LOS	D	D	D	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	45.55			43.84			18.84			17.66		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	24.77											
Intersection LOS	C											
Intersection V/C	0.438											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.163	2.256	2.849	3.065
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	711	422	489
d_b, Bicycle Delay [s]	15.61	18.69	28.01	25.69
l_b,int, Bicycle LOS Score for Intersection	2.165	1.966	2.050	2.105
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.055

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	967	965	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	14	0	9	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	9	0	0	-9	9
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	23	0	976	956	19
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	0	257	252	5
Total Analysis Volume [veh/h]	0	24	0	1027	1006	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.66	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.31	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.66		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	82	114	0	0	114	3	5	0	78	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	13	3	0	0	0	0	0	9	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	9	0	0	0	0	0	0	9	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	114	22	3	114	3	5	0	78	18	0	3
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	33	6	1	33	1	1	0	23	5	0	1
Total Analysis Volume [veh/h]	96	134	26	4	134	4	6	0	91	21	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.17	0.03	0.01	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.55	10.57	9.34	10.57	11.04	9.44	7.23	0.00	0.00	7.43	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.67	0.62	0.56	0.02	0.68	0.68	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	16.84	15.38	13.92	0.46	17.09	17.09	0.28	0.28	0.28	1.06	1.06	1.06
d_A, Approach Delay [s/veh]	10.81			10.98			0.45			6.24		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.71											
Intersection LOS	B											

Raising Cane's Imperial Beach

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Report File: \...\2 EX WP PM.pdf

Scenario 2 EX WP PM
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	SB Left	0.594	25.0	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	SB Right	0.052	13.0	B
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.119	11.4	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	123	70	113	124	88	19	58	1358	210	138	637	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	8	0	0	7	0	0	8	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	9	0	0	9	-9	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	76	113	141	88	19	74	1349	210	146	644	88
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	20	30	37	23	5	19	353	55	38	169	23
Total Analysis Volume [veh/h]	129	80	118	148	92	20	77	1413	220	153	674	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	12	36	0	11	32	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	13	8	13	5	44	44	10	48	48
g / C, Green / Cycle	0.09	0.14	0.09	0.14	0.06	0.49	0.49	0.11	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.08	0.06	0.04	0.31	0.31	0.09	0.13	0.06
s, saturation flow rate [veh/h]	1781	1692	1781	1813	1781	3560	1744	1781	5094	1589
c, Capacity [veh/h]	158	239	158	256	101	1733	849	187	2726	850
d1, Uniform Delay [s]	40.27	37.56	40.74	35.35	41.84	17.12	17.14	39.42	11.21	10.32
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.69	7.12	20.68	1.17	11.12	1.77	3.58	8.43	0.22	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.83	0.93	0.44	0.76	0.63	0.63	0.82	0.25	0.11
d, Delay for Lane Group [s/veh]	49.96	44.68	61.42	36.52	52.96	18.89	20.72	47.86	11.43	10.58
Lane Group LOS	D	D	E	D	D	B	C	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.19	4.64	4.12	2.30	1.98	8.30	8.58	3.70	2.31	0.91
50th-Percentile Queue Length [ft/ln]	79.82	116.11	103.01	57.59	49.45	207.39	214.45	92.41	57.79	22.79
95th-Percentile Queue Length [veh/ln]	5.75	8.18	7.42	4.15	3.56	13.02	13.38	6.65	4.16	1.64
95th-Percentile Queue Length [ft/ln]	143.67	204.46	185.42	103.67	89.02	325.47	334.53	166.35	104.02	41.03

Movement, Approach, & Intersection Results

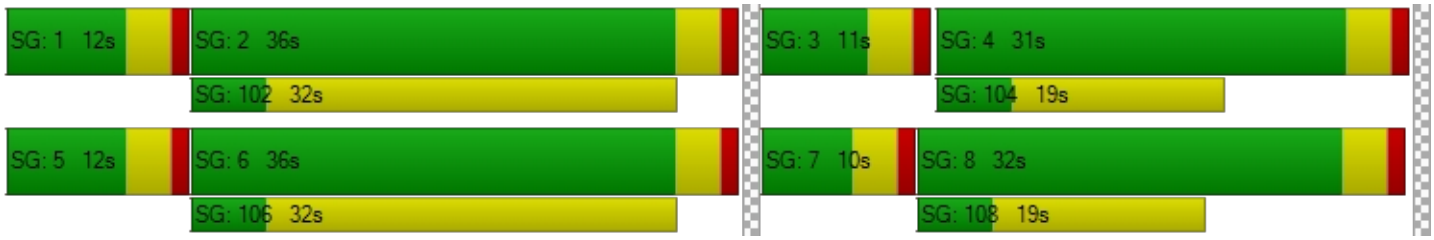
d_M, Delay for Movement [s/veh]	49.96	44.68	44.68	61.42	36.52	36.52	52.96	19.30	20.72	47.86	11.43	10.58
Movement LOS	D	D	D	E	D	D	D	B	C	D	B	B
d_A, Approach Delay [s/veh]	46.77			50.70			21.00			17.41		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	24.99											
Intersection LOS	C											
Intersection V/C	0.594											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.199	2.257	2.948	3.132
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	622	600
d_b, Bicycle Delay [s]	18.69	18.69	21.36	22.05
l_b,int, Bicycle LOS Score for Intersection	2.099	1.989	2.500	2.065
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.052

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	1595	863	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	15	0	8	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	9	0	0	-9	9
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	24	0	1603	854	19
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	0	422	225	5
Total Analysis Volume [veh/h]	0	25	0	1687	899	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	12.98	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.14	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.98		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.119

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	70	115	0	1	132	1	5	0	63	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	13	3	0	0	0	0	0	8	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	9	0	0	0	0	0	0	9	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	115	22	4	132	1	5	0	63	17	0	3
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	33	6	1	38	0	1	0	18	5	0	1
Total Analysis Volume [veh/h]	80	131	25	5	150	1	6	0	72	19	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.17	0.02	0.01	0.20	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.40	10.38	9.19	10.40	10.96	9.51	7.23	0.00	0.00	7.39	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.60	0.55	0.49	0.02	0.74	0.74	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	14.97	13.66	12.36	0.56	18.54	18.54	0.28	0.28	0.28	0.94	0.94	0.94
d_A, Approach Delay [s/veh]	10.60			10.93			0.56			6.38		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.92											
Intersection LOS	B											

APPENDIX C-3

INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2023

Raising Cane's Imperial Beach

Vistro File: \...\RC Imperial Beach MD.vistro
Report File: \...\3 OY 2023 CUM MD.pdf

Scenario 3 OY 2023 CUM MD
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	EB Left	0.447	23.5	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	WB Thru	0.012	0.0	A
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.137	11.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	164	68	124	131	74	20	66	712	95	135	728	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	1	0	0	8	0	0	2	68	0	0	145	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	69	126	142	75	20	69	794	97	138	888	108
Peak Hour Factor	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	17	32	36	19	5	17	201	25	35	225	27
Total Analysis Volume [veh/h]	170	70	128	144	76	20	70	804	98	140	899	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	41	0	14	36	0	9	23	0	12	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	13	9	11	5	43	43	9	48	48
g / C, Green / Cycle	0.12	0.14	0.10	0.13	0.05	0.48	0.48	0.10	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.10	0.12	0.08	0.05	0.04	0.17	0.17	0.08	0.18	0.07
s, saturation flow rate [veh/h]	1781	1678	1781	1804	1781	3560	1768	1781	5094	1589
c, Capacity [veh/h]	206	238	176	226	92	1716	852	176	2698	842
d1, Uniform Delay [s]	38.91	37.55	39.74	36.35	42.14	14.52	14.54	39.65	12.09	10.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.09	7.28	8.86	1.26	12.23	0.56	1.15	7.83	0.33	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.83	0.82	0.42	0.76	0.35	0.35	0.79	0.33	0.13
d, Delay for Lane Group [s/veh]	46.99	44.83	48.60	37.61	54.37	15.09	15.69	47.48	12.43	11.01
Lane Group LOS	D	D	D	D	D	B	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.08	4.65	3.51	2.00	1.83	3.77	3.91	3.37	3.31	1.11
50th-Percentile Queue Length [ft/ln]	101.91	116.30	87.78	50.12	45.74	94.31	97.78	84.19	82.72	27.79
95th-Percentile Queue Length [veh/ln]	7.34	8.19	6.32	3.61	3.29	6.79	7.04	6.06	5.96	2.00
95th-Percentile Queue Length [ft/ln]	183.43	204.73	158.00	90.21	82.32	169.76	176.00	151.54	148.89	50.02

Movement, Approach, & Intersection Results

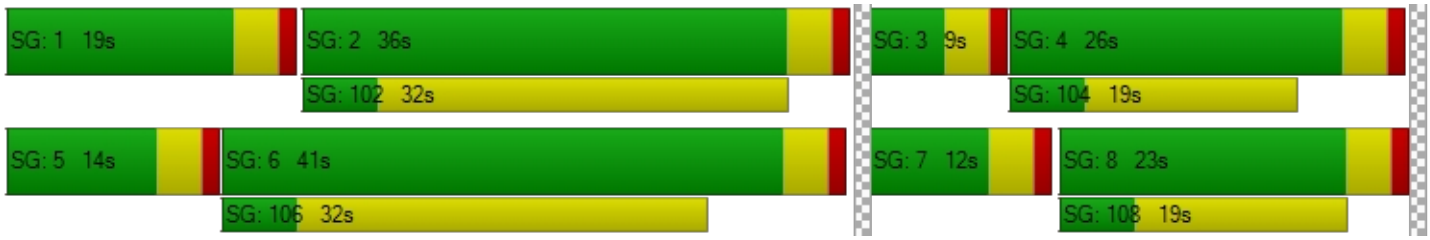
d_M, Delay for Movement [s/veh]	46.99	44.83	44.83	48.60	37.61	37.61	54.37	15.24	15.69	47.48	12.43	11.01
Movement LOS	D	D	D	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	45.83			44.21			18.10			16.57		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	23.49											
Intersection LOS	C											
Intersection V/C	0.447											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.163	2.252	2.882	3.092
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	711	422	489
d_b, Bicycle Delay [s]	15.61	18.69	28.01	25.69
l_b,int, Bicycle LOS Score for Intersection	2.167	1.956	2.094	2.191
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	967	965	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0200	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	76	149	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1062	1133	0
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	279	298	0
Total Analysis Volume [veh/h]	0	0	0	1118	1193	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	14.41	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.41		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.137

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	82	114	0	0	114	3	5	0	78	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	6	0	0	8	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	122	0	0	124	3	5	0	80	0	0	0
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	36	0	0	36	1	1	0	23	0	0	0
Total Analysis Volume [veh/h]	98	143	0	0	145	4	6	0	94	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.17	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.01	10.12	9.26	9.94	10.68	9.38	7.23	0.00	0.00	7.40	0.00	0.00
Movement LOS	B	B	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.59	0.55	0.51	0.00	0.69	0.69	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	14.65	13.67	12.69	0.00	17.37	17.37	0.28	0.28	0.28	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.48			10.64			0.43			2.47		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.48											
Intersection LOS	B											

Raising Cane's Imperial Beach

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Report File: \...\3 OY 2023 CUM PM.pdf

