SAN YSIDRO LAND PORT OF ENTRY (LPOE) EXPANSION MOBILITY STUDY

April 30, 2009

GSA

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PLANNING & ENGINEERING

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EXECUTIVE SUMMARY

INTRODUCTION

The San Ysidro Land Port of Entry (LPOE) is one of the busiest land ports of entry in the United States. Increasing delays in cross-border trips resulting from additional trips and extra security measures underscore the necessity to expand current facilities in order to maintain border crossing services and increase efficiency, security, and safety.

The LPOE project proposes to expand vehicle inspection and pedestrian processing facilities in three phases over approximately four years. Phase 1 and Phase 2 are combined in this study as Phase 2 since the work and schedule are similar. Phase 2 proposes to reconfigure vehicle and pedestrian inspection facilities, construct new facilities for an operations center and central plant, construct a new pedestrian bridge, and provide a new parking structure. Phase 3 proposes to relocate southbound crossing facilities, provide an employee parking structure, relocate the southbound lanes of Interstate 5, and relocate affected facilities. Vehicular impacts are analyzed in a separate report ("San Ysidro Land Port of Entry Expansion Traffic Impact Study" conducted by KOA Corporation in 2009). This report examines the affects of other modes of mobility that would be affected by the proposed project. The No-Build scenario analyzes future conditions without the project; Phase 2 and Phase 3 work are analyzed for future conditions. Pedestrian, transit, and bicycle facilities and their corresponding levels of service are analyzed and discussed.

PEDESTRIAN FACILITIES

Existing pedestrian conditions are identified and analyzed to ascertain what, if any, impacts each phase of the proposed project would cause in near-term and long-term conditions. The existing land uses that generate and attract pedestrians within the study area are identified. An inventory of existing pedestrian facilities was conducted to determine the walkability of the study area. The inventory identifies missing facilities, connectivity issues, unsafe conditions, and other physical and perceptual elements related to pedestrian mobility in the study area. Once the connections are established, walking distances to and from major attractors and generators are then estimated. Pedestrian flows are calculated from pedestrian counts taken at numerous locations during weekday morning and weekday evening peak hours. Level of service is determined for sidewalks and their landings for approximately 40 sidewalks throughout the study area. Near-term and long-term conditions are estimated by applying growth rate to existing conditions and accounting for any project-related changes to the facilities.

TRANSIT FACILITIES

Transit facilities are an important component of mobility in the San Ysidro study area. With over 21,000 daily transit riders, the San Ysidro Transit Center is one of the three busiest transit stations in San Diego. Transit options in the area include light rail ("Trolley"), public bus service, private bus service, jitneys, and taxis. Each mode has different requirements for loading/unloading, staging, ticketing, and passenger waiting. The study identifies the locations used for loading/unloading, staging, and ticketing for each transit mode within the study area. Similar to the pedestrian facilities, the location of transit facilities is identified and service levels are quantified based on frequency of service and ridership.

The LPOE project area has two transit areas located east and west of Interstate 5, respectively. The San Ysidro Transit Center is approximately 1.5 acres that consists of a loading/unloading area, Trolley Station, and pedestrian plaza outside the northbound LPOE crossing for public transit. The plaza has an enclosed facility staffed by MTS personnel to provide information and sell tickets. In

addition, the plaza has ticketing machines, ATMs, and benches. The Camiones Way Transit area is located west of Interstate 5 and provides loading/unloading for private vehicles, private buses, and public buses. The facilities are limited to benches for pedestrians; no transit related structures are present.

Public Transit

The Blue Line of the Trolley services the San Ysidro Transit Center providing service to locations north of the border area at stops paralleling Interstate 5 through downtown San Diego to the terminus at Old Town Transit Center. The Blue Line operates every 7 ½ minutes for weekday AM and PM peak periods and every 15 minutes for off-peak periods. Ridership data was provided by MTS for fiscal year 2007-2008 for daily boardings and alightings at the San Ysidro station to compare to 3-car and 4-car crush capacity. Projected ridership for near-term and long-term conditions is estimated by applying growth rates of 43.7% and 62.7% were to existing ridership data based on SANDAG forecast modeling specifically performed for this project. Public bus services are provided by Bus Route 929 and 932. The buses provide service to San Ysidro, Imperial Beach, Chula Vista, National City, and downtown San Diego. Ridership data for fiscal year 2007-08 that was provided by MTS is compared to bus crush capacity. Growth rates of 43.7% and 62.7% were to existing ridership data based on the same SANDAG forecast modeling to determine near-term and long-term conditions for buses.

Private Transit

Private bus operators and the respective loading/unloading, staging, and ticketing areas are identified. The Greyhound bus facility located at the southern end of the San Ysidro Transit Center has two bays that provide a loading/unloading area for Greyhound passengers and two private bus operators. Approximately ten other private buses are authorized to load/unload in an area behind a retail store. These buses provide access to locations throughout San Diego as well as other metropolitan areas at longer distances. Jitneys are smaller buses that provide frequent local access to and from the transit centers and downtown San Ysidro. Taxis stage off-site and load/unload passengers at the San Ysidro Transit Station and Camiones Way Transit Center. Currently, there are no provisions made for passenger loading/unloading on the east side of Interstate 5 near the northbound entry. Private vehicles queue illegally in proximity to the transit center to pick up passengers.

BICYCLE FACILITIES

Bicycle facilities are another mode of transportation that must be analyzed for the proposed project to provide a complete picture of mobility. Besides using bikeways, bicyclists may frequently use pedestrian and transit modes as part of their commute. Existing bicycle facilities are identified based on current City of San Diego Bicycle Master Plan guidelines to classify bikeways. Similar to the pedestrian analysis, the bicycle land use attractors and generators are identified, the existing bike facilities in the study area are inventoried, and levels of service are determined using the Highway Capacity Manual methodology. Future bike facilities are used to determine level of service in the near-term and long-term conditions.

SUMMARY OF FINDINGS

The following summarizes the findings for pedestrian, transit, and bicycle modes of transportation in the study area by existing, near-term, and long-term conditions.

Existing Conditions

Pedestrian Mobility

The existing pedestrian facilities in the study area are generally adequate with some walkability issues arising because of gaps in facilities, poor maintenance, litter, and obstructions. In particular, the

pedestrian bridge at the LPOE facility is dimly lit and has non-ADA compliant ramps. The connectivity of existing pedestrian facilities affects walkability and pedestrian flows and is a major determinant of transit usage. Walking distances quantify connectivity from different locations in the study area to one another, ranging from 400 feet to 3,900 feet or approximately 2 to 16 minutes assuming standard pedestrian travel speed of 4 feet per second.

Pedestrian level of service (LOS) quantifies the adequacy of pedestrian facilities by comparing the number of pedestrians using the facility relative to the sidewalk's width and size of the queuing area. All existing pedestrian facilities operate at good levels of service in the AM and PM peak hour periods except the west sidewalk located in the south/west area of the Rail Court cul-de-sac. This sidewalk currently operates poorly in both AM and PM peak hour periods. Pedestrian landings are defined as the areas where pedestrians queue temporarily while waiting to cross. The pedestrian landings in the study area all operate at adequate levels of service except three locations that operate poorly in both the AM and PM peak hours.

Transit Mobility

Transit levels of service are determined by the number of riders compared to the available number of seats (seated capacity) or standing room (crush capacity) over a given time period. Capacity can be measured by each trolley leaving every fifteen minutes or by the peak hour of operations. Peak hour seated capacity for the Blue Line of the Trolley is exceeded for the existing northbound 3-car trolley in the AM peak period. Peak hour capacity for both bus routes does not exceed seated or crush capacity.

Bicycle Mobility

Bicycles can provide convenient transportation for destinations ranging between one and five miles. Major regional employment centers and other destinations for cyclists are located at distances in excess of 15 miles from the border crossing thereby requiring more than one mode of transportation to link bike trips to their final destination. Current transit options that cyclists would use would be MTS buses and the Trolley; however, these transit modes accommodate a limited number of bikes. This may explain the nominal bicycle activity observed at the border.

The existing bicycle facilities are not extensive in the study area and have gaps or are poorly maintained. In addition, LPOE inspection operations do not provide special accommodations for bicyclists and southbound bicyclists entering Mexico must use a gate that is difficult to maneuver for entry. Bicycle level of service is measured by the compatibility of the bicycle facilities to roadways. Two locations have relatively poor levels of service as measured by LOS "D".

Near-Term Conditions

Phase 2 of the proposed LPOE project would construct in a new pedestrian bridge spanning Interstate 5, improve pedestrian ramps at both ends of the bridge, provide a new pedestrian inspection building, renovate the pedestrian plaza, and provide a parking structure for government employees. The project would also relocate the Camiones Way Transit area, provide additional right-of-way at the trolley stop for MTS to expand its' trolley station to accommodate a 4-car trolley, and demolish Payless Shoe Store.

Pedestrian Mobility

The pedestrian experience would be improved with implementation of Phase 2 for the proposed LPOE project. The proposed east-west pedestrian bridge would provide ADA compliant ramps. Sidewalk level of service would improve for those facilities that currently operate at lower levels of

service. There are no proposed changes to sidewalk landings which result in level of service for landings degrading slightly for three locations due to near-term growth in pedestrian volumes.

Transit Mobility

Transit mobility in the study area would be affected by the relocation of the Camiones Way Transit area north by approximately 300 feet, elimination of the Greyhound bus facility, and relocation of a trolley ticket booth. The relocated Camiones Way Transit area would nominally increase walking distances for southbound transit riders at this location. In addition, the site has been master planned such that the additional right-of-way that will be provided by the proposed LPOE project will allow MTS to expand the Blue Line trolley from 3-car to 4-car trolleys. The demolition of the Greyhound bus facility will displace slightly more than one-fourth of private bus trips originating from the San Ysidro area. The proposed LPOE project does not affect Trolley or public bus facilities but due to demand near-term Trolley ridership would exceed seated and crush capacity if a 3-car trolley is provided and show improvement should MTS provide a 4-car trolley. Route 929 would exceed seated capacity for one location in the PM peak period.

Bicycle Mobility

Phase 2 of the proposed LPOE project would not affect bicycle facilities in the study area. Level of service was determined for the near term assuming San Ysidro Community Plan improvements for bike paths. Bicycle level of service would degrade slightly along San Ysidro Boulevard and would improve along Camiones Way south of Camino de la Plaza.

Long-Term Conditions

Phase 3 of the proposed LPOE project would realign the southbound lanes of Interstate 5 to provide additional vehicle processing lanes before terminating at the new crossing approximately 1,700 feet west of the current location. In addition, the proposed project would construct an at-grade southbound pedestrian crossing at Virginia Avenue west of Interstate 5, provide an elevated pedestrian sideway connecting Virginia Avenue to the pedestrian bridge, relocate the Camiones Way terminus, and provide ingress and egress to the realigned lanes of southbound Interstate 5 to the secured employee parking structure. The retail location adjacent to Camiones Way would be removed.

Pedestrian Mobility

Pedestrian mobility patterns become altered with implementation of Phase 3. A proposed southbound crossing east of Interstate 5 at Virginia Avenue would decrease walking distances for southbound entrants. Consequently, the revised terminus of Camiones Way would be closer to the new southbound crossing at Virginia Avenue than the southbound crossing west of Interstate 5. The last chance U-turn at Virginia Avenue would create a pedestrian and vehicular conflict between the southbound pedestrian crossing and the at-grade U-turn lane. Sidewalk facilities would operate at primarily LOS A or B for sidewalk facilities. Level of service for sidewalk landings would continue to degrade at some locations. All landings at San Ysidro Boulevard/Camino de la Plaza would operate at LOS E or F for the AM and PM peak and all landings at San Ysidro Boulevard/Interstate5 northbound ramps would operate at LOS E or F in the PM peak period.

Transit Mobility

Transit mobility in the study area would be affected by the relocation of the Camiones Way terminus area northeast of the Phase 2 location, construction of parking adjacent to Virginia Avenue, and vehicular access to the secured government employee parking structure. The relocated Camiones Way Transit area would be approximately 700 feet from the new southbound crossing at Virginia Avenue. However, this proposed facility will not adequately accommodate bus, private transit/jitney or privately owned vehicle staging. Loading and unloading of all three uses may also be affected by the

inadequate facility length. Phase 3 of the proposed project does not affect Trolley or public bus facilities. Future demand will continue to exceed seated and crush capacities for the Trolley. Route 929 would exceed seated capacity for one location in the PM peak period.

Bicycle Mobility

Phase 3 of the proposed LPOE project would remove the Camiones Way bicycle path; facilities are otherwise unaffected in the study area. Level of service for the long term assume the San Ysidro Community Plan improvements would keep bicycle level of service essential the same as existing conditions except for a segment of San Ysidro Boulevard that worsens to LOS D.

Summary of Facility Levels of Service

The following tables summarize the mobility analysis for pedestrian, transit, and bicycle facilities for those locations that show changes to levels of service. The levels of service for pedestrian facilities in Phase 2 and Phase 3 of the proposed LPOE project either improves levels of service or would have no impact to the locations as shown in Tables ES-1 and ES-2. Levels of service for landings worsen at two intersections for the AM peak and three intersections for the PM peak as shown in Table ES-3.

Table ES-1
Summary of Level of Service for Sidewalks – AM Peak Period

Location	Existing AM	NT AM – No Build	NT AM - Phase 2	LT AM – No Build	LT AM - Phase 2	LT AM - Phase 3
San Ysidro Boulevard						
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	A	A	A	B	B	B
E San Ysidro Transit Station						
23: East Plaza	A	B	B	C	C	C
26: South Plaza	C	D	A	D	B	B
Rail Court						
South/West of Cul-de-Sac						
38: West Sidewalk	F	F	A	F	A	A

Table ES-2
Summary of Level of Service for Sidewalks – PM Peak Period

Location	Existing PM	NT PM - No Build	NT PM - Phase 2	LT PM - No Build	LT PM - Phase 2	LT PM - Phase 3
Transit Station to Border						
17: n/o Border	C	D	A	E	B	A
San Ysidro Boulevard						
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	A	A	A	B	B	B
E San Ysidro Transit Station						
23: East Plaza	A	A	A	B	B	B
26: South Plaza	A	B	A	B	A	A
South of Transit Loop						
27: n/o Ped Bridge	A	B	B	B	B	B
28: e/o Ped Bridge	A	B	A	C	A	A
Rail Court						
South/West of Cul-de-Sac						
38: West Sidewalk	F	F	A	F	A	A

Table ES-3
Summary of Level of Service for Pedestrian Landings

Location	Intersection	Existing LOS	Near-Term LOS	Long-Term LOS
AM Peak Hr				
8	San Ysidro Blvd/ Camino de la Plaza	C	C	D
9		B	C	C
11		B	C	C
10		D	E	E
12	San Ysidro Blvd/ I-5 NB Ramp Entrance	F	F	F
44		D	E	E
13		D	E	E
PM Peak Hr				
18	Camiones Wy/ Camino de la Plaza	A	B	B
7		A	B	B
22		C	D	D
11	San Ysidro Blvd/ Camino de la Plaza	D	D	E
8		C	D	D
10		C	D	D
9		E	E	E
12	San Ysidro Blvd/ I-5 NB Ramp Entrance	F	F	F
44		D	E	E
13		D	E	E

Seated and crush capacity for MTS bus and Trolley service is summarized in Table ES-4 and ES-5 for existing, near-term and long-term conditions. Southbound Route 929 would exceed seated capacities during the PM peak. Northbound Trolley service from the San Ysidro Station would exceed seated capacity during the AM peak. Crush capacity would be exceeded only for the northbound Trolley from the San Ysidro Station in the AM peak.

Table ES-4
Summary of Level of Service for Transit – Seated Capacity

			Existing		Near-term, Phase 2		Long-term, Phase 3		Long-term, Phase 3 (w/ MTS Expansion)	
Mode/Route	Direction	Peak Period	Transit Riders	V/C Seated Capacity	Transit Riders	V/C Seated Capacity	Transit Riders	V/C Seated Capacity	Transit Riders	V/C Seated Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	110	55.0%	167	83.7%	183	91.3%	183	91.3%
		PM	66	41.3%	100	62.8%	110	68.5%	110	68.5%
	South to Camiones Way / Border	AM	31	19.4%	47	29.5%	51	32.2%	51	32.2%
		PM	132	82.5%	201	125.6%	219	137.0%	219	137.0%
Bus/932	North From SY Intl Border Trolley Station	AM	76	38.0%	116	57.8%	126	63.1%	126	63.1%
		PM	75	46.9%	114	71.3%	125	77.8%	125	77.8%
	South to SY Intl Border Trolley Station	AM	12	7.5%	18	11.4%	20	12.5%	20	12.5%
		PM	1	0.6%	2	1.0%	2	1.0%	2	1.0%
Trolley	North From SY Intl Border Trolley Station	AM	1,923	125.2%	2,927	142.9%	3,192	207.8%	3,192	155.9%
		PM	466	30.3%	709	34.6%	774	50.4%	774	37.8%
	South to SY Intl Border Trolley Station	AM	227	14.8%	345	16.9%	377	24.5%	377	18.4%
		PM	1,498	86.7%	2,280	99.0%	2,487	143.9%	2,487	107.9%

Table ES-5
Summary of Level of Service for Transit – Crush Capacity

			Existing		Near-term, Phase 2		Long-term, Phase 3		Long-term, Phase 3 (w/ MTS Expansion)	
Mode/Route	Direction	Peak Period	Transit Riders	V/C Crush Capacity	Transit Riders	V/C Crush Capacity	Transit Riders	V/C Crush Capacity	Transit Riders	V/C Seated Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	110	33.8%	167	51.5%	183	56.2%	183	56.2%
		PM	66	25.4%	100	38.6%	110	42.1%	110	42.1%
	South to Camiones Way / Border	AM	31	11.9%	47	18.1%	51	19.8%	51	19.8%
		PM	132	50.8%	201	77.3%	219	84.3%	219	84.3%
Bus/932	North From SY Intl Border Trolley Station	AM	76	23.4%	116	35.6%	126	38.8%	126	38.8%
		PM	75	28.8%	114	43.9%	125	47.9%	125	47.9%
	South to SY Intl Border Trolley Station	AM	12	4.6%	18	7.0%	20	7.7%	20	7.7%
		PM	1	0.4%	2	0.6%	2	0.6%	2	0.6%
Trolley	North From SY Intl Border Trolley Station	AM	1,923	66.8%	2,927	101.6%	3,192	110.8%	3,192	83.1%
		PM	466	16.2%	709	24.6%	774	26.9%	774	20.1%
	South to SY Intl Border Trolley Station	AM	227	7.9%	345	12.0%	377	13.1%	377	9.8%
		PM	1,498	46.2%	2,280	70.4%	2,487	76.7%	2,487	57.6%

Bicycle level of service is summarized in Table ES-6 for existing, near-term, and long-term conditions. Levels of service for bicycle facilities would be unaffected by the proposed LPOE project with the exception of two locations where facilities are removed; proposed bicycle facility improvements assumed in the San Ysidro Community Plan are incorporated for the long-term analysis.

Table ES-6
Summary of Levels of Service for Bicycles

Location	Existing			Near-Term + Project			Long-Term + Community Plan + Project		
	BCI	LOS	Bicycle Compatibility Level	BCI	LOS	Bicycle Compatibility Level	BCI	LOS	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaza	4.25	D	Moderately Low	4.65	E	Very Low	3.83	D	Moderately Low
San Ysidro Blvd north of Camino de la Plaza	2.76	C	Moderately High	3.09	C	Moderately High	3.95	D	Moderately Low
Camino de la Plaza Virginia to Camiones Way	2.54	C	Moderately High	3.11	C	Moderately High	3.40	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro Blvd	3.45	D	Moderately Low	3.72	D	Moderately Low	4.21	D	Moderately Low
Camiones Way - Bike Path	0.45	A	Extremely High	0.45	A	Extremely High	NA	NA	NA
Camiones Way south of Camino de la Plaza	2.55	C	Moderately High	1.90	B	Very High	3.12	C	Moderately High

RECOMMENDATIONS

The proposed list of recommendations to improve mobility in the San Ysidro LPOE vicinity is based on the proposed project's impacts.

Phase 2

- **Move the eastern at-grade connection of the pedestrian bridge** further away from the edge of the walkway to improve pedestrian flow and reduce potential vehicular-pedestrian conflicts.
- **Move the eastern pedestrian staircase** to the pedestrian bridge further north and adjacent to the pedestrian bridge to improve pedestrian flow on the bridge.

Phase 3

- **Relocate the Last Chance U-turn.** The current Phase 3 design creates a conflict between the southbound pedestrians at Virginia Avenue and the Last Chance U-turn location. This U-turn should be relocated to remove the pedestrian-vehicular conflict.

- **Reconfigure the Phase 3 Camiones Way Transit Station** to accommodate MTS bus and private bus unloading and staging as well as unloading for privately owned vehicles. It should provide convenient access to the southbound crossing point at Virginia Avenue. The planned bus rapid transit (BRT) route would be served with convenient access to Interstate 5 and out of direction travel would be minimized.

CHAPTER 1
INTRODUCTION

BACKGROUND

This comprehensive Mobility Study of the San Ysidro Land Port of Entry (LPOE) evaluates the proposed port expansion and its effects on transit, pedestrians, and bicycle mobility. Vehicular traffic impacts from the project are evaluated in a separate report ("San Ysidro Land Port of Entry Expansion Traffic Study" conducted by KOA Corporation in 2009). The existing border facility is located at the southern terminus of Interstate 5 located between San Diego, California and Tijuana, Baja California, Mexico. The San Ysidro Border Station is known as the world's busiest land port of entry[1]. In 2006, more than 17 million vehicles and 50 million people entered the U.S. at the San Ysidro LPOE.[2] Nearly 9.5 million pedestrians and more than 100,000 buses cross at the San Ysidro LPOE.[3]

Expansion of the port is needed to modernize the existing facility and to increase efficiency, security, and safety for federal agencies and the traveling public. Delays in cross-border trips have been increasing in the last several years, especially in the northbound direction. This is partly due to the increase in cross-border trips. In addition, stepped up security measures at the LPOE are in effect as a result of the September 11 attacks. The proposed expansion master plan includes expanded vehicle inspection and pedestrian processing facilities to address these challenges.

The LPOE expansion will be constructed in three phases over approximately four years. Phases 1 and 2 will reconfigure the northbound vehicle and pedestrian inspection facilities, relocate the southbound processing center, construct a new operations center and central plant, construct a new pedestrian bridge, and provide new parking structures. Phase 3 of the LPOE project will relocate both vehicular and pedestrian border southbound crossing to approximately 1,700 feet east of the current LPOE facility to connect with Mexico's planned El Chaparral facility. This work will continue to improve operational efficiencies in order to meet projected increases in vehicular and pedestrian border crossings. This report outlines the existing, near-term, and long-term levels of pedestrian, bike, and transit activities. In this analysis, near-term refers to conditions in two years and long-term refers to conditions thereafter. In addition, for the purposes of evaluation, Phase 1 and 2 are combined and evaluated as one phase – Phase 2 and referred as Phase 2 in this report – because of the similar work and compressed timeline for this work. Phase 2 work is evaluated in both the near-term and long-term conditions; Phase 3 is evaluated under long-term conditions.

Transportation is fundamental to a prosperous economy and quality of life for residents, visitors, and businesses in the vicinity of the San Ysidro LPOE. The movement of people is dependent on a safe, flexible, and efficient transportation system which takes into account the needs of all users. In order to increase the efficiency of the transportation system, all modes of transportation should be maximized to simultaneously accommodate the many people who are taking similar routes to common destinations. The objective of this study is to evaluate and provide recommendations to improve mobility for people that are processed through the San Ysidro LPOE.

REPORT ORGANIZATION

[1] U. S. General Services Administration website (www.gsa.gov)
[2] U. S. General Services Administration
[3] Source: Ibid.

This report examines each mode of transportation in existing, near-term, and long-term conditions. The methodologies for each mode of transportation are discussed.

PROJECT STUDY AREA

The study area is generally bounded by Camino de la Plaza to the north, Mexico to the south, Rail Court to the east and Virginia Avenue to the west. Pedestrian, bike, and transit facilities in the vicinity of the San Ysidro LPOE are evaluated. The characteristics of local streets and their corresponding sidewalks were observed in the field and are described in this report.

Figure 1-1: Project Vicinity

CHAPTER 2
EXISTING PEDESTRIAN FACILITIES

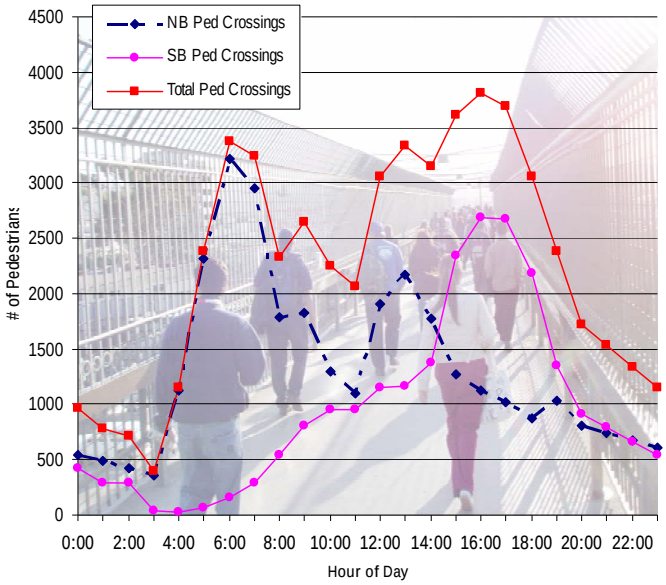
In Fiscal Year 2006, more than 50 million people entered the U.S. at the San Ysidro LPOE. Many of these trips were made by pedestrians. Therefore, it is important to evaluate pedestrian facilities for the proposed San Ysidro LPOE. The ultimate goal is to maintain an integrated system of vehicular, transit, bicycle, and pedestrian facilities at the LPOE. This section documents the analysis of existing pedestrian facilities to address the following questions:

- How many pedestrians cross the border;
- Where pedestrians are coming from and going to (origin and destination);
- The purpose of these trips;
- What pedestrian facilities link the different destinations;
- The walking distances between different destinations;
- The obstacles to pedestrian mobility;
- The number of pedestrians on the facilities; and
- The adequacy of pedestrian facilities.

PEDESTRIAN CROSSINGS

Directional pedestrian counts were taken for an 18-hour period (03:00 to 20:00) in January 2009 at both northbound and southbound portals to determine daily crossing characteristics of pedestrians. Pedestrian counts were interpolated for the period from 21:00 to 02:00. Figure 2-1 shows the resulting counts for each portal and for the total LPOE facility. Appendix A includes pedestrian count data. The peak periods for pedestrian crossings occurred between the hours of 06:00 to 08:00 and 16:00 to 18:00, respectively. The total number of pedestrians crossing the border at the LPOE facility is approximately 31,400 daily northbound pedestrians and approximately 22,700 daily southbound pedestrians. In total, approximately 54,100 pedestrians were processed daily through the LPOE facility. There were approximately 3,400 pedestrians processed during the morning peak one hour and 3,900 pedestrians processed during the evening peak one hour.

Figure 2-1: Existing Pedestrian Crossings at LPOE



PEDESTRIAN ORIGIN AND DESTINATION SURVEY RESULTS

KOA Corporation conducted intercept surveys of 627 pedestrians at the northbound and southbound LPOE locations during the AM and PM peak periods in January 2009. Survey participants were asked five questions regarding their origin, destination, purpose of their visit, and mode of transportation. Appendix B tabulates the survey results by responses taken during the AM and PM peak hours as well as responses for all survey participants.

Tabulations of the surveys indicate more than half of respondents' trips originated in Tijuana with the remaining respondents trips originating primarily from the San Diego County locations of San Diego (27%) and San Ysidro (17%). Figure 2-2 depicts the total number of trips by origin. Conversely, Tijuana was the top destination of respondents (43%), followed by San Diego (35%) and San Ysidro (12%) as shown in Figure 2-3. As shown on both Figures 2-2 and 2-3, approximately 95% of all cross border pedestrian trips originated and were destined between Tijuana, San Ysidro, and the Greater San Diego area. Based on the pedestrian intercept survey conducted at the LPOE crossing points, it was concluded that the most dominant origin and destination locations were Tijuana, San Diego, and San Ysidro for home, shopping, work, school, and tourism traveling primarily by Trolley and private vehicles.

Figure 2-2: Respondents by Origin

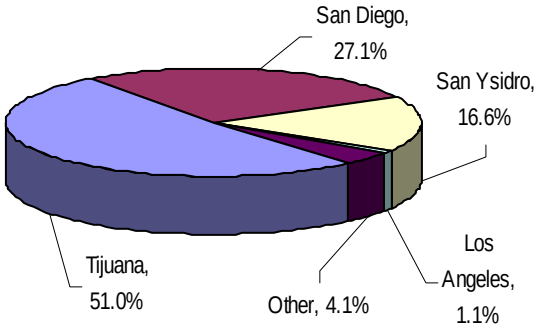
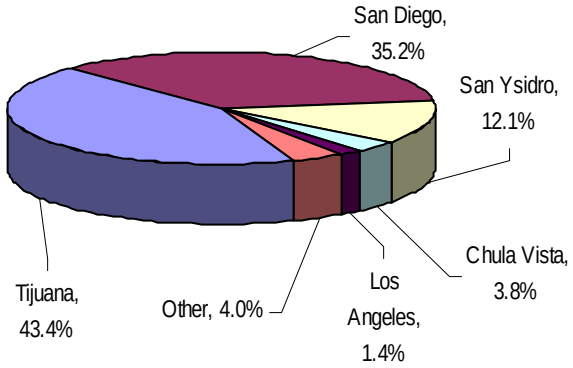


Figure 2-3: Respondents by Destination



The purpose of trips is detailed by both origin and destination points. Most respondents' morning trips originated from their home in order to travel to work and to school while most respondents' evening trips were destined for home and shopping as shown in Figure 2-4 and Figure 2-5.

Figure 2-4: Purpose of Trip – Origin

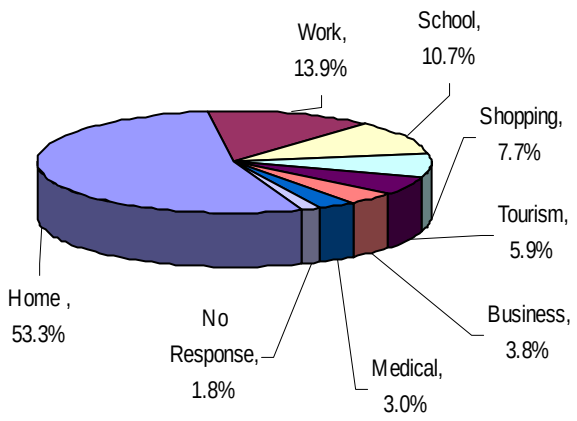
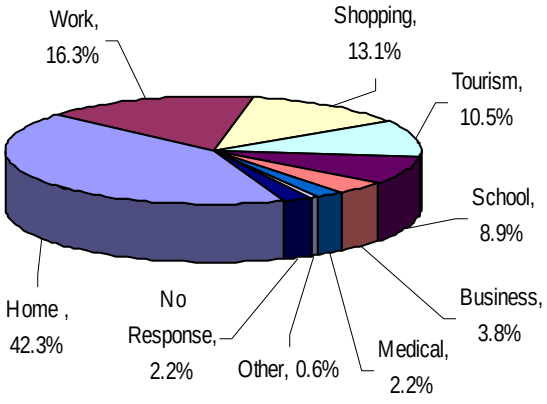
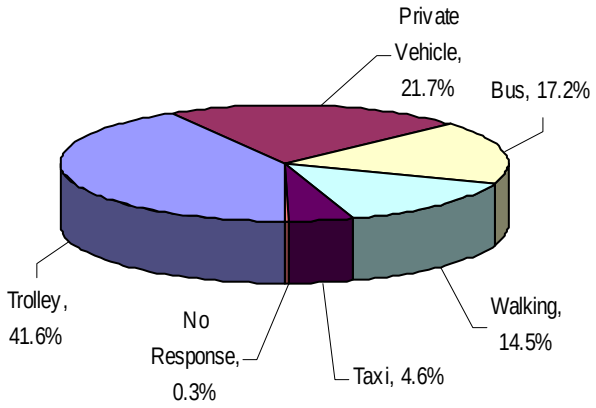


Figure 2-5: Purpose of Trip – Destination



The Trolley was the dominant mode of transportation (42%) for respondents followed by private vehicles (22%), buses (17%), and walking (15%). Figure 2-6 depicts the breakdown by mode of transportation by respondents.

Figure 2-6: Mode of Transportation for Intercept Respondents



PEDESTRIAN STUDY AREA

The pedestrian study area for the project is defined as all pedestrian facilities that would be affected by the proposed LPOE project. The proposed project affects pedestrian facilities that are generally bounded by Virginia Avenue, Camino de la Plaza, Camiones Way, and San Ysidro Boulevard. The pedestrian facilities that are potentially affected by the project are shown in Figure 2-7. Most of the pedestrian study area is within a five-minute walking radius from the northbound and southbound portals at the San Ysidro Border crossing. A five-minute walking radius equates to approximately 1,200 feet assuming a pedestrian travel speed of 4 feet per second. Figure 2-8 shows the walking radii emanating from the existing northbound and southbound entry points at the San Ysidro border crossing would range from 1 to 8 minutes in the study area.