Scenario 3 OY 2023 CUM PM
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	SB Left	0.624	24.6	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	EB Thru	0.019	0.0	A
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.115	11.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	123	70	113	124	88	19	58	1358	210	138	637	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	9	0	2	1	152	1	0	95	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	71	115	135	90	21	60	1537	215	141	745	93
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	19	30	35	24	5	16	402	56	37	195	24
Total Analysis Volume [veh/h]	131	74	120	141	94	22	63	1609	225	148	780	97
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	12	36	0	11	32	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	12	8	12	4	44	44	9	49	49
g / C, Green / Cycle	0.09	0.14	0.09	0.14	0.05	0.49	0.49	0.10	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.08	0.06	0.04	0.34	0.35	0.08	0.15	0.06
s, saturation flow rate [veh/h]	1781	1686	1781	1809	1781	3560	1755	1781	5094	1589
c, Capacity [veh/h]	158	235	158	252	83	1750	863	182	2788	870
d1, Uniform Delay [s]	40.32	37.66	40.57	35.61	42.40	17.74	17.79	39.55	10.89	9.82
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.39	7.15	15.27	1.30	13.18	2.36	4.80	8.41	0.25	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.83	0.89	0.46	0.76	0.70	0.70	0.81	0.28	0.11
d, Delay for Lane Group [s/veh]	50.72	44.81	55.84	36.91	55.59	20.11	22.59	47.96	11.14	10.08
Lane Group LOS	D	D	E	D	E	C	C	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.27	4.56	3.72	2.40	1.67	9.76	10.29	3.58	2.65	0.93
50th-Percentile Queue Length [ft/ln]	81.75	113.89	92.95	60.08	41.81	244.05	257.15	89.49	66.15	23.28
95th-Percentile Queue Length [veh/ln]	5.89	8.06	6.69	4.33	3.01	14.89	15.55	6.44	4.76	1.68
95th-Percentile Queue Length [ft/ln]	147.15	201.40	167.30	108.14	75.26	372.15	388.64	161.07	119.07	41.91

Movement, Approach, & Intersection Results

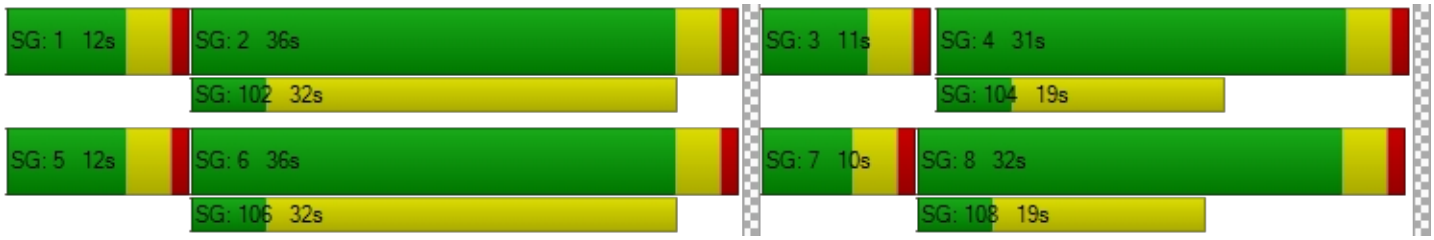
d_M, Delay for Movement [s/veh]	50.72	44.81	44.81	55.84	36.91	36.91	55.59	20.70	22.59	47.96	11.14	10.08
Movement LOS	D	D	D	E	D	D	E	C	C	D	B	B
d_A, Approach Delay [s/veh]	47.19			47.30			22.08			16.36		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	24.59											
Intersection LOS	C											
Intersection V/C	0.624											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.199	2.252	2.990	3.164
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	622	600
d_b, Bicycle Delay [s]	18.69	18.69	21.36	22.05
l_b,int, Bicycle LOS Score for Intersection	2.096	1.984	2.603	2.123
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	1595	863	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0200	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	161	98	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1788	978	0
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	471	257	0
Total Analysis Volume [veh/h]	0	0	0	1882	1029	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.33	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.33		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	70	115	0	1	132	1	5	0	63	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	4	0	0	11	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	121	0	1	146	1	5	0	64	0	0	0
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	34	0	0	41	0	1	0	18	0	0	0
Total Analysis Volume [veh/h]	81	138	0	1	166	1	6	0	73	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane	No			No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance	No			No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.16	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.97	9.97	9.12	9.82	10.66	9.49	7.23	0.00	0.00	7.36	0.00	0.00
Movement LOS	B	A	A	A	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.52	0.48	0.45	0.00	0.78	0.78	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.05	12.12	11.19	0.10	19.49	19.49	0.28	0.28	0.28	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.34			10.65			0.55			2.45		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.79											
Intersection LOS	B											

APPENDIX C-4

INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2023 PLUS
PROJECT

Raising Cane's Imperial Beach

Vistro File: \...\RC Imperial Beach MD.vistro
Report File: \...\4 OY 2023 CUM WP MD.pdf

Scenario 4 OY 2023 CUM WP MD
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	EB Left	0.463	24.6	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	SB Right	0.062	15.0	B
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.150	11.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	164	68	124	131	74	20	66	712	95	135	728	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	1	0	0	8	0	0	2	68	0	0	145	4
Site-Generated Trips [veh/h]	0	6	0	9	0	0	7	0	0	7	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	9	0	0	9	-9	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	75	126	160	75	20	85	785	97	145	895	108
Peak Hour Factor	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880	0.9880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	19	32	40	19	5	22	199	25	37	226	27
Total Analysis Volume [veh/h]	170	76	128	162	76	20	86	795	98	147	906	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	41	0	14	36	0	9	23	0	12	26	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	13	10	13	6	42	42	9	45	45
g / C, Green / Cycle	0.12	0.15	0.11	0.14	0.06	0.46	0.46	0.10	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.10	0.12	0.09	0.05	0.05	0.17	0.17	0.08	0.18	0.07
s, saturation flow rate [veh/h]	1781	1684	1781	1804	1781	3560	1767	1781	5094	1589
c, Capacity [veh/h]	206	246	195	252	112	1650	819	184	2565	800
d1, Uniform Delay [s]	38.89	37.31	39.26	35.16	41.52	15.56	15.58	39.45	13.49	11.91
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.99	6.97	8.82	0.94	10.44	0.62	1.25	7.81	0.38	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.83	0.83	0.38	0.77	0.36	0.36	0.80	0.35	0.14
d, Delay for Lane Group [s/veh]	46.88	44.28	48.08	36.11	51.97	16.18	16.83	47.26	13.87	12.26
Lane Group LOS	D	D	D	D	D	B	B	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.07	4.77	3.93	1.96	2.18	3.90	4.04	3.53	3.58	1.19
50th-Percentile Queue Length [ft/ln]	101.78	119.18	98.27	48.90	54.53	97.51	101.07	88.20	89.56	29.78
95th-Percentile Queue Length [veh/ln]	7.33	8.35	7.08	3.52	3.93	7.02	7.28	6.35	6.45	2.14
95th-Percentile Queue Length [ft/ln]	183.21	208.70	176.89	88.02	98.15	175.52	181.93	158.77	161.20	53.60

Movement, Approach, & Intersection Results

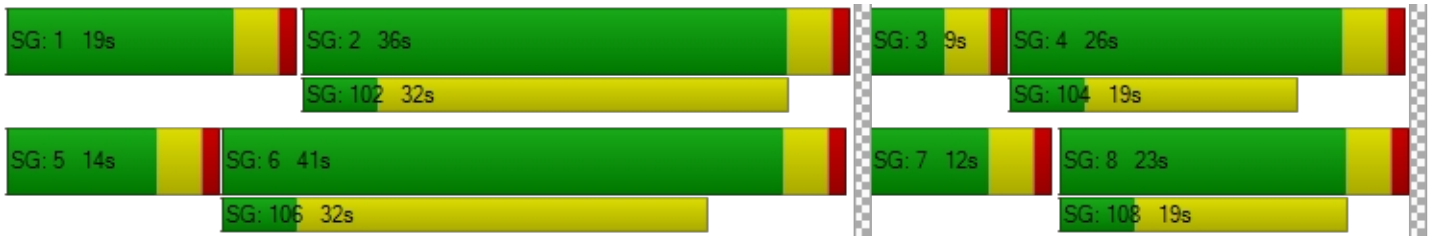
d_M, Delay for Movement [s/veh]	46.88	44.28	44.28	48.08	36.11	36.11	51.97	16.34	16.83	47.26	13.87	12.26
Movement LOS	D	D	D	D	D	D	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	45.46			43.62			19.52			17.95		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	24.60											
Intersection LOS	C											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.168	2.262	2.884	3.094
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	822	711	422	489
d_b, Bicycle Delay [s]	15.61	18.69	28.01	25.69
l_b,int, Bicycle LOS Score for Intersection	2.177	1.985	2.098	2.199
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.062

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	967	965	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0200	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	76	149	0
Site-Generated Trips [veh/h]	0	14	0	9	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	9	0	0	-9	9
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	23	0	1071	1124	19
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	0	282	296	5
Total Analysis Volume [veh/h]	0	24	0	1127	1183	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	14.96	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.20	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.96	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.96		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.150

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	82	114	0	0	114	3	5	0	78	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	6	0	0	8	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	13	3	0	0	0	0	0	9	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	9	0	0	0	0	0	0	9	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	122	22	3	124	3	5	0	80	18	0	3
Peak Hour Factor	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530	0.8530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	36	6	1	36	1	1	0	23	5	0	1
Total Analysis Volume [veh/h]	98	143	26	4	145	4	6	0	94	21	0	4
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.19	0.03	0.01	0.20	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.80	10.65	9.40	10.68	11.19	9.57	7.23	0.00	0.00	7.43	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.72	0.66	0.59	0.02	0.76	0.76	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	18.10	16.40	14.70	0.47	18.88	18.88	0.28	0.28	0.28	1.06	1.06	1.06
d_A, Approach Delay [s/veh]	10.95			11.13			0.43			6.24		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	8.85											
Intersection LOS	B											

Raising Cane's Imperial Beach

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Report File: \...\4 OY 2023 CUM WP PM.pdf

Scenario 4 OY 2023 CUM WP PM
2/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Palm Avenue at Ninth Street	Signalized	HCM 6th Edition	SB Left	0.640	26.3	C
101	Palm Avenue at Project Driveway 1	Two-way stop	HCM 6th Edition	SB Right	0.057	13.8	B
102	Ninth Street at Project Driveway 2	Two-way stop	HCM 6th Edition	NB Left	0.125	11.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Palm Avenue at Ninth Street

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

Intersection Setup

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Palm Avenue			Palm Avenue		
Base Volume Input [veh/h]	123	70	113	124	88	19	58	1358	210	138	637	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	9	0	2	1	152	1	0	95	3
Site-Generated Trips [veh/h]	0	6	0	8	0	0	7	0	0	8	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	9	0	0	9	-9	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	77	115	152	90	21	76	1528	215	149	752	93
Peak Hour Factor	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550	0.9550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	20	30	40	24	5	20	400	56	39	197	24
Total Analysis Volume [veh/h]	131	81	120	159	94	22	80	1600	225	156	787	97
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	12	36	0	11	32	0	10	31	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	27	0	0	27	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	13	8	13	5	43	43	10	48	48
g / C, Green / Cycle	0.09	0.14	0.09	0.14	0.06	0.48	0.48	0.11	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.07	0.12	0.09	0.06	0.04	0.34	0.34	0.09	0.15	0.06
s, saturation flow rate [veh/h]	1781	1692	1781	1809	1781	3560	1755	1781	5094	1589
c, Capacity [veh/h]	158	242	158	259	105	1721	848	190	2705	844
d1, Uniform Delay [s]	40.32	37.48	41.00	35.29	41.73	18.28	18.34	39.35	11.70	10.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.39	7.12	34.32	1.21	10.80	2.50	5.08	8.45	0.27	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.83	1.00	0.45	0.76	0.71	0.71	0.82	0.29	0.11
d, Delay for Lane Group [s/veh]	50.72	44.60	75.32	36.50	52.53	20.79	23.42	47.80	11.97	10.81
Lane Group LOS	D	D	F	D	D	C	C	D	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.27	4.71	4.97	2.39	2.04	9.92	10.46	3.77	2.80	0.98
50th-Percentile Queue Length [ft/ln]	81.75	117.79	124.15	59.67	51.10	247.91	261.57	94.18	70.09	24.39
95th-Percentile Queue Length [veh/ln]	5.89	8.27	8.63	4.30	3.68	15.08	15.77	6.78	5.05	1.76
95th-Percentile Queue Length [ft/ln]	147.15	206.78	215.84	107.40	91.98	377.02	394.19	169.52	126.16	43.90