Figure 2-7: Pedestrian Study Area

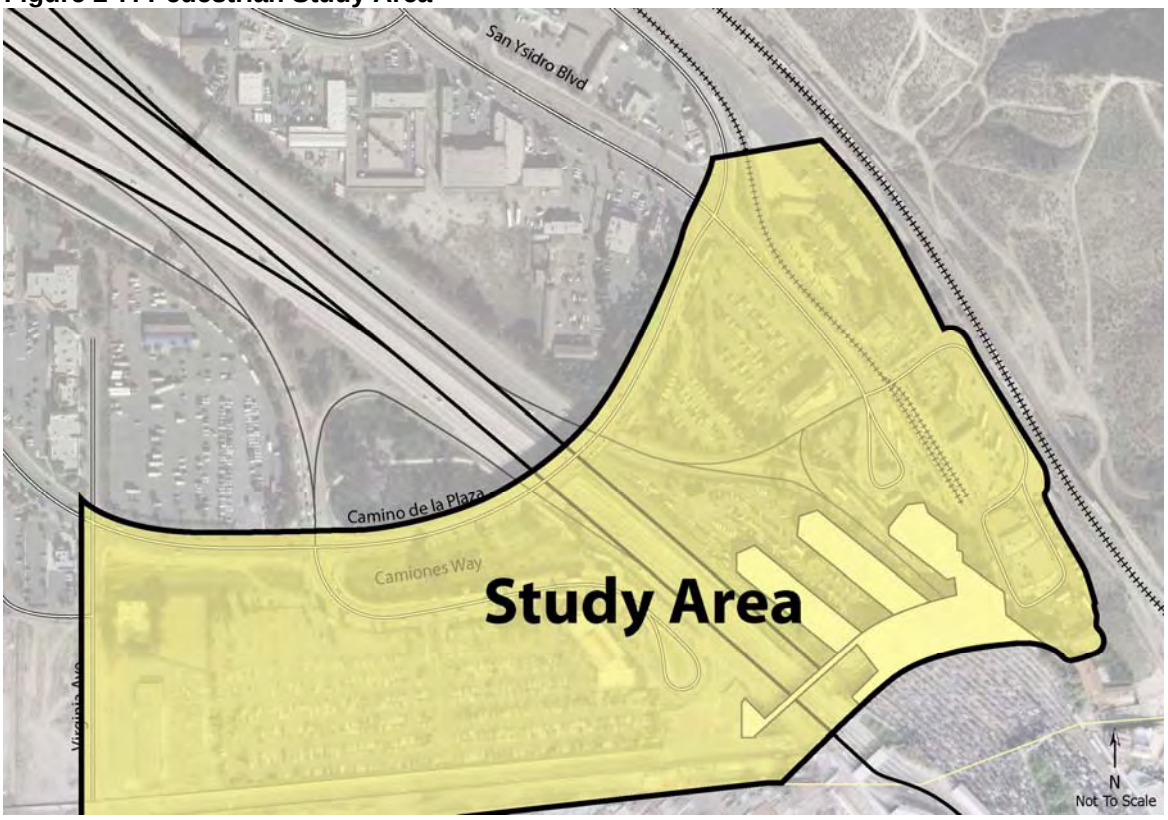
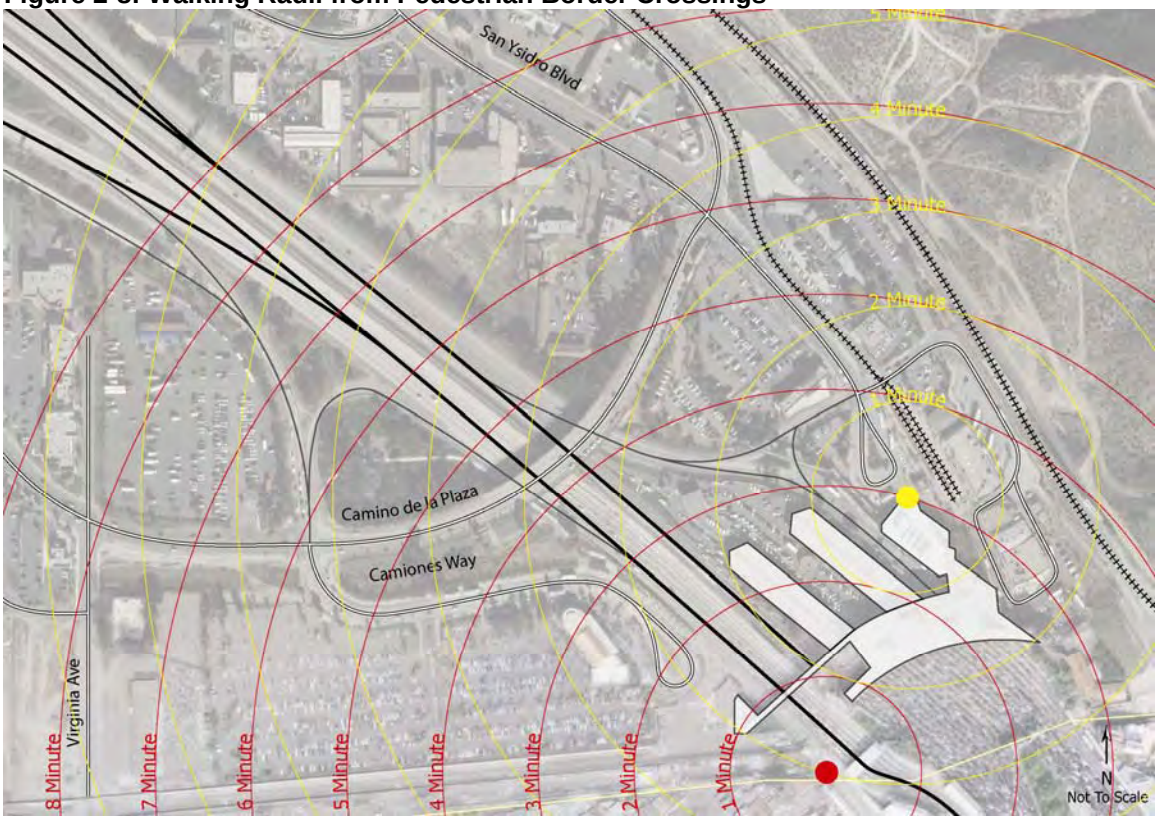


Figure 2-8: Walking Radii from Pedestrian Border Crossings



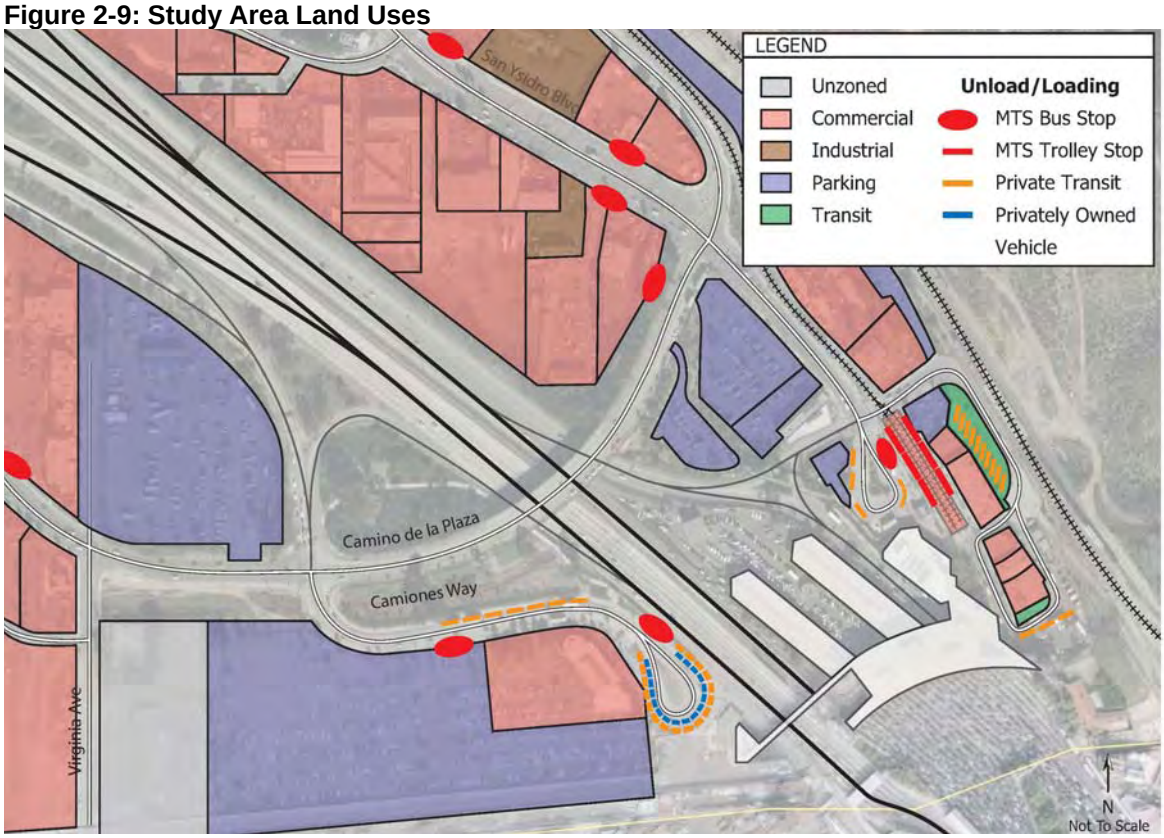
PEDESTRIAN LAND USE ATTRACTORS AND GENERATORS

Land uses that would attract or generate pedestrians within the pedestrian study area are shown in Figure 2-9. The land uses in the study area include retail and commercial/office as well as public and private transit services. Pedestrians crossing the border use transit services and vehicle loading areas to connect to other modes of travel in order to continue their trip to their final destination. These facilities are also identified.

Retail shopping and public schools located west of Camino de la Plaza and Virginia Avenue are pedestrian attractors within this study area. Las Americas and San Ysidro Village are major retail facilities that are northwest of the LPOE facility. Existing parking facilities are interspersed throughout the study area both east and west of Interstate 5 and include public, private, and restricted parking spaces. Most parking in the area is located in two surface lots near the intersection of Virginia Avenue and Camino de la Plaza and three lots adjacent to San Ysidro Boulevard and Camino de la Plaza. In addition, there are two restricted parking lots for government employees as well. One lot, with access from Camino de la Plaza, is connected to the LPOE by a pedestrian bridge.

The walking distance to a transit stop is one of the major determinants of transit usage. Transit usage increases the closer the transit stop is to a person's point of origin or destination. Transit attractors in the study area are comprised of public and private transportation services that include the San Diego Trolley Station, buses for the Metropolitan Transit System (MTS), Greyhound buses, jitneys/independent bus operators, and taxis. These transit facilities are generally concentrated adjacent to the northbound and southbound portals for the LPOE facility.

Figure 2-9: Study Area Land Uses



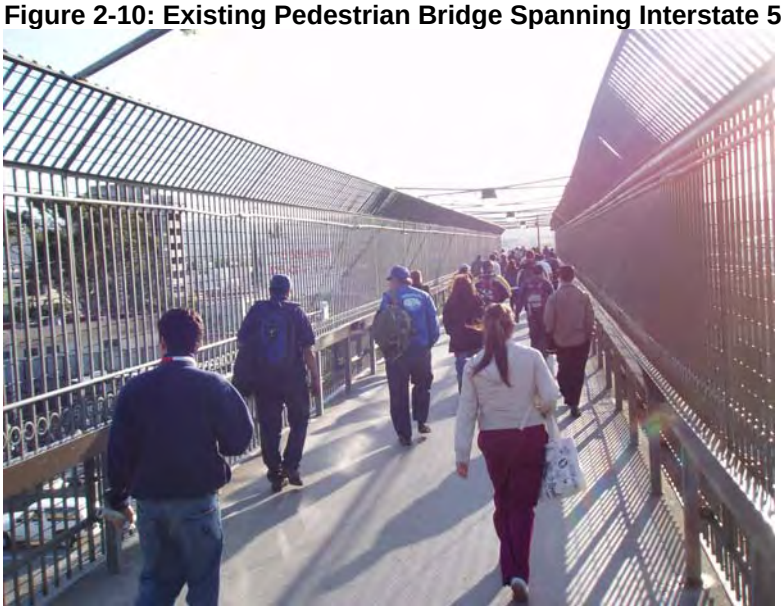
PEDESTRIAN FACILITIES

Existing pedestrian facilities were inventoried as part of the existing conditions analysis to determine the types of facilities connecting the pedestrian attractors and their condition. The area immediately north of the border crossing is a major transit hub for a large volume people crossing the United States and Mexico border that do not use private automobiles. As such, the interconnected relationship between the transit land uses and pedestrian facilities is substantial.

Pedestrian Facilities

The existing point of entry into the United States (northbound) is located at the northeast corner of the building. The existing LPOE facility consists of 14 lanes of pedestrian inspection facilities at-grade. Pedestrian ramps on both sides of the LPOE facility provide connectivity between the northbound and southbound portals. The existing point of entry into Mexico (southbound) is located at the southwest corner of the LPOE building. The southbound entry consists of wide queuing area with turnstile gates that allow pedestrians to enter the country; no inspection is required. The two portals are connected by an elevated pedestrian bridge that traverses Interstate 5. The pedestrian bridge is approximately 14 feet wide and is generally free of obstructions with few physical deficiencies such as cracks, gaps, or tripping hazards as shown in Figure 2-10.

Figure 2-10: Existing Pedestrian Bridge Spanning Interstate 5



There is a pedestrian bridge approximately 6 feet wide south of Camino de la Plaza that traverses the Interstate 5 northbound ramps. This bridge has restricted access to the parking lot for government staff. The pedestrian bridge is well maintained, free of litter, and is visually enhanced by its design and surrounding landscaping to provide a pleasant walking experience.

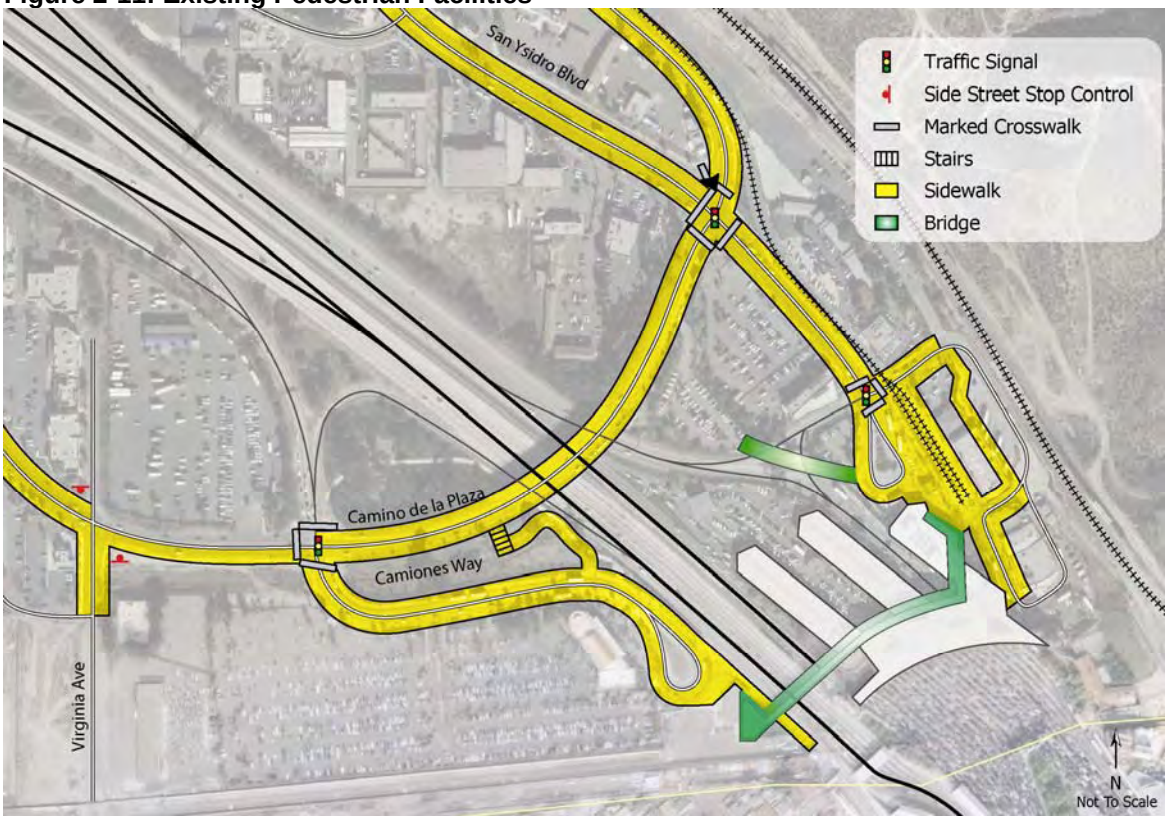
The sidewalks along Camino de la Plaza traverse Interstate 5 providing further pedestrian connectivity. The Camino de la Plaza sidewalks are approximately 6 feet wide and provide access to parking lots and commercial land uses to the west of the study area and access to transit, commercial, and industrial land uses east of Interstate 5. There is a paved stairway approximately 11 feet wide that connects the grade separated Camino de la Plaza to Camiones Way.

There are two pedestrian plazas located outside the northbound and southbound portals of the LPOE facility. The pedestrian plaza at the northbound portal helps facilitate pedestrian flow between the

northbound border crossing portal to the Trolley, Greyhound bus, taxis, jitneys, and private buses directly northeast of the LPOE facility. The plaza has some landscaping and is generally free of litter. The pedestrian plaza at the southbound portal provides queuing space for pedestrians awaiting private vehicles before it transitions to sidewalks that connect the LPOE to awaiting transit vehicles. The plaza at the southbound portal is enhanced by landscaping and is generally well maintained.

The remaining pedestrian facilities in the area consist of sidewalks ranging from 7 to 13 feet wide, stairways, marked crosswalks, and drop-off/pick-up areas. Figure 2-11 shows existing pedestrian facilities in the study area.

Figure 2-11: Existing Pedestrian Facilities



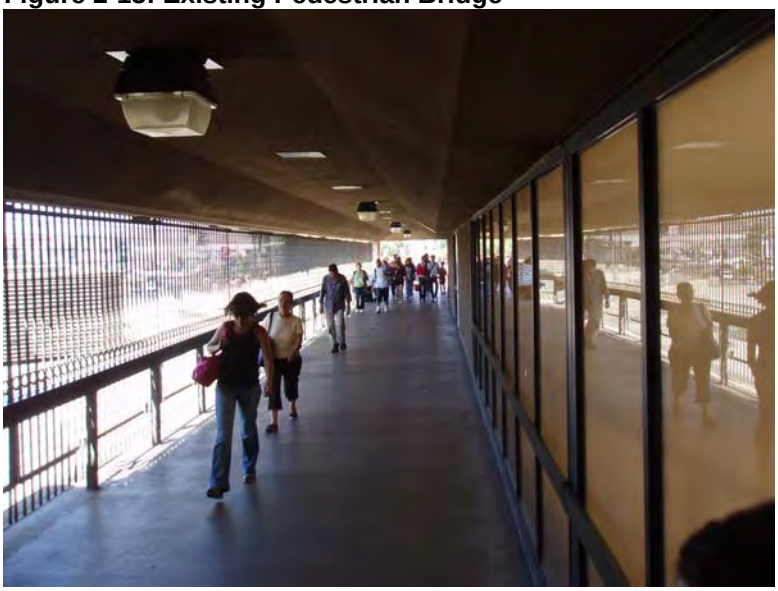
Walkability Findings

Walkability findings describe the physical and perceptual elements related to pedestrian mobility in the study area. Issues that detract from walkability include potentially unsafe conditions, missing facilities, or poor connectivity. The following summarizes the major walkability issues for existing pedestrian facilities in the study area. A detailed list is shown in Appendix C.

East/West Pedestrian Bridge (Locations 1-3): The existing pedestrian ramps at either end are dimly lit during daytime hours, are missing curb ramps, have limited pedestrian access for specific time periods, and are not aesthetically appealing, all of which discourage pedestrian use. Further, the 8% grade of the ramp is not ADA compliant for physically disabled pedestrians. The portion of the walkway over Interstate 5 is uncovered exposing pedestrians to direct sunlight or rain. Figures 2-12 and 2-13 show conditions of the pedestrian bridge at various locations.

Figure 2-12: Existing Pedestrian Bridge Ramp

Figure 2-13: Existing Pedestrian Bridge



Trolley Court Transit Area (Locations 43, 45): There is no designated loading area for northbound pedestrians to be picked up by private vehicles. Consequently, many private vehicles park illegally near bus loading zones and commercial parking lots. Additionally, there is a poorly delineated sidewalk between the northbound LPOE and the private bus loading area. Bus passengers are processed as pedestrians through the LPOE and walk from the northbound LPOE up this deficient walkway towards the bus loading.

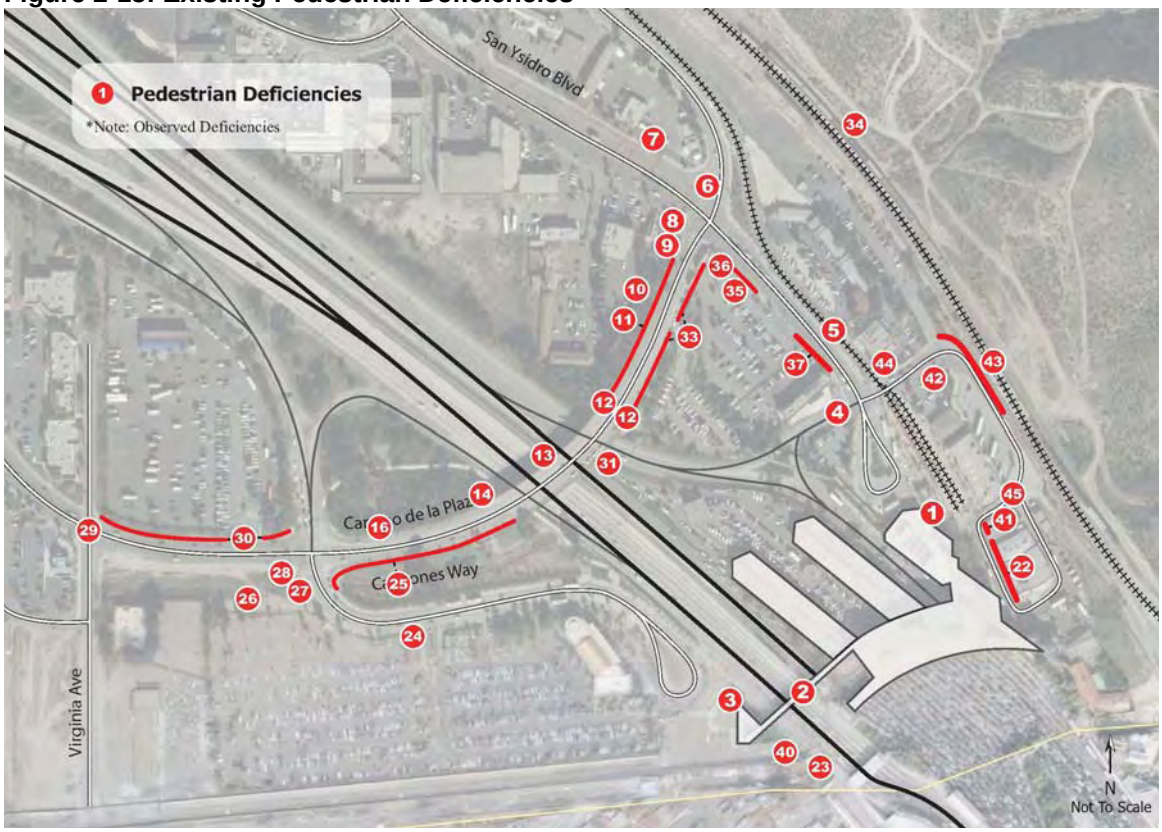
Figure 2-14: Existing Trolley Court Transit Area

Camino de la Plaza (Locations 8-14, 16, 25-31): The close proximity of the sidewalk to vehicular traffic traveling along Camino de la Plaza does not buffer pedestrians from noise or fumes. In addition, portions of the sidewalks are missing, are in disrepair, are poorly maintained, have graffiti and litter, and are partially obstructed by taxi cab drivers waiting at the taxi staging area.

San Ysidro Boulevard (Locations 5-7, 37-38): Some of the other pedestrian facilities have gaps in the sidewalk paving material, have unmarked crosswalks, have areas that are poorly maintained, and experience impeded pedestrian flow because of numerous driveways or other obstructions.

Figure 2-15 shows the pedestrian facility deficiencies observed in the study area. Appendix C provides additional detail on the observed deficiency at the location.

Figure 2-15: Existing Pedestrian Deficiencies



Linkage and Connectivity

For the purposes of evaluation, detailed land uses and pedestrian attractors are grouped together into larger subareas as shown in Figure 2-16. The pedestrian linkages to land uses are indicated in Figure 2-17 based on the existing pedestrian facilities and the key attractors within the study area.

Figure 2-16: Pedestrian Subareas

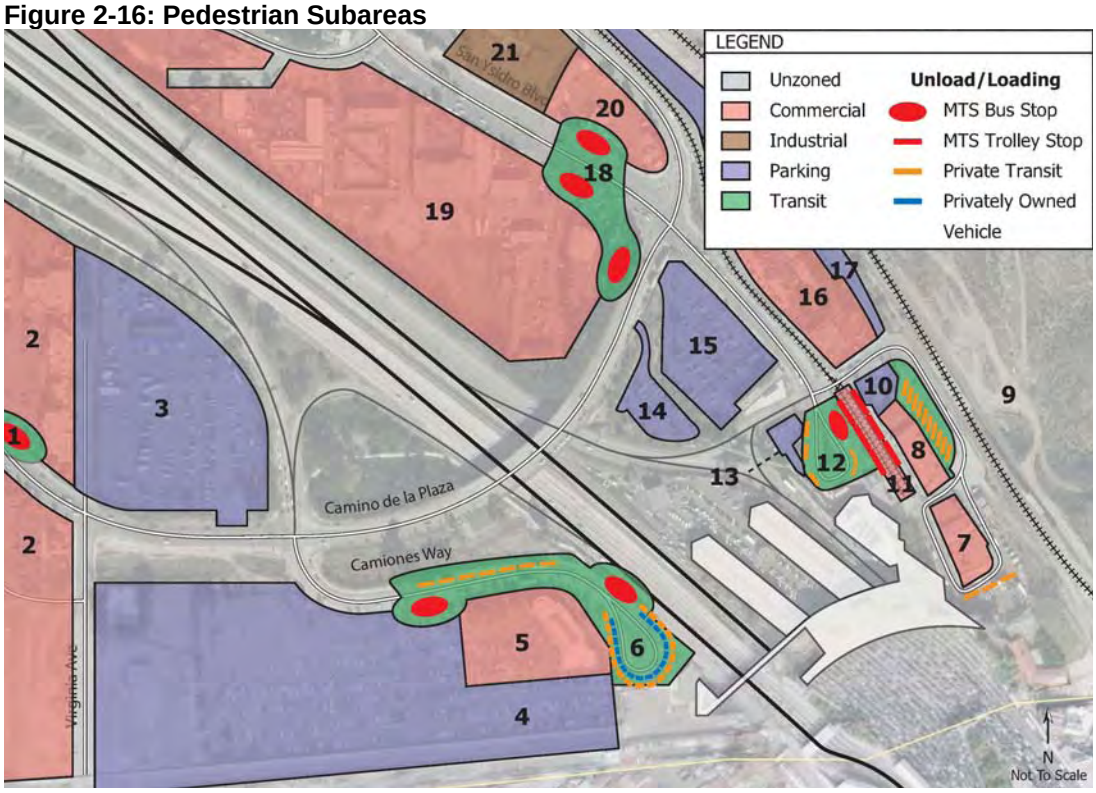
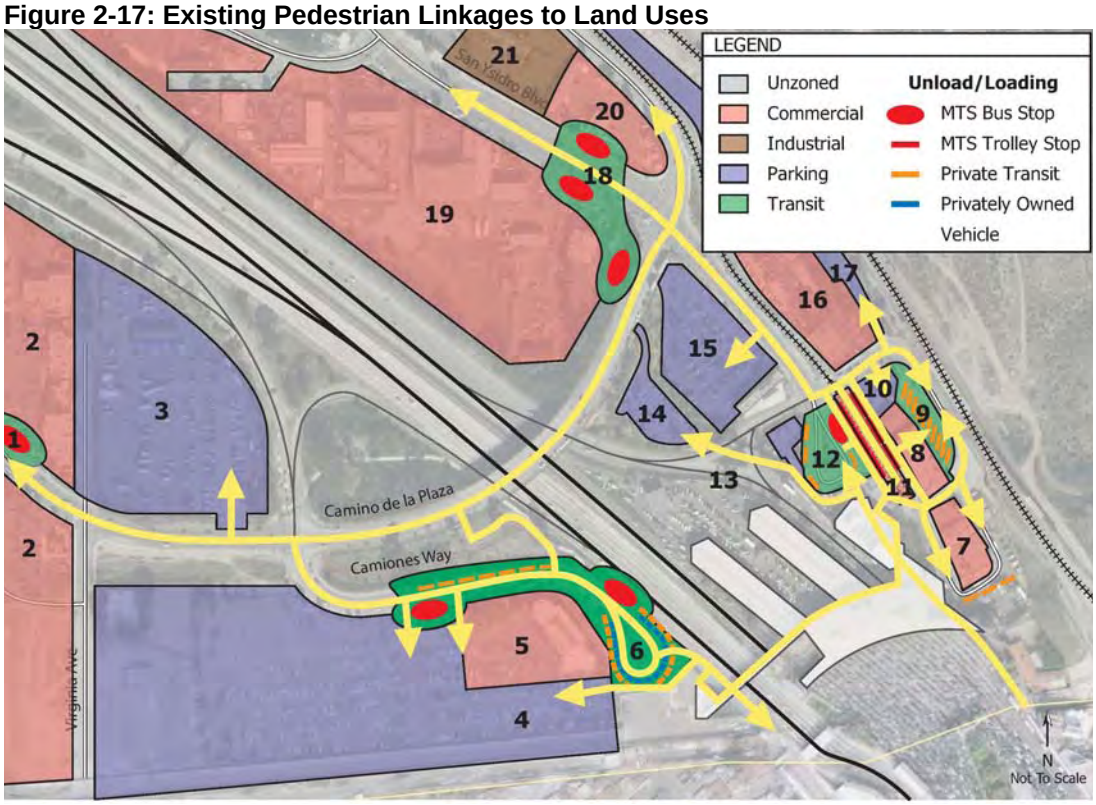


Figure 2-17: Existing Pedestrian Linkages to Land Uses



Walking Distances

One factor affecting the walkability of the study area is distances of attractors and destinations from the two portals at LPOE. The walking distance to a transit stop is one of the major determinants of transit usage. The closer the transit stop is to a person's point of origin or destination; the more likely they are to choose transit. Therefore, distances between attractors and destinations are an important factor in determining walkability. Table 2-1 shows the distances pedestrians would walk from each of the two portals to a subarea using existing pedestrian facilities. The distances ranged from 50 feet to 3,500 feet which would equate to less than a minute to approximately 15 minutes assuming a pedestrian travel speed of 4 feet per second.

Table 2-1
Existing Pedestrian Facilities – Walking Distances

Location[1]	Description	NB LPOE (ft)	SB LPOE (ft)
1	MTS Bus Stop	3,500	2,050
2	Commercial	3,200	1,800
3	Parking	3,200	1,700
4	Parking	2,500	800
5	Commercial	1,700	350
6	Camiones Way Transit Station	1,950	300
7	Greyhound Transit	300	2,350
8	Private Transit	300	2,150
9	Private Transit	400	2,400
10	Parking	400	2,500
11	Trolley Station	100	2,700
12	San Ysidro Transit Station	50	2,000
13	MTS Parking	200	2,450
14	Government Employee Parking	500	2,800
15	Parking	600	2,850
16	Commercial	500	2,700
17	Parking	700	3,000
18	MTS Bus Stops	1,200	3,350
19	Commercial	1,500	3,900
20	Commercial	1,300	3,350
21	Industrial	1,600	3,900

[1] Locations correspond to Figure 2-16.

PEDESTRIAN FLOWS

Pedestrian counts were taken at 19 locations in the pedestrian study area. The counts were taken during the weekday morning peak period from 06:00 to 08:00 and the weekday evening peak from 16:00 to 18:00. The counts were taken at the locations shown in Figure 2-18 tracking pedestrian movements in the study area. Figure 2-19 shows the AM and PM peak hour pedestrian volumes at the count locations for existing conditions. The highest northbound pedestrian flows occur near the Trolley Station, MTS bus station, and jitney loading areas directly north of the LPOE facility. The highest southbound flows occur at the Camiones Way Transit area and southbound portal. The pedestrian bridge at the LPOE facility is heavily utilized while the pedestrian bridge at Camino de la Plaza has lower volumes.