Movement, Approach, & Intersection Results

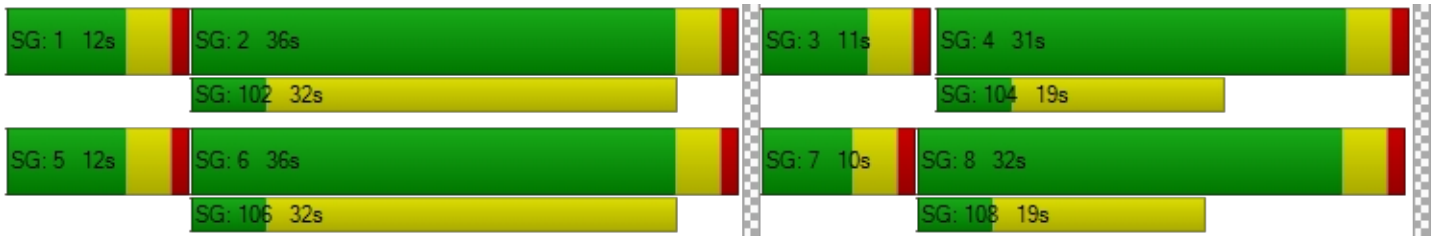
d_M, Delay for Movement [s/veh]	50.72	44.60	44.60	75.32	36.50	36.50	52.53	21.41	23.42	47.80	11.97	10.81
Movement LOS	D	D	D	F	D	D	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	47.01			58.95			22.95			17.24		
Approach LOS	D			E			C			B		
d_I, Intersection Delay [s/veh]	26.32											
Intersection LOS	C											
Intersection V/C	0.640											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.204	2.263	2.992	3.167
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	711	711	622	600
d_b, Bicycle Delay [s]	18.69	18.69	21.36	22.05
l_b,int, Bicycle LOS Score for Intersection	2.107	2.013	2.607	2.132
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: Palm Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.057

Intersection Setup

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		Palm Avenue		Palm Avenue	
Base Volume Input [veh/h]	0	0	0	1595	863	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0200	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	161	98	0
Site-Generated Trips [veh/h]	0	15	0	8	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	9	0	0	-9	9
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	24	0	1796	969	19
Peak Hour Factor	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	0	473	255	5
Total Analysis Volume [veh/h]	0	25	0	1891	1020	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	13.77	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.18	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.55	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.77		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 102: Ninth Street at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.125

Intersection Setup

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Ninth Street			Ninth Street			Shopping Center			Project Driveway 2		
Base Volume Input [veh/h]	70	115	0	1	132	1	5	0	63	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	4	0	0	11	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	13	3	0	0	0	0	0	8	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	9	0	0	0	0	0	0	9	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	121	22	4	146	1	5	0	64	17	0	3
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	34	6	1	41	0	1	0	18	5	0	1
Total Analysis Volume [veh/h]	81	138	25	5	166	1	6	0	73	19	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.18	0.02	0.01	0.22	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.67	10.43	9.22	10.48	11.13	9.67	7.23	0.00	0.00	7.39	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.64	0.58	0.52	0.02	0.84	0.84	0.01	0.01	0.01	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	15.97	14.43	12.88	0.57	21.07	21.07	0.28	0.28	0.28	0.94	0.94	0.94
d_A, Approach Delay [s/veh]	10.72			11.10			0.55			6.38		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	9.11											
Intersection LOS	B											

APPENDIX **D**

DRIVE-THROUGH QUEUING

Prepared by National Data & Surveying Services

Queue Study

Location: 8867 Cuyamaca St
City: Santee, CA

Date: 2/5/2022
Day: Saturday

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	11:00 AM	3	2	0	5
0	11:01 AM	3	2	0	5
0	11:02 AM	3	2	0	5
1	11:03 AM	3	3	0	6
1	11:04 AM	4	3	0	7
2	11:05 AM	5	4	0	9
2	11:06 AM	6	5	0	11
0	11:07 AM	6	5	0	11
0	11:08 AM	6	4	0	10
1	11:09 AM	8	3	0	11
0	11:10 AM	8	3	0	11
3	11:11 AM	10	4	0	14
2	11:12 AM	10	6	0	16
0	11:13 AM	10	6	0	16
0	11:14 AM	9	3	0	12
0	11:15 AM	9	2	0	11
0	11:16 AM	8	3	0	11
0	11:17 AM	8	2	0	10
0	11:18 AM	8	2	0	10
0	11:19 AM	8	2	0	10
3	11:20 AM	9	4	0	13
1	11:21 AM	9	5	0	14
0	11:22 AM	8	4	0	12
1	11:23 AM	6	7	0	13
1	11:24 AM	7	7	0	14
5	11:25 AM	11	8	0	19
0	11:26 AM	11	7	0	18
0	11:27 AM	11	7	0	18
1	11:28 AM	11	8	0	19
0	11:29 AM	10	7	0	17

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	4:00 PM	8	7	0	15
0	4:01 PM	8	6	0	14
0	4:02 PM	8	6	0	14
0	4:03 PM	7	6	0	13
1	4:04 PM	7	7	0	14
0	4:05 PM	6	6	0	12
1	4:06 PM	7	6	0	13
0	4:07 PM	6	7	0	13
0	4:08 PM	6	7	0	13
2	4:09 PM	8	7	0	15
0	4:10 PM	7	7	0	14
1	4:11 PM	8	7	0	15
1	4:12 PM	9	7	0	16
0	4:13 PM	10	4	0	14
1	4:14 PM	9	6	0	15
0	4:15 PM	8	7	0	15
0	4:16 PM	10	5	0	15
0	4:17 PM	9	6	0	15
0	4:18 PM	10	5	0	15
1	4:19 PM	10	6	0	16
0	4:20 PM	9	7	0	16
1	4:21 PM	10	7	0	17
0	4:22 PM	9	7	0	16
0	4:23 PM	9	6	0	15
1	4:24 PM	10	6	0	16
0	4:25 PM	10	6	0	16
0	4:26 PM	9	6	0	15
0	4:27 PM	9	6	0	15
1	4:28 PM	9	7	0	16
0	4:29 PM	9	7	0	16

1	11:30 AM	11	7	0	18
0	11:31 AM	10	6	0	16
3	11:32 AM	12	7	0	19
0	11:33 AM	11	8	0	19
0	11:34 AM	11	6	0	17
0	11:35 AM	11	5	0	16
0	11:36 AM	12	4	0	16
0	11:37 AM	9	4	0	13
3	11:38 AM	11	5	0	16
0	11:39 AM	11	5	0	16
3	11:40 AM	12	7	0	19
1	11:41 AM	11	9	0	20
1	11:42 AM	11	10	0	21
1	11:43 AM	11	11	0	22
0	11:44 AM	11	11	0	22
1	11:45 AM	12	11	0	23
0	11:46 AM	11	10	0	21
0	11:47 AM	11	10	0	21
0	11:48 AM	11	10	0	21
0	11:49 AM	10	9	0	19
2	11:50 AM	10	11	0	21
1	11:51 AM	11	10	1	22
0	11:52 AM	10	9	0	19
0	11:53 AM	11	8	0	19
2	11:54 AM	12	9	0	21
0	11:55 AM	12	9	0	21
0	11:56 AM	12	9	0	21
0	11:57 AM	12	8	0	20
0	11:58 AM	12	7	0	19
1	11:59 AM	12	8	0	20
2	12:00 PM	12	10	0	22
0	12:01 PM	12	10	0	22
0	12:02 PM	11	8	0	19
0	12:03 PM	11	8	0	19
0	12:04 PM	11	8	0	19
0	12:05 PM	11	7	0	18
0	12:06 PM	10	8	0	18
0	12:07 PM	9	6	0	15

0	4:30 PM	7	6	0	13
0	4:31 PM	7	6	0	13
2	4:32 PM	8	7	0	15
0	4:33 PM	7	7	0	14
0	4:34 PM	6	8	0	14
0	4:35 PM	5	6	0	11
1	4:36 PM	5	7	0	12
0	4:37 PM	5	7	0	12
0	4:38 PM	4	7	0	11
1	4:39 PM	5	7	0	12
0	4:40 PM	4	7	0	11
0	4:41 PM	3	7	0	10
0	4:42 PM	2	7	0	9
0	4:43 PM	3	6	0	9
0	4:44 PM	5	4	0	9
5	4:45 PM	7	7	0	14
2	4:46 PM	7	9	0	16
0	4:47 PM	7	7	0	14
0	4:48 PM	7	7	0	14
2	4:49 PM	9	7	0	16
1	4:50 PM	10	7	0	17
0	4:51 PM	8	8	0	16
0	4:52 PM	8	8	0	16
0	4:53 PM	9	7	0	16
1	4:54 PM	9	8	0	17
1	4:55 PM	10	8	0	18
3	4:56 PM	11	10	0	21
0	4:57 PM	10	11	0	21
0	4:58 PM	9	10	0	19
2	4:59 PM	11	10	0	21
0	5:00 PM	10	10	0	20
0	5:01 PM	10	9	0	19
1	5:02 PM	11	9	0	20
0	5:03 PM	10	7	0	17
0	5:04 PM	9	7	0	16
1	5:05 PM	10	7	0	17
0	5:06 PM	10	7	0	17
0	5:07 PM	10	7	0	17

0	12:08 PM	6	7	0	13
0	12:09 PM	6	7	0	13
4	12:10 PM	9	8	0	17
0	12:11 PM	9	8	0	17
0	12:12 PM	9	8	0	17
0	12:13 PM	10	7	0	17
0	12:14 PM	11	4	0	15
0	12:15 PM	10	4	0	14
5	12:16 PM	11	8	0	19
1	12:17 PM	11	9	0	20
0	12:18 PM	11	6	0	17
3	12:19 PM	12	8	0	20
1	12:20 PM	12	9	0	21
0	12:21 PM	11	9	0	20
2	12:22 PM	12	10	0	22
0	12:23 PM	11	9	0	20
2	12:24 PM	12	10	0	22
0	12:25 PM	12	10	0	22
0	12:26 PM	11	10	0	21
0	12:27 PM	11	10	0	21
0	12:28 PM	11	10	0	21
1	12:29 PM	12	10	0	22
0	12:30 PM	12	10	0	22
2	12:31 PM	12	12	0	24
0	12:32 PM	12	11	0	23
1	12:33 PM	12	12	0	24
0	12:34 PM	11	12	0	23
0	12:35 PM	10	11	0	21
0	12:36 PM	9	10	0	19
1	12:37 PM	10	10	0	20
2	12:38 PM	12	10	0	22
0	12:39 PM	11	11	0	22
1	12:40 PM	11	12	0	23
0	12:41 PM	9	12	0	21
4	12:42 PM	11	14	0	25
0	12:43 PM	11	14	0	25
1	12:44 PM	12	14	0	26
0	12:45 PM	11	13	1	25

0	5:08 PM	10	7	0	17
0	5:09 PM	8	7	0	15
1	5:10 PM	9	7	0	16
0	5:11 PM	9	6	0	15
2	5:12 PM	11	6	0	17
5	5:13 PM	12	10	0	22
0	5:14 PM	11	10	0	21
0	5:15 PM	11	10	0	21
0	5:16 PM	10	8	0	18
1	5:17 PM	11	8	0	19
1	5:18 PM	11	9	0	20
1	5:19 PM	12	9	0	21
0	5:20 PM	12	9	0	21
0	5:21 PM	12	9	0	21
0	5:22 PM	11	8	0	19
1	5:23 PM	12	8	0	20
0	5:24 PM	12	8	0	20
0	5:25 PM	11	6	0	17
0	5:26 PM	11	6	0	17
0	5:27 PM	11	6	0	17
1	5:28 PM	11	7	0	18
0	5:29 PM	7	7	0	14
0	5:30 PM	8	5	0	13
0	5:31 PM	7	6	0	13
0	5:32 PM	5	7	0	12
0	5:33 PM	4	6	0	10
0	5:34 PM	4	6	0	10
0	5:35 PM	2	5	0	7
0	5:36 PM	2	5	0	7
2	5:37 PM	2	7	0	9
1	5:38 PM	3	7	0	10
0	5:39 PM	3	7	0	10
1	5:40 PM	4	7	0	11
1	5:41 PM	5	7	0	12
0	5:42 PM	4	7	0	11
5	5:43 PM	9	7	0	16
0	5:44 PM	10	4	0	14
3	5:45 PM	9	8	0	17

0	12:46 PM	11	13	0	24	0	5:46 PM	9	8	0	17
1	12:47 PM	12	13	0	25	0	5:47 PM	8	8	0	16
0	12:48 PM	12	13	0	25	2	5:48 PM	9	9	0	18
0	12:49 PM	11	12	0	23	1	5:49 PM	10	9	0	19
0	12:50 PM	11	12	0	23	1	5:50 PM	11	9	0	20
1	12:51 PM	12	12	0	24	0	5:51 PM	12	8	0	20
0	12:52 PM	12	12	0	24	0	5:52 PM	12	8	0	20
0	12:53 PM	12	10	0	22	0	5:53 PM	11	9	0	20
0	12:54 PM	11	11	0	22	0	5:54 PM	9	9	0	18
1	12:55 PM	12	11	0	23	3	5:55 PM	12	9	0	21
0	12:56 PM	12	11	0	23	0	5:56 PM	11	9	0	20
0	12:57 PM	12	11	0	23	0	5:57 PM	10	10	0	20
0	12:58 PM	11	9	0	20	0	5:58 PM	10	8	0	18
1	12:59 PM	10	11	0	21	2	5:59 PM	11	9	0	20
3	1:00 PM	12	12	0	24	0	6:00 PM	11	9	0	20
0	1:01 PM	12	12	0	24	1	6:01 PM	11	10	0	21
0	1:02 PM	10	12	0	22	1	6:02 PM	12	10	0	22
1	1:03 PM	11	12	0	23	0	6:03 PM	12	9	0	21
0	1:04 PM	12	10	0	22	0	6:04 PM	10	9	0	19
0	1:05 PM	10	10	0	20	0	6:05 PM	10	9	0	19
0	1:06 PM	11	9	0	20	0	6:06 PM	10	9	0	19
2	1:07 PM	12	10	0	22	0	6:07 PM	10	9	0	19
2	1:08 PM	12	12	0	24	1	6:08 PM	11	9	0	20
0	1:09 PM	12	12	0	24	1	6:09 PM	11	10	0	21
0	1:10 PM	12	10	0	22	0	6:10 PM	10	9	0	19
0	1:11 PM	12	10	0	22	0	6:11 PM	10	8	0	18
0	1:12 PM	11	11	0	22	2	6:12 PM	12	8	0	20
2	1:13 PM	11	13	0	24	2	6:13 PM	12	10	0	22
1	1:14 PM	12	13	0	25	0	6:14 PM	10	10	0	20
0	1:15 PM	11	11	1	23	1	6:15 PM	11	10	0	21
0	1:16 PM	12	11	0	23	0	6:16 PM	11	10	0	21
0	1:17 PM	11	9	0	20	0	6:17 PM	10	9	0	19
0	1:18 PM	10	9	0	19	3	6:18 PM	12	10	0	22
0	1:19 PM	11	8	0	19	0	6:19 PM	12	10	0	22
3	1:20 PM	12	10	0	22	0	6:20 PM	11	10	0	21
0	1:21 PM	10	8	0	18	1	6:21 PM	12	10	0	22
2	1:22 PM	11	9	0	20	0	6:22 PM	12	9	0	21
0	1:23 PM	12	8	0	20	0	6:23 PM	12	8	0	20

1	1:24 PM	12	9	0	21	3	6:24 PM	12	11	0	23
0	1:25 PM	11	10	0	21	0	6:25 PM	11	10	0	21
1	1:26 PM	12	10	0	22	0	6:26 PM	11	10	0	21
4	1:27 PM	12	14	0	26	0	6:27 PM	11	9	0	20
0	1:28 PM	12	13	1	26	0	6:28 PM	9	9	0	18
0	1:29 PM	11	12	0	23	0	6:29 PM	8	9	0	17
0	1:30 PM	11	12	0	23	0	6:30 PM	8	9	0	17
0	1:31 PM	11	12	0	23	2	6:31 PM	10	9	0	19
1	1:32 PM	12	12	0	24	1	6:32 PM	10	10	0	20
0	1:33 PM	11	10	0	21	0	6:33 PM	10	10	0	20
0	1:34 PM	11	9	0	20	1	6:34 PM	11	10	0	21
0	1:35 PM	8	9	0	17	0	6:35 PM	10	10	0	20
3	1:36 PM	9	11	0	20	1	6:36 PM	11	10	0	21
2	1:37 PM	11	11	0	22	0	6:37 PM	11	10	0	21
0	1:38 PM	9	11	0	20	1	6:38 PM	12	10	0	22
3	1:39 PM	12	11	0	23	0	6:39 PM	12	9	0	21
1	1:40 PM	12	12	0	24	0	6:40 PM	10	9	0	19
0	1:41 PM	11	12	0	23	0	6:41 PM	10	9	0	19
1	1:42 PM	12	12	0	24	0	6:42 PM	8	10	0	18
1	1:43 PM	12	13	0	25	0	6:43 PM	8	10	0	18
0	1:44 PM	12	13	0	25	1	6:44 PM	9	10	0	19
0	1:45 PM	12	12	0	24	0	6:45 PM	9	10	0	19
0	1:46 PM	10	12	0	22	1	6:46 PM	10	10	0	20
0	1:47 PM	11	11	0	22	0	6:47 PM	9	10	0	19
0	1:48 PM	11	11	0	22	0	6:48 PM	9	9	0	18
0	1:49 PM	10	11	0	21	1	6:49 PM	10	9	0	19
2	1:50 PM	12	11	0	23	0	6:50 PM	10	9	0	19
0	1:51 PM	11	12	0	23	1	6:51 PM	10	10	0	20
0	1:52 PM	10	10	0	20	0	6:52 PM	10	10	0	20
0	1:53 PM	9	10	0	19	0	6:53 PM	11	9	0	20
0	1:54 PM	9	10	0	19	0	6:54 PM	11	9	0	20
0	1:55 PM	8	10	0	18	0	6:55 PM	11	9	0	20
1	1:56 PM	8	11	0	19	0	6:56 PM	10	9	0	19
0	1:57 PM	8	11	0	19	0	6:57 PM	10	9	0	19
0	1:58 PM	7	9	0	16	0	6:58 PM	10	7	0	17
0	1:59 PM	7	9	0	16	0	6:59 PM	10	7	0	17
3	2:00 PM	8	11	0	19	0	7:00 PM	10	6	0	16
	Totals	1873	1628	4	3505		Totals	1178	1026	0	2204

Prepared by National Data & Surveying Services

Queue Study

Location: 8867 Cuyamaca St
City: Santee, CA

Date: 2/8/2022
Day: Tuesday

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	11:00 AM	2	1	0	3
1	11:01 AM	2	2	0	4
0	11:02 AM	0	2	0	2
0	11:03 AM	1	1	0	2
0	11:04 AM	1	0	0	1
0	11:05 AM	1	0	0	1
0	11:06 AM	1	0	0	1
2	11:07 AM	1	2	0	3
2	11:08 AM	1	4	0	5
0	11:09 AM	1	4	0	5
0	11:10 AM	1	4	0	5
1	11:11 AM	1	5	0	6
0	11:12 AM	0	6	0	6
0	11:13 AM	2	4	0	6
1	11:14 AM	3	4	0	7
0	11:15 AM	5	1	0	6
0	11:16 AM	4	2	0	6
0	11:17 AM	4	2	0	6
2	11:18 AM	4	4	0	8
0	11:19 AM	2	4	0	6
0	11:20 AM	1	5	0	6
0	11:21 AM	1	4	0	5
4	11:22 AM	2	7	0	9
1	11:23 AM	3	7	0	10
2	11:24 AM	3	9	0	12
1	11:25 AM	4	9	0	13
2	11:26 AM	5	10	0	15
0	11:27 AM	6	9	0	15
0	11:28 AM	5	10	0	15
1	11:29 AM	6	10	0	16

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	4:00 PM	0	2	0	2
0	4:01 PM	0	1	0	1
1	4:02 PM	0	2	0	2
1	4:03 PM	0	3	0	3
0	4:04 PM	0	2	0	2
0	4:05 PM	0	1	0	1
0	4:06 PM	1	0	0	1
1	4:07 PM	1	1	0	2
0	4:08 PM	1	0	0	1
0	4:09 PM	0	0	0	0
2	4:10 PM	0	2	0	2
1	4:11 PM	1	2	0	3
0	4:12 PM	0	2	0	2
2	4:13 PM	0	4	0	4
1	4:14 PM	1	4	0	5
2	4:15 PM	2	5	0	7
0	4:16 PM	2	4	0	6
0	4:17 PM	2	3	0	5
0	4:18 PM	3	1	0	4
3	4:19 PM	4	3	0	7
0	4:20 PM	4	2	0	6
0	4:21 PM	3	1	0	4
0	4:22 PM	1	1	0	2
0	4:23 PM	2	0	0	2
3	4:24 PM	2	3	0	5
2	4:25 PM	3	4	0	7
0	4:26 PM	2	5	0	7
2	4:27 PM	3	6	0	9
0	4:28 PM	4	4	0	8
3	4:29 PM	4	7	0	11

0	11:30 AM	5	9	0	14
0	11:31 AM	5	9	0	14
0	11:32 AM	9	4	0	13
3	11:33 AM	9	7	0	16
0	11:34 AM	9	6	0	15
0	11:35 AM	11	3	0	14
0	11:36 AM	11	3	0	14
0	11:37 AM	12	2	0	14
1	11:38 AM	11	4	0	15
0	11:39 AM	11	4	0	15
0	11:40 AM	11	3	0	14
0	11:41 AM	9	4	0	13
0	11:42 AM	8	4	0	12
2	11:43 AM	7	7	0	14
3	11:44 AM	9	8	0	17
0	11:45 AM	8	8	0	16
0	11:46 AM	7	8	0	15
1	11:47 AM	6	10	0	16
2	11:48 AM	10	8	0	18
0	11:49 AM	10	6	0	16
0	11:50 AM	10	5	0	15
0	11:51 AM	11	3	0	14
1	11:52 AM	11	4	0	15
0	11:53 AM	11	2	0	13
3	11:54 AM	10	6	0	16
1	11:55 AM	10	7	0	17
1	11:56 AM	10	8	0	18
0	11:57 AM	11	7	0	18
0	11:58 AM	11	6	0	17
0	11:59 AM	12	5	0	17
0	12:00 PM	10	5	0	15
0	12:01 PM	11	4	0	15
2	12:02 PM	9	8	0	17
1	12:03 PM	8	10	0	18
0	12:04 PM	9	9	0	18
0	12:05 PM	9	6	0	15
2	12:06 PM	9	8	0	17
0	12:07 PM	9	7	0	16