Figure 2-18: Pedestrian Count Locations

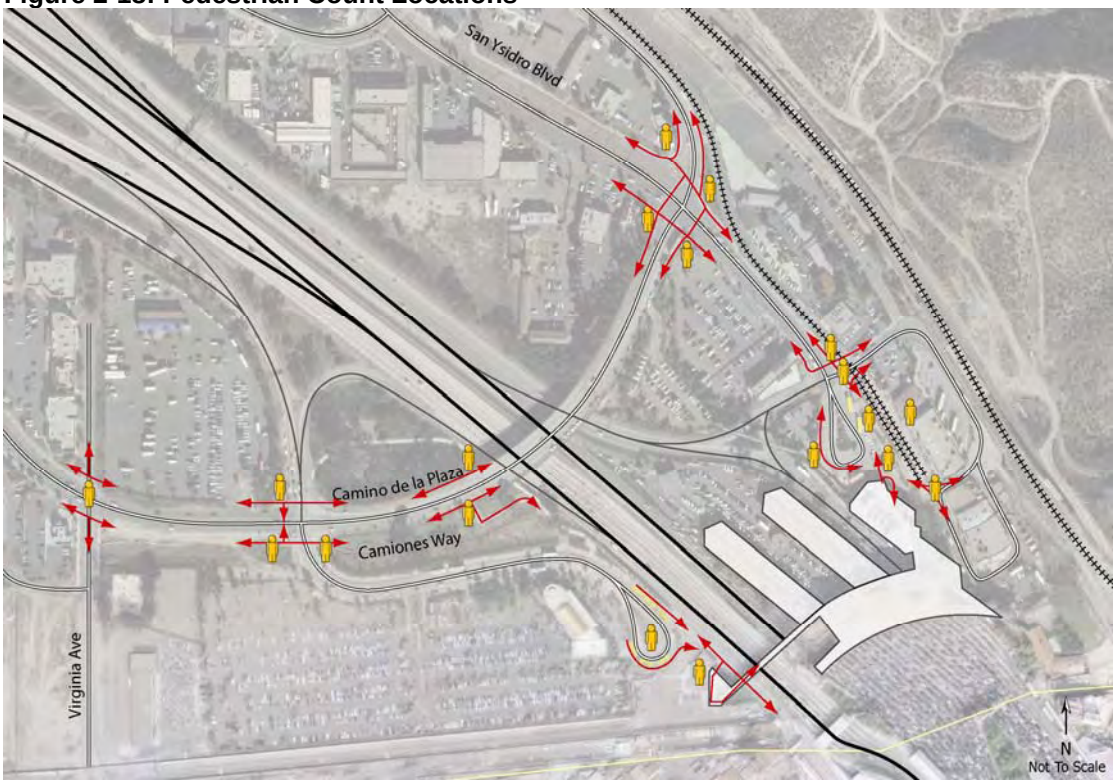
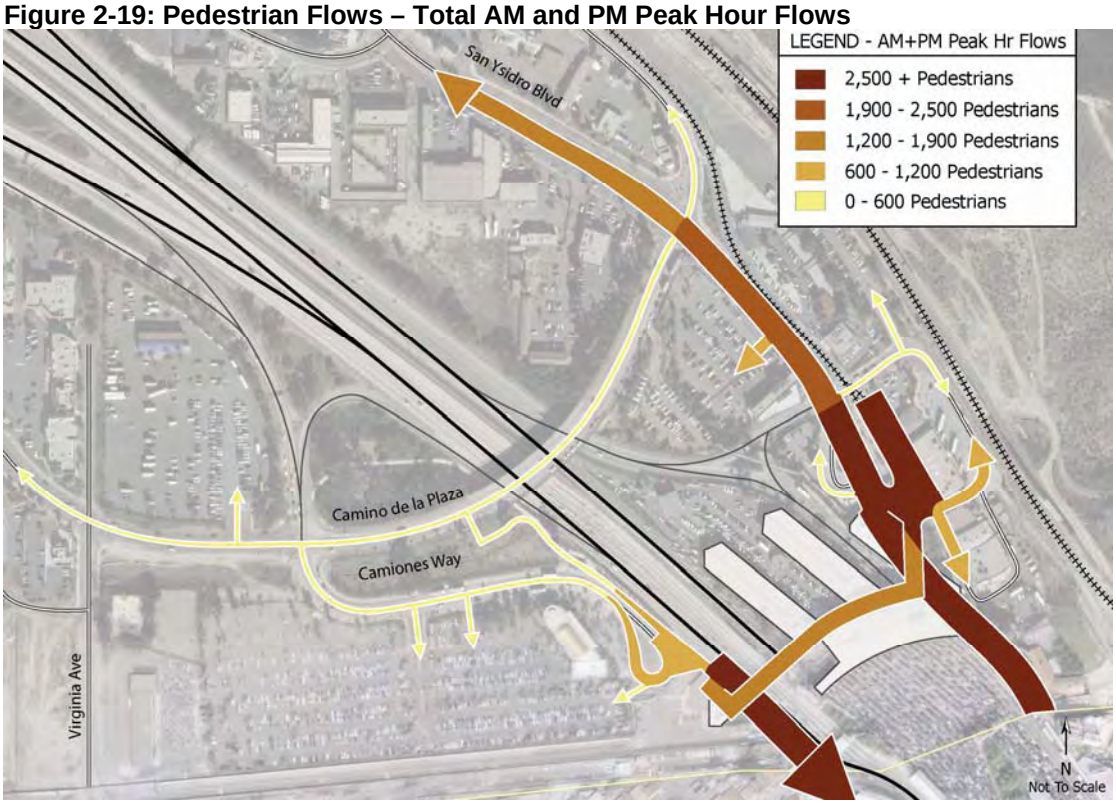


Figure 2-19: Pedestrian Flows – Total AM and PM Peak Hour Flows



PEDESTRIAN LEVEL OF SERVICE METHODOLOGY

Pedestrian operating conditions are typically described in terms of "level of service." Level of service is a report-card scale used to indicate the quality of traffic flow along sidewalks and at pedestrian landings of intersections. Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). The Highway Capacity Manual (2000) describes methodologies to measure the level of effectiveness for a variety of pedestrian facilities. This section analyzes two types of pedestrian facilities: sidewalks and queuing area (intersection corners).

Sidewalks

The primary performance measure for sidewalks is space. Space, the inverse of density, is determined by measuring a sample area of the facility and determining the maximum number of pedestrians at a given time in that area. Space (i.e. pedestrian unit flow rate) can be determined using the following equation (HCM 2000, Equation 18-2):

$$v_P = \frac{v_{15}}{15 * W_E}$$

where:
v_P = pedestrian unit flow rate (p/min/ft)
v_{15} = peak 15-minute flow rate (p/15-min); and
W_E = effective walkway width (ft)

Queuing Areas

Another measure of performance for walkway service is based on the amount of queuing space available for pedestrians related to time. The space required for pedestrians is computed by dividing the total time-space available by the time that pedestrians use walking through the corner area.

Pedestrian space at an intersection is measured using the following equation (HCM 2000, Equation 18-10):

$$M = \frac{TS_C}{4v_{tot}}$$

where:
M = circulation area per pedestrian (ft^2/p)
TS_C = total time-space available for circulating pedestrians (ft^2-s); and
v_{tot} = total number of circulating pedestrians in one cycle = $v_{ci} + v_{co} + v_{di} + v_{do} + v_{a,b}$

Table 2-2 below summarizes the level of service for sidewalks and queuing areas based on the volume-to-capacity ratio and space for each facility type, respectively. The capacity of a sidewalk is assumed to be 23 pedestrians per minute per foot. The level of service for a queuing area (intersection corner) providing 60 square feet per pedestrian or more is assumed to be a level of service "A".

Table 2-2
Level of Service Thresholds for Walkways and Sidewalks

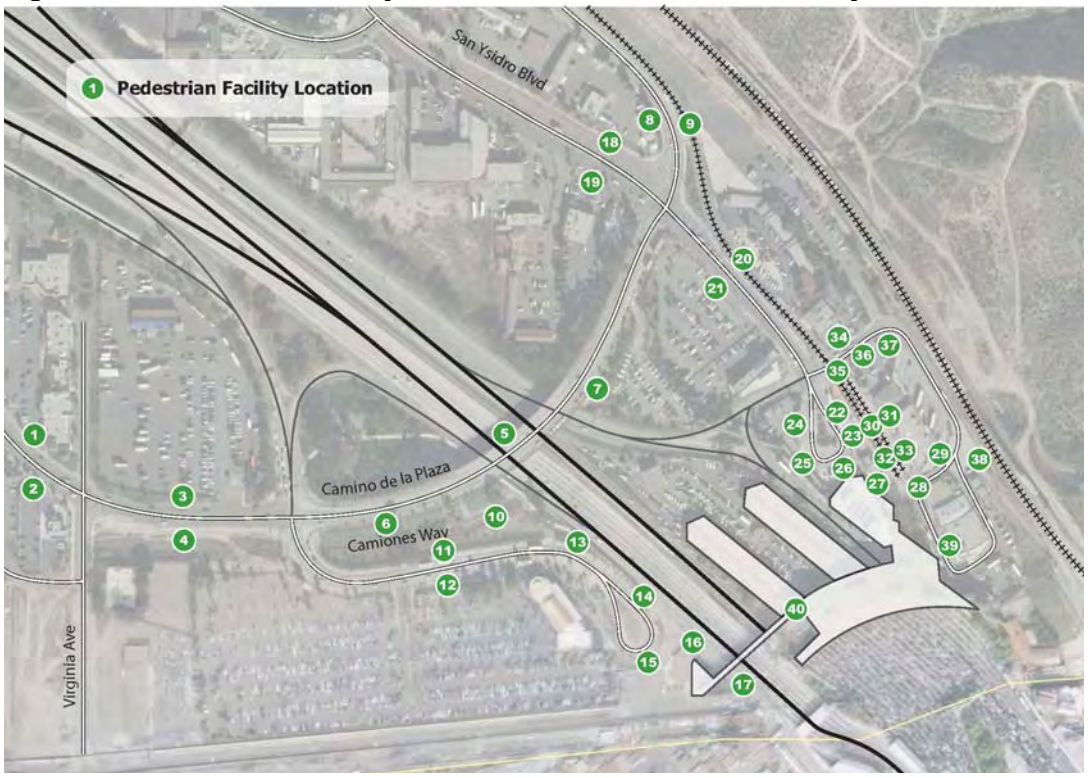
LOS	Space (ft^2/p)	Flow Rate (p/min/ft)	v/c Ratio
A	> 60	≤ 5	≤ 0.21
B	> 40-60	> 5-7	> 0.21-0.31
C	> 24-40	> 7-10	> 0.31-0.44
D	> 15-24	>10-15	> 0.44-0.65
E	> 8-15	> 15-23	> 0.65-1.0
F	≤ 8	>23.01	>1.0

Source: HCM 2000, Exhibit 18-3

PEDESTRIAN LEVEL OF SERVICE

All sidewalks operate a LOS C or better in the AM and PM peak hours with the exception of the west sidewalk located south/west of the cul-de-sac at Rail Court (Location 38). This sidewalk is a LOS F in both the AM and PM peak hours. Most pedestrian landings operate at LOS C or better in the AM peak hour. Figure 2-20 shows the locations of the pedestrian facilities used in the level of service analyses shown in Table 2-3 and 2-4, the AM and PM peak hour level of service for sidewalks.

Figure 2-20: Pedestrian Facility Locations for Level of Service Analysis



The three landings at the intersection of San Ysidro Boulevard and Interstate 5 Northbound Ramps operate at LOS D or LOS F in the AM and PM peak hours. The southwest corner of San Ysidro Boulevard and Camino de la Plaza operates at LOS D in the AM peak hour. The northeast and southwest corners of San Ysidro Boulevard and Camino de la Plaza operate at LOS D or LOS E in the PM peak hour. Table 2-5 shows AM and PM peak hour level of service for sidewalk landings. The tables in Appendix D provide the details for the LOS calculations for sidewalks and landings.

Table 2-3
Volumes and Level of Service for Sidewalks – Existing AM Peak Hour

Location	Peak Hour Pedestrian Volume	Pedestrians Per Minute Per Foot	Level of Service
Camino de la Plaza			
West of Virginia Ave			
1: North Sidewalk	10	0.05	A
2: South Sidewalk	70	0.29	A
Virginia Ave to Camiones Wy			
3: North Sidewalk	50	0.62	A
4: South Sidewalk	81	0.39	A
Camiones Way to Ped Stairway			
5: North Sidewalk	35	0.22	A
6: South Sidewalk	73	0.33	A
Ped Stairway to San Ysidro Blvd			
7: South Sidewalk	110	0.51	A

Location	Peak Hour Pedestrian Volume	Pedestrians Per Minute Per Foot	Level of Service
East of San Ysidro Blvd			
8: North Sidewalk	36	0.15	A
9: South Sidewalk	12	0.15	A
Ped Stairway down to Camiones Way			
10: Sidewalk	30	0.13	A
Camiones Way			
11: North Sidewalk	7	0.07	A
12: South Sidewalk	15	0.13	A
Camiones Transit Station			
13: East Plaza	35	0.09	A
14: East Plaza	95	0.27	A
15: South Plaza	155	0.48	A
Transit Station to Border			
16: n/o Ped Bridge	260	0.24	A
17: n/o Border	330	1.38	A
San Ysidro Boulevard			
North of Camino de la Plaza			
18: East Sidewalk	372	2.27	A
19: West Sidewalk	232	1.21	A
Camino de la Plaza to I-5 NB Ramp Entrance			
20: East Sidewalk	485	2.97	A
21: West Sidewalk	300	1.80	A
E San Ysidro Transit Station			
22: East Plaza	655	1.06	A
23: East Plaza	3140	4.67	A
24: West Plaza	10	0.03	A
25: West Plaza	115	0.44	A
26: South Plaza	3030	7.33	C
South of Transit Loop			
27: n/o Ped Bridge	70	0.17	A
28: e/o Ped Bridge	185	0.45	A
29: e/o Ped Bridge	100	0.14	A
30: Trolley Middle Pad South	50	0.08	A
31: Trolley East Pad South	370	0.79	A
32: Trolley Middle Pad North	150	0.37	A
33: Trolley East Pad North	12	0.02	A
Rail Court			
East of San Ysidro Blvd			
34: North Sidewalk	180	0.63	A
35: South Sidewalk	75	0.49	A
36: South Sidewalk	26	0.18	A
37: South Sidewalk	10	0.04	A

Location	Peak Hour Pedestrian Volume	Pedestrians Per Minute Per Foot	Level of Service
South/West of Cul-de-Sac			
38: West Sidewalk	240	46.67	F
39: South Sidewalk	475	0.97	A
Pedestrian Bridge			
40: Existing Pedestrian Bridge	180	0.29	A

Table 2-4
Volumes and Level of Service for Sidewalks – Existing PM Peak Hour

Location	Peak Hour Pedestrian Volume	Pedestrians Per Minute Per Foot	Level of Service
Camino de la Plaza			
West of Virginia Ave			
1: North Sidewalk	85	0.33	A
2: South Sidewalk	295	1.13	A
Virginia Ave to Camiones Wy			
3: North Sidewalk	95	0.58	A
4: South Sidewalk	295	0.28	A
Camiones Way to Ped Stairway			
5: North Sidewalk	60	0.28	A
6: South Sidewalk	147	0.62	A
Ped Stairway to San Ysidro Blvd			
7: South Sidewalk	275	1.04	A
East of San Ysidro Blvd			
8: North Sidewalk	80	0.45	A
9: South Sidewalk	58	0.47	A
Ped Stairway down to Camiones Way			
10: Sidewalk	122	0.37	A
Camiones Way			
11: North Sidewalk	18	0.12	A
12: South Sidewalk	215	1.16	A
Camiones Transit Station			
13: East Plaza	141	0.29	A
14: East Plaza	450	1.05	A
15: South Plaza	1010	2.66	A
Transit Station to Border			
16: n/o Ped Bridge	1495	1.17	A
17: n/o Border	2860	10.02	C
San Ysidro Boulevard			
North of Camino de la Plaza			
18: East Sidewalk	520	2.78	A
19: West Sidewalk	345	1.65	A

Location	Peak Hour Pedestrian Volume	Pedestrians Per Minute Per Foot	Level of Service
Camino de la Plaza to I-5 NB Ramp Entrance			
20: East Sidewalk	555	3.10	A
21: West Sidewalk	375	2.23	A
E San Ysidro Transit Station			
22: East Plaza	690	1.81	A
23: East Plaza	1320	3.19	A
24: West Plaza	9	0.04	A
25: West Plaza	25	0.16	A
26: South Plaza	1070	4.20	A
South of Transit Loop			
27: n/o Ped Bridge	1030	4.05	A
28: e/o Ped Bridge	1150	4.52	A
29: e/o Ped Bridge	290	0.65	A
30: Trolley Middle Pad South	900	2.17	A
31: Trolley East Pad South	355	1.24	A
32: Trolley Middle Pad North	170	0.67	A
33: Trolley East Pad North	45	0.16	A
Rail Court			
East of San Ysidro Blvd			
34: North Sidewalk	215	1.22	A
35: South Sidewalk	215	2.24	A
36: South Sidewalk	45	0.47	A
37: South Sidewalk	20	0.11	A
South/West of Cul-de-Sac			
38: West Sidewalk	225	70.67	F
39: South Sidewalk	270	0.89	A
Pedestrian Bridge			
40: Existing Pedestrian Bridge	740	1.94	A

Table 2-5
Level of Service for Pedestrian Landings – Existing Conditions

Intersection	Corner	Total Ped Circulation (peds/hr)	Pedestrian Space (ft^2/ped)	LOS
AM Peak Hour				
Camiones Wy/ Camino de la Plaza	NE	30	367.2	A
	NW	50	161.7	A
	SE	75	158.7	A
	SW	103	104.5	A
San Ysidro Blvd/ Camino de la Plaza	NE	495	34.4	C
	NW	433	41.8	B
	SE	377	54.6	B
	SW	260	21.3	D
San Ysidro Blvd/ I-5 NB Ramp Entrance	NE	835	5.6	F
	NW	395	20.7	D
	SE	760	18.6	D
PM Peak Hour				
Camiones Wy/ Camino de la Plaza	NE	35	314.7	A
	NW	103	78.3	A
	SE	153	77.6	A
	SW	370	28.8	C
San Ysidro Blvd/ Camino de la Plaza	NE	752	22.4	D
	NW	615	29.3	C
	SE	730	28.0	C
	SW	380	14.5	E
San Ysidro Blvd/ I-5 NB Ramp Entrance	NE	875	5.3	F
	NW	500	16.3	D
	SE	790	18.2	D

CHAPTER 3
EXISTING TRANSIT FACILITIES

The purpose of the transportation system is to move people and goods from place to place. If people and goods are spread out among many vehicles, congestion results when there are more vehicles vying for space than there is roadway capacity. In order to increase the efficiency of the transportation system, public transit vehicles can be utilized to simultaneously accommodate the many people who are taking similar routes to common destinations. Public transit can also be used to provide assistance to those who are unable to drive, walk, or bicycle to the destinations they wish to reach.

The San Ysidro LPOE currently provides numerous transportation options within walking distance from the U.S/Mexico border crossing. The transportation options include light rail service, public bus service, private bus service, jitneys, and taxis. Over 21,000 daily transit riders use the surrounding public transit making the International Border Station one of the three busiest transit stations in San Diego. The walking distance to a transit stop is one of the major determinants of transit usage. The closer the transit stop is to a person's point of origin or destination, the more likely they are to choose transit. Each of these transportation modes has different requirements for:

- Loading/unloading;
- Staging;
- Ticketing; and
- Passenger waiting.

Figure 3-1: Transportation Facilities

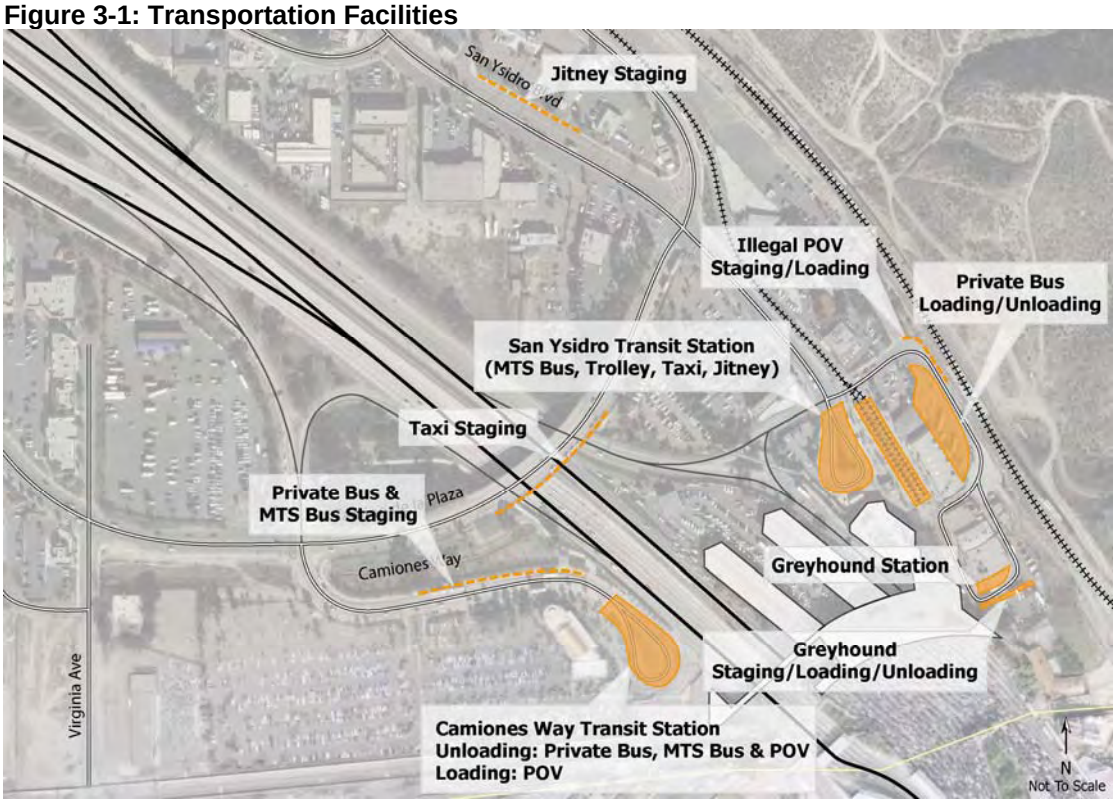
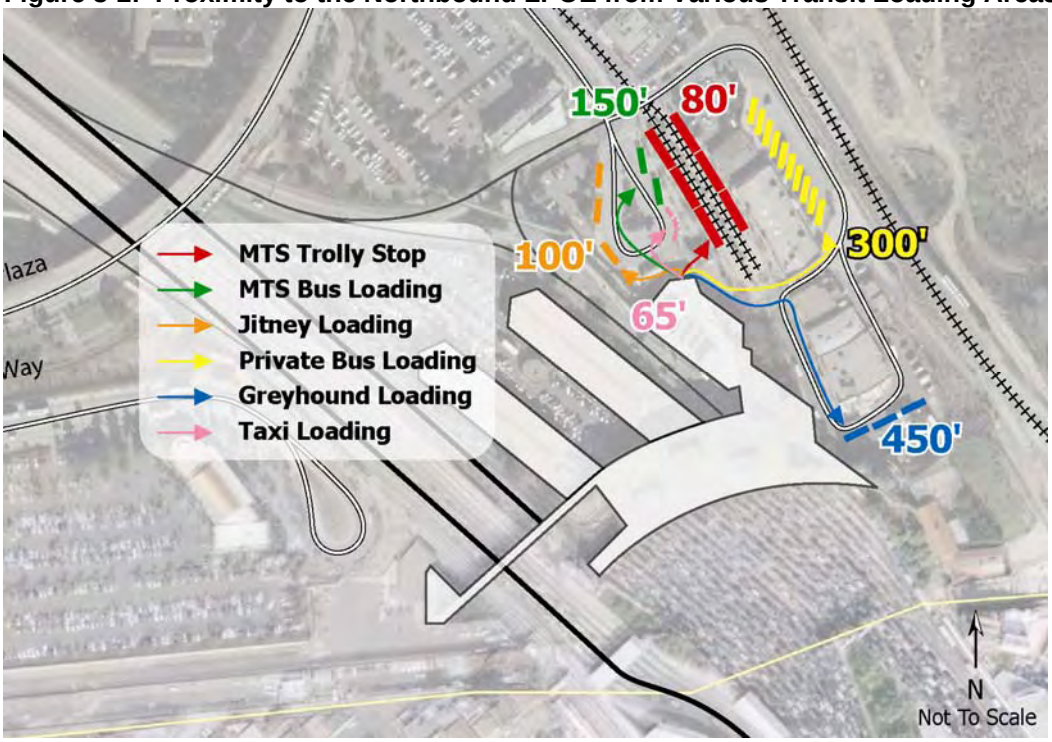


Figure 3-2: Proximity to the Northbound LPOE from Various Transit Loading Areas



TRANSIT SERVICES

Light Rail (Trolley)

The Metropolitan Transit System (MTS) of San Diego operates the light rail system serving the project area called the Trolley. The existing trolley system is a fixed-guideway electric rail system that operates at street level and is elevated level at some locations along the service line. The existing trolley system consists of three service lines including Blue, Green, and Orange lines. The existing trolley system uses multiple cars and can operate safely in high pedestrian activity areas linking activity centers throughout the region. Figure 3-3 shows existing trolley lines and routes.

Figure 3-3: Existing Trolley Routes

The Blue Line is the only service line that provides access to the San Ysidro Transit Center. The trolley blue line provides services from the San Ysidro Transit Center north through San Diego's central business district (downtown) and north to the blue line terminus at the Old Town Transit Center. The Blue Line trolley service connects to the orange line trolley service at the Imperial/12th station at the southern end of downtown and to the trolley Green Line at the Old Town Transit Center. The Orange and Green trolley lines head easterly on parallel paths connecting again at Grossmont and El Cajon Transit Centers. The Green Line runs east through Mission Valley and serves major shopping centers in the valley, Qualcomm Stadium, and SDSU. The Orange Line runs east serving the communities such as Southeastern San Diego, Encanto, and the cities of Lemon Grove, La Mesa, and El Cajon. As shown on Figure 3-3, the existing trolley lines provide connectivity between key locations throughout the San Diego region including major centers of employment, retail, residential and institutional zones.

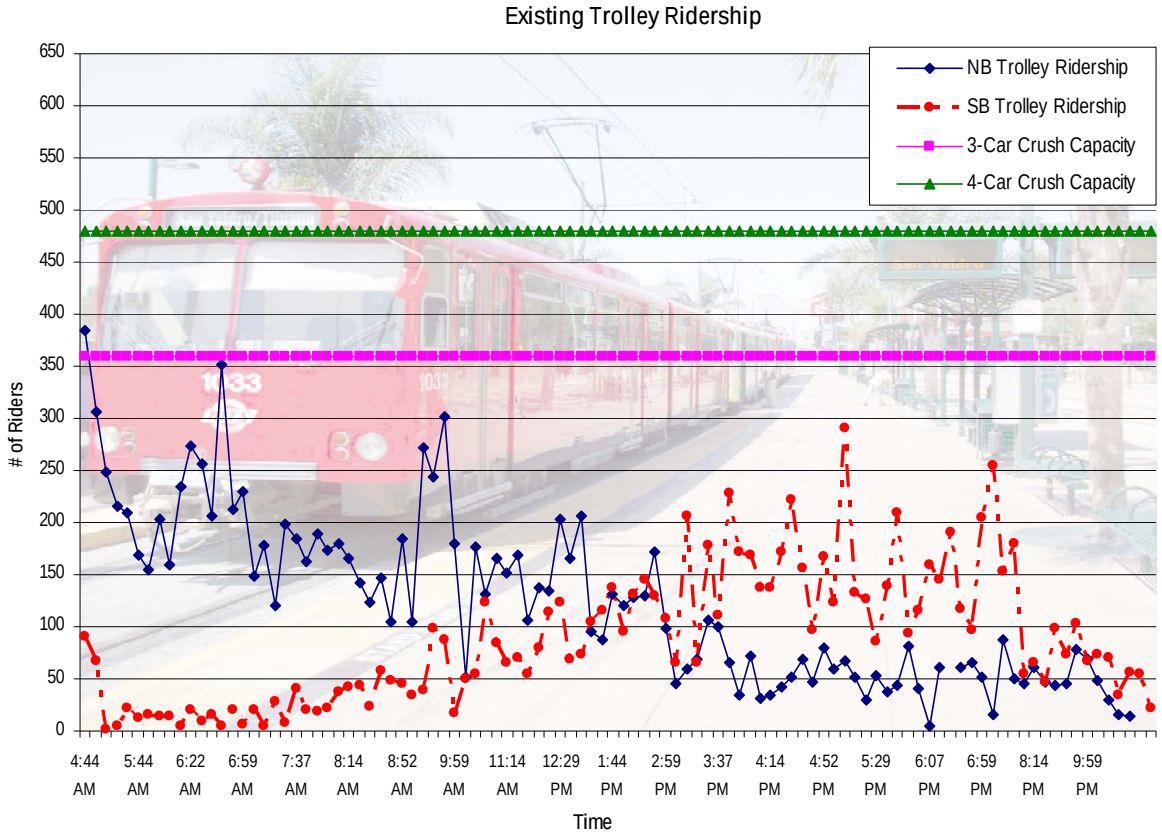
This San Ysidro Transit Center is located just north of the existing border crossing between the U.S. and Mexico at the San Ysidro LPOE. The transit center consists of a building staffed by MTS cashiers, ticketing kiosks, covered benches, ATM machines, and vending machines. The Trolley loading, unloading, staging, ticketing and passenger waiting areas are all provided at the southern

terminus of San Ysidro Boulevard at a convenient location that is near both the northbound LPOE and the pedestrian bridge connecting the southbound LPOE.

The current headway, or frequency, for the Trolley Blue Line is 7 ½ minutes for weekday AM and PM peak periods and 15 minutes for off-peak periods. On weekdays, the first trolley leaves the station at 04:44 and the last trolley leaves at 00:59 providing service for approximately 20 hours a day. The trolley provides service to the 12th & Imperial station at the southeast end of downtown in approximately 30 minutes and the America Plaza station on the northwest end of downtown in approximately 45 minutes at all times of the day. Appendix D shows trolley schedule and headway for all three lines.

Pedestrian counts were conducted during the weekday morning peak period from 06:00 to 08:00 and during the weekday evening peak period from 16:00 to 18:00 in January 2009. The resultant existing weekday morning and evening peak hour pedestrian volumes utilizing the trolley are included in Appendix A. These counts were compared to the MTS fiscal year 2007-2008 ridership counts. It was determined that the MTS counts are more conservative and therefore, used in this analysis. According to the data, there are approximately 11,200 daily boardings and 8,600 daily alightings at the San Ysidro station. Trolley ridership data for FY07-FY09 are also included in Appendix E. Figure 3-4 shows daily boardings and alightings in 15-minute increments for the southbound and northbound trolleys. As the charts indicate, trolley ridership rarely exceeds the 3-car crush capacity for individual trains in 15-minute intervals.

Figure 3-4: Daily Trolley Ridership at San Ysidro International Border Station



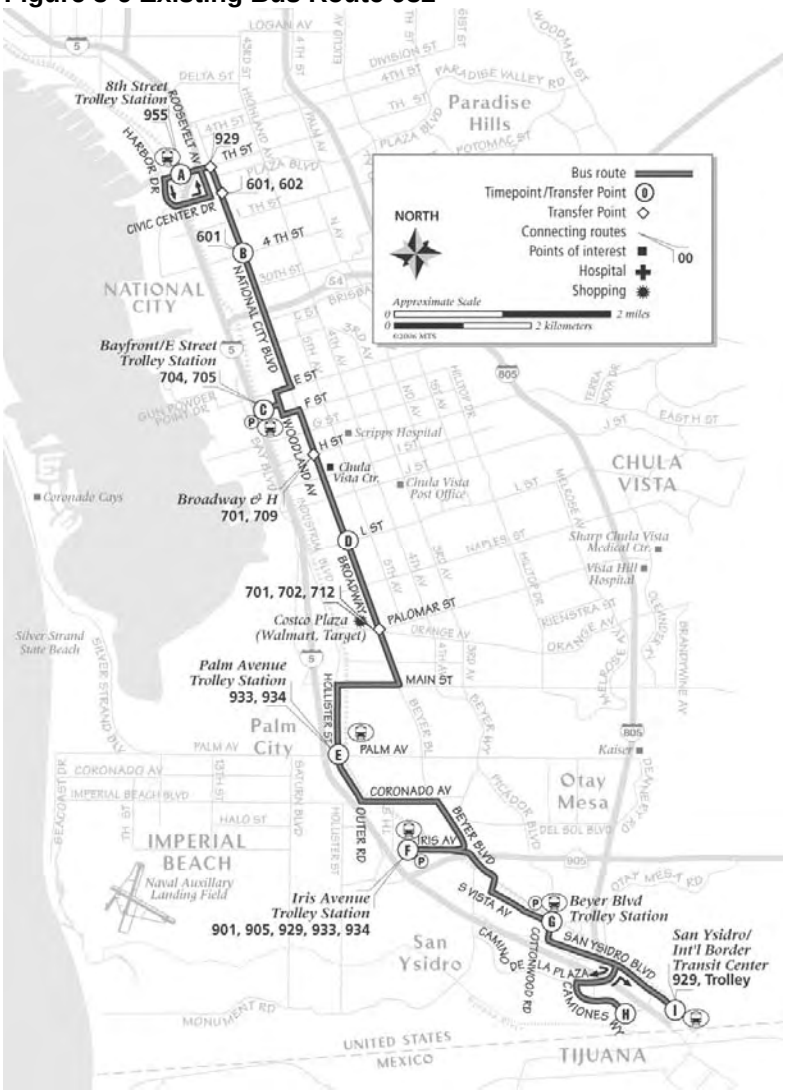
MTS Bus Service

Bus services, whether private or public, is a form of enhanced rubber tired bus service that connects major activity centers within a region. The standard 40 foot long buses are currently used by MTS to serve the San Ysidro area. These vehicles are low-floor with multiple entry/exit doors and utilize electrical lifter platform to facilitate boarding of disabled riders. The bus stops provided along the terminus of San Ysidro Boulevard are currently utilizing curb bulbs that are approximately at the same level of the vehicle doorways.

The San Ysidro area is currently served by MTS bus routes 929 and 932. The 929 bus route provides services within the San Ysidro area and from the San Ysidro Transit Center to both Imperial/12th station and Old Town Transit Centers including all locations in between as shown on Figure 3-5. The 932 bus route provides services within the San Ysidro area and from the San Ysidro Transit Center to 8th Street trolley station including all locations in between as shown on Figure 3-6.

Figure 3-5 Existing Bus Route 929

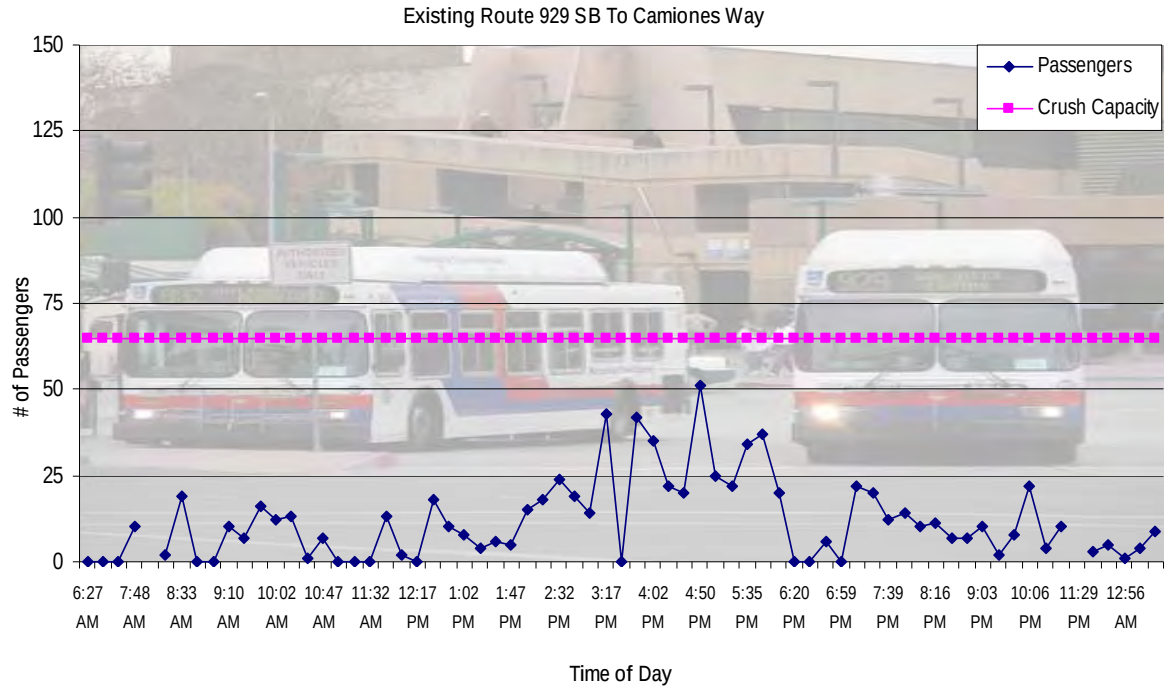
Figure 3-6 Existing Bus Route 932



The operation of the existing bus service provided at the LPOE is currently provided at two locations separating the pick-up area from the drop-off area. The northbound pick-up location is provided at the terminus of San Ysidro Boulevard, on the east side of Interstate 5, where only two buses can be accommodated, at a time. The southbound drop-off location is currently provided at the terminus of Camiones Way on the west side of Interstate 5. Camiones Way also provides adequate curbside area for queued buses waiting for the pick-up area at the terminus of San Ysidro Boulevard to be cleared. The current headway for the existing bus service at the LPOE border crossing is 15 minutes for weekday AM and PM peak periods.

Ridership counts were obtained from MTS for Fiscal Year 2007-2008. The resultant existing weekday morning and evening peak hour pedestrian volumes utilizing the buses are included in Appendix E. According to the data, there are approximately 1,935 daily boardings and 255 daily alightings at the San Ysidro station. Figures 3-7 and 3-8 show daily boardings and alightings for northbound and southbound legs of each route.

Figure 3-7: Daily Bus Route 929 Ridership at San Ysidro International Border Station



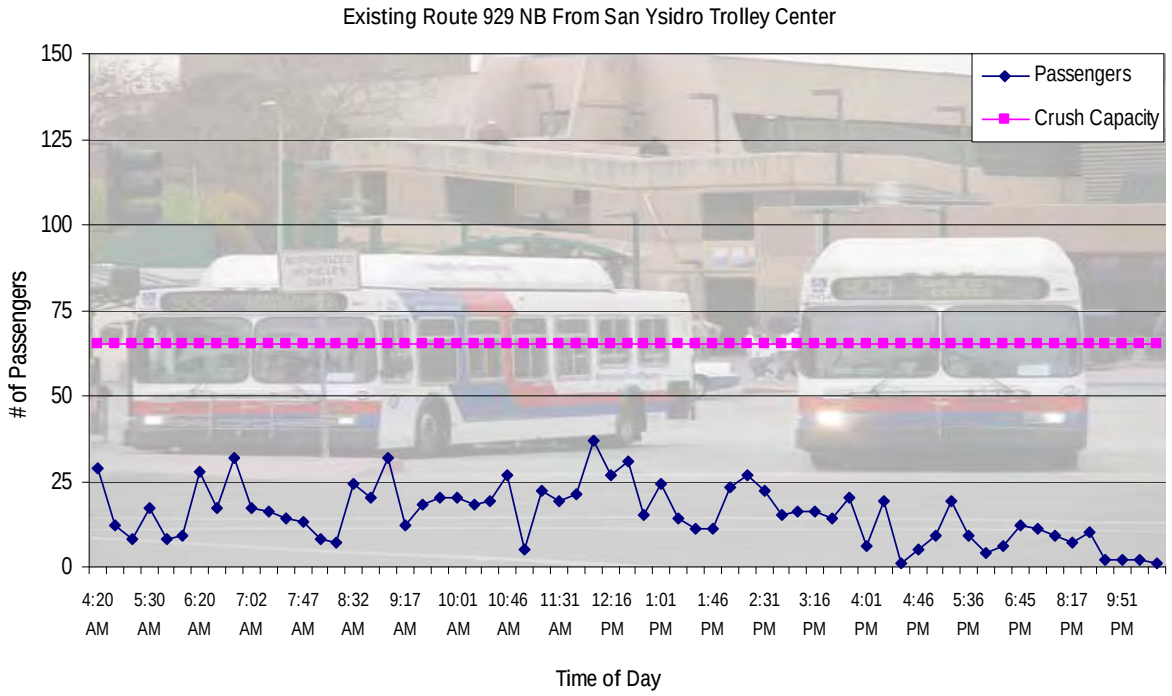
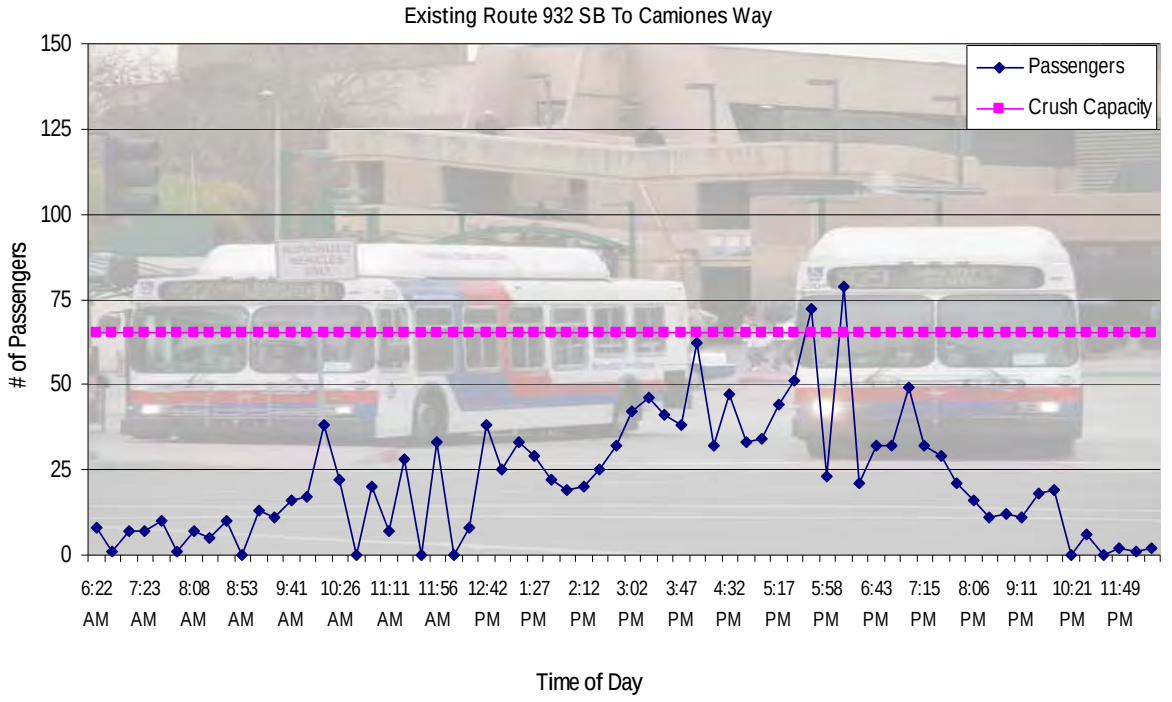
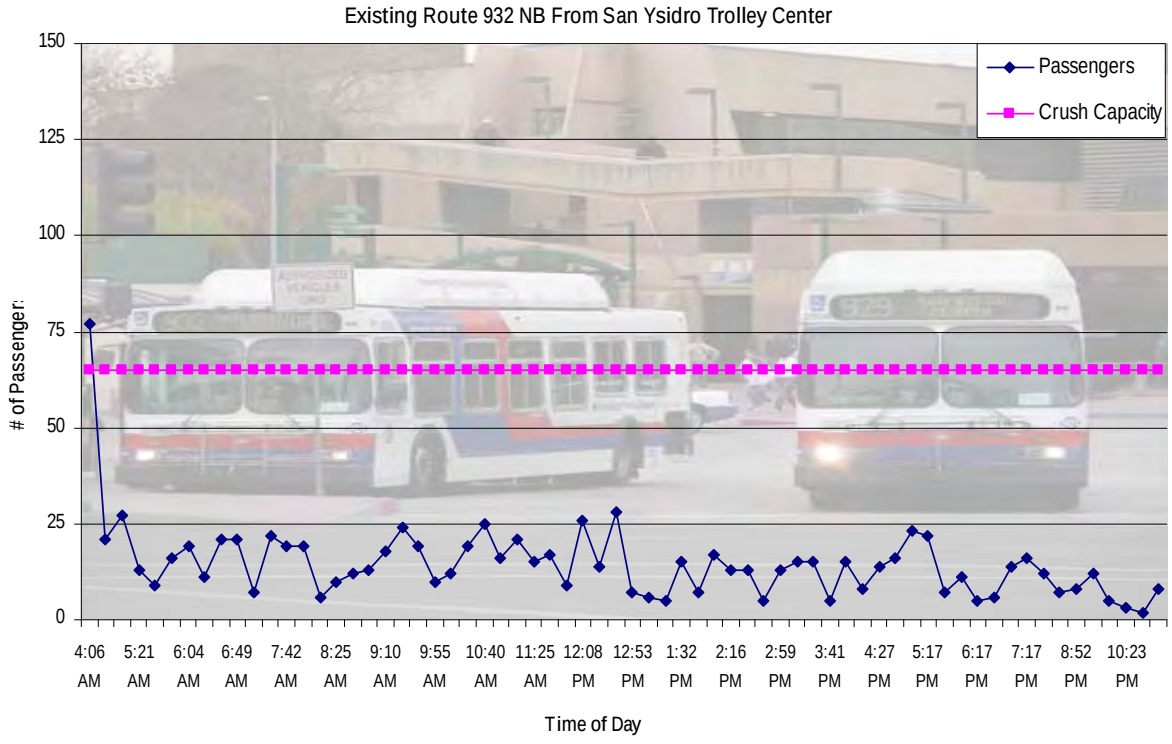


Figure 3-8: Daily Bus Route 932 Ridership at San Ysidro International Border Station





Private Transit Service

Private transit service is another important transportation option currently provided at the LPOE border crossing. It is a flexible alternative to fixed route/schedule traditional transit, and utilizes vehicles such as charter buses, jitneys, and taxis. These services range from those allowing pick-up/drop-off along a defined route by passenger request to those which offer on-demand door-to-door service within a given geographic area. When traditional transit services are not financially feasible in a place or do not serve desired destinations, private transit service fills an important niche in helping customers maintain their health, independence, and self-sufficiency.

Private Buses & Vans

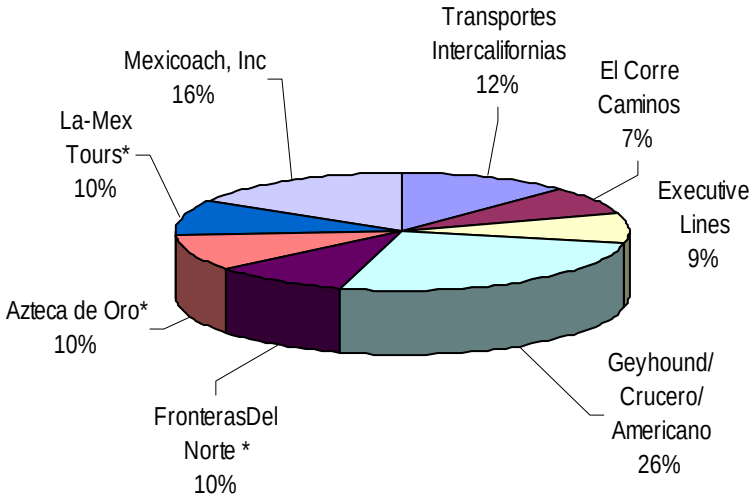
The following are some of the authorized charter bus companies serving the border crossing:

- Americanos
- Azteca De Oro
- Cal-Mex Tours
- Crucero USA
- El Corre Caminos
- Executive Lines
- Fronteras Del Norte
- Greyhound
- La-Mex Tours
- Mexicoach, Inc
- Tourismo Express
- Transportes Intercalifornias

Private bus service is offered through Greyhound, Cruceros, and Americanos Lines from the San Ysidro Transit Station. Crucero and Americanos bus lines are wholly owned subsidiaries of Greyhound that provide cross-border bus service from various locations in Mexico to California and Texas. There are a minimum of 21 daily buses originating from the San Ysidro location daily including 20 times a day between San Ysidro and downtown San Diego and one time a day, direct service with no stops, between San Ysidro and Los Angeles. Bus services between San Ysidro and San Diego then continue service to Los Angeles and other destinations where Greyhound bus service is provided. Additional buses may be added in order to meet unanticipated demand. There is no formal program, schedule or frequency that is advertized for the charter buses; however, an information kiosk, next to the trolley tracks, is available to assist travelers looking for private transportation accommodations. The services provided by the Greyhound and other charter buses serve a wider geographical area compared to the services provided by MTS.

There are different passenger loading, unloading, and staging areas designated for the Greyhound and other private charter buses. The loading, unloading, and staging area designated for the Greyhound buses is located south of the trolley tracks at the terminus of the south segment of East San Ysidro Boulevard. The Greyhound station has ticket counters located in the building adjacent to the staging area. Figure 3-9 shows the breakdown of total daily bus trips by private bus operator based on data collected from the private operators in March 2009.

Figure 3-9: Estimated Private Bus Trips



* Assumes average number of daily bus trips.

The two buildings just north of the Payless Shoe store and Greyhound station house five other private charter companies. The McDonald's building houses other private charter companies. The passenger loading area designated for these private charter companies is located behind the McDonald's retail building near the terminus of Rail Court. The passenger loading area has capacity for five vans and five buses. Multiple private charter companies use this loading area, which can be used for one-half hour increments to load passengers. The staging for these companies occurs at various locations off-site. Generally, the operators use radios to signal to drivers at the off-site staging areas when the buses are needed in the loading area. Figure 3-10 shows location of the private charter buses loading, unloading, ticketing and staging areas in the project vicinity.

The processing and inspection of buses differs for northbound and southbound buses. Northbound buses coming from Mexico and entering the U.S. unload their passengers just south of the LPOE. The bus is then processed through the vehicular inspection facility. The passengers are processed through the pedestrian inspection facilities. Once they are processed through the port, passengers either make their way back to the private bus loading area in the facility behind McDonalds, or they first go to the ticketing booth and then to the loading area. Depending on bus availability the time between the passenger unloading in Mexico and reloading in the U.S. is anywhere from 15 to 60 minutes. Currently there are no facilities provided for these passengers to wait with their luggage. Southbound buses stop briefly at the loading area behind McDonalds and then continue south through the port without unloading their passengers.

Figure 3-10: Private Bus Transportation Facilities

Jitneys, Taxis and Privately Owned Vehicles

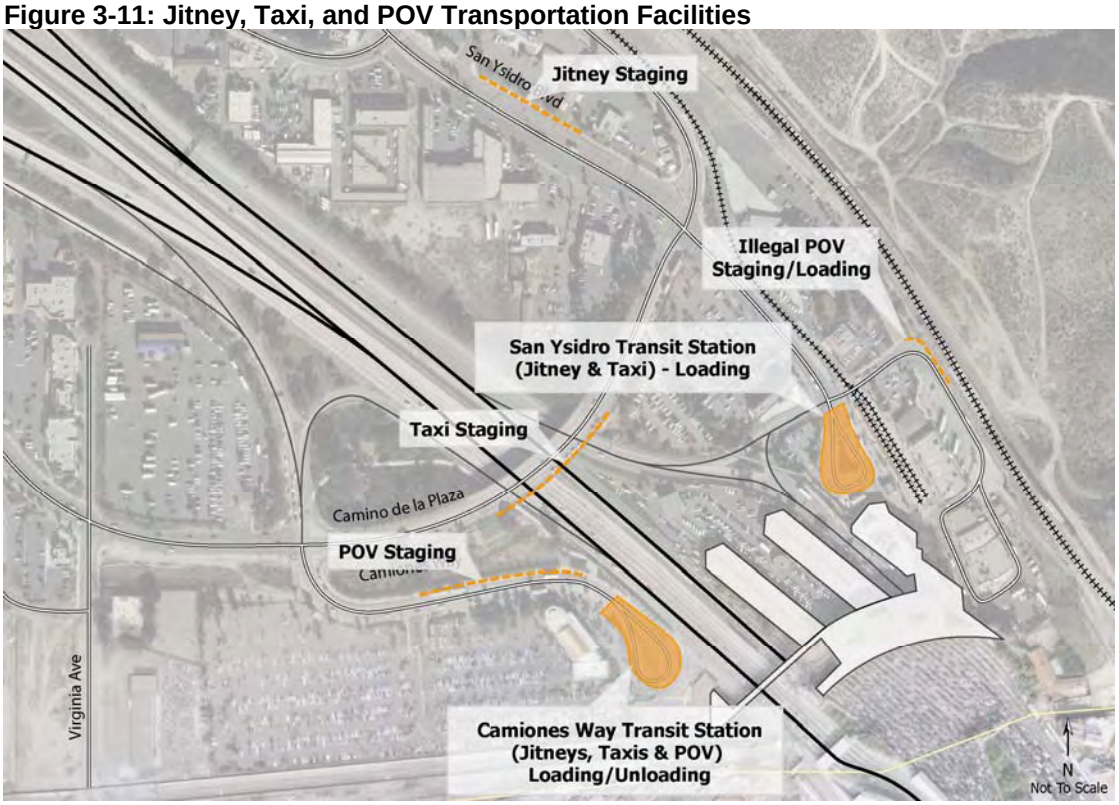
Jitneys are a fixed route shuttle service that is licensed and regulated by MTS. The jitneys provide service from the Camiones Transit Center and San Ysidro Transit Center to San Ysidro and other local destinations. The fare for jitneys ranges from $1.00 to $2.25 based on the destination. Similar to MTS bus service, jitney loading and unloading is accommodated at the San Ysidro Transit Station and the Camiones Way Transit Station. The San Ysidro Transit Station is restricted to buses, taxis and jitneys. The curb area at the west side of the cul-de-sac is designated as passengers pick-up zone for the jitneys and a portion of the east side of the of the cul-de-sac curb area is designated for taxis. Jitney staging occurs on East San Ysidro Boulevard just north of Camino de la Plaza. Jitneys do not require a staging location proximate to the border because it is on a fixed route; therefore, staging can be accommodated adequately anywhere along the route.

Taxi loading is accommodated at the San Ysidro Transit Station. Taxi loading/unloading is accommodated at the Camiones Way Transit Station. Camino de la Plaza provides a convenient location and adequate curbside area for taxi staging that allows the taxi driver to see when designated pick-up area at the San Ysidro Transit Station is cleared.

Currently there are no accommodations for loading/unloading or staging for privately owned vehicles on the east side of Interstate 5 near the northbound LPOE. The Camiones Transit Station allows for loading and unloading of privately owned vehicles; however, staging is not accommodated. Due to its' proximity to the southbound port, the station is primarily used for unloading passengers. Northbound pedestrians pass through the LPOE and are required to walk to the Camiones Way Transit Station to the designated privately owned vehicle loading area, which is approximately 2,100 feet or 9 minutes across the pedestrian bridge. Privately owned vehicles that are picking up passengers at the border crossing are typically queued illegally on Rail Court just east of E. San Ysidro Boulevard very close to the northbound port due to the lack of accommodations. Figure 3-11

shows the location of taxis, jitneys and privately owned vehicles loading/unloading, ticketing, and staging areas.

Figure 3-11: Jitney, Taxi, and POV Transportation Facilities



TRANSIT LEVEL OF SERVICE METHODOLOGY

The capacity on transit vehicles is expressed in terms of both seated and crush capacities (total number of riders including standees). The capacities of the trolley cars and buses were determined ising SANDAG/MTS data as well as information provided by the manufacturers. The capacities per vehicle and for a 3-car trolley were also determined.

Table 3-1: Capacity of Trolley and Buses at San Ysidro Transit Center

Trolley Capacity			
Condition	Capacity per Car	Capacity Per 3-car Trolley	Capacity Per 4-car Trolley
Seated	64	192	256
Crush	120	360	480

Bus Capacity	
Condition	Capacity per Bus
Seated	40
Crush	65

TRANSIT LEVEL OF SERVICE

Service levels for public transit are evaluated for both trolley cars and buses; no level of service calculations are provided for private transit. To determine service levels of the trolley cars and buses, we compared the average peak period rider count to the seated capacity and crush capacity (seated and standing) of each car per hour. Ridership data for the trolley and MTS buses is available by arrival and departure and has been summarized for the peak AM and PM hours. Table 3-2 shows the existing transit service levels. It should be noted that the following analysis is performed on an hourly basis whereas ridership data was previously presented in 15-minute increments. As indicated on Figure 3-8, the crush capacity of the first AM northbound and two of the peak PM southbound 932 buses is exceeded.

Table 3-2: Level of Service for Transit – Existing Conditions

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Bus/929	North from SY Intl Border Trolley Station	AM	5	110	200	325	55.00%	33.80%
		PM	4	66	160	260	41.30%	25.40%
	South to Camiones Way / Border	AM	4	31	160	260	19.40%	11.90%
		PM	4	132	160	260	82.50%	50.80%
Bus/932	North from SY Intl Border Trolley Station	AM	5	76	200	325	38.00%	23.40%
		PM	4	75	160	260	46.90%	28.80%
	South to SY Intl Border Trolley Station	AM	4	12	160	260	7.50%	4.60%
		PM	4	1	160	260	0.60%	0.40%
Trolley	North from SY Intl Border Trolley Station	AM	8	1,923	1,536	2,880	125.20%	66.80%
		PM	8	466	1,536	2,880	30.30%	16.20%
	South to SY Intl Border Trolley Station	AM	8	227	1,536	2,880	14.80%	7.90%
		PM	9	1,498	1,728	3,240	86.70%	46.20%

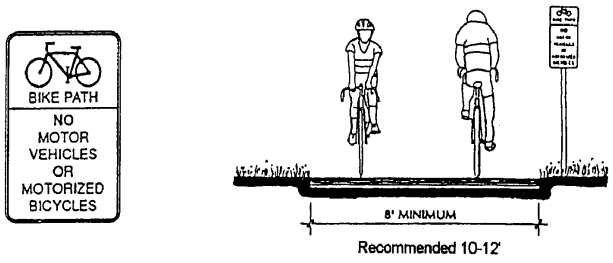
CHAPTER 4
EXISTING BICYCLE FACILITIES

Bicycling is a basic fundamental form of transportation that is sometime overlooked in this age of high-tech motorized travel. Yet this human-powered transportation mode is important to the success of the transportation system as a whole. All travelers are pedestrians at some point during their trip, even if it is between their parking space and their office building. Bicycling is considered a form of transportation that adds a viable alternative to freedom of mobility. Transportation planners and engineers have the same level of responsibility to provide for the safety of bicyclists and pedestrians as they do for motorists.

Bicycles can provide convenient transportation for destinations ranging between one and five miles. More experienced riders may be comfortable commuting up to 20 miles provided there are adequate bicycle facilities. According to the current City of San Diego Bicycle Master Plan, bikeways can be classified into three types:

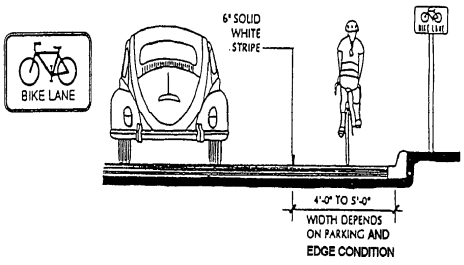
- Class I Bike Path - A bike path provides for bicycle travel on a paved right-of-way completely separated from any street or highway.

Class I Bike Path

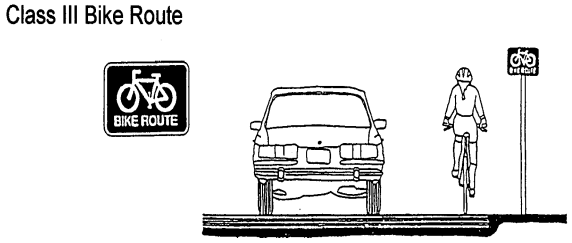


- Class II Bike Lane - These facilities are often referred to as bike lanes. Bike lanes provide a striped and stenciled lane for one-way travel on a street or highway. When properly designed, bike lanes help improve the visibility of bicyclists.

Class II Bike Lane



- Class III Bike Route – Generally referred to as a bike route. It provides for shared use with pedestrian or motor vehicle traffic and is identified only by signing. This recommended when there is enough right-of-way for bicyclists and motorists to safely pass.



Any of these facilities can be implemented in the San Ysidro LPOE study area, depending on the predicted users, coordination with automobile traffic, and several other factors related to roadway classifications, Community Plan requirements, and availability of adequate right-of-way that can accommodate these facilities. On-road bicycle lanes (Class II) allow higher bicycle speeds compared to bicycle routes (Class III). Shared-use paths (Class I) are useful for children and relaxed recreational riders who are uncomfortable sharing the road with automobiles. Just as for sidewalks, connectivity in the bicycle network is very important. Riders of all abilities should be able to use the network.

The purpose of evaluating bicycle facilities is to address the integration of vehicular, transit, bicycle, and pedestrian facilities as directed in the San Ysidro Community Plan. This section documents:

- Existing bicycle facilities and linkages to different destinations
- The obstacles to bicycle mobility
- The level of service of bicycle facilities
- Border crossing bicycle activities

BICYCLE STUDY AREA

The study area is generally bounded by Camino De La Plaza to the north, Mexico to the south, Rail Court to the east and Virginia Avenue to the west. The bicycle mobility for the San Ysidro LPOE border crossing is being evaluated along all public streets that are located within the study area. The specific locations that are expected to be affected by this project include the following locations:

- Camino de la Plaza from Virginia Avenue to Interstate 5 (I-5) Southbound Ramps
- Camino de la Plaza from I-5 Southbound ramps to East San Ysidro Boulevard
- Camiones Way south of Camino de la Plaza
- East San Ysidro Boulevard south of Camino de la Plaza

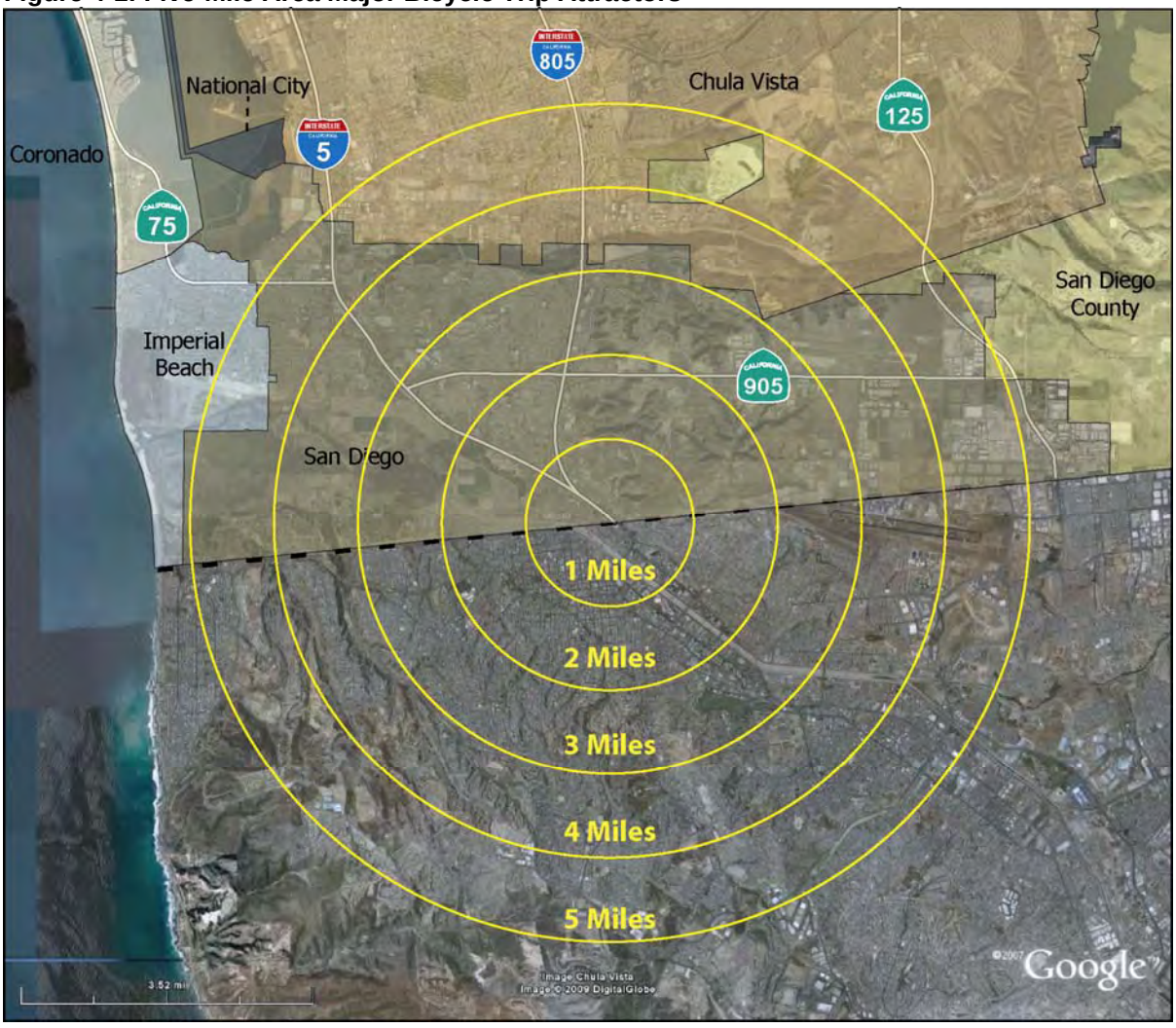
BICYCLE LAND USE ATTRACTORS AND GENERATORS

There are a number of bicycle land use attractors that are within the study area. These land uses include commercial, transit, mixed land uses, and the border crossing. The commercial land uses in the immediate vicinity of the LPOE border crossing consist primarily of restaurants and retail spaces. In addition, the San Ysidro International Transit Station is also considered a bicycle user attractor. This station is located at the southern terminus of San Ysidro Boulevard and includes the Blue Line San Diego Trolley Service, bus stops for Route 929 and 932, Greyhound buses, and private charter

buses.Additional large land use attractors/generators are also provided within five miles of the LPOE property. These land use attractors include the communities of Otay Mesa, Imperial Beach, San Ysidro, and Tijuana as shown in Figure 4-1.

There are other land use attractors for cyclists that are located outside the five-mile radius. The major regional employment centers are located in downtown San Diego and locations east and north of downtown San Diego at distances in excess of 15 miles from the border crossing. Consequently, bicyclists with destination points beyond the five-mile radius are dependent on other modes of transportation to link them to their final destination. At the border, public and private buses and the Trolley provide this link. However, these modes offer few accommodations for bicyclists. Additional facilities for bikes on public transit are needed in order to create a viable link between the border and the major employment centers.

Figure 4-1: Five-Mile Area Major Bicycle Trip Attractors



EXISTING BICYCLE FACILITIES

The existing bike circulation network provided at and around the San Ysidro LPOE is not heavily utilized either as a result of the few accommodations being provided to bicyclist crossing the border or relatively few cyclists in the area. The number of cyclists crossing the border may be the result of the distances from the border crossing to final destination point and reliance on other modes of transportation.