1	4:30 PM	5	7	0	12
1	4:31 PM	6	7	0	13
1	4:32 PM	6	8	0	14
0	4:33 PM	6	7	0	13
1	4:34 PM	5	9	0	14
0	4:35 PM	4	9	0	13
0	4:36 PM	3	9	0	12
0	4:37 PM	1	9	0	10
1	4:38 PM	2	9	0	11
0	4:39 PM	3	8	0	11
0	4:40 PM	3	8	0	11
0	4:41 PM	3	8	0	11
0	4:42 PM	2	8	0	10
0	4:43 PM	2	7	0	9
0	4:44 PM	3	6	0	9
0	4:45 PM	4	5	0	9
0	4:46 PM	4	5	0	9
0	4:47 PM	3	6	0	9
0	4:48 PM	3	6	0	9
1	4:49 PM	4	6	0	10
0	4:50 PM	3	7	0	10
0	4:51 PM	3	6	0	9
0	4:52 PM	3	5	0	8
2	4:53 PM	4	6	0	10
1	4:54 PM	3	8	0	11
0	4:55 PM	2	9	0	11
0	4:56 PM	2	9	0	11
1	4:57 PM	3	8	1	12
1	4:58 PM	3	8	2	13
0	4:59 PM	3	9	0	12
3	5:00 PM	3	9	3	15
0	5:01 PM	3	9	0	12
4	5:02 PM	4	9	3	16
0	5:03 PM	3	9	3	15
1	5:04 PM	4	9	3	16
0	5:05 PM	3	8	3	14
0	5:06 PM	3	8	0	11
5	5:07 PM	3	8	5	16

0	12:08 PM	8	8	0	16
0	12:09 PM	9	5	0	14
1	12:10 PM	9	6	0	15
0	12:11 PM	8	7	0	15
0	12:12 PM	7	6	0	13
1	12:13 PM	9	5	0	14
0	12:14 PM	10	4	0	14
1	12:15 PM	9	6	0	15
0	12:16 PM	9	6	0	15
0	12:17 PM	10	5	0	15
2	12:18 PM	10	7	0	17
0	12:19 PM	9	7	0	16
0	12:20 PM	7	8	0	15
0	12:21 PM	9	6	0	15
1	12:22 PM	9	7	0	16
0	12:23 PM	8	6	0	14
0	12:24 PM	8	6	0	14
1	12:25 PM	8	7	0	15
0	12:26 PM	8	7	0	15
1	12:27 PM	11	5	0	16
2	12:28 PM	10	8	0	18
0	12:29 PM	10	8	0	18
0	12:30 PM	10	6	0	16
0	12:31 PM	10	5	0	15
4	12:32 PM	10	9	0	19
0	12:33 PM	11	7	0	18
0	12:34 PM	10	6	0	16
1	12:35 PM	11	6	0	17
0	12:36 PM	9	6	1	16
0	12:37 PM	8	5	1	14
1	12:38 PM	8	7	0	15
1	12:39 PM	8	8	0	16
0	12:40 PM	7	9	0	16
0	12:41 PM	8	8	0	16
0	12:42 PM	8	8	0	16
0	12:43 PM	6	9	0	15
0	12:44 PM	4	10	0	14
1	12:45 PM	5	10	0	15

0	5:08 PM	3	8	0	11
4	5:09 PM	3	8	4	15
0	5:10 PM	3	9	3	15
0	5:11 PM	3	9	3	15
0	5:12 PM	2	8	0	10
4	5:13 PM	3	8	3	14
0	5:14 PM	3	8	0	11
1	5:15 PM	3	8	1	12
2	5:16 PM	3	8	3	14
0	5:17 PM	2	8	3	13
0	5:18 PM	3	9	0	12
3	5:19 PM	2	10	3	15
1	5:20 PM	1	10	5	16
0	5:21 PM	1	10	0	11
5	5:22 PM	1	10	5	16
1	5:23 PM	2	9	6	17
0	5:24 PM	3	9	0	12
7	5:25 PM	4	8	7	19
0	5:26 PM	4	8	6	18
0	5:27 PM	3	9	6	18
2	5:28 PM	3	9	8	20
0	5:29 PM	4	9	0	13
7	5:30 PM	4	9	7	20
0	5:31 PM	4	10	0	14
7	5:32 PM	3	10	8	21
0	5:33 PM	4	10	6	20
0	5:34 PM	4	9	0	13
9	5:35 PM	4	10	8	22
0	5:36 PM	4	10	6	20
0	5:37 PM	5	10	0	15
1	5:38 PM	6	10	0	16
4	5:39 PM	6	10	4	20
0	5:40 PM	5	10	0	15
2	5:41 PM	5	10	2	17
1	5:42 PM	5	10	3	18
0	5:43 PM	3	10	0	13
1	5:44 PM	4	10	0	14
8	5:45 PM	6	11	5	22

0	12:46 PM	5	10	0	15
0	12:47 PM	5	9	0	14
0	12:48 PM	5	8	0	13
1	12:49 PM	6	8	0	14
0	12:50 PM	6	8	0	14
2	12:51 PM	7	9	0	16
0	12:52 PM	8	8	0	16
3	12:53 PM	9	10	0	19
0	12:54 PM	10	9	0	19
0	12:55 PM	9	8	0	17
0	12:56 PM	10	6	0	16
0	12:57 PM	10	4	0	14
0	12:58 PM	9	5	0	14
2	12:59 PM	10	6	0	16
3	1:00 PM	10	9	0	19
2	1:01 PM	11	10	0	21
0	1:02 PM	8	10	0	18
0	1:03 PM	7	9	0	16
0	1:04 PM	7	9	0	16
1	1:05 PM	6	11	0	17
0	1:06 PM	7	9	0	16
0	1:07 PM	9	7	0	16
0	1:08 PM	11	5	0	16
4	1:09 PM	11	9	0	20
1	1:10 PM	11	10	0	21
0	1:11 PM	10	11	0	21
0	1:12 PM	9	10	0	19
1	1:13 PM	8	12	0	20
0	1:14 PM	11	8	0	19
0	1:15 PM	11	8	0	19
0	1:16 PM	12	5	0	17
0	1:17 PM	10	4	0	14
2	1:18 PM	10	6	0	16
0	1:19 PM	7	5	0	12
0	1:20 PM	8	4	0	12
0	1:21 PM	6	6	0	12
0	1:22 PM	4	7	0	11
2	1:23 PM	4	9	0	13

0	5:46 PM	7	12	0	19
4	5:47 PM	7	12	4	23
0	5:48 PM	6	13	0	19
4	5:49 PM	6	13	4	23
0	5:50 PM	6	13	0	19
7	5:51 PM	9	14	3	26
0	5:52 PM	10	14	0	24
4	5:53 PM	11	14	3	28
0	5:54 PM	10	14	0	24
1	5:55 PM	11	14	0	25
0	5:56 PM	9	14	2	25
0	5:57 PM	11	13	1	25
0	5:58 PM	11	11	0	22
0	5:59 PM	11	11	0	22
0	6:00 PM	11	9	0	20
0	6:01 PM	12	7	0	19
0	6:02 PM	12	7	0	19
0	6:03 PM	12	7	0	19
0	6:04 PM	10	8	0	18
0	6:05 PM	10	7	0	17
1	6:06 PM	10	8	0	18
0	6:07 PM	10	6	0	16
0	6:08 PM	11	5	0	16
5	6:09 PM	11	10	0	21
0	6:10 PM	11	10	0	21
0	6:11 PM	11	9	0	20
0	6:12 PM	10	8	0	18
1	6:13 PM	10	9	0	19
0	6:14 PM	11	8	0	19
0	6:15 PM	11	5	0	16
5	6:16 PM	12	9	0	21
0	6:17 PM	11	10	0	21
1	6:18 PM	12	10	0	22
0	6:19 PM	11	8	0	19
0	6:20 PM	11	7	0	18
0	6:21 PM	11	7	0	18
2	6:22 PM	11	9	0	20
0	6:23 PM	11	9	0	20

0	1:24 PM	5	8	0	13
4	1:25 PM	6	11	0	17
2	1:26 PM	6	13	0	19
0	1:27 PM	9	9	0	18
0	1:28 PM	9	8	0	17
0	1:29 PM	9	7	0	16
1	1:30 PM	9	8	0	17
0	1:31 PM	8	7	0	15
1	1:32 PM	10	6	0	16
0	1:33 PM	9	7	0	16
0	1:34 PM	10	5	0	15
0	1:35 PM	9	1	0	10
0	1:36 PM	8	1	0	9
2	1:37 PM	8	3	0	11
1	1:38 PM	6	6	0	12
0	1:39 PM	4	6	0	10
0	1:40 PM	5	4	0	9
0	1:41 PM	6	3	0	9
0	1:42 PM	6	3	0	9
1	1:43 PM	7	3	0	10
3	1:44 PM	8	5	0	13
1	1:45 PM	11	3	0	14
0	1:46 PM	11	3	0	14
0	1:47 PM	12	1	0	13
0	1:48 PM	10	1	0	11
0	1:49 PM	10	0	0	10
0	1:50 PM	9	0	0	9
0	1:51 PM	8	1	0	9
0	1:52 PM	8	1	0	9
0	1:53 PM	6	2	0	8
0	1:54 PM	6	1	0	7
0	1:55 PM	5	2	0	7
0	1:56 PM	5	1	0	6
0	1:57 PM	4	2	0	6
0	1:58 PM	3	3	0	6
0	1:59 PM	6	0	0	6
0	2:00 PM	6	0	0	6
	Totals	1354	1064	2	2420

0	6:24 PM	10	7	0	17
1	6:25 PM	11	7	0	18
1	6:26 PM	11	8	0	19
0	6:27 PM	10	8	0	18
1	6:28 PM	10	9	0	19
0	6:29 PM	9	7	0	16
3	6:30 PM	10	9	0	19
0	6:31 PM	10	9	0	19
0	6:32 PM	9	9	0	18
0	6:33 PM	9	8	0	17
0	6:34 PM	8	5	0	13
7	6:35 PM	11	9	0	20
0	6:36 PM	11	7	0	18
2	6:37 PM	11	9	0	20
0	6:38 PM	11	7	0	18
2	6:39 PM	10	10	0	20
1	6:40 PM	12	9	0	21
0	6:41 PM	10	9	0	19
0	6:42 PM	11	8	0	19
3	6:43 PM	11	11	0	22
0	6:44 PM	11	11	0	22
1	6:45 PM	12	11	0	23
0	6:46 PM	12	10	0	22
0	6:47 PM	11	11	0	22
0	6:48 PM	11	10	0	21
0	6:49 PM	9	9	0	18
3	6:50 PM	9	10	2	21
2	6:51 PM	9	11	3	23
0	6:52 PM	9	11	3	23
0	6:53 PM	10	11	0	21
2	6:54 PM	10	11	2	23
0	6:55 PM	9	11	1	21
0	6:56 PM	9	11	0	20
1	6:57 PM	10	11	0	21
2	6:58 PM	10	11	2	23
0	6:59 PM	10	11	2	23
0	7:00 PM	10	11	0	21
	Totals	921	1141	167	2229