There are currently different bike facilities that exist within the study area. Figure 4-2 shows a bicycle parking location in the study area. Figure 4-3 shows the observed bicycle facility deficiencies in the study area with additional detail in Appendix C. These facilities include the following:

- Class I bike path crossing under Camino de la Plaza connecting the bike facility on Camino de la Plaza to the one on Camiones Way.
- Class II bicycle lane on Camino de la Plaza between Virginia Avenue and East San Ysidro Boulevard
- Class III bike route on Camiones Way
- Functional Class III bike route on San Ysidro Boulevard south of Camino de la Plaza
- There are bicycle racks located just north of the I-5 northbound ramps/San Ysidro Boulevard intersection and bicycle racks along the bicycle path that are located just north of the southbound pedestrian border crossing.
- Bikes are currently accommodated on the trolley; however, no special accommodations (e.g. racks) are provided. Bicyclists are required enter at the rear door and lift their bikes onto the trolley. The trolley allows two bicycles per trolley car during off-peak times and one bicycle per trolley car during peak periods.
- Bikes are currently accommodated on the MTS buses. The buses have bicycle racks that can allow up to two bicycles per bus.

Figure 4-2: Bicycle Rack Facility at the Northbound LPOE

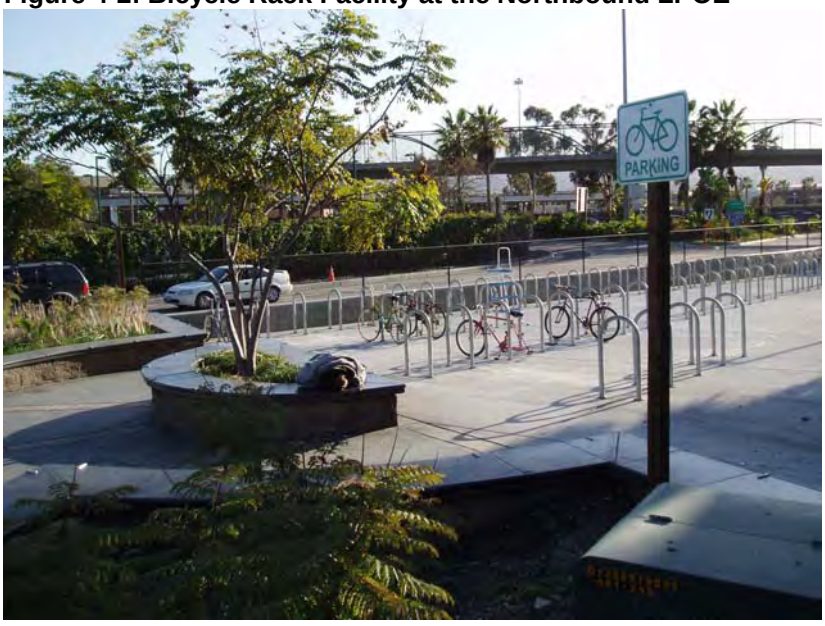
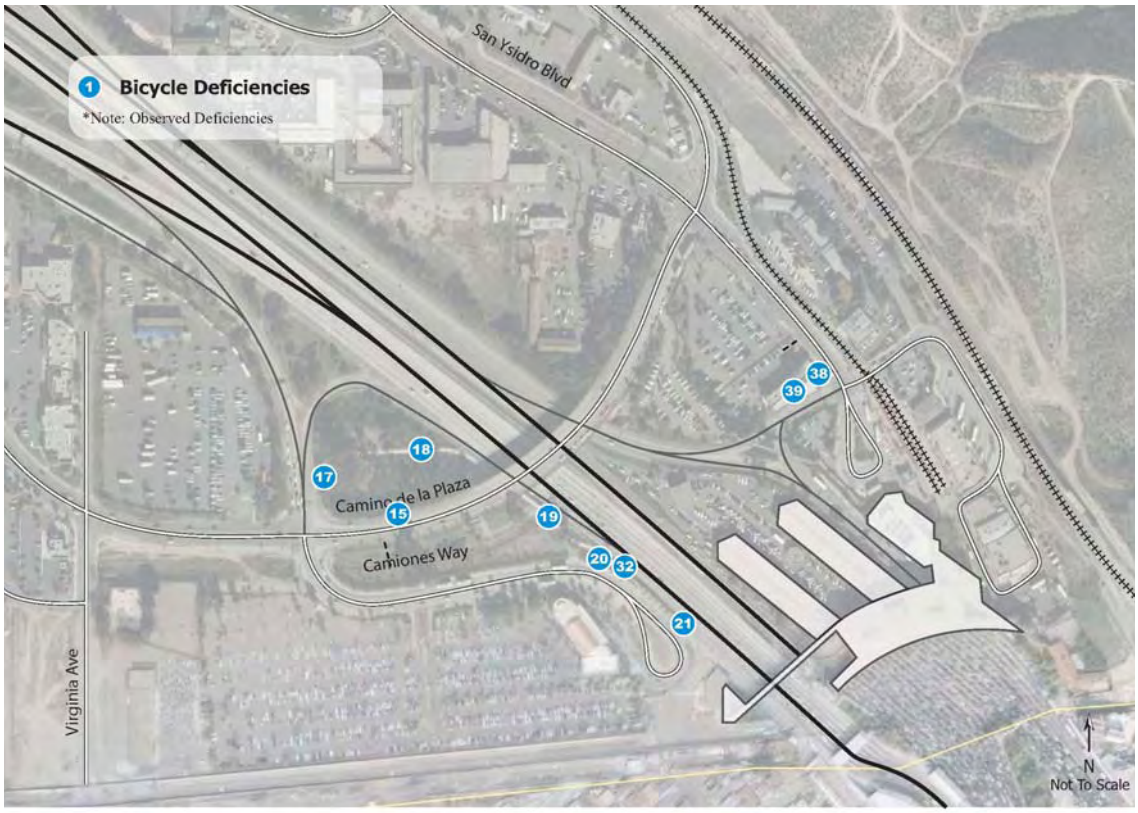


Figure 4-3: Observed Bicycle Facility Deficiencies



The characteristics of the roadways providing the bike facilities within the study area are described below. Figure 4-4 shows the existing bike circulation network including the proposed shortening of Camiones Way. Figure 4-5 shows the bicycle Circulation Network for the San Ysidro Community Plan.

Figure 4-4: Existing Bicycle Circulation Network

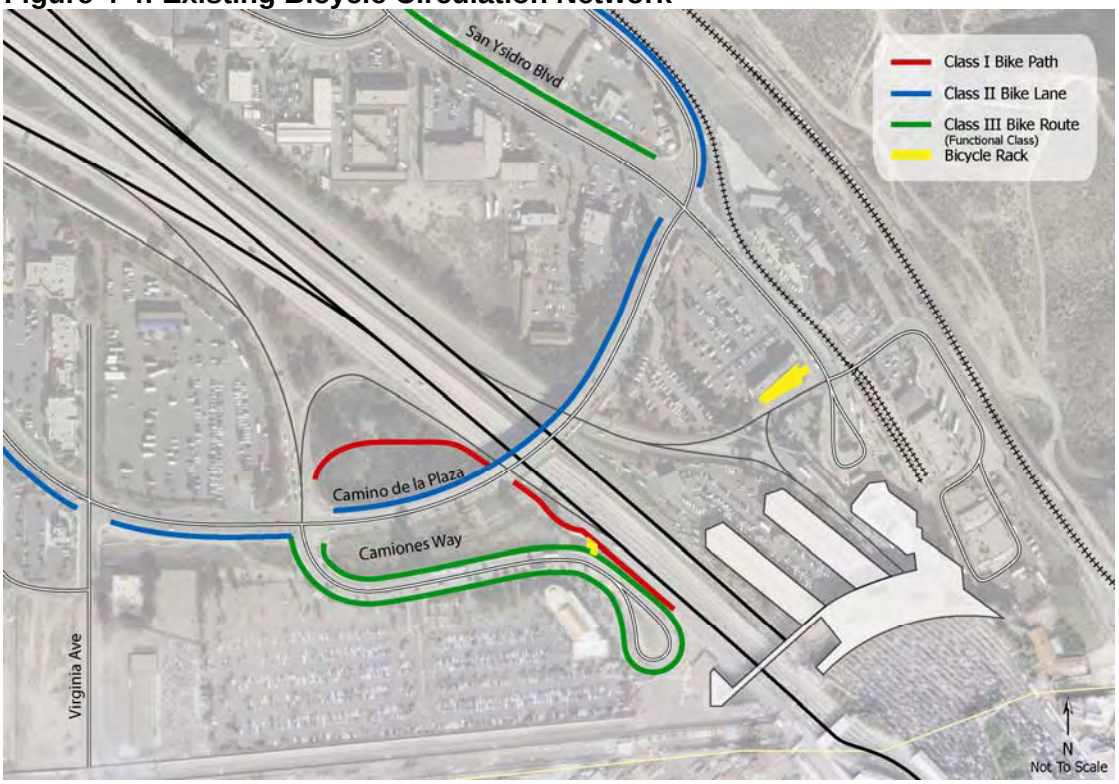
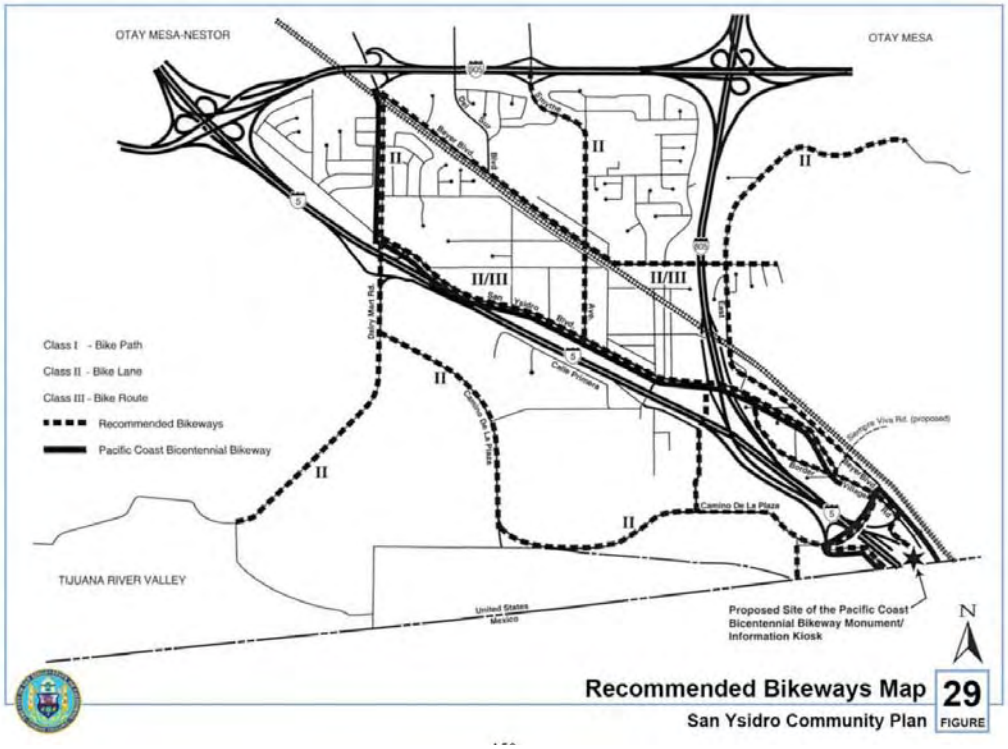


Figure 4-5: Community Plan Bicycle Circulation Network



The characteristics of the roadways providing the bike facilities within the study area are described below.

Camino de la Plaza

Camino de la Plaza is an east-west road that provides access to Las Americas (formerly International Gateway of the Americas). Las Americas is a mixed use development that incorporates retail, restaurant and commercial uses to the residential neighborhoods at the west side of I-5. Camino de la Plaza is currently constructed and classified as a four-lane collector road. Parking is permitted on the north side of the roadway only. The speed limit is not posted. There is a Class II bicycle lane on the south side of the street from the west extent of the study area to Camiones Way. A five foot wide sidewalk is provided on the south side of the roadway segment between Camiones Way and Virginia Avenue there is no sidewalk on the north side of the roadway. Between Camiones Way and San Ysidro Boulevard, there is a three foot wide sidewalk on both sides of the roadway segment. Camino de la Plaza connects with Dairy Mart Road, the next I-5 interchange north beyond the study area.

San Ysidro Boulevard

San Ysidro Boulevard runs loosely parallel to and north of I-5 and varies in classification and current geometry. The West and East sections of the road are demarcated by I-805. It is constructed as a 4-lane major street between Via de San Ysidro and Camino de la Plaza, and a one-way loop road in the immediate vicinity of San Ysidro Border Trolley Station. There is no bike lane provided along this roadway segment. Sidewalks are provided on both sides of the roadway. San Ysidro Boulevard provides access to the San Ysidro Transit Center and has sizeable commercial and retail development south of its junction with I-805.

Camiones Way

Camiones Way is currently constructed and classified as a two-lane collector street. Sidewalks are provided on both sides of the roadway. Parking is not permitted and a Class III bike route is provided along this segment. The posted speed limit is 25 mph.

Virginia Avenue

Virginia Avenue is not classified in the San Ysidro Community plan and southern portion of the roadway is not currently improved to City of San Diego roadway standards. It functions as dead end two-lane roadway. The southern portion of the roadway does not provide sidewalks either side of the roadway. The Community Plan recommends a future bikeway on this street.

Existing Bicycle Deficiencies

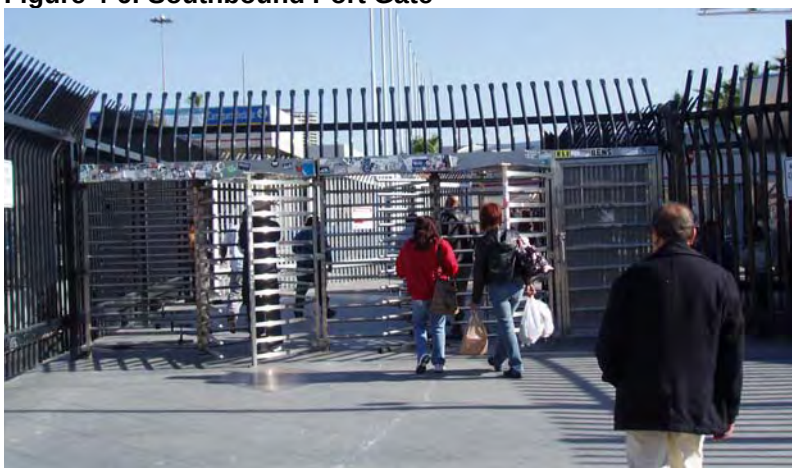
Currently, there are many bicycle deficiencies existing within the study area deterring bicycle trips. These include the following:

- Few bicycle paths and lanes are provided in the study area deterring potential bicycle trips.
- The existing Class I bicycle path crossing under Camino de la Plaza is over-run in some areas by vegetation along the route. This bicycle path is not connected to other major bicycle pathways in the City. Within five miles of the study area, there are Class II bikeways on Otay Mesa Road and Dairy Mart Road. Also, a Class III bicycle routes exists on Smythe Road north of Beyer Boulevard.
- The existing LPOE inspection operation process does not currently provide any special accommodations or separate processing lanes for bicyclist. Bicyclists are currently being processed as pedestrians and required to cross through the border check points into the U.S with their bicycles. A separated bicycle processing line had recently been provided; however, large

numbers of non-functional bicycles were being rented temporarily as a means to bypass the longer pedestrian only lines. The separated bicycle processing line has since been removed.

- The bicycle racks located just north of the I-5 northbound ramps/San Ysidro Boulevard intersection have bicycles which are chained up, but are missing wheels and chains. The bicycle racks located adjacent to the bicycle path that leads to the southbound pedestrian crossing are often blocked in by moped parking.
- When crossing southbound into Mexico, pedestrians are required to cross through a turnstile gate that is difficult for a bicyclist to maneuver with a bicycle. Figure 4-6 shows the southbound turnstile gate.
- Although bikes are currently accommodated on the trolley no special accommodations (e.g. racks) are provided. Bicyclists are required enter at the rear door and lift their bikes onto the trolley. The trolley allows two bicycles per trolley car during off-peak times and one bicycle per trolley car during peak periods. Based on the Trolley's current schedule, the Trolley can accommodate only 16 bikes per car per hour during off-peak times or a total of 48 bikes per hour for a 3-car train. The Trolley can accommodate no more than 8 bikes per car per hour during AM peak periods and 9 bikes per car per hour during PM peak periods. For a 3-car train, a total of 24 bikes and 27 bikes can be accommodated in the AM and PM peak periods, respectively.
- MTS buses have bicycle racks on the bus that can allow up to two bicycles per bus. Based on the current bus schedule, MTS buses could accommodate 10 bicycles per bus per hour in the AM peak period and 8 bicycles per bus per hour in the PM peak period.

Figure 4-6: Southbound Port Gate



BICYCLE LEVEL OF SERVICE METHODOLOGY

Bicycle operating conditions are typically described in terms of "level of service." Level of service is a report-card scale used to indicate the quality of traffic flow along sidewalks and at pedestrian landings of intersections. Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). Currently, there are no bicycle LOS criteria provided in The Highway Capacity Manual (HCM). However, the definition of LOS according to the manual is founded on the concept of users' perceptions of qualitative measures that characterize the operational conditions of the roadway. Two of the terms used in the manual to describe LOS are comfort/convenience and freedom to maneuver.

The Federal Highway Administration (FHWA) developed the bicycle compatibility index (BCI) to determine the level of service for bicycles based on these principals. Table 4-1 describes the level of service delineations for bicycles.

Table 4-1
Level of Service Ranges for Bicyclists

LOS	BCI Range	Compatibility Level
A	≤1.50	Extremely High
B	1.51 – 2.30	Very High
C	2.31 – 3.40	Moderately High
D	3.41 – 4.40	Moderately Low
E	4.41 – 5.30	Very Low
F	> 5.30	Extremely Low

BICYCLE LEVEL OF SERVICE

Table 4-2 summarizes the BCI and resulting level of service. Detailed level of service calculations can be found in Appendix F.

Table 4-2
Level of Service for Bicycles – Existing Conditions

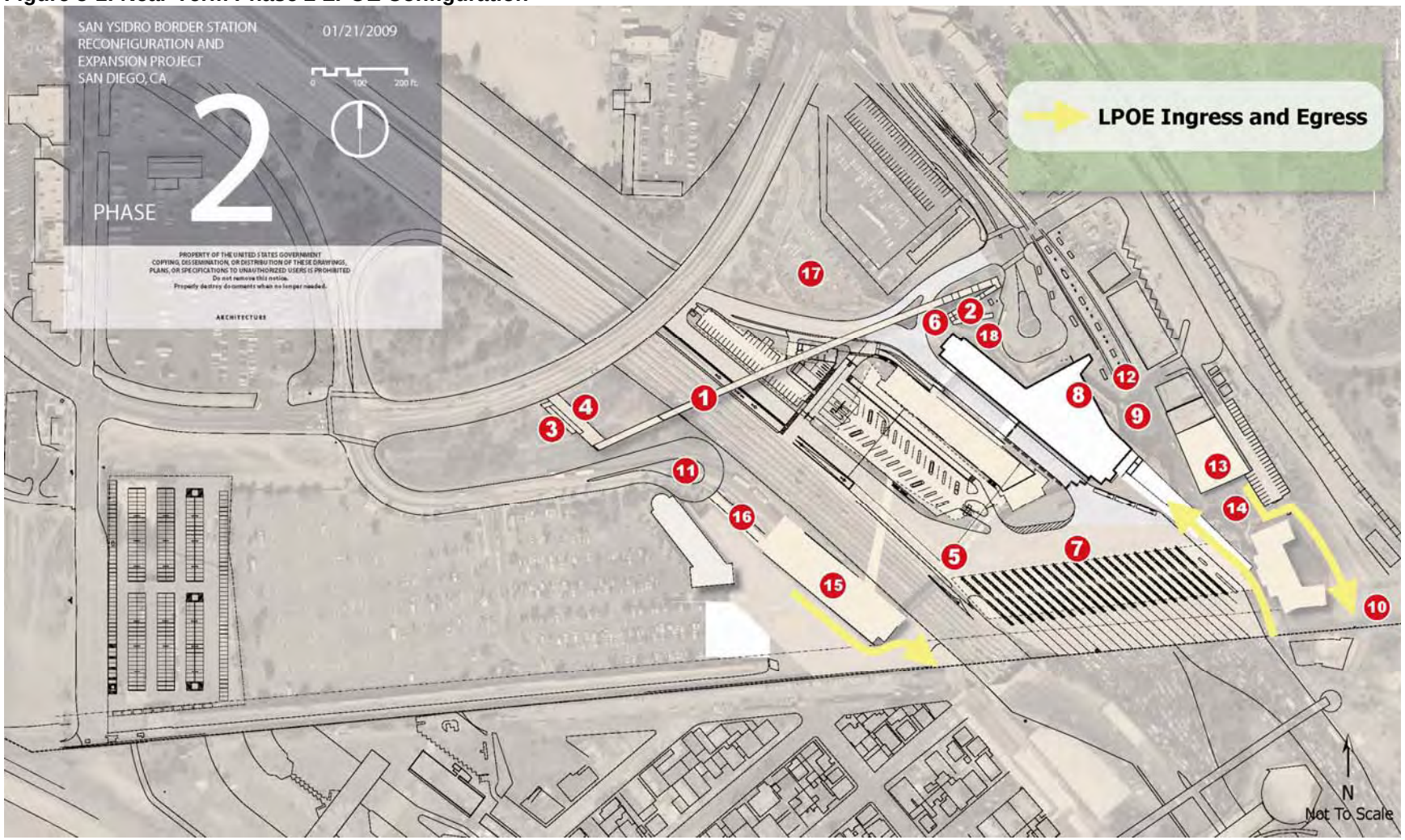
Location		BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd	I-5 NB Ramps to Camino de la Plaza	4.25	D	Moderately Low
	North of Camino de la Plaza	2.76	C	Moderately High
Camino de la Plaza	Virginia to Camiones Way	2.54	C	Moderately High
	Camiones Way to San Ysidro Blvd	3.45	D	Moderately Low
Camiones Way	Bike Path	0.45	A	Extremely High
	South of Camino de la Plaza	2.55	C	Moderately High

CHAPTER 5
NEAR-TERM LPOE CONFIGURATION

For the purposes of this report, the near-term conditions for the proposed LPOE facility are analyzed at the completion of all Phase 1 and Phase 2 work in Year 2014. Phases 1 and 2 will reconfigure the northbound facilities, relocate the southbound processing center, construct a new operations center and central plant, construct a new pedestrian bridge, and provide a new parking structure. These changes will increase processing capacity and operational efficiencies for the LPOE facility. The detailed information for Phases 1 and 2 are summarized below and graphically depicted in Figure 5-1:

1. Construct a pedestrian bridge spanning Interstate 5 that will connect Camino de la Plaza to the Trolley Court that is 15 feet wide.
2. Construct an ADA compliant ramp on the eastern side of the new pedestrian bridge with a landing on the south side of the Interstate 5 Northbound ramps/San Ysidro Boulevard intersection
3. Construct an ADA compliant ramp on the western end of the new pedestrian bridge landing next to Camiones Way
4. Construct an at-grade connection between Camino de la Plaza and the new pedestrian bridge
5. Remove the existing pedestrian bridge over Interstate 5
6. Remove the port employee pedestrian bridge connecting the GSA parking lot to the Trolley Court
7. Demolish the existing pedestrian inspection building
8. Construct a new pedestrian inspection building with northbound pedestrian inspection in the second level
9. Renovate the pedestrian plaza connected to the Trolley Court
10. Construct a new southbound crossing located on the east side of Interstate 5, just east of the current northbound crossing
11. Shorten Camiones Way moving the existing transit facility and privately owned vehicle (POV) unloading/loading area
12. Provide additional right-of-way to allow MTS to lengthen the trolley station thereby accommodating four-car trains
13. Demolish Greyhound private bus terminal and the Payless Shoe Store buildings
14. Remove Greyhound private bus transit turn-around route
15. Construct a secured parking structure for government employees
16. Construct vehicular access to employee parking structure from Camiones Way
17. Move designated employee parking from MTS owned lot to the parking structure
18. Remove the MTS parking facility and move to secured employee parking structure (at Location 16)

Figure 5-1: Near-Term Phase 2 LPOE Configuration



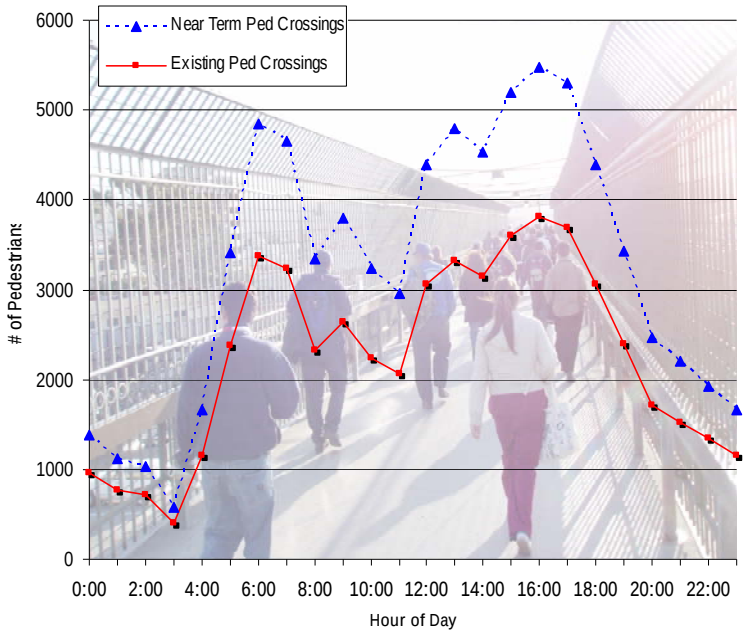
CHAPTER 6
NEAR-TERM PEDESTRIAN FACILITIES

This chapter discusses changes to pedestrian facilities, changes to pedestrian linkages, and projected pedestrian volumes for Year 2014 that result from completion of Phase 2 of the proposed LPOE project.

PEDESTRIAN CROSSINGS

A growth rate of 43.7% was applied to existing pedestrian counts to estimate near-term pedestrian crossings at the LPOE facility. This growth rate is consistent with the San Ysidro Traffic Impact Study (KOA Corporation in 2009) and reflects growth used GSA as well as SANDAG Series 10 forecast models developed specifically for this project. The projected volumes for Year 2014 are shown in Figure 6-1. The total daily pedestrians crossing the border both northbound and southbound at the LPOE facility is estimated to be approximately 78,000. There will be approximately 5,000 and 5,500 total pedestrian crossings during the morning and evening peak hours, respectively.

Figure 6-1: Near-Term Total Pedestrian Crossings at LPOE



LINKAGE AND CONNECTIVITY

Changes that affect pedestrian mobility in the study area include: new and demolished pedestrian facilities; relocated, additional, or removed land uses or loading areas; and relocated parking. The changes in pedestrian facilities would result in numerous changes to pedestrian linkages. These changes are shown in Figure 6-2.

New and demolished pedestrian facilities require pedestrians to reroute and find other paths to connect to their destinations.

- It is assumed that a new southbound border crossing portal will be located just east of the existing northbound crossing on the east side of Interstate 5.
- The existing northbound pedestrian inspection facility will be raised from a ground floor facility to a second floor facility and expanded from 14 inspection stations to 16 inspection stations.
- The existing pedestrian bridge and ramp system over Interstate 5 connecting the eastern portal to the western portal would be relocated northerly by Phase 2 of the project. The existing ramp system, which has non-ADA compliant slopes and is not aesthetically pleasant, will be replaced by an improved facility. The proposed improvements make the ramps and switchbacks ADA compliant and would provide a more pedestrian friendly experience. The bridge creates a new at-grade connection to Camino de la Plaza west of Interstate 5. The bridge connects at-grade on the east side just south of the Interstate 5 northbound on ramps. This eastern ramp location will provide direct connectivity to the northbound pedestrian inspection exit by way of a pedestrian walkway. It also provides direct connectivity to the southbound pedestrian port (on the east side of Interstate 5) by way of a pedestrian plaza. The San Ysidro International Border Transit Station pedestrian walkway will be expanded on the west side of the loop to the proposed GSA facility. The proposed pedestrian facility will be approximately 30 feet wide on the west side. However, the facility will be only 10 feet wide underneath the northernmost switchback of the pedestrian ramp.
- The existing staircase connecting Camiones Way to Camino de la Plaza will be replaced by an ADA compliant pedestrian ramp.
- The pedestrian bridge over the Interstate 5 northbound ramps that connects the restricted employee parking lot to the LPOE will be demolished. It is assumed that employees or other users of the parking lot will be required to walk north to Camino de la Plaza and around the block.
- East San Ysidro Boulevard south of the trolley line will be demolished to make way for a pedestrian plaza.

Changes to the pedestrian attractors and generators in the study area will also affect pedestrian mobility due to the relocation or removal of retail, commercial uses, and transit facilities. Changes in retail and commercial uses will affect pedestrian behavior. Relocation of transit stations or pedestrian loading zones will require pedestrians to reroute and find other paths to connect. Relocation of parking lots will result in some pedestrian rerouting as well. The following summarizes the changes to pedestrian attractors and generators in the study area:

- The private transit operator Greyhound will be dislocated.
- Camiones Way will be shortened and the existing transit facility and privately owned vehicle (POV) unloading/loading area will be moved north approximately 300 feet farther away from the southbound port.
- The existing employee parking facility accessed from Trolley Court will be demolished to make way for new pedestrian ramps. It is assumed that the vehicles using this facility will relocate to the existing employee parking facility accessed from Camino de la Plaza just west of East San Ysidro Boulevard
- The existing government employee parking accessed from Camino de la Plaza just west of East San Ysidro Boulevard will be moved to a new secured employee parking structure on the west side of Interstate 5 with access from Camiones Way.

Figure 6-2: Near-Term Phase 2 Pedestrian Facilities

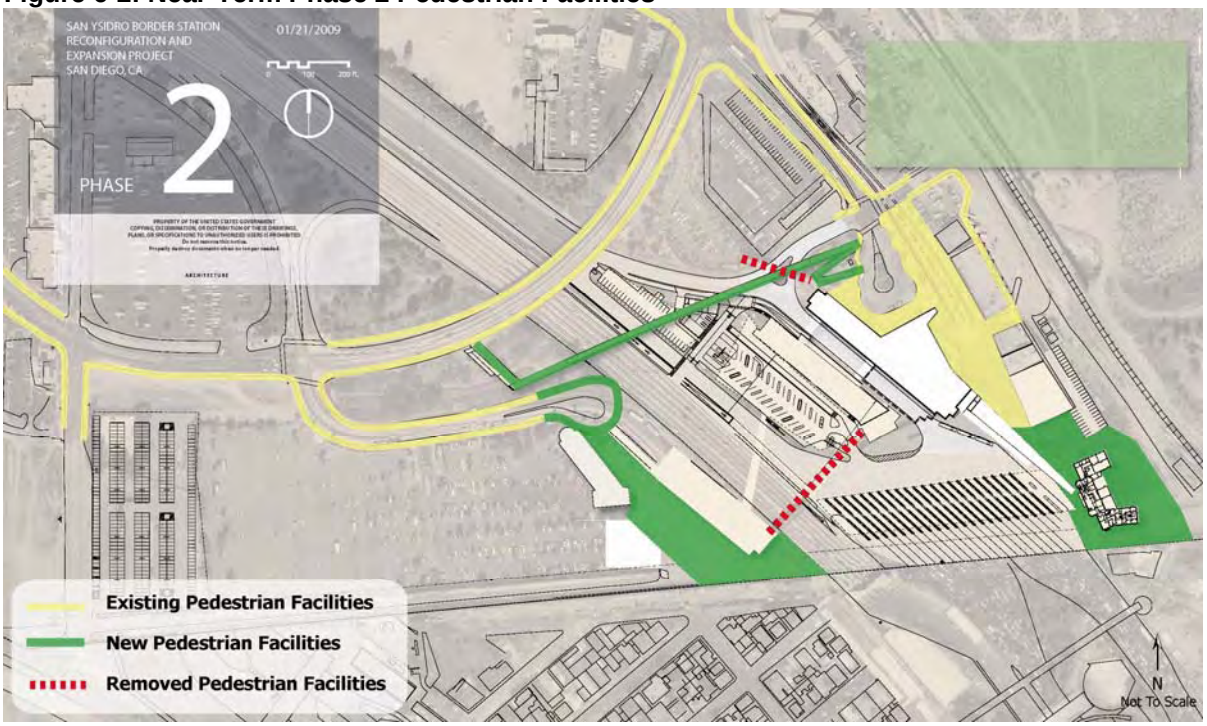
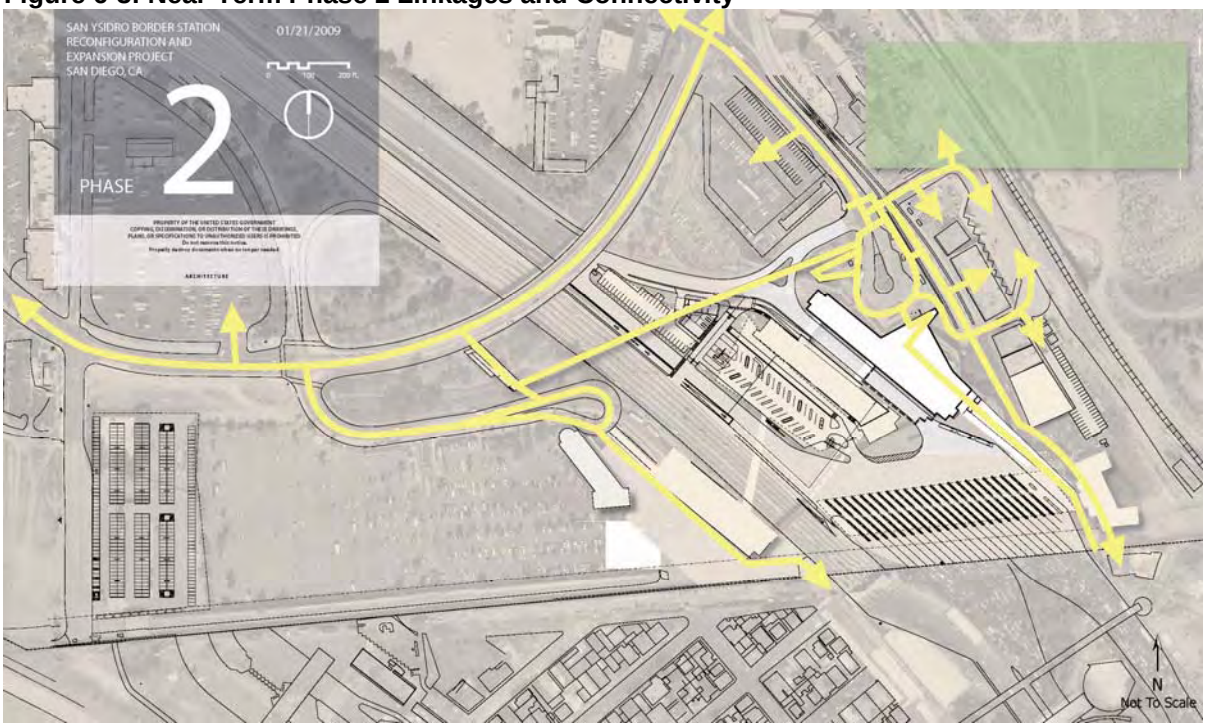


Figure 6-3: Near-Term Phase 2 Linkages and Connectivity



WALKING DISTANCES

The proposed changes in land uses and facilities will affect the walking distances from the northbound and southbound LPOE locations. A new southbound facility to be located southeast of

existing Greyhound station will redirect pedestrian flows within the vicinity. The distances pedestrians would walk from each processing area to a subarea using pedestrian facilities in the near-term condition are indicated in Table 6-1. The distances ranged from approximately 50 feet to 3,900 feet which would equate to less than 1 minute to 16 minutes assuming a pedestrian travel speed of 4 feet per second.