Prepared by National Data & Surveying Services

Queue Study

Location: 8223 Mira Mesa Blvd
City: San Diego, CA

Date: 2/5/2022
Day: Saturday

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	11:00 AM	0	1	0	1
0	11:01 AM	0	1	0	1
1	11:02 AM	1	1	0	2
0	11:03 AM	1	1	0	2
0	11:04 AM	1	1	0	2
0	11:05 AM	0	0	0	0
2	11:06 AM	2	0	0	2
2	11:07 AM	2	2	0	4
0	11:08 AM	1	2	0	3
0	11:09 AM	1	2	0	3
0	11:10 AM	1	2	0	3
0	11:11 AM	1	2	0	3
1	11:12 AM	1	3	0	4
2	11:13 AM	0	6	0	6
1	11:14 AM	1	6	0	7
0	11:15 AM	0	5	0	5
1	11:16 AM	0	6	0	6
0	11:17 AM	1	5	0	6
0	11:18 AM	1	5	0	6
0	11:19 AM	2	3	0	5
0	11:20 AM	2	3	0	5
0	11:21 AM	1	3	0	4
1	11:22 AM	1	4	0	5
0	11:23 AM	2	2	0	4
0	11:24 AM	1	3	0	4
3	11:25 AM	3	4	0	7
0	11:26 AM	4	2	0	6
0	11:27 AM	4	1	0	5
1	11:28 AM	4	2	0	6
0	11:29 AM	4	1	0	5

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	4:00 PM	7	2	0	9
0	4:01 PM	5	1	0	6
2	4:02 PM	5	3	0	8
2	4:03 PM	7	3	0	10
0	4:04 PM	6	4	0	10
0	4:05 PM	6	3	0	9
1	4:06 PM	7	3	0	10
0	4:07 PM	7	3	0	10
0	4:08 PM	8	2	0	10
0	4:09 PM	8	2	0	10
0	4:10 PM	7	1	0	8
0	4:11 PM	7	1	0	8
0	4:12 PM	5	1	0	6
0	4:13 PM	5	0	0	5
0	4:14 PM	4	1	0	5
1	4:15 PM	4	2	0	6
0	4:16 PM	4	1	0	5
0	4:17 PM	3	1	0	4
1	4:18 PM	3	2	0	5
1	4:19 PM	5	1	0	6
1	4:20 PM	7	0	0	7
1	4:21 PM	7	1	0	8
0	4:22 PM	7	0	0	7
0	4:23 PM	7	0	0	7
0	4:24 PM	4	1	0	5
0	4:25 PM	3	0	0	3
0	4:26 PM	2	1	0	3
0	4:27 PM	2	1	0	3
0	4:28 PM	0	3	0	3
0	4:29 PM	2	1	0	3

0	11:30 AM	5	0	0	5
0	11:31 AM	5	0	0	5
0	11:32 AM	4	1	0	5
0	11:33 AM	3	1	0	4
1	11:34 AM	4	1	0	5
0	11:35 AM	3	1	0	4
0	11:36 AM	1	2	0	3
0	11:37 AM	0	1	0	1
0	11:38 AM	0	1	0	1
0	11:39 AM	0	0	0	0
0	11:40 AM	0	0	0	0
0	11:41 AM	0	0	0	0
2	11:42 AM	2	0	0	2
0	11:43 AM	0	0	0	0
1	11:44 AM	0	1	0	1
2	11:45 AM	3	0	0	3
0	11:46 AM	3	0	0	3
0	11:47 AM	3	0	0	3
0	11:48 AM	3	0	0	3
0	11:49 AM	2	0	0	2
1	11:50 AM	3	0	0	3
1	11:51 AM	2	2	0	4
0	11:52 AM	1	2	0	3
0	11:53 AM	1	1	0	2
1	11:54 AM	1	2	0	3
1	11:55 AM	3	1	0	4
0	11:56 AM	4	0	0	4
0	11:57 AM	4	0	0	4
2	11:58 AM	4	2	0	6
0	11:59 AM	5	1	0	6
0	12:00 PM	4	0	0	4
0	12:01 PM	4	0	0	4
1	12:02 PM	5	0	0	5
1	12:03 PM	5	1	0	6
3	12:04 PM	7	2	0	9
0	12:05 PM	6	3	0	9
0	12:06 PM	6	2	0	8
0	12:07 PM	4	2	0	6

0	4:30 PM	1	0	0	1
0	4:31 PM	1	0	0	1
0	4:32 PM	0	0	0	0
0	4:33 PM	0	0	0	0
2	4:34 PM	0	2	0	2
1	4:35 PM	3	0	0	3
2	4:36 PM	5	0	0	5
0	4:37 PM	5	0	0	5
0	4:38 PM	4	0	0	4
0	4:39 PM	3	0	0	3
2	4:40 PM	3	2	0	5
1	4:41 PM	3	3	0	6
0	4:42 PM	1	2	0	3
3	4:43 PM	3	3	0	6
1	4:44 PM	2	5	0	7
0	4:45 PM	2	5	0	7
0	4:46 PM	2	3	0	5
0	4:47 PM	0	3	0	3
0	4:48 PM	1	2	0	3
0	4:49 PM	0	2	0	2
1	4:50 PM	0	3	0	3
1	4:51 PM	2	2	0	4
0	4:52 PM	2	2	0	4
1	4:53 PM	3	2	0	5
0	4:54 PM	3	2	0	5
0	4:55 PM	3	2	0	5
0	4:56 PM	2	3	0	5
0	4:57 PM	2	2	0	4
0	4:58 PM	2	2	0	4
1	4:59 PM	4	1	0	5
1	5:00 PM	6	0	0	6
1	5:01 PM	6	1	0	7
0	5:02 PM	6	1	0	7
2	5:03 PM	7	2	0	9
2	5:04 PM	8	3	0	11
1	5:05 PM	8	4	0	12
0	5:06 PM	8	3	0	11
0	5:07 PM	9	0	0	9

0	12:08 PM	3	3	0	6
0	12:09 PM	2	3	0	5
2	12:10 PM	3	4	0	7
0	12:11 PM	4	3	0	7
0	12:12 PM	3	4	0	7
0	12:13 PM	3	3	0	6
0	12:14 PM	2	4	0	6
0	12:15 PM	1	4	0	5
0	12:16 PM	2	3	0	5
0	12:17 PM	2	3	0	5
0	12:18 PM	2	2	0	4
1	12:19 PM	2	3	0	5
1	12:20 PM	2	4	0	6
0	12:21 PM	2	3	0	5
1	12:22 PM	3	3	0	6
2	12:23 PM	4	4	0	8
1	12:24 PM	5	4	0	9
0	12:25 PM	4	4	0	8
1	12:26 PM	5	4	0	9
0	12:27 PM	5	4	0	9
0	12:28 PM	5	4	0	9
0	12:29 PM	4	4	0	8
0	12:30 PM	4	4	0	8
0	12:31 PM	2	6	0	8
0	12:32 PM	2	4	0	6
0	12:33 PM	2	3	0	5
0	12:34 PM	1	3	0	4
0	12:35 PM	0	3	0	3
1	12:36 PM	1	3	0	4
0	12:37 PM	1	3	0	4
1	12:38 PM	1	4	0	5
0	12:39 PM	2	3	0	5
2	12:40 PM	3	4	0	7
1	12:41 PM	5	3	0	8
0	12:42 PM	6	2	0	8
0	12:43 PM	6	1	0	7
0	12:44 PM	6	0	0	6
3	12:45 PM	8	1	0	9

0	5:08 PM	8	0	0	8
0	5:09 PM	5	1	0	6
1	5:10 PM	5	2	0	7
0	5:11 PM	6	1	0	7
1	5:12 PM	5	3	0	8
0	5:13 PM	6	2	0	8
0	5:14 PM	4	3	0	7
0	5:15 PM	6	1	0	7
0	5:16 PM	6	1	0	7
0	5:17 PM	6	0	0	6
0	5:18 PM	5	0	0	5
2	5:19 PM	7	0	0	7
0	5:20 PM	6	0	0	6
0	5:21 PM	5	0	0	5
2	5:22 PM	5	2	0	7
0	5:23 PM	5	2	0	7
0	5:24 PM	5	2	0	7
0	5:25 PM	5	0	0	5
0	5:26 PM	2	0	0	2
0	5:27 PM	1	0	0	1
1	5:28 PM	0	2	0	2
0	5:29 PM	1	0	0	1
0	5:30 PM	0	0	0	0
0	5:31 PM	0	0	0	0
1	5:32 PM	0	1	0	1
0	5:33 PM	0	1	0	1
1	5:34 PM	1	1	0	2
0	5:35 PM	1	1	0	2
1	5:36 PM	3	0	0	3
0	5:37 PM	1	1	0	2
0	5:38 PM	2	0	0	2
6	5:39 PM	6	2	0	8
0	5:40 PM	7	0	0	7
3	5:41 PM	8	2	0	10
0	5:42 PM	8	2	0	10
1	5:43 PM	9	2	0	11
0	5:44 PM	7	2	0	9
0	5:45 PM	7	1	0	8

1	12:46 PM	7	3	0	10
0	12:47 PM	7	3	0	10
2	12:48 PM	8	4	0	12
2	12:49 PM	8	6	0	14
1	12:50 PM	9	6	0	15
0	12:51 PM	6	6	0	12
0	12:52 PM	5	5	0	10
0	12:53 PM	3	4	0	7
0	12:54 PM	3	4	0	7
2	12:55 PM	6	3	0	9
0	12:56 PM	6	2	0	8
1	12:57 PM	6	3	0	9
0	12:58 PM	6	3	0	9
3	12:59 PM	7	5	0	12
1	1:00 PM	9	4	0	13
0	1:01 PM	9	2	0	11
0	1:02 PM	9	1	0	10
2	1:03 PM	9	3	0	12
0	1:04 PM	9	1	0	10
1	1:05 PM	8	3	0	11
2	1:06 PM	9	4	0	13
0	1:07 PM	9	2	0	11
0	1:08 PM	8	3	0	11
0	1:09 PM	7	2	0	9
1	1:10 PM	5	5	0	10
2	1:11 PM	7	5	0	12
0	1:12 PM	6	4	0	10
0	1:13 PM	5	5	0	10
1	1:14 PM	5	6	0	11
0	1:15 PM	4	6	0	10
0	1:16 PM	5	5	0	10
1	1:17 PM	5	6	0	11
0	1:18 PM	6	4	0	10
2	1:19 PM	6	6	0	12
0	1:20 PM	6	6	0	12
0	1:21 PM	7	3	0	10
2	1:22 PM	6	6	0	12
0	1:23 PM	6	5	0	11

0	5:46 PM	6	1	0	7
2	5:47 PM	8	1	0	9
2	5:48 PM	9	2	0	11
0	5:49 PM	7	3	0	10
0	5:50 PM	7	3	0	10
0	5:51 PM	6	4	0	10
0	5:52 PM	6	3	0	9
1	5:53 PM	7	3	0	10
0	5:54 PM	6	4	0	10
1	5:55 PM	7	4	0	11
0	5:56 PM	7	4	0	11
0	5:57 PM	7	2	0	9
0	5:58 PM	5	3	0	8
0	5:59 PM	5	3	0	8
1	6:00 PM	4	5	0	9
0	6:01 PM	3	5	0	8
0	6:02 PM	3	5	0	8
0	6:03 PM	4	4	0	8
0	6:04 PM	4	4	0	8
0	6:05 PM	2	5	0	7
0	6:06 PM	4	3	0	7
1	6:07 PM	5	3	0	8
0	6:08 PM	6	1	0	7
2	6:09 PM	6	3	0	9
0	6:10 PM	7	2	0	9
0	6:11 PM	7	2	0	9
1	6:12 PM	8	2	0	10
0	6:13 PM	8	0	0	8
0	6:14 PM	8	0	0	8
0	6:15 PM	8	0	0	8
0	6:16 PM	6	0	0	6
1	6:17 PM	6	1	0	7
0	6:18 PM	6	0	0	6
1	6:19 PM	6	1	0	7
0	6:20 PM	6	1	0	7
0	6:21 PM	5	0	0	5
0	6:22 PM	5	0	0	5
0	6:23 PM	5	0	0	5