Table 6-1
Phase 2 Pedestrian Facilities – Walking Distances

Location[1]	Description	NB LPOE (ft)	SB LPOE-West (ft)	SB LPOE-East (ft)
1	MTS Bus Stop	2,400	2,050	3,600
2	Commercial	2,400	1,800	3,800
3	Parking	2,200	1,700	3,400
4	Parking	1,550	800	3,300
5	Commercial	1,400	350	2,600
6	Camiones Way Transit Station	1,650	500	2,800
7	Greyhound Transit	NA	NA	NA
8	Private Transit	300	2,150	1,100
9	Private Transit	400	2,400	1,230
10	Parking	400	2,500	NA
11	Trolley Station	100	2,700	800
12	San Ysidro Transit Station	50	2,400	600
13	MTS Parking	NA	NA	NA
14	Government Employee Parking	NA	NA	NA
15	Parking	600	2,850	1,870
16	Commercial	500	2,700	1,800
17	Parking	700	2,900	1,900
18	MTS Bus Stops	1,200	3,350	2,400
19	Commercial	1,500	3,900	2,900
20	Commercial	1,300	3,350	2,500
21	Industrial	1,600	3,900	2,900
[1] Locations correspond to Figure 2-16.				

PEDESTRIAN LEVEL OF SERVICE

The volumes for the near-term condition assume 43.7% growth from existing volumes based on SANDAG's Series 10 modeling performed specifically for this project. Some pedestrian traffic is diverted as the existing bridge is moved north in Phase 2. The pedestrian volumes for the No-build and Phase 2 scenarios are the same for landing level of service calculations as no physical changes to the landings occurs.

The majority of sidewalks continue to operate at LOS C or better in the No-Build scenario for near-term conditions. The sidewalk at the south plaza of the San Ysidro Transit Station (Location 26) and the sidewalk north of the border (Location 17) operate at LOS D in the AM and PM peak hours, respectively. The west sidewalk located south/west of the cul-de-sac at Rail Court (Location 38) continues to operate at LOS F in the AM and PM peak hours. All sidewalks would operate at LOS C or better if all work associated with Phase 2 is completed in the near-term. Table 6-2 summarizes level of service results for sidewalks in the No-build and Phase 2 scenarios in the near-term condition.

The three landings at the intersection of San Ysidro Boulevard and Interstate 5 Northbound Ramps would degrade and operate at LOS E or LOS F in the AM and PM peak hours. The southwest corner of San Ysidro Boulevard and Camino de la Plaza would operate at LOS E in the AM peak hour. The southwest landing of San Ysidro Boulevard and Camino de la Plaza intersection would operate at LOS E. All landings of the San Ysidro Boulevard and Camino de la Plaza intersection would operate at LOS D or LOS E in the PM peak hour. Table 6-3 shows AM and PM peak hour level of service for landings. The tables in Appendix D provide the details for the LOS calculations for sidewalks and landings.

Table 6-2
Level of Service for Sidewalks – Summary of AM/PM Peak Hours (Near-Term)

Location	NT AM - No Build	NT PM - No Build	NT AM - Phase 2	NT PM - Phase 2
Camino de la Plaza				
West of Virginia Ave				
1: North Sidewalk	A	A	A	A
2: South Sidewalk	A	A	A	A
Virginia Ave to Camiones Wy				
3: North Sidewalk	A	A	A	A
4: South Sidewalk	A	A	A	A
Camiones Way to Ped Stairway				
5: North Sidewalk	A	A	A	A
6: South Sidewalk	A	A	A	A
Ped Stairway to San Ysidro Blvd				
7: South Sidewalk	A	A	A	A
East of San Ysidro Blvd				
8: North Sidewalk	A	A	A	A
9: South Sidewalk	A	A	A	A
Ped Stairway down to Camiones Way				
10: Sidewalk	A	A	A	A
Camiones Way				
Camino de la Plaza to Stair Walkway/Transit Station				
11: North Sidewalk	A	A	A	A
12: South Sidewalk	A	A	A	A
Camiones Transit Station				
13: East Plaza	A	A	A	A
14: East Plaza	A	A	A	A
15: South Plaza	A	A	A	A
Transit Station to Border				
16: n/o Ped Bridge	A	A	A	A
17: n/o Border	A	D	A	A
San Ysidro Boulevard				
North of Camino de la Plaza				
18: East Sidewalk	A	A	A	A
19: West Sidewalk	A	A	A	A

Location	NT AM - No Build	NT PM - No Build	NT AM - Phase 2	NT PM - Phase 2
Camino de la Plaza to I-5 NB Ramp Entrance				
20: East Sidewalk	A	A	A	A
21: West Sidewalk	A	A	A	A
E San Ysidro Transit Station				
22: East Plaza	A	A	A	A
23: East Plaza	B	A	B	A
24: West Plaza	A	A	A	A
25: West Plaza	A	A	A	A
26: South Plaza	D	B	A	A
South of Transit Loop				
27: n/o Ped Bridge	A	B	A	B
28: e/o Ped Bridge	A	B	A	A
29: e/o Ped Bridge	A	A	A	A
30: Trolley Middle Pad South	A	A	A	A
31: Trolley East Pad South	A	A	A	A
32: Trolley Middle Pad North	A	A	A	A
33: Trolley East Pad North	A	A	A	A
Rail Court				
East of San Ysidro Blvd				
34: North Sidewalk	A	A	A	A
35: South Sidewalk	A	A	A	A
36: South Sidewalk	A	A	A	A
37: South Sidewalk	A	A	A	A
South/West of Cul-de-Sac				
38: West Sidewalk	F	F	A	A
39: South Sidewalk	A	A	A	A
Pedestrian Bridge				
40: Existing Pedestrian Bridge	A	A	NA	NA
41: e/o Ped Stairway/Ramp	NA	NA	A	A
42: w/o Ped Stairway/Ramp	NA	NA	A	A

Table 6-3
Level of Service for Pedestrian Landings – Near-Term

Intersection	Corner	Total Ped Circulation (peds/hr)	Pedestrian Space (ft^2/ped)	LOS
AM Peak Hour				
Camiones Wy/ Camino de la Plaza	NE	43	257.2	A
	NW	71	113.2	A
	SE	107	111.1	A
	SW	147	73.1	A
San Ysidro Blvd/ Camino de la Plaza	NE	706	24.1	C
	NW	618	29.2	C
	SE	538	38.1	C
	SW	371	14.8	E
San Ysidro Blvd/ I-5 NB Ramp Entrance	NE	1,192	3.8	F
	NW	564	14.4	E
	SE	1,085	12.9	E
PM Peak Hour				
Camiones Wy/ Camino de la Plaza	NE	50	220.4	A
	NW	147	54.8	B
	SE	218	54.3	B
	SW	528	20.1	D
San Ysidro Blvd/ Camino de la Plaza	NE	1,073	15.6	D
	NW	878	20.4	D
	SE	1,042	19.5	D
	SW	542	10.0	E
San Ysidro Blvd/ I-5 NB Ramp Entrance	NE	1,249	3.6	F
	NW	714	11.3	E
	SE	1,127	12.7	E

CHAPTER 7
NEAR-TERM TRANSIT FACILITIES

As discussed in Chapter 5, the proposed LPOE border crossing project will have an affect on the existing transit network due to the proposed shortening of Camiones Way, lengthening of the trolley station, and demolishing of the Greyhound facility. This chapter will discuss the potential changes to the transit facilities as well as forecast volumes and transit service levels for the Year 2014.

TRANSIT RIDERSHIP

A growth rate of 43.7% is applied to existing ridership data to estimate near-term boardings and alightings at the bus and trolley stations in the project study area. The total daily pedestrians crossing the border both northbound and southbound at the LPOE facility in Year 2014 is estimated to be approximately 78,000. There will be approximately 5,000 and 5,500 total pedestrian crossings during the morning and evening peak hours, respectively. According to existing survey data, approximately 40% of these pedestrians will use the trolley. The projected trolley ridership data in 15-minute increments is shown in Figure 7-1. Projections for bus ridership in Year 2014 by northbound and southbound directions are shown in Figures 7-2 and 7-3 for bus routes 929 and 932.

Figure 7-1: Near-Term Trolley Ridership

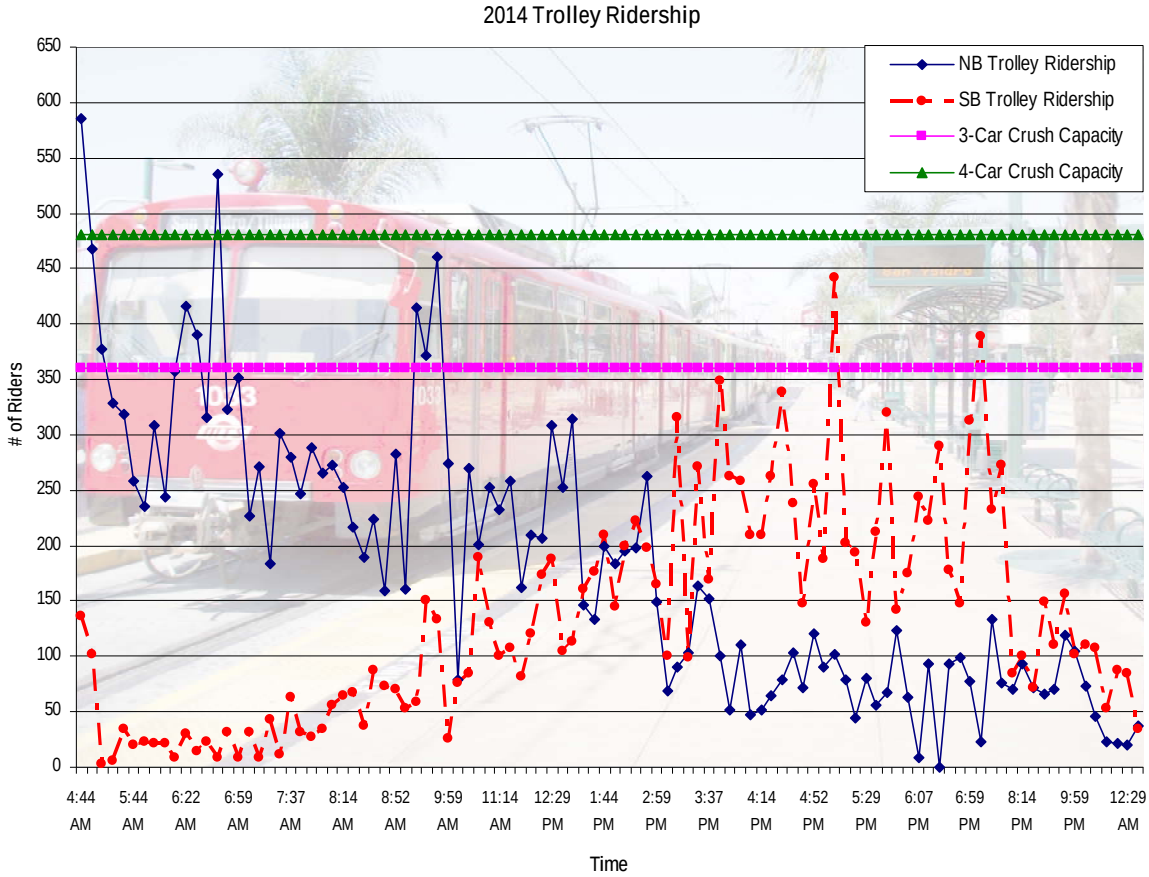
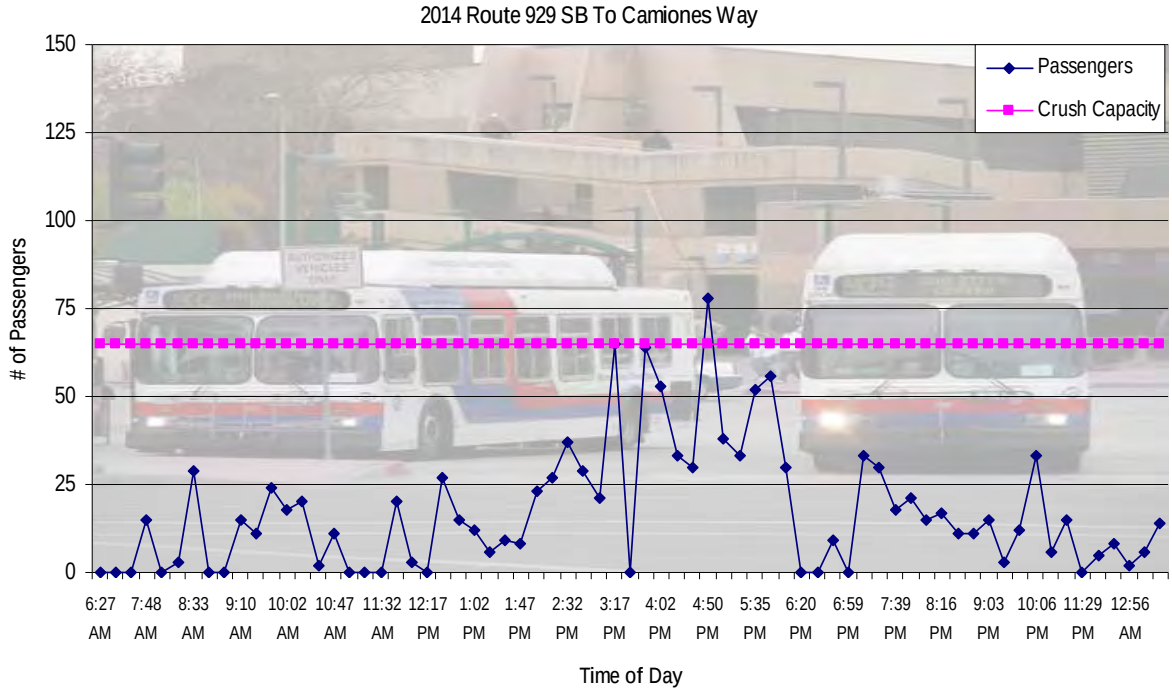


Figure 7-2: Near-Term Bus Route 929 Ridership at San Ysidro Border Station



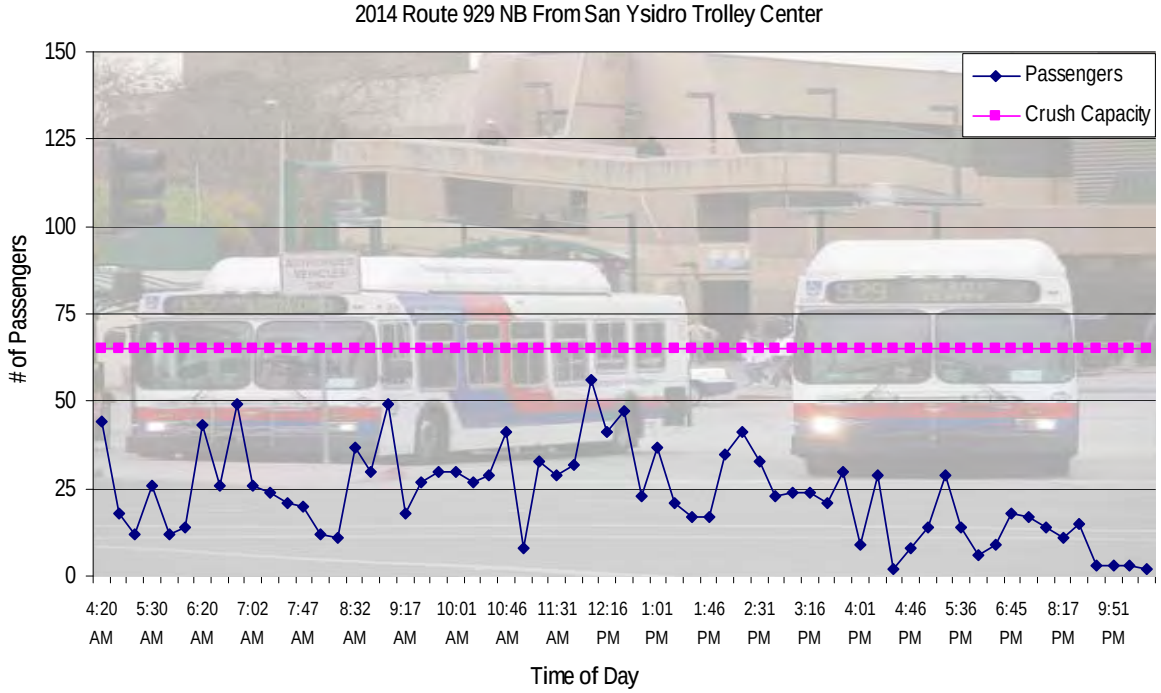
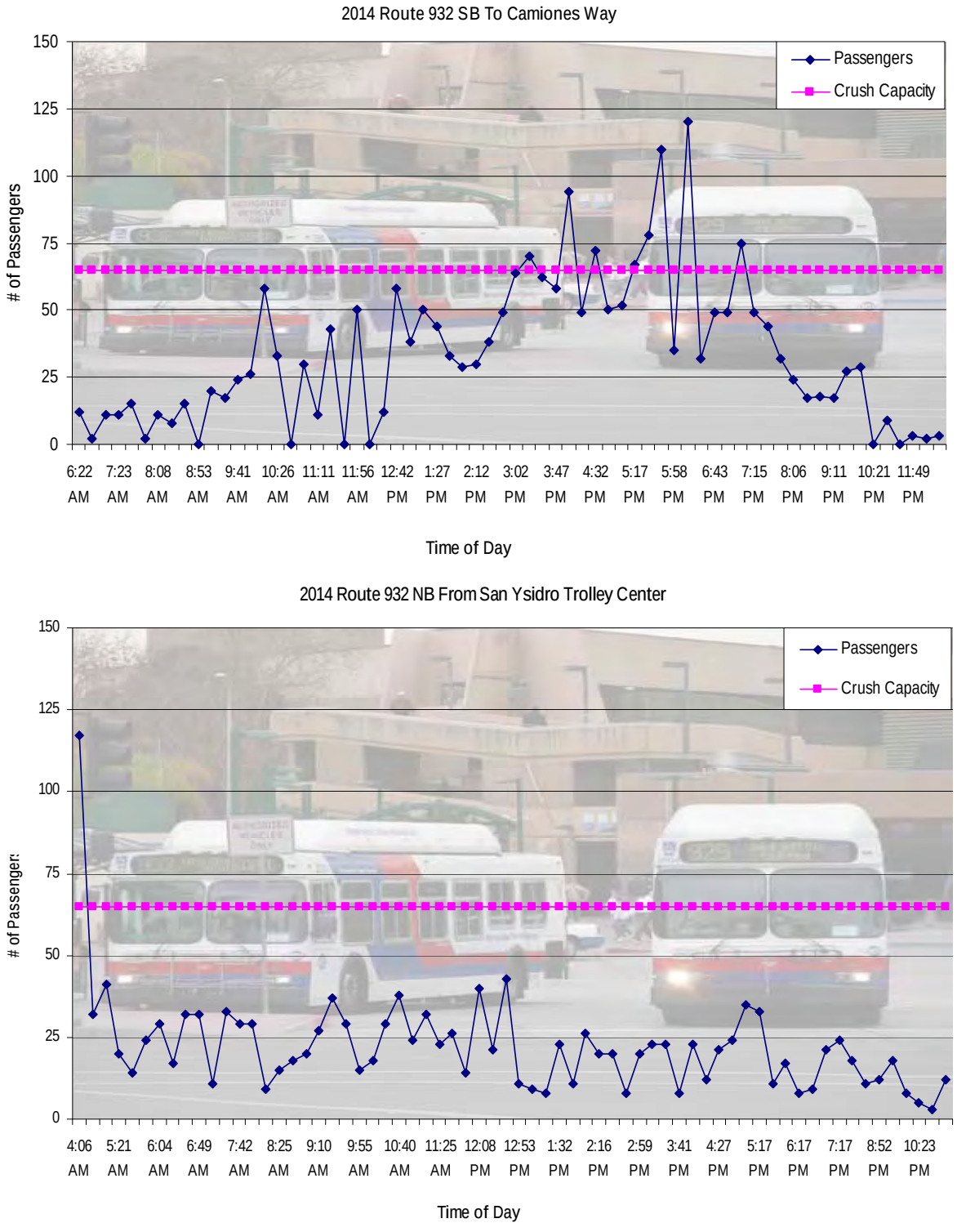


Figure 7-3: Near-Term Bus Route 932 Ridership at San Ysidro Border Station

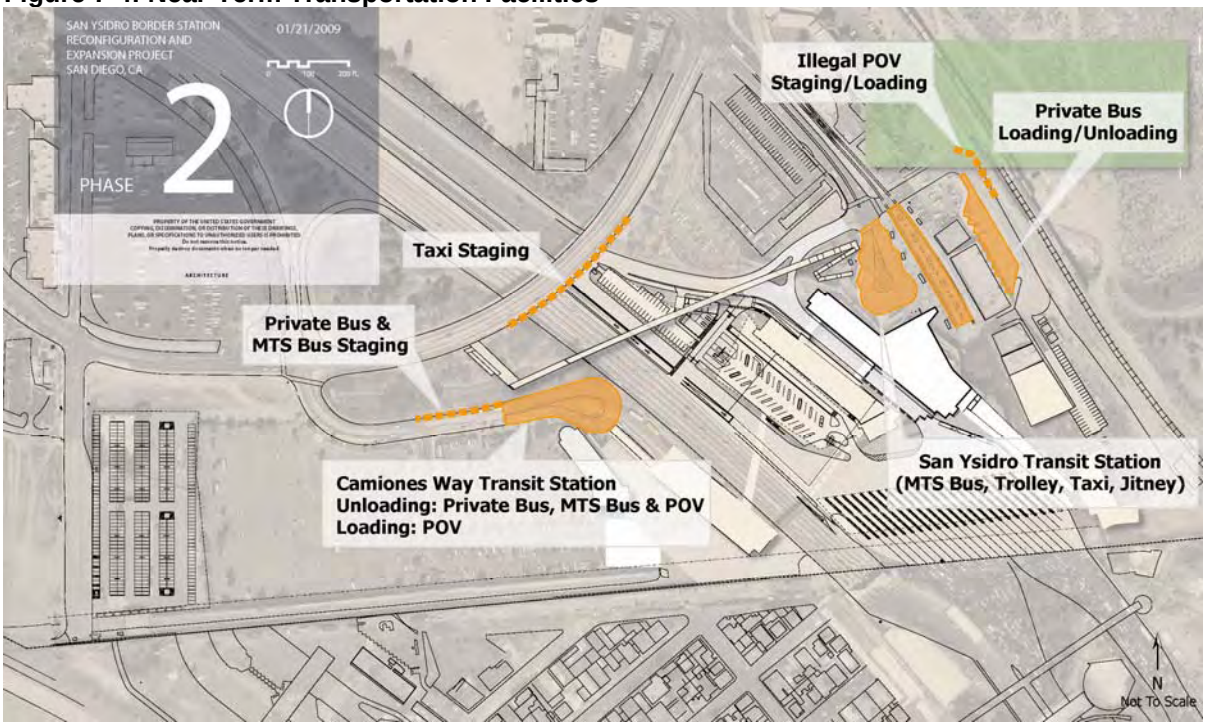


TRANSIT FACILITIES

Figure 7-4 shows the near-term transportation network. Changes in near-term transit service assume the following:

- **A lengthened trolley station to be provided by MTS** from the existing three-car trolley to a four-car trolley as the result of additional right-of-way provided by the LPOE project. The additional car would provide more capacity to accommodate forecasted increases in trolley ridership at the border crossing.
- **Shortening Camiones Way** which will result in moving the existing transit drop-off area to the north and maintaining adequate bus staging area. The proposed shortening of Camiones Way will not affect the transit station at Camiones Way since adequate loading, unloading and staging areas will be maintained for both the private and public transit services currently operating at that location.
- **Demolition of the Greyhound private bus terminal building**. No definite location has been identified to relocate the existing facility at this time. However, it should be noted that approximately ten other private transit operations will be unaffected by the project and may offset some or all of the impact caused by the removal of the Greyhound facility.

Figure 7-4: Near-Term Transportation Facilities



TRANSIT LEVEL OF SERVICE

Service levels for public transit are evaluated for both trolley cars and buses. No level of service calculations are provided for private transit. To determine service levels of the trolley cars and buses, we compared the average peak period rider count to the seated capacity and crush capacity (seated and standing) of each car. Tables 7-1 and 7-2 show the near-term transit service levels. Table 7-3 shows the near-term trolley service levels should MTS expand service from a three-car to a four- car train.

Table 7-1
Level of Service for Transit – Near-Term, No Build

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	5	167	200	325	83.70%	51.50%
		PM	4	100	160	260	62.80%	38.60%
	South to Camiones Way / Border	AM	4	47	160	260	29.50%	18.10%
		PM	4	201	160	260	125.60%	77.30%
Bus/932	North From SY Intl Border Trolley Station	AM	5	116	200	325	57.80%	35.60%
		PM	4	114	160	260	71.30%	43.90%
	South to SY Intl Border Trolley Station	AM	4	18	160	260	11.40%	7.00%
		PM	4	2	160	260	1.00%	0.60%
Trolley	North From SY Intl Border Trolley Station	AM	8	2,927	1,536	2,880	190.50%	101.60%
		PM	8	709	1,536	2,880	46.20%	24.60%
	South to SY Intl Border Trolley Station	AM	8	345	1,536	2,880	22.50%	12.00%
		PM	9	2,280	1,728	3,240	131.90%	70.40%

Table 7-2
Level of Service for Transit – Near-Term, Phase 2 (No MTS Trolley Expansion)

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	5	167	200	325	83.70%	51.50%
		PM	4	100	160	260	62.80%	38.60%
	South to Camiones Way / Border	AM	4	47	160	260	29.50%	18.10%
		PM	4	201	160	260	125.60%	77.30%
Bus/932	North From SY Intl Border Trolley Station	AM	5	116	200	325	57.80%	35.60%
		PM	4	114	160	260	71.30%	43.90%
	South to SY Intl Border Trolley Station	AM	4	18	160	260	11.40%	7.00%
		PM	4	2	160	260	1.00%	0.60%
Trolley	North From SY Intl Border Trolley Station	AM	8	2,927	1,536	2,880	190.50%	101.60%
		PM	8	709	1,536	2,880	46.20%	24.60%
	South to SY Intl Border Trolley Station	AM	8	345	1,536	2,880	22.50%	12.00%
		PM	9	2,280	1,728	3,240	131.90%	70.40%

Table 7-3
Level of Service for Transit – Near-Term, Phase 2 (with MTS Trolley Expansion)

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Trolley	North From SY Intl Border Trolley Station	AM	8	2,927	2,048	3,840	142.90%	76.20%
		PM	8	709	2,048	3,840	34.60%	18.50%
	South to SY Intl Border Trolley Station	AM	8	345	2,048	3,840	16.90%	9.00%
		PM	9	2,280	2,304	4,320	99.00%	52.80%

CHAPTER 8
NEAR-TERM BICYCLE FACILITIES

As discussed in the previous chapters, the proposed LPOE project will shorten Camiones Way as a result of the border crossing expansion. This chapter will discuss potential changes to the bicycle facilities and their linkages for the Year 2014.

NEAR-TERM BICYCLE CIRCULATION NETWORK

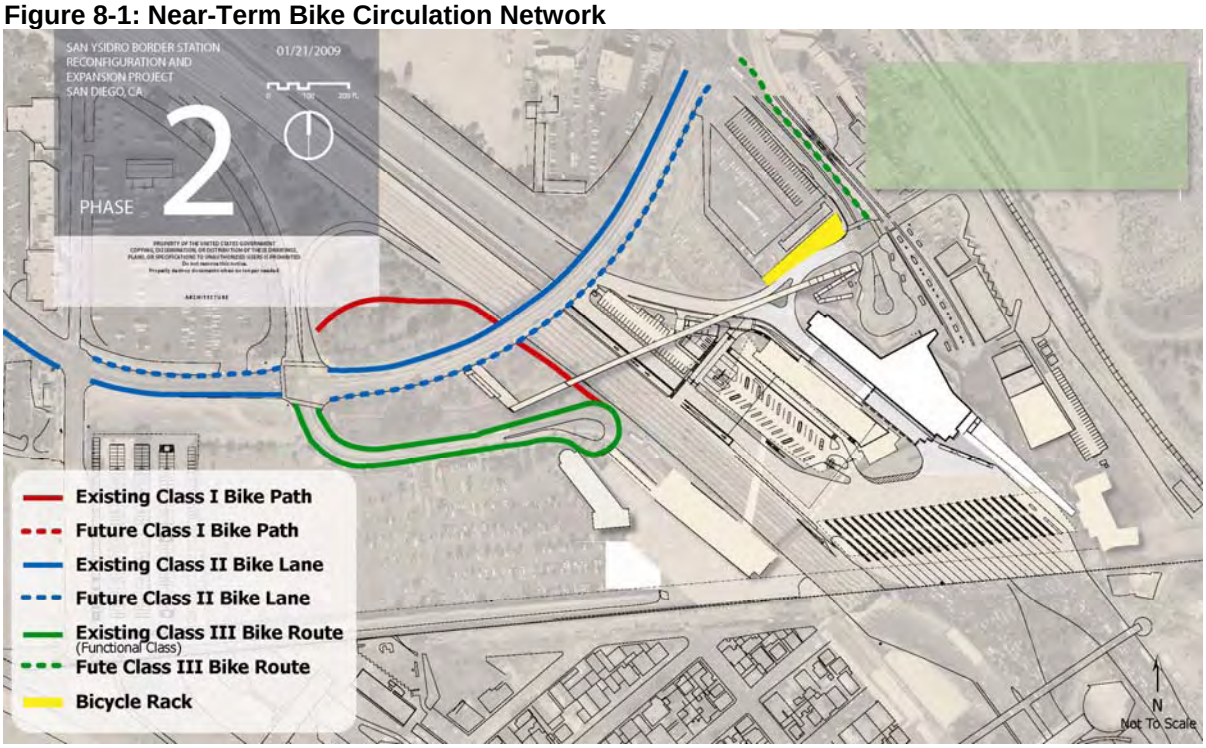
Other than project-specific changes, no other changes to the existing bike circulation network are assumed in the near term scenario compared to existing conditions.

NEAR TERM BICYCLE FACILITIES

The near term bike facility will be consistent with the existing facility and will include the following:

- Class I bike path crossing under Camino de la Plaza connecting the bike facility on Camino de la Plaza to the one on Camiones Way.
- Class II bicycle lane on Camino de la Plaza and East San Ysidro Boulevard
- Class III bike route on Camiones Way
- Functional Class III bike route on San Ysidro Boulevard south of Camino de la Plaza

Figure 8-1: Near-Term Bike Circulation Network



The LPOE inspection operation in the Year 2014 will maintain the existing processing procedure for bicyclist by not providing any special accommodations or separate processing lanes bike users. Bicyclists will be processed as pedestrians.