1	1:24 PM	6	6	0	12
0	1:25 PM	5	6	0	11
1	1:26 PM	6	6	0	12
0	1:27 PM	6	6	0	12
0	1:28 PM	6	6	0	12
0	1:29 PM	5	6	0	11
0	1:30 PM	6	5	0	11
0	1:31 PM	4	5	0	9
0	1:32 PM	3	6	0	9
0	1:33 PM	4	5	0	9
0	1:34 PM	3	4	0	7
0	1:35 PM	2	3	0	5
2	1:36 PM	2	5	0	7
0	1:37 PM	4	3	0	7
1	1:38 PM	5	3	0	8
0	1:39 PM	4	2	0	6
1	1:40 PM	4	3	0	7
0	1:41 PM	2	2	0	4
0	1:42 PM	1	2	0	3
1	1:43 PM	2	2	0	4
2	1:44 PM	4	2	0	6
0	1:45 PM	3	2	0	5
0	1:46 PM	2	2	0	4
1	1:47 PM	2	3	0	5
0	1:48 PM	3	2	0	5
0	1:49 PM	5	0	0	5
1	1:50 PM	5	1	0	6
2	1:51 PM	5	3	0	8
0	1:52 PM	4	4	0	8
0	1:53 PM	5	3	0	8
0	1:54 PM	6	2	0	8
2	1:55 PM	6	4	0	10
0	1:56 PM	7	3	0	10
0	1:57 PM	6	2	0	8
0	1:58 PM	7	1	0	8
1	1:59 PM	8	1	0	9
0	2:00 PM	9	0	0	9
	Totals	690	508	0	1198

0	6:24 PM	4	0	0	4
1	6:25 PM	4	1	0	5
0	6:26 PM	2	0	0	2
0	6:27 PM	0	0	0	0
1	6:28 PM	0	1	0	1
1	6:29 PM	0	2	0	2
0	6:30 PM	0	1	0	1
0	6:31 PM	0	1	0	1
1	6:32 PM	1	1	0	2
1	6:33 PM	3	0	0	3
1	6:34 PM	3	1	0	4
0	6:35 PM	3	1	0	4
0	6:36 PM	3	1	0	4
0	6:37 PM	3	0	0	3
0	6:38 PM	2	0	0	2
1	6:39 PM	2	1	0	3
1	6:40 PM	2	2	0	4
0	6:41 PM	2	2	0	4
1	6:42 PM	2	3	0	5
2	6:43 PM	2	5	0	7
3	6:44 PM	5	5	0	10
0	6:45 PM	5	3	0	8
0	6:46 PM	5	3	0	8
0	6:47 PM	5	1	0	6
0	6:48 PM	5	0	0	5
0	6:49 PM	5	0	0	5
0	6:50 PM	4	0	0	4
2	6:51 PM	4	2	0	6
0	6:52 PM	4	1	0	5
0	6:53 PM	4	1	0	5
0	6:54 PM	4	1	0	5
0	6:55 PM	4	1	0	5
0	6:56 PM	3	0	0	3
3	6:57 PM	3	3	0	6
0	6:58 PM	3	2	0	5
1	6:59 PM	3	3	0	6
0	7:00 PM	3	3	0	6
	Totals	770	289	0	1059

Prepared by National Data & Surveying Services

Queue Study

Location: 8223 Mira Mesa Blvd
City: San Diego, CA

Date: 2/9/2022
Day: Wednesday

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	11:00 AM	0	1	0	1
1	11:01 AM	0	2	0	2
0	11:02 AM	0	2	0	2
1	11:03 AM	0	3	0	3
1	11:04 AM	1	3	0	4
0	11:05 AM	2	2	0	4
1	11:06 AM	4	1	0	5
0	11:07 AM	4	1	0	5
0	11:08 AM	4	0	0	4
0	11:09 AM	3	1	0	4
0	11:10 AM	2	1	0	3
0	11:11 AM	2	1	0	3
0	11:12 AM	2	1	0	3
3	11:13 AM	2	4	0	6
1	11:14 AM	2	5	0	7
0	11:15 AM	3	3	0	6
1	11:16 AM	4	3	0	7
3	11:17 AM	5	5	0	10
0	11:18 AM	5	4	0	9
3	11:19 AM	7	5	0	12
0	11:20 AM	7	3	0	10
2	11:21 AM	8	4	0	12
0	11:22 AM	8	4	0	12
1	11:23 AM	7	6	0	13
0	11:24 AM	7	5	0	12
1	11:25 AM	7	6	0	13
0	11:26 AM	7	5	0	12
2	11:27 AM	8	6	0	14
0	11:28 AM	8	6	0	14
0	11:29 AM	7	4	0	11

New Veh in DT	TIME	Queue Length (Number of Vehicles)			
		Zone 1 (Pickup Window to Order Menu)	Zone 2 (Order Menu to Drive Thru Lane Entrance)	Zone 3 (Drive Thru Lane Entrance to Back)	Totals
	4:00 PM	8	6	0	14
0	4:01 PM	8	5	0	13
0	4:02 PM	8	5	0	13
1	4:03 PM	9	5	0	14
0	4:04 PM	9	4	0	13
0	4:05 PM	9	4	0	13
0	4:06 PM	8	4	0	12
0	4:07 PM	8	4	0	12
0	4:08 PM	8	2	0	10
0	4:09 PM	8	2	0	10
0	4:10 PM	8	2	0	10
1	4:11 PM	7	4	0	11
0	4:12 PM	6	5	0	11
1	4:13 PM	6	6	0	12
0	4:14 PM	8	4	0	12
0	4:15 PM	8	4	0	12
1	4:16 PM	8	5	0	13
1	4:17 PM	8	6	0	14
1	4:18 PM	8	7	0	15
0	4:19 PM	8	7	0	15
0	4:20 PM	7	5	0	12
0	4:21 PM	6	4	0	10
0	4:22 PM	6	4	0	10
0	4:23 PM	6	4	0	10
0	4:24 PM	4	2	0	6
0	4:25 PM	3	1	0	4
0	4:26 PM	3	1	0	4
0	4:27 PM	2	0	0	2
1	4:28 PM	3	0	0	3
1	4:29 PM	2	2	0	4

0	11:30 AM	8	2	0	10
2	11:31 AM	9	3	0	12
0	11:32 AM	8	3	0	11
0	11:33 AM	8	3	0	11
0	11:34 AM	8	2	0	10
0	11:35 AM	8	2	0	10
0	11:36 AM	7	2	0	9
1	11:37 AM	7	3	0	10
0	11:38 AM	7	3	0	10
4	11:39 AM	7	7	0	14
1	11:40 AM	8	7	0	15
0	11:41 AM	8	5	0	13
3	11:42 AM	8	8	0	16
0	11:43 AM	8	8	0	16
0	11:44 AM	7	8	0	15
0	11:45 AM	7	8	0	15
1	11:46 AM	8	8	0	16
0	11:47 AM	8	7	0	15
0	11:48 AM	7	6	0	13
0	11:49 AM	9	3	0	12
0	11:50 AM	9	2	0	11
0	11:51 AM	8	3	0	11
1	11:52 AM	8	4	0	12
0	11:53 AM	6	5	0	11
0	11:54 AM	6	3	0	9
1	11:55 AM	6	4	0	10
0	11:56 AM	5	4	0	9
0	11:57 AM	4	5	0	9
0	11:58 AM	2	5	0	7
0	11:59 AM	3	3	0	6
1	12:00 PM	3	4	0	7
0	12:01 PM	2	5	0	7
0	12:02 PM	2	5	0	7
1	12:03 PM	3	5	0	8
0	12:04 PM	4	4	0	8
2	12:05 PM	6	4	0	10
1	12:06 PM	5	6	0	11
1	12:07 PM	6	6	0	12

0	4:30 PM	2	2	0	4
0	4:31 PM	2	1	0	3
0	4:32 PM	0	0	0	0
0	4:33 PM	0	0	0	0
0	4:34 PM	0	0	0	0
0	4:35 PM	0	0	0	0
1	4:36 PM	0	1	0	1
1	4:37 PM	0	2	0	2
0	4:38 PM	0	2	0	2
0	4:39 PM	0	1	0	1
0	4:40 PM	0	1	0	1
0	4:41 PM	0	0	0	0
1	4:42 PM	0	1	0	1
0	4:43 PM	0	1	0	1
1	4:44 PM	0	2	0	2
0	4:45 PM	0	2	0	2
0	4:46 PM	0	0	0	0
0	4:47 PM	0	0	0	0
0	4:48 PM	0	0	0	0
0	4:49 PM	0	0	0	0
1	4:50 PM	0	1	0	1
1	4:51 PM	1	1	0	2
2	4:52 PM	2	2	0	4
0	4:53 PM	3	0	0	3
2	4:54 PM	2	3	0	5
0	4:55 PM	0	2	0	2
0	4:56 PM	0	2	0	2
0	4:57 PM	0	1	0	1
0	4:58 PM	0	0	0	0
0	4:59 PM	0	0	0	0
1	5:00 PM	1	0	0	1
2	5:01 PM	0	3	0	3
1	5:02 PM	2	2	0	4
1	5:03 PM	4	1	0	5
0	5:04 PM	4	1	0	5
0	5:05 PM	3	0	0	3
2	5:06 PM	3	2	0	5
2	5:07 PM	4	3	0	7

2	12:08 PM	6	8	0	14
0	12:09 PM	8	5	0	13
1	12:10 PM	9	5	0	14
0	12:11 PM	9	3	0	12
1	12:12 PM	9	4	0	13
0	12:13 PM	8	4	0	12
0	12:14 PM	9	3	0	12
1	12:15 PM	9	4	0	13
0	12:16 PM	9	4	0	13
0	12:17 PM	8	4	0	12
0	12:18 PM	8	2	0	10
2	12:19 PM	8	4	0	12
0	12:20 PM	8	4	0	12
0	12:21 PM	7	4	0	11
1	12:22 PM	7	5	0	12
2	12:23 PM	7	7	0	14
0	12:24 PM	8	4	0	12
2	12:25 PM	7	7	0	14
0	12:26 PM	7	7	0	14
1	12:27 PM	9	6	0	15
0	12:28 PM	7	6	0	13
0	12:29 PM	8	5	0	13
0	12:30 PM	8	5	0	13
0	12:31 PM	7	5	0	12
1	12:32 PM	7	6	0	13
1	12:33 PM	7	7	0	14
1	12:34 PM	7	8	0	15
0	12:35 PM	7	8	0	15
0	12:36 PM	7	8	0	15
0	12:37 PM	7	7	0	14
0	12:38 PM	7	7	0	14
0	12:39 PM	8	4	0	12
0	12:40 PM	7	5	0	12
0	12:41 PM	5	5	0	10
0	12:42 PM	3	4	0	7
0	12:43 PM	3	2	0	5
2	12:44 PM	3	4	0	7
0	12:45 PM	1	5	0	6