The existing bicycle racks located just north of the I-5 northbound ramps/San Ysidro Boulevard intersection will be maintained and the existing racks along the bicycle path just north of the southbound pedestrian border crossing will potentially be removed due to the proposed shortening of Camiones Way.

BICYCLE LEVEL OF SERVICE

Bicycle level of service is summarized for near-term conditions (Year 2014) in the study area without and with the expansion as shown in Tables 8-1 and 8-2.

Table 8-1
Level of Service for Bicycles – Near-term, No Build

Location		BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd	I-5 NB Ramps to Camino de la Plaza	4.59	E	Very Low
	North of Camino de la Plaza	3.05	C	Moderately High
Camino de la Plaza	Virginia to Camiones Way	2.77	C	Moderately High
	Camiones Way to San Ysidro Blvd	3.69	D	Moderately Low
Camiones Way	Bike Path	0.45	A	Extremely High
	South of Camino de la Plaza	2.55	C	Moderately High

Table 8-2
Level of Service for Bicycles – Near-term, Phase 2

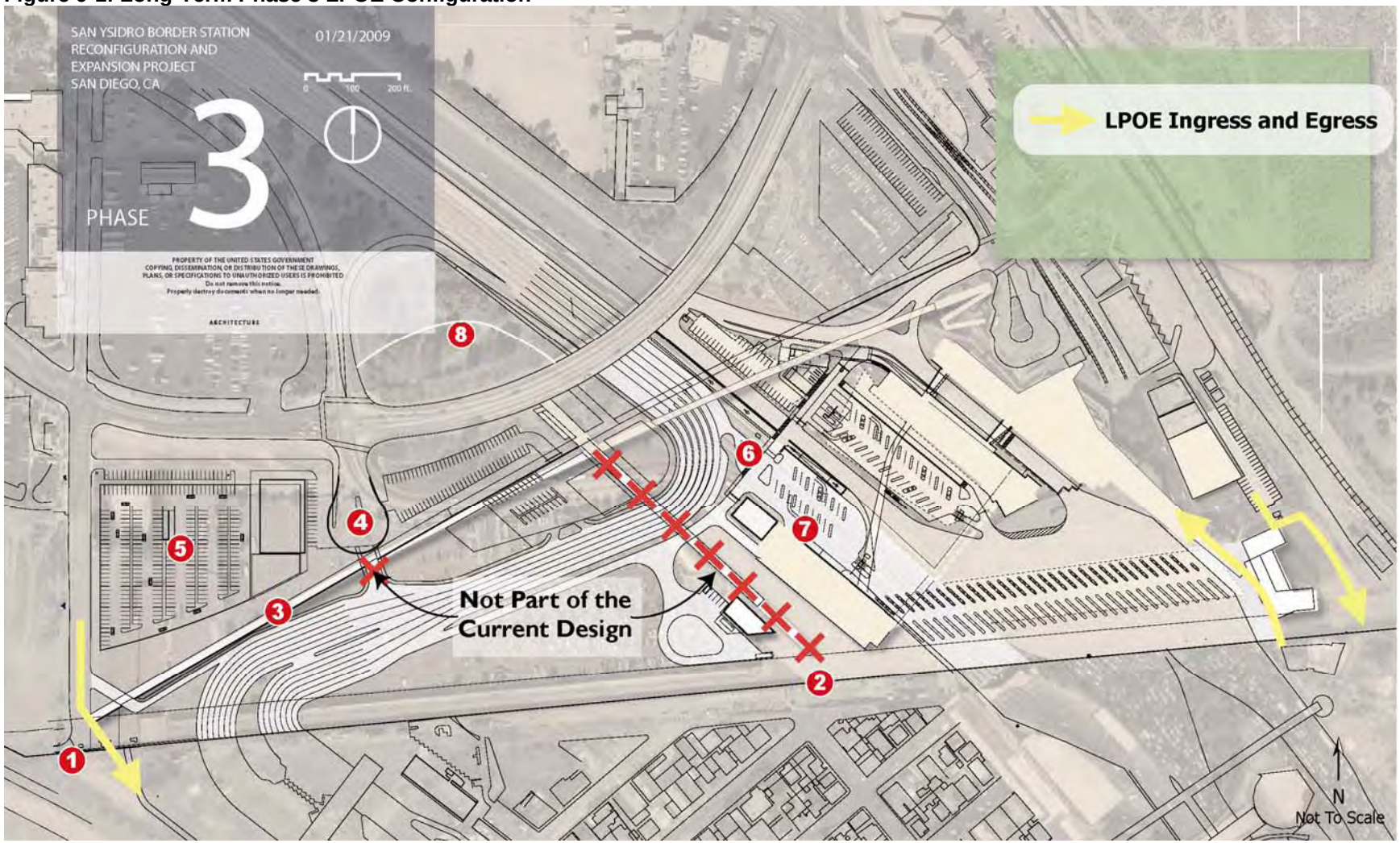
Location		BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd	I-5 NB Ramps to Camino de la Plaza	4.65	E	Very Low
	North of Camino de la Plaza	3.09	C	Moderately High
Camino de la Plaza	Virginia to Camiones Way	3.11	C	Moderately High
	Camiones Way to San Ysidro Blvd	3.72	D	Moderately Low
Camiones Way	Bike Path	0.45	A	Extremely High
	South of Camino de la Plaza	1.90	B	Very High

CHAPTER 9
LONG-TERM LPOE CONFIGURATION

The long-term conditions for the proposed LPOE facility are analyzed assuming the completion of Phase 1, Phase 2, and Phase 3 work in Year 2030. Phases 1 and 2 will reconfigure the northbound facilities, provide an additional southbound processing center, construct a new operations center and central plant, and construct a new pedestrian bridge. These changes will increase processing capacity and operational efficiencies for the LPOE facility. Phase 3 of the LPOE project will relocate both vehicular and pedestrian border crossing facilities approximately 1,800 feet east of the current LPOE facility to connect with Mexico's planned El Chaparral facility. This work will continue to improve operational efficiencies in order to meet projected increases in vehicular and pedestrian border crossings. The detailed information for Phase 3 is summarized below and graphically depicted in Figure 9-1:

1. Construct an at-grade pedestrian southbound POE crossing at Virginia Avenue and an at grade northbound last chance vehicular turn around at the same location.
2. Close the existing southbound border crossing at Camiones Way
3. Construct an elevated pedestrian sidewalk connecting Virginia Avenue (at-grade) to the pedestrian bridge
4. Relocate the terminus of Camiones Way approximately 200 feet northeast of the Phase 2 terminus.
5. Retain this location for land use to be determined in the future.
6. Construct vehicular ingress to the secured government employee parking structure from I-5 southbound lanes
7. Construct vehicular egress from the secured government employee parking structure through secondary inspection to northbound I-5
8. Remove the bike path that travels under Camino de la Plaza

Figure 9-1: Long-Term Phase 3 LPOE Configuration



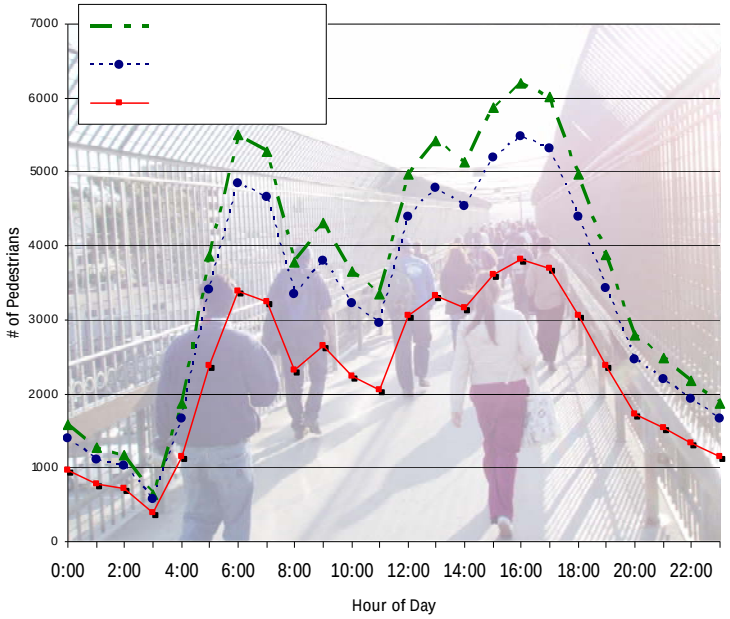
CHAPTER 10
LONG-TERM PEDESTRIAN FACILITIES

As discussed in Chapter 9, Phase 3 of the proposed LPOE project will relocate the southbound lanes of Interstate 5 and relocate the existing southbound processing center at Camiones Way to Virginia Avenue. The long-term condition for Phase 2 of the LPOE project would be the same as the near-term condition for facilities, land uses, and connectivity with the exception of increased pedestrian crossings. Consequently, this chapter discusses the changes to pedestrian facilities, the resulting changes to connectivity, and projected volumes for Year 2030 that would result with construction of Phase 3 of the LPOE project.

PEDESTRIAN CROSSINGS

A growth rate of 62.7% was applied to existing pedestrian counts to estimate long-term pedestrian crossings at the LPOE facility. This growth rate is consistent with the San Ysidro Traffic Impact Study (KOA Corporation in 2009) and reflects growth used by GSA as well as SANDAG Series 10 forecast models developed specifically for this project. The projected volumes are shown in Figure 10-1. The total daily pedestrians crossing the border both northbound and southbound at the LPOE facility in Year 2030 is estimated to be approximately 88,000. There will be approximately 5,500 and 6,000 total pedestrian crossings during the morning and evening peak hours, respectively.

Figure 10-1: Long-Term Pedestrian Crossings at LPOE



LINKAGE AND CONNECTIVITY

Relocating processing facilities, constructing new pedestrian facilities, and redirecting vehicular access in the project vicinity in Phase 3 of the LPOE project will cause numerous changes to pedestrian linkages and connectivity as summarized below:

- The existing southbound border crossing port at Camiones Way will be located approximately 1,700 feet west to Virginia Avenue aligning the U.S. LPOE facility with Mexico's planned El Chaparral facility.
- A new pedestrian walkway will connect Virginia Avenue to the existing pedestrian bridge.
- Vehicular ingress from southbound Interstate 5 lanes and egress to northbound Interstate 5 lanes will be provided to the government employee parking structure
- The terminus of Camiones Way will be relocated approximately 200 feet northeast of the Phase 2 location

Changes to the pedestrian attractors and generators in the study area that would also affect pedestrian mobility include relocation of transit stations or pedestrian loading zones and parking lots. Those changes would include the following:

- Shortening the terminus of Camiones Way will require relocation of transit and privately owned vehicle (POV) unloading/loading areas.

Figures 10-2 and 10-3 show the changes in pedestrian facilities and the resulting changes to linkages and connectivity.

Figure 10-2: Long-Term Phase 3 Pedestrian Facilities

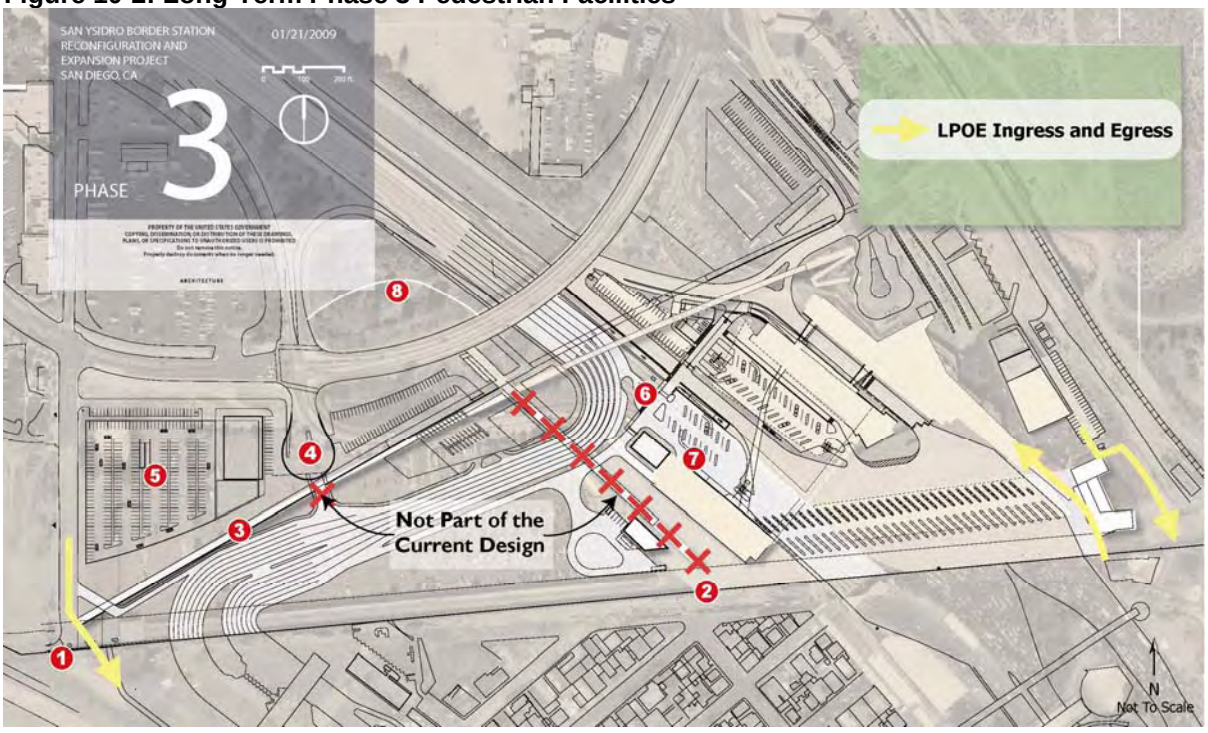
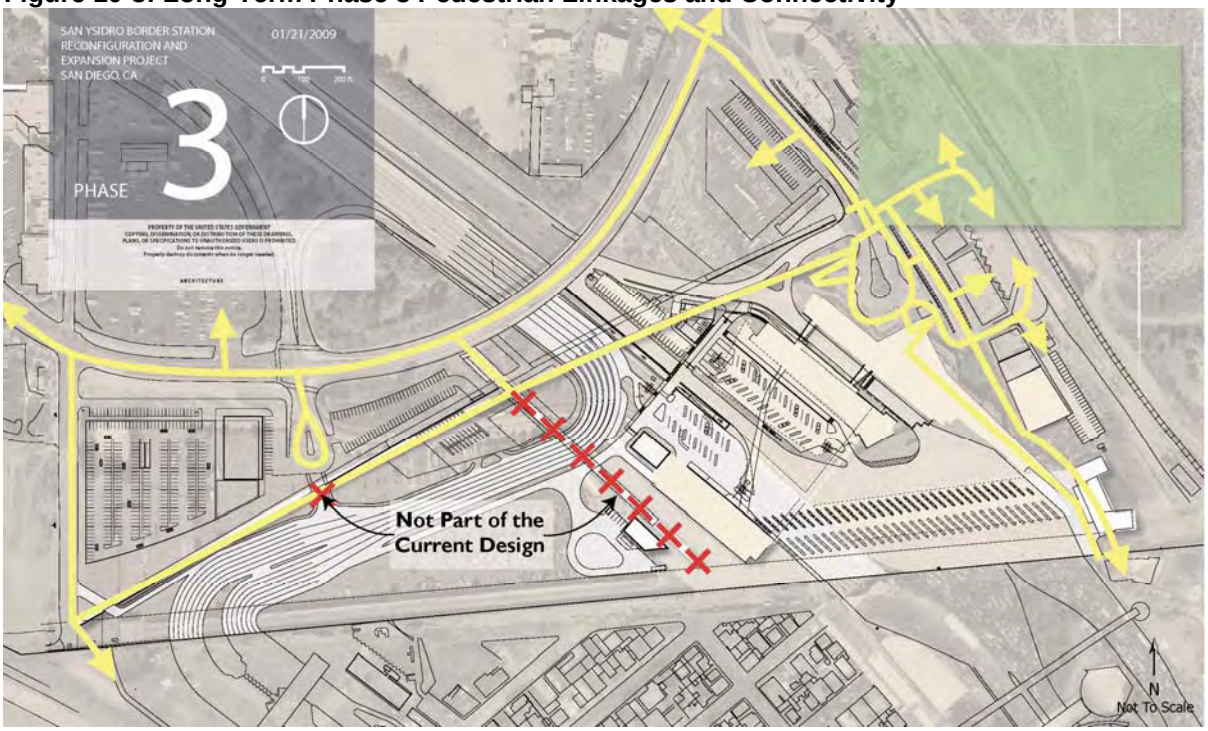


Figure 10-3: Long-Term Phase 3 Pedestrian Linkages and Connectivity



WALKING DISTANCES

The proposed changes in land uses and facilities will also affect the walking distances from the northbound and southbound LPOE locations. The distances pedestrians would walk from each processing area to a subarea using pedestrian facilities in the near-term condition are indicated in Table 10-1. The distances ranged from 50 feet to 4,000 feet which would equate to less than 1 minute to 17 minutes assuming a pedestrian travel speed of 4 feet per second.

Table 10-1
Phase 3 Pedestrian Facilities – Walking Distances

Location[1]	Description	NB LPOE (ft)	SB LPOE-West (ft)	SB LPOE-East (ft)
1	MTS Bus Stop	2,400	1,000	3,600
2	Commercial	2,400	1,200	3,800
3	Parking	2,200	1,200	3,400
4	Parking	NA	NA	NA
5	Commercial	NA	NA	NA
6	Camiones Way Transit Station	1,800	700	2,800
7	Greyhound Transit	NA	NA	NA
8	Private Transit	300	3,200	1,100
9	Private Transit	400	3,400	1,230
10	Parking	400	3,100	NA
11	Trolley Station	100	3,100	800
12	San Ysidro Transit Station	50	2,500	600
13	MTS Parking	NA	NA	NA

Location[1]	Description	NB LPOE (ft)	SB LPOE-West (ft)	SB LPOE-East (ft)
14	Government Employee Parking	NA	NA	NA
15	Parking	600	3,100	1,870
16	Commercial	500	2,800	1,800
17	Parking	700	3,000	1,900
18	MTS Bus Stops	1,200	3,500	2,400
19	Commercial	1,500	4,000	2,900
20	Commercial	1,300	3,500	2,500
21	Industrial	1,600	4,000	2,900
[1] Locations correspond to Figure 2-16.				

PEDESTRIAN LEVEL OF SERVICE

The volumes for the long-term condition assume 62.7% growth from existing volumes based on SANDAG's Series 10 modeling performed specifically for this project. Some pedestrian traffic is diverted as existing facilities are removed and new facilities are constructed in Phase 3. The pedestrian volumes for the No-build, Phase 2, and Phase 3 scenarios are the same for landing level of service calculations as no physical changes to the landings occurs.

The majority of sidewalks continue to operate at LOS C or better in the No-Build scenario for long-term conditions. There is a degradation in the levels of service for the previously identified sidewalks at the south plaza of the San Ysidro Transit Station (Location 26), the sidewalk north of the border (Location 17), and the west sidewalk located south/west of the cul-de-sac at Rail Court (Location 38). All sidewalks would operate at LOS C or better if all work associated with Phase 2 is completed in the long-term. All sidewalks would operate at LOS B or better for Phase 3 long-term conditions. Table 10-2 summarizes level of service results for sidewalks in the No-build, Phase 2, and Phase 3 scenarios in the long-term condition.

The three landings at the intersection of San Ysidro Boulevard and Interstate 5 Northbound Ramps would operate at LOS E or LOS F in the AM and PM peak hours. The northeast and southwest corners of San Ysidro Boulevard and Camino de la Plaza would operate at LOS D or LOS E in the AM peak hour. All landings at intersection of San Ysidro Boulevard and Camino de la Plaza would operate at LOS D or LOS E in the PM peak hour. Table 10-3 shows AM and PM peak hour level of service for landings in the long-term condition. The tables in Appendix D provide the details for the LOS calculations for sidewalks and landings.

Table 10-2
Level of Service for Sidewalks – Summary of AM/PM Peak Hours (Long-Term)

Location	LT AM - No Build	LT PM - No Build	LT AM - Phase 2	LT PM - Phase 2	LT AM - Phase 3	LT PM - Phase 3
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	A	A	A	A	A	A
2: South Sidewalk	A	A	A	A	A	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	A	A	A	A	A	A
4: South Sidewalk	A	A	A	A	A	A
Camiones Way to Ped Stairway						
5: North Sidewalk	A	A	A	A	A	A
6: South Sidewalk	A	A	A	A	A	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	A	A	A	A	A	A
East of San Ysidro Blvd						
8: North Sidewalk	A	A	A	A	A	A
9: South Sidewalk	A	A	A	A	A	A
10: Sidewalk	A	A	A	A	A	A
Camiones Way						
11: North Sidewalk	A	A	A	A	A	A
12: South Sidewalk	A	A	A	A	A	A
Camiones Transit Station						
13: East Plaza	A	A	A	A	A	A
14: East Plaza	A	A	A	A	A	A
15: South Plaza	A	A	A	A	A	A
Transit Station to Border						
16: n/o Ped Bridge	A	A	A	A	A	A
17: n/o Border	A	E	A	B	A	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	A	A	A	A	A	A
19: West Sidewalk	A	A	A	A	A	A
20: East Sidewalk	B	B	B	B	B	B
21: West Sidewalk	A	A	A	A	A	A
E San Ysidro Transit Station						
22: East Plaza	A	A	A	A	A	A
23: East Plaza	C	B	C	B	C	B
24: West Plaza	A	A	A	A	A	A
25: West Plaza	A	A	A	A	A	A
26: South Plaza	D	B	B	A	B	A
South of Transit Loop						
27: n/o Ped Bridge	A	B	A	B	A	B

Location	LT AM - No Build	LT PM - No Build	LT AM - Phase 2	LT PM - Phase 2	LT AM - Phase 3	LT PM - Phase 3
28: e/o Ped Bridge	A	C	A	A	A	A
29: e/o Ped Bridge	A	A	A	A	A	A
30: Trolley Middle Pad South	A	A	A	A	A	A
31: Trolley East Pad South	A	A	A	A	A	A
32: Trolley Middle Pad North	A	A	A	A	A	A
33: Trolley East Pad North	A	A	A	A	A	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	A	A	A	A	A	A
35: South Sidewalk	A	A	A	A	A	A
36: South Sidewalk	A	A	A	A	A	A
37: South Sidewalk	A	A	A	A	A	A
South/West of Cul-de-Sac						
38: West Sidewalk	F	F	A	A	A	A
39: South Sidewalk	A	A	A	A	A	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	A	A	NA	NA	NA	NA
41: e/o Ped Stairway/Ramp	NA	NA	A	A	A	A
42: w/o Ped Stairway/Ramp	NA	NA	A	A	A	A

Table 10-3
Level of Service for Pedestrian Landings – Long-Term

Intersection	Corner	Total Ped Circulation (peds/hr)	Pedestrian Space (ft^2/ped)	LOS
AM Peak Hour				
Camiones Wy/ Camino de la Plaza	NE	49	225.5	A
	NW	81	99.2	A
	SE	122	97.4	A
	SW	168	64.1	A
San Ysidro Blvd/ Camino de la Plaza	NE	805	21.1	D
	NW	704	25.5	C
	SE	613	33.4	C
	SW	423	13.0	E
San Ysidro Blvd/ I-5 NB Ramp Entrance	NE	1,359	3.3	F
	NW	643	12.6	E
	SE	1,237	11.3	E
PM Peak Hour				
Camiones Wy/ Camino de la Plaza	NE	57	193.3	A
	NW	168	48.0	B
	SE	249	47.6	B
	SW	602	17.6	D
San Ysidro Blvd/ Camino de la Plaza	NE	1,224	13.6	E
	NW	1,001	17.9	D
	SE	1,188	17.1	D
	SW	618	8.8	E
San Ysidro Blvd/ I-5 NB Ramp Entrance	NE	1,424	3.1	F
	NW	814	9.9	E
	SE	1,285	11.2	E

CHAPTER 11
LONG-TERM TRANSIT FACILITIES

As discussed in Chapter 9, Phase 3 of the proposed LPOE border crossing project will further affect the transit network as compared to Phase 2 due to the additional shortening of Camiones Way and the relocation of the southbound LPOE to Virginia Avenue. This chapter will discuss the potential changes to the transit facilities as well as forecast volumes and transit service levels for the year 2030.

TRANSIT RIDERSHIP

A growth rate of 62.7% is applied to existing ridership data to estimate long-term boardings and alightings at the bus and trolley stations in the project study area. The total daily pedestrians crossing the border both northbound and southbound at the LPOE facility in Year 2030 is estimated to be approximately 88,000. There will be approximately 5,500 and 6,000 total pedestrian crossings during the morning and evening peak hours, respectively. According to existing survey data, approximately 40% of these pedestrians will use the trolley. The projected trolley ridership data is shown in Figure 11-1. Hourly projections for bus ridership in Year 2030 by northbound and southbound directions are shown in Figures 7-2 and 7-3 for bus routes 929 and 932.

Figure 11-1: Long-Term Trolley Transit Ridership

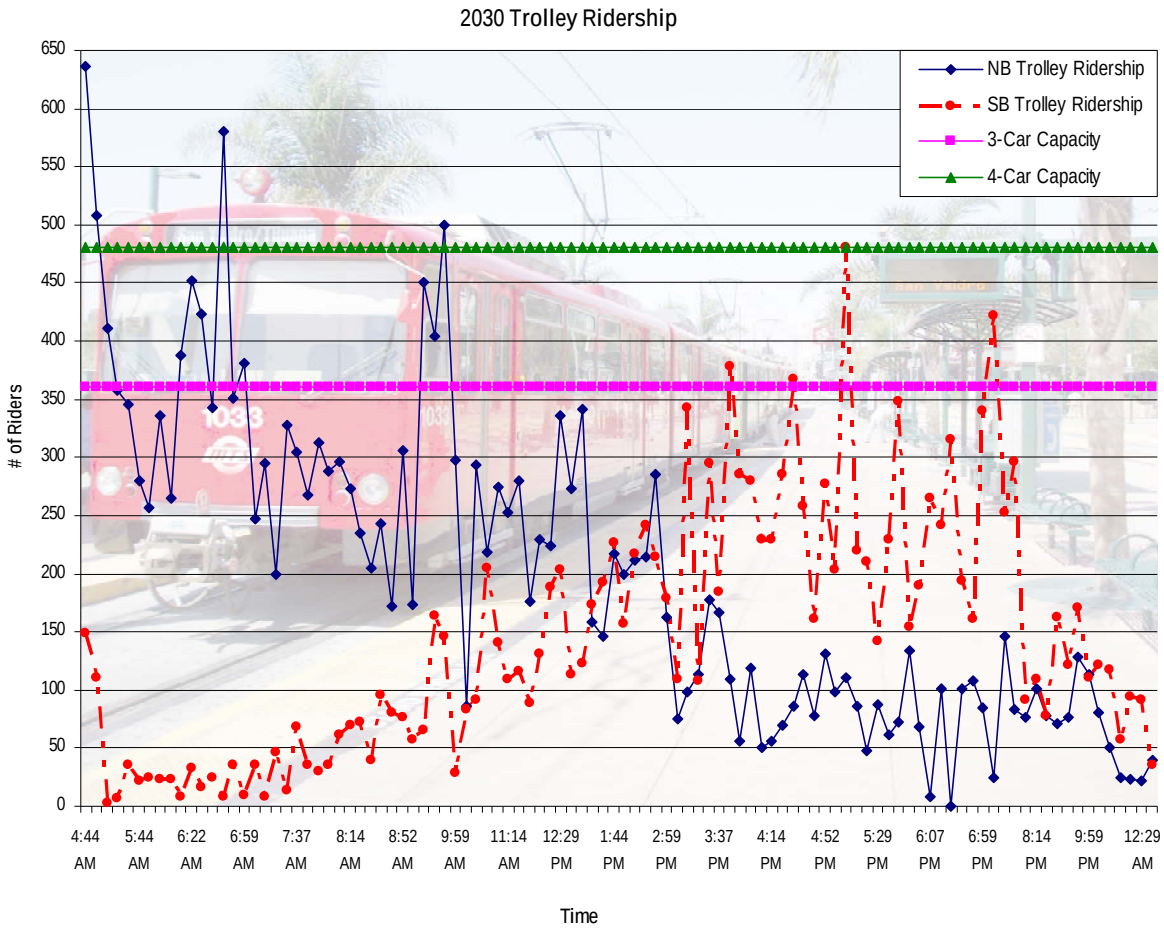
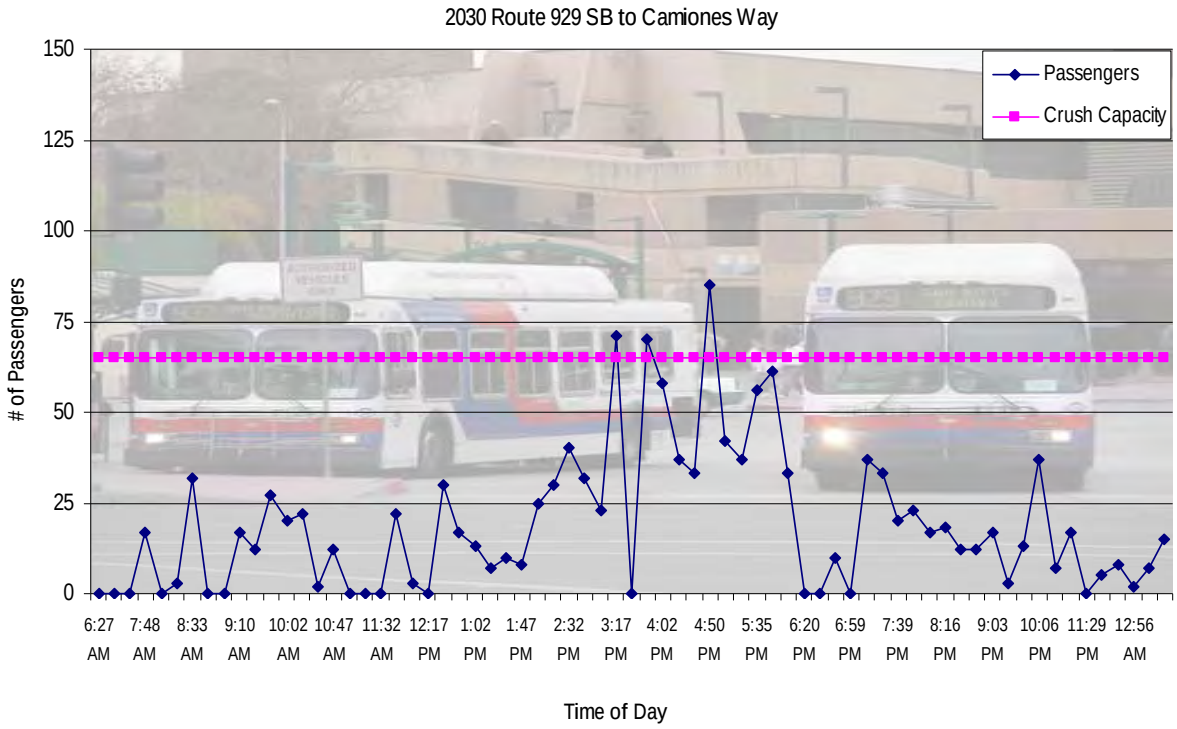


Figure 11-2: Long-Term Bus Route 929 Ridership at San Ysidro Border Station


2030 Route 929 SB to Camiones Way
Passengers
Crush Capacity
# of Passengers
150
125
100
75
50
25
0
6:27 AM
7:48 AM
8:33 AM
9:10 AM
10:02 AM
10:47 AM
11:32 AM
12:17 PM
1:02 PM
1:47 PM
2:32 PM
3:17 PM
4:02 PM
4:50 PM
5:35 PM
6:20 PM
6:59 PM
7:39 PM
8:16 PM
9:03 PM
10:06 PM
11:29 PM
12:56 AM
Time of Day