0	5:08 PM	3	4	0	7
1	5:09 PM	3	5	0	8
2	5:10 PM	4	6	0	10
0	5:11 PM	4	6	0	10
0	5:12 PM	3	6	0	9
0	5:13 PM	3	6	0	9
0	5:14 PM	4	5	0	9
0	5:15 PM	3	6	0	9
1	5:16 PM	4	6	0	10
0	5:17 PM	4	6	0	10
0	5:18 PM	5	4	0	9
0	5:19 PM	4	4	0	8
1	5:20 PM	4	5	0	9
0	5:21 PM	4	5	0	9
1	5:22 PM	5	5	0	10
0	5:23 PM	5	4	0	9
2	5:24 PM	5	6	0	11
0	5:25 PM	3	7	0	10
2	5:26 PM	4	8	0	12
1	5:27 PM	6	7	0	13
0	5:28 PM	5	6	0	11
0	5:29 PM	4	7	0	11
0	5:30 PM	4	6	0	10
1	5:31 PM	4	7	0	11
0	5:32 PM	5	6	0	11
2	5:33 PM	5	8	0	13
0	5:34 PM	5	7	0	12
0	5:35 PM	5	7	0	12
1	5:36 PM	6	7	0	13
0	5:37 PM	5	7	0	12
0	5:38 PM	4	8	0	12
0	5:39 PM	5	7	0	12
1	5:40 PM	6	7	0	13
1	5:41 PM	7	7	0	14
1	5:42 PM	8	7	0	15
0	5:43 PM	8	7	0	15
0	5:44 PM	8	7	0	15
1	5:45 PM	8	8	0	16

0	12:46 PM	3	2	0	5
0	12:47 PM	1	1	0	2
0	12:48 PM	2	0	0	2
1	12:49 PM	3	0	0	3
2	12:50 PM	3	2	0	5
1	12:51 PM	3	3	0	6
1	12:52 PM	3	4	0	7
0	12:53 PM	4	2	0	6
0	12:54 PM	4	2	0	6
0	12:55 PM	4	2	0	6
0	12:56 PM	3	2	0	5
2	12:57 PM	3	4	0	7
1	12:58 PM	5	3	0	8
1	12:59 PM	6	3	0	9
0	1:00 PM	6	2	0	8
0	1:01 PM	6	1	0	7
1	1:02 PM	5	3	0	8
0	1:03 PM	7	1	0	8
5	1:04 PM	7	6	0	13
2	1:05 PM	9	6	0	15
0	1:06 PM	9	6	0	15
0	1:07 PM	9	6	0	15
0	1:08 PM	7	7	0	14
2	1:09 PM	9	7	0	16
0	1:10 PM	7	8	0	15
0	1:11 PM	8	7	0	15
1	1:12 PM	8	8	0	16
0	1:13 PM	9	6	0	15
0	1:14 PM	8	6	0	14
1	1:15 PM	8	7	0	15
1	1:16 PM	8	8	0	16
0	1:17 PM	7	7	0	14
0	1:18 PM	6	8	0	14
0	1:19 PM	8	5	0	13
0	1:20 PM	8	4	0	12
0	1:21 PM	7	3	0	10
1	1:22 PM	7	4	0	11
0	1:23 PM	9	1	0	10

0	5:46 PM	8	8	0	16
0	5:47 PM	9	7	0	16
0	5:48 PM	9	7	0	16
0	5:49 PM	8	8	0	16
0	5:50 PM	7	7	0	14
1	5:51 PM	7	8	0	15
0	5:52 PM	7	8	0	15
0	5:53 PM	7	8	0	15
0	5:54 PM	6	8	0	14
0	5:55 PM	7	7	0	14
0	5:56 PM	7	7	0	14
1	5:57 PM	7	8	0	15
0	5:58 PM	6	8	0	14
0	5:59 PM	7	7	0	14
1	6:00 PM	7	8	0	15
0	6:01 PM	7	8	0	15
0	6:02 PM	7	7	0	14
0	6:03 PM	6	8	0	14
2	6:04 PM	8	8	0	16
0	6:05 PM	8	8	0	16
0	6:06 PM	9	6	0	15
1	6:07 PM	9	7	0	16
0	6:08 PM	7	7	0	14
0	6:09 PM	7	7	0	14
0	6:10 PM	6	6	0	12
0	6:11 PM	6	6	0	12
0	6:12 PM	6	5	0	11
0	6:13 PM	6	5	0	11
0	6:14 PM	7	4	0	11
0	6:15 PM	6	4	0	10
0	6:16 PM	6	4	0	10
0	6:17 PM	6	2	0	8
0	6:18 PM	5	2	0	7
2	6:19 PM	5	4	0	9
0	6:20 PM	5	3	0	8
0	6:21 PM	5	3	0	8
0	6:22 PM	6	2	0	8
1	6:23 PM	6	3	0	9

0	1:24 PM	8	1	0	9
0	1:25 PM	7	1	0	8
0	1:26 PM	7	1	0	8
0	1:27 PM	7	0	0	7
0	1:28 PM	7	0	0	7
0	1:29 PM	7	0	0	7
0	1:30 PM	6	0	0	6
0	1:31 PM	4	2	0	6
1	1:32 PM	4	3	0	7
0	1:33 PM	2	4	0	6
1	1:34 PM	2	5	0	7
0	1:35 PM	0	3	0	3
0	1:36 PM	1	2	0	3
0	1:37 PM	1	1	0	2
2	1:38 PM	2	2	0	4
1	1:39 PM	3	2	0	5
1	1:40 PM	3	3	0	6
0	1:41 PM	3	1	0	4
3	1:42 PM	5	2	0	7
0	1:43 PM	5	2	0	7
0	1:44 PM	5	1	0	6
1	1:45 PM	6	1	0	7
0	1:46 PM	6	0	0	6
0	1:47 PM	6	0	0	6
0	1:48 PM	3	1	0	4
0	1:49 PM	3	0	0	3
0	1:50 PM	1	2	0	3
1	1:51 PM	1	3	0	4
0	1:52 PM	3	1	0	4
3	1:53 PM	5	2	0	7
0	1:54 PM	4	3	0	7
0	1:55 PM	3	3	0	6
2	1:56 PM	3	5	0	8
0	1:57 PM	1	5	0	6
0	1:58 PM	3	2	0	5
3	1:59 PM	5	3	0	8
0	2:00 PM	5	2	0	7
	Totals	1014	693	0	1707

0	6:24 PM	6	3	0	9
0	6:25 PM	6	2	0	8
0	6:26 PM	6	0	0	6
0	6:27 PM	5	0	0	5
2	6:28 PM	5	2	0	7
0	6:29 PM	6	1	0	7
1	6:30 PM	6	2	0	8
0	6:31 PM	6	2	0	8
1	6:32 PM	6	3	0	9
0	6:33 PM	6	2	0	8
0	6:34 PM	6	2	0	8
0	6:35 PM	6	2	0	8
0	6:36 PM	6	1	0	7
0	6:37 PM	6	0	0	6
1	6:38 PM	6	1	0	7
0	6:39 PM	5	1	0	6
0	6:40 PM	4	2	0	6
0	6:41 PM	5	1	0	6
0	6:42 PM	5	0	0	5
3	6:43 PM	5	3	0	8
0	6:44 PM	7	1	0	8
0	6:45 PM	5	2	0	7
0	6:46 PM	5	2	0	7
0	6:47 PM	6	0	0	6
3	6:48 PM	5	4	0	9
0	6:49 PM	6	2	0	8
1	6:50 PM	6	3	0	9
0	6:51 PM	5	3	0	8
1	6:52 PM	5	4	0	9
1	6:53 PM	6	4	0	10
0	6:54 PM	6	2	0	8
2	6:55 PM	6	4	0	10
0	6:56 PM	5	3	0	8
0	6:57 PM	5	3	0	8
0	6:58 PM	5	2	0	7
1	6:59 PM	5	3	0	8
0	7:00 PM	6	1	0	7
	Totals	879	697	0	1576

APPENDIX **E**

CITY OF IMPERIAL BEACH'S
PARKING REQUIREMENTS

- Main Table of Contents
- Search
- Ordinance List
- Statutory References
- CodeAlert - Recently Passed Ordinances

Links:

- Imperial Beach, California - Home Page

Contact:

City Clerk: (619) 423-8616

19.48.050. Required spaces—Stand-alone commercial and other uses.

The number of required off-street parking spaces for commercial and other uses shall be as follows:

A. Automobile service stations: one space for each pump island;

B. Bowling alleys: two spaces for each lane;

C. Car washes, self-service or attendant-operated: three spaces for each stall;

D. Educational institutions: five spaces plus one for each employee;

E. The following uses require one space for each fifty square feet of net floor area, plus one space per two employees at largest work shift:

1. Drive-in restaurants, drive-through establishments, and food stands;

F. The following uses require one space for each seventy-five square feet of net floor area, plus one per two employees at largest work shift:

1. Establishments for the sale and consumption on the premises of food and beverages (minimum four spaces);

G. The following uses require one space for each one hundred square feet of net floor area, plus one space per two employees:

1. Auditoriums,

2. Funeral homes,

3. Mortuaries,

4. Sports arenas,

5. Stadiums,

6. Theaters;

H. The following uses require one space per each one hundred square feet of net floor area, plus one space per two employees minimum. When a conditional use permit is required for any of these uses, applicant shall provide a report by a qualified civil engineer or other specialist that shows the proposed uses and maximum required parking:

1. Religious assemblies,

2. Fraternal organizations (Masons, Moose, Elks, Eagles, etc.),

3. Service organizations (such as Rotary, Kiwanis, Lions Club, Jaycees, etc.),

4. Veterans organizations (American Legion, VFW, FRA, Disabled American Veterans, etc.);

I. All other commercial uses require one space for each five hundred square feet of net floor area;

J. In the C/MU-1, C/MU-2, and C/MU-3 zones, shared parking or off-site parking within one thousand feet of the project site may be used to satisfy this requirement with the approval of a conditional use permit. Projects in these zones shall be reviewed to determine the suitability and feasibility of implementing one or more transportation demand management strategies that may be approved through a development agreement.

For mixed-use development of multiple-family residential over commercial use, required parking may be reduced by up to twenty-five percent with approval of a conditional use permit. (Ord. 2013-1140 § 1; Ord. 2012-1130 § 1; Ord. 2005-1032 § 3; Ord. 2001-960 § 19; Ord. 94-888 § 3; Ord. 94-884; Ord. 640 § 1, 1984; Ord. 635 § 3, 1984; Ord. 601 § 1, 1983)

APPENDIX F

PARKING DATA COLLECTION

Prepared by National Data & Surveying Services

Parking Study

Location: 8867 Cuyamaca St

City: Santee, CA

Date	Location #	Space Type	Space	11:00 AM	12:00 PM	1:00 PM	4:00 PM	5:00 PM	6:00 PM
02/10/2022, Thursday	1	Regular	27	21	22	25	27	21	23
		Handicap	2	0	2	1	1	0	0
		Clean Air Van Pool	3	0	3	3	3	2	2
		Mobile Curbside Pick Up	2	0	1	1	2	1	2
			TOTAL	21	28	30	33	24	27
02/12/2022, Saturday	1	Regular	27	23	25	23	23	22	22
		Handicap	2	0	1	0	1	1	0
		Clean Air Van Pool	3	1	3	1	2	3	2
		Mobile Curbside Pick Up	2	0	2	2	1	2	0
			TOTAL	24	31	26	27	28	24

Prepared by National Data & Surveying Services

Parking Study

Project : 8223 Mira Mesa Blvd

City: San Diego, CA

Date	Location #	Space Type	Space	11:00 AM	12:00 PM	1:00 PM	4:00 PM	5:00 PM	6:00 PM
02/10/2022, Thursday	2	Regular	30	7	9	19	6	7	7
		Handicap	3	0	0	0	0	0	1
		Clean Air Van Pool	3	0	0	1	1	1	2
		Mobile Curbside Pick Up	3	0	0	0	2	0	1
			TOTAL	7	9	20	9	8	11
02/12/2022, Saturday	2	Regular	30	8	14	14	7	12	8
		Handicap	3	0	0	0	0	0	1
		Clean Air Van Pool	3	0	1	1	1	2	1
		Mobile Curbside Pick Up	3	0	0	1	0	0	1
			TOTAL	8	15	16	8	14	11