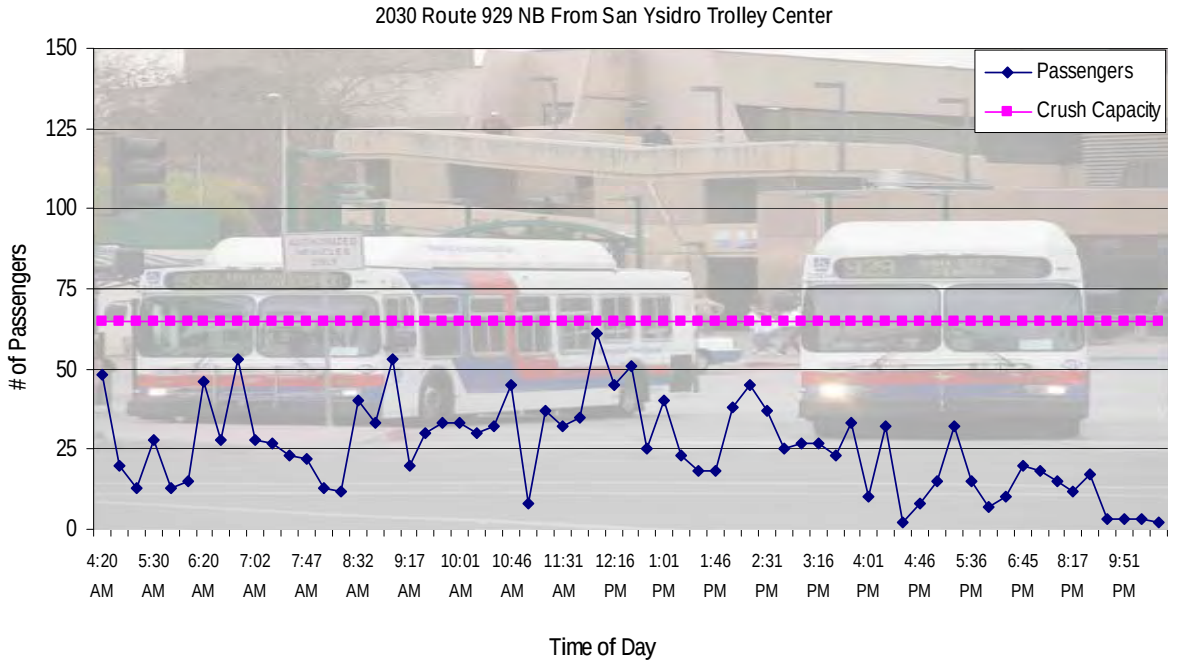
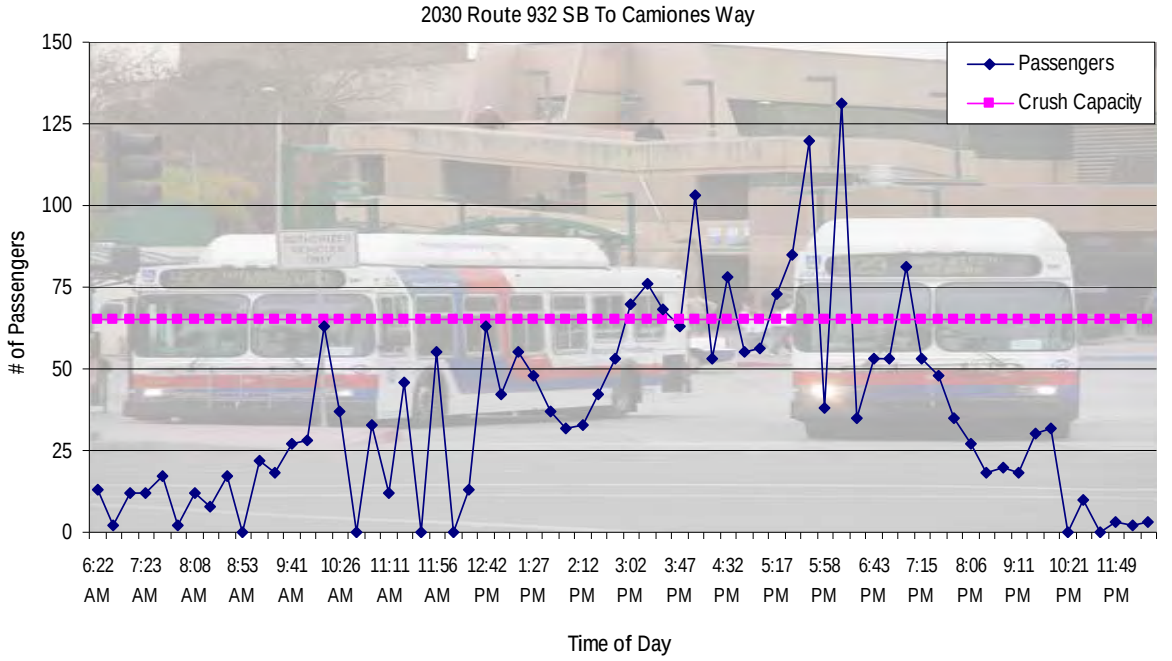
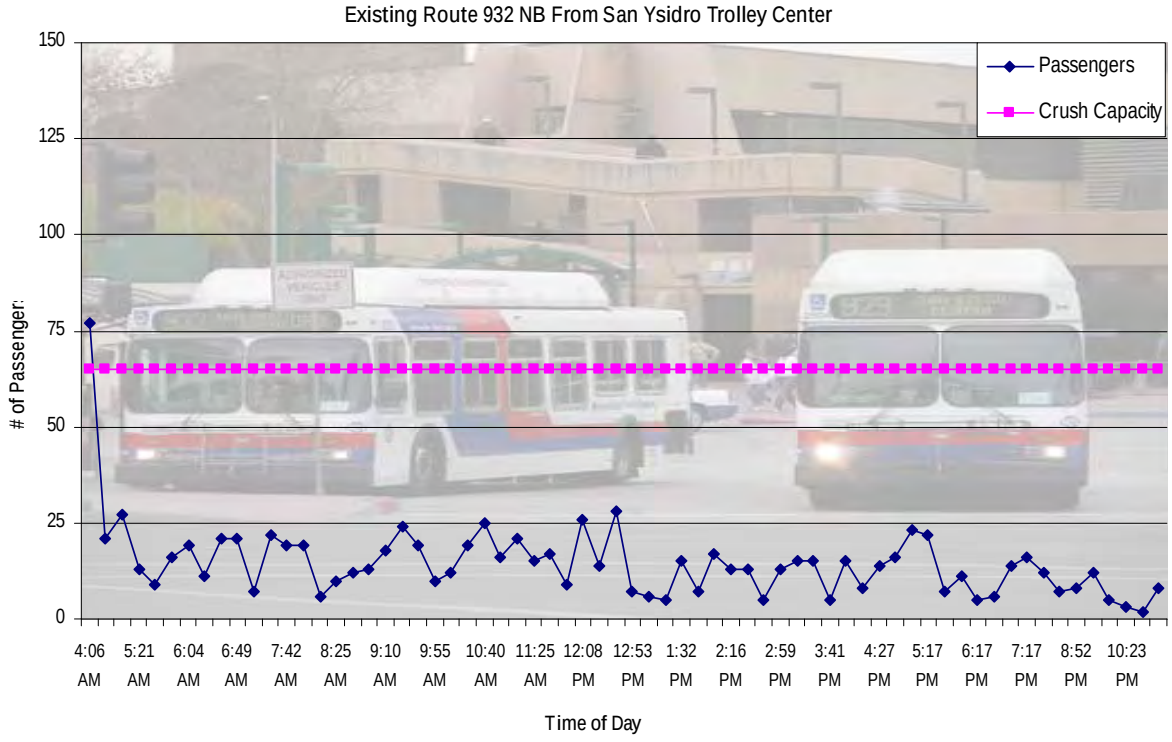

2030 Route 929 NB From San Ysidro Trolley Center
Passengers
Crush Capacity
# of Passengers
150
125
100
75
50
25
0
4:20 AM
5:30 AM
6:20 AM
7:02 AM
7:47 AM
8:32 AM
9:17 AM
10:01 AM
10:46 AM
11:31 AM
12:16 PM
1:01 PM
1:46 PM
2:31 PM
3:16 PM
4:01 PM
4:46 PM
5:36 PM
6:45 PM
8:17 PM
9:51 PM
Time of Day

Figure 11-3: Long-Term Bus Route 932 Ridership at San Ysidro Border Station



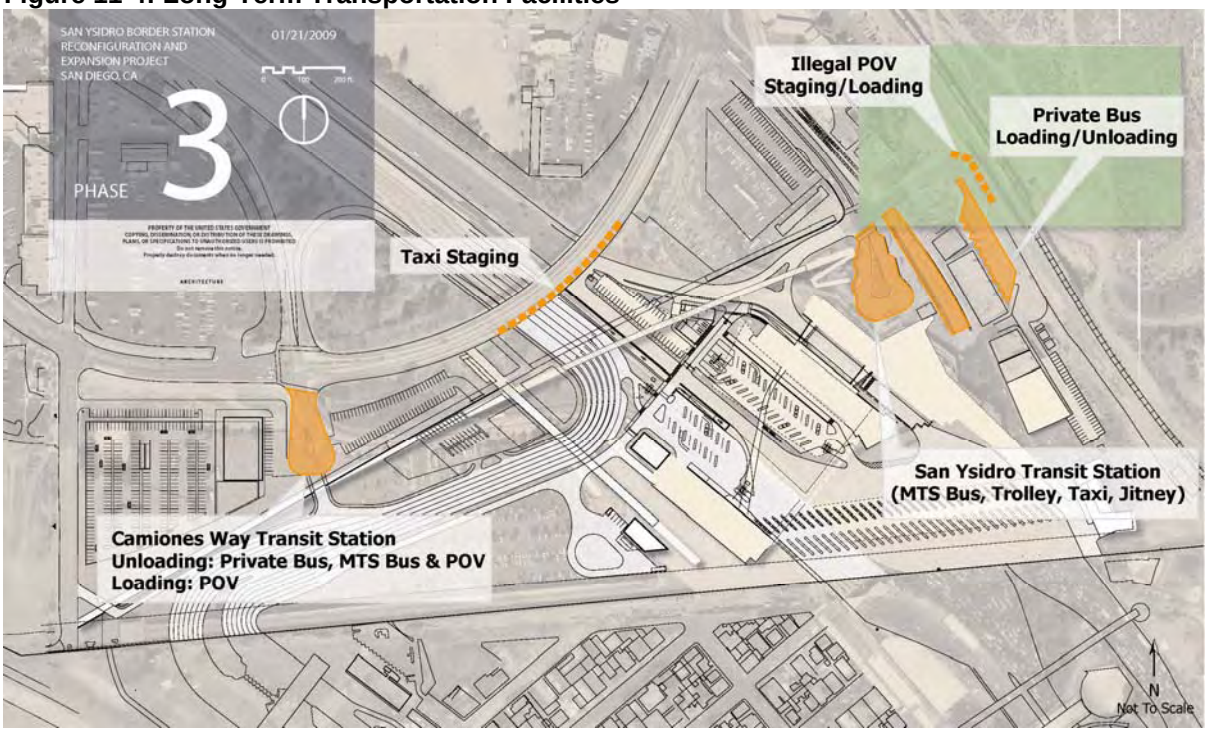


TRANSIT FACILITIES

Figure 11-4 shows the Phase 3 long-term transit network. Changes to the near-term Phase 2 transit service network under long-term Phase 3 conditions include:

- **Shortening Camiones Way** resulting in moving the existing transit drop-off area further to the north.
- **Relocation of the existing southbound pedestrian crossing** from Camiones Way to Virginia Avenue to link to the planned El Chapparal facility.
- **Route 640 for the Bus Rapid Transit service** between San Ysidro and downtown San Diego is expected to use the existing transit facilities on the east and west sides of Interstate 5 (Source: Table A.8 – Phased Transit Services – Reasonably Expected Revenue Scenario, SANDAG 2030 Regional Transportation Plan).

Figure 11-4: Long-Term Transportation Facilities



TRANSIT LEVEL OF SERVICE

Service levels for public transit are evaluated for both trolley cars and buses. No level of service calculations are provided for private transit. To determine service levels of the trolley cars and buses, we compared the average peak period rider count to the seated capacity and crush capacity (seated and standing) of each car. Tables 11-1 and 11-2 show the long-term transit service levels. Table 11-3 shows the long-term trolley service levels assuming the expansion from a three car to a four car train.

Table 11-1
Level of Service for Transit – Long-Term, No Build

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	5	183	200	325	91.30%	56.20%
		PM	4	110	160	260	68.50%	42.10%
	South to Camiones Way / Border	AM	4	51	160	260	32.20%	19.80%
		PM	4	219	160	260	137.00%	84.30%
Bus/932	North From SY Intl Border Trolley Station	AM	5	126	200	325	63.10%	38.80%
		PM	4	125	160	260	77.80%	47.90%
	South to SY Intl Border Trolley Station	AM	4	20	160	260	12.50%	7.70%
		PM	4	2	160	260	1.00%	0.60%
Trolley	North From SY Intl Border Trolley Station	AM	8	3,192	1,536	2,880	207.80%	110.80%
		PM	8	774	1,536	2,880	50.40%	26.90%
	South to SY Intl Border Trolley Station	AM	8	377	1,536	2,880	24.50%	13.10%
		PM	9	2,487	1,728	3,240	143.90%	76.70%

Table 11-2
Level of Service for Transit – Long-Term, Phase 3 (No Trolley Expansion)

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	5	183	200	325	91.30%	56.20%
		PM	4	110	160	260	68.50%	42.10%
	South to Camiones Way / Border	AM	4	51	160	260	32.20%	19.80%
		PM	4	219	160	260	137.00%	84.30%
Bus/932	North From SY Intl Border Trolley Station	AM	5	126	200	325	63.10%	38.80%
		PM	4	125	160	260	77.80%	47.90%
	South to SY Intl Border Trolley Station	AM	4	20	160	260	12.50%	7.70%
		PM	4	2	160	260	1.00%	0.60%
Trolley	North From SY Intl Border Trolley Station	AM	8	3,192	1,536	2,880	207.80%	110.80%
		PM	8	774	1,536	2,880	50.40%	26.90%
	South to SY Intl Border Trolley Station	AM	8	377	1,536	2,880	24.50%	13.10%
		PM	9	2,487	1,728	3,240	143.90%	76.70%

Table 11-3
Level of Service for Transit – Long-Term, Phase 3 (with Trolley Expansion)

					Peak Hour			
					Capacity		Condition	
Mode/ Route	Direction	Peak Period	Current Cycles (per hr)	FY 09 Transit Riders	Seated Capacity	Crush Capacity	V/C Seated Capacity	V/C Crush Capacity
Trolley	North From SY Intl Border Trolley Station	AM	8	3,192	2,048	3,840	155.90%	83.10%
		PM	8	774	2,048	3,840	37.80%	20.10%
	South to SY Intl Border Trolley Station	AM	8	377	2,048	3,840	18.40%	9.80%
		PM	9	2,487	2,304	4,320	107.90%	57.60%

CHAPTER 12
LONG-TERM BICYCLE FACILITIES

This chapter will discuss potential changes to bicycle facilities and their linkages in the long term scenario (Year 2030). The San Ysidro Community Plan recommends a number of streets to be included as part of a future bikeway network, including Dairy Mart Road, East Beyer Boulevard, Smythe Avenue, Willow Road, Beyer Boulevard, Otay Mesa Road, San Ysidro Boulevard, Tijuana Street, Border Village Road, Camiones Way, and Virginia Avenue. Other recommendations include providing an exclusive bicycle lane at the border crossing to ease congestion and providing signage for the San Ysidro segment of the Pacific Coast Bicentennial Bike Route, and integrate bicycle facilities with bicycle-sensitive loop detectors and parking facilities at activity centers.

In addition, the San Ysidro Community Plan identifies three goals for bicycling. These goals are identified as follows:

- Increase bicycle accessibility throughout the community.
- Minimize bicycle/automobile conflicts on major streets throughout the community.
- Increase the use of bicycles in San Ysidro to reduce dependence on the single-occupant vehicle user mode.

LONG-TERM BICYCLE CIRCULATION NETWORK

For the purposes of this analysis, the long-term bicycle analysis was performed both with and without the San Ysidro Community Plan Bicycle Plan changes. These changes are considered to be consistent with what is recommended in the current City of San Diego Bicycle Master Plan and San Ysidro Community Plan. However, The City of San Diego is in the process of updating the current City of San Diego Bicycle Master Plan which may recommend a different bike circulation network within the study area.

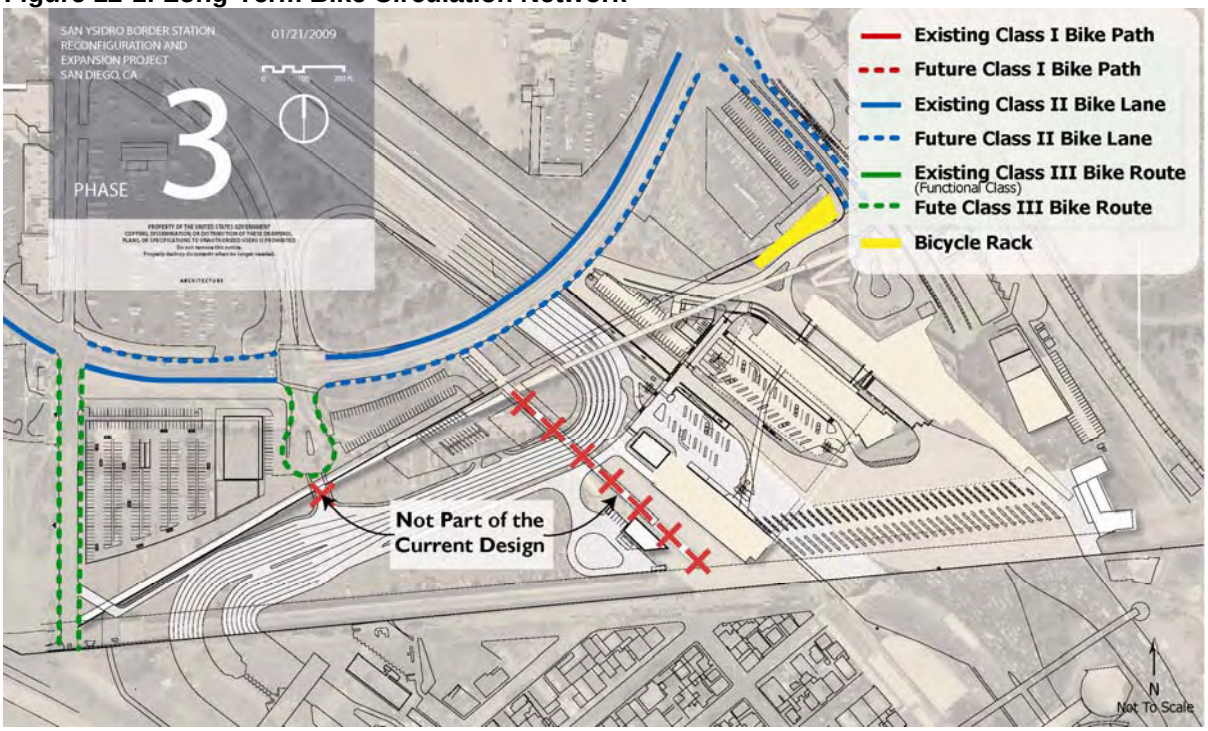
BICYCLE FACILITIES

The City of San Diego has a list of proposed bikeway projects listed in their Bicycle Master Plan. The following are proposed facilities that are located within the study area:

- Camino de la Plaza: Dairy Mart Road to San Ysidro Boulevard (Class II)
- San Ysidro Boulevard: Dairy Mart Road to San Ysidro Trolley Station (Class II)
- Virginia Avenue: Camino de la Plaza to International Border (Class III)
- Class III bike route on Camiones Way due to the proposed shortening of Camiones Way and widening

Figure 12-1 shows the long-term bicycle circulation network

Figure 12-1: Long-Term Bike Circulation Network



Other proposed bike facilities that are within five miles from the LPOE border crossing:

- Beyer Boulevard: Smythe Avenue to Otay Mesa Road (Class II)
- East Beyer Boulevard: Otay Mesa Road to San Ysidro Trolley Station (Class III)
- Border Village Road (Class II or III)
- Smythe Avenue: South Vista Avenue to San Ysidro Boulevard (Class II or III)
- Willow Road/Calle Primavera/Via de San Ysidro: Tijuana Street to San Ysidro Boulevard

Bicycle Level of Service

Bicycle level of service is summarized for long-term conditions (Year 2030) in the study area without and with the proposed LPOE expansion as shown in Tables 12-1 through 12-3.

Table 12-1
Level of Service for Bicycles – Long-term, No Build

Location		BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd	I-5 NB Ramps to Camino de la Plaza	5.35	F	Extremely Low
	North of Camino de la Plaza	3.53	D	Moderately Low
Camino de la Plaza	Virginia to Camiones Way	3.15	C	Moderately High
	Camiones Way to San Ysidro Blvd	4.17	D	Moderately Low
Camiones Way	Bike Path	0.45	A	Extremely High
	South of Camino de la Plaza	2.55	C	Moderately High

Table 12-2
Level of Service for Bicycles – Long-term, Phase 3

Location		BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd	I-5 NB Ramps to Camino de la Plaza	5.42	F	Extremely Low
	North of Camino de la Plaza	3.58	D	Moderately Low
Camino de la Plaza	Virginia to Camiones Way	3.40	C	Moderately High
	Camiones Way to San Ysidro Blvd	4.21	D	Moderately Low
Camiones Way	South of Camino de la Plaza	3.12	C	Moderately High

Table 12-3
Level of Service for Bicycles – Long-term, Phase 3 (with Community Plan)

Location		BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd	I-5 NB Ramps to Camino de la Plaza	3.83	D	Moderately Low
	North of Camino de la Plaza	3.95	D	Moderately Low
Camino de la Plaza	Virginia to Camiones Way	3.40	C	Moderately High
	Camiones Way to San Ysidro Blvd	4.21	D	Moderately Low
Camiones Way	South of Camino de la Plaza	3.12	C	Moderately High

CHAPTER 13
SUMMARY OF FINDINGS

This section summarizes the impacts of the proposed LPOE project by phase and mode of transportation followed by tables summarizing changes to level of service for each mode of transportation. Recommendations to address project related impacts are also presented.

SUMMARY OF PROJECT IMPACTS

Phase 2

The following is a list of Phase 2 project mobility impacts. Phases 1 and 2 are combined and analyzed as Phase 2 for the purposes of this report since there is minimal difference in the work to be completed and completion dates for both phases are similar to one another. Figure 13-1 illustrates these locations.

Pedestrian Facilities

1. **The relocated east-west pedestrian bridge** over Interstate 5 at the LPOE facility increases walking distances from the San Ysidro International Transit Station to the southbound crossing location by approximately 400 feet or adding just under two minutes of walking time. However, the new bridge provides ADA-compliant ramps, which the existing facility does not provide. Additionally, the proposed bridge ramps provide a much improved pedestrian experience compared to the existing circular ramp facilities that are dark and not aesthetically pleasing.
2. **The eastern at-grade connection of the pedestrian bridge** may be located too close to the edge of the pedestrian plaza.
3. **The eastern stairs of the pedestrian bridge** are designed internal to the bridge facility thereby requiring approximately eight feet of usable width of the bridge.
4. **Reconstruction of the northbound LPOE facility** will cause minimal affect to pedestrians. The current at grade facility is proposed to have a second-floor processing center that will have ADA-compliant ramps. Walking distances do not substantially change due to the facility.
5. **Demolition of the employee-only pedestrian bridge** connecting the employee parking to the northbound LPOE facility will potentially increase employee pedestrian travel distances by approximately 1,000 feet or just over four minutes. However, the future use of the parking lot is uncertain.
6. **Relocation of the employee parking to the proposed secured employee parking structure** will cause government employees to experience slightly longer walking distances due to relocated parking from the parking lot east of Interstate 5 to the parking structure west of Interstate 5.

Transit Facilities

7. **Relocation of the Camiones Way Transit Station** will increase walking distances for transit riders using the southbound LPOE facility. The additional 250 feet will add one-minute of walking time to arrive at the southbound crossing location. However, it should be noted that the construction of the southbound port entrance on the east side of Interstate 5 will provide an improved walking distance for trolley passengers heading south into Mexico.
8. **Elimination of the Greyhound facility** will impact the availability of private transit options assuming they do not relocate. These bus trips represent approximately 24% of total daily bus trips for private bus operations. It should be noted that approximately ten other private transit operations will be unaffected by the project.

9. **Demolition of one trolley ticket booth** will cause a temporary impact; however, this ticket booth will be replaced and relocated by the project.

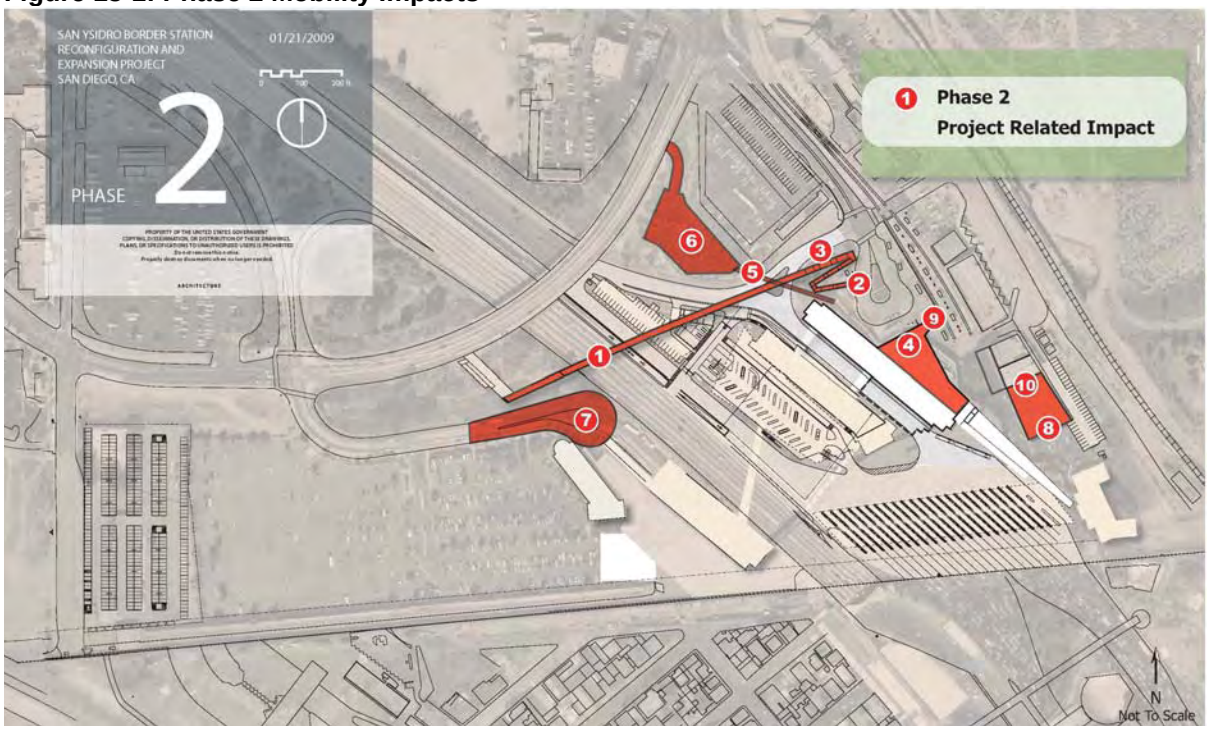
Bicycle Facilities

- **No impacts to bicycle facilities** will be caused by the project.

Other Facilities

10. **The demolition of the Payless Shoe Store** will be caused by the project.

Figure 13-1: Phase 2 Mobility Impacts



Phase 3

The following is a list of Phase 3 project mobility impacts illustrated in Figure 13-2.

Pedestrian Facilities

11. **Relocation of the Southbound Port from Camiones Way to Viriginia Avenue** will affect the convenience and connectivity of the Camiones Way Transit Station to the southbound port.
12. **The location of the Last Chance U-turn at Virginia Avenue** will create a pedestrian and vehicular conflict between the southbound pedestrian crossing and the at-grade U-turn lane.

Transit Facilities

13. **Relocation of the Camiones Way Transit Station** will further decrease the length of the facility. This proposed facility will not adequately accommodate bus, private transit/jitney or privately owned vehicle staging. Loading and unloading of all three uses may also be affected by the inadequate facility length.

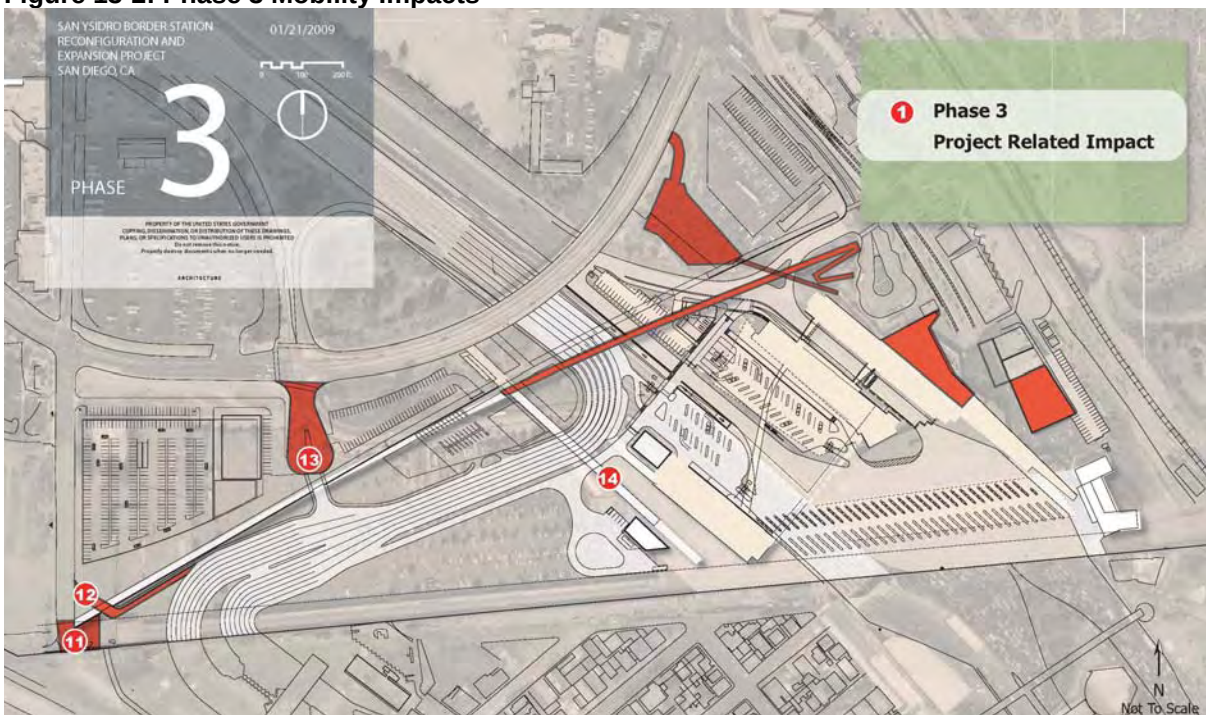
Bicycle Facilities

- **No impacts to bicycle facilities** will be caused by the project.

Other Facilities

14. **The demolition of the retail facility on Camiones Way** will be caused by the project.

Figure 13-2: Phase 3 Mobility Impacts



SUMMARY OF LEVELS OF SERVICE

The following tables summarize levels of service by each mode of transportation for existing, near-term, and long-term conditions. The tables summarize only those facilities and locations that will have changes in level of service as the result of the proposed LPOE project.

Pedestrian Facilities

Tables 13-1 and 13-2 compare the levels of service for sidewalk facilities that are affected by the proposed project for AM and PM peak periods, respectively. A comparison of resulting levels of service for No Build scenarios versus Phase 2 and Phase 3 conditions shows the proposed LPOE project either improves levels of service or would have no impact to the resulting at these locations. Table 13-3 shows levels of service for landings worsen at two intersections for the AM peak and three intersections for the PM peak.

Table 13-1
Summary of Level of Service for Sidewalks – AM Peak Period

Location	Existing AM	NT AM – No Build	NT AM - Phase 2	LT AM – No Build	LT AM - Phase 2	LT AM - Phase 3
San Ysidro Boulevard						
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	A	A	A	B	B	B
E San Ysidro Transit Station						
23: East Plaza	A	B	B	C	C	C
26: South Plaza	C	D	A	D	B	B
Rail Court						
South/West of Cul-de-Sac						
38: West Sidewalk	F	F	A	F	A	A

Table 13-2
Summary of Level of Service for Sidewalks – PM Peak Period

Location	Existing PM	NT PM - No Build	NT PM - Phase 2	LT PM - No Build	LT PM - Phase 2	LT PM - Phase 3
Transit Station to Border						
17: n/o Border	C	D	A	E	B	A
San Ysidro Boulevard						
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	A	A	A	B	B	B
E San Ysidro Transit Station						
23: East Plaza	A	A	A	B	B	B
26: South Plaza	A	B	A	B	A	A
South of Transit Loop						
27: n/o Ped Bridge	A	B	B	B	B	B
28: e/o Ped Bridge	A	B	A	C	A	A
Rail Court						
South/West of Cul-de-Sac						
38: West Sidewalk	F	F	A	F	A	A

Table 13-3
Summary of Level of Service for Pedestrian Landings

Location	Intersection	Existing LOS	Near-Term LOS	Long-Term LOS
AM Peak Hr				
8	San Ysidro Blvd/ Camino de la Plaza	C	C	D
9		B	C	C
11		B	C	C
10		D	E	E
12	San Ysidro Blvd/ I-5 NB Ramp Entrance	F	F	F
44		D	E	E
13		D	E	E
PM Peak Hr				
18	Camiones Wy/ Camino de la Plaza	A	B	B
7		A	B	B
22		C	D	D
11	San Ysidro Blvd/ Camino de la Plaza	D	D	E
8		C	D	D
10		C	D	D
9		E	E	E
12	San Ysidro Blvd/ I-5 NB Ramp Entrance	F	F	F
44		D	E	E
13		D	E	E

Transit Facilities

Tables 13-4 and 13-5 summarize the seated and crush capacities for the Blue line of the Trolley and bus routes 929 and 932 for existing, near-term and long-term conditions. Seated capacity would increase for both buses and the Trolley in the near-term and long-term. Southbound Route 929 would exceed seated capacities during the PM peak. The northbound Trolley from the San Ysidro Station would exceed seated capacity during the AM peak. Table 13-5 shows crush capacity would be exceeded for the northbound Trolley from the San Ysidro Station in the AM peak.

Table 13-4
Summary of Level of Service for Transit – Seated Capacity

			Existing		Near-term, Phase 2		Long-term, Phase 3		Long-term, Phase 3 (w/ MTS Expansion)	
Mode/Route	Direction	Peak Period	Transit Riders	V/C Seated Capacity	Transit Riders	V/C Seated Capacity	Transit Riders	V/C Seated Capacity	Transit Riders	V/C Seated Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	110	55.0%	167	83.7%	183	91.3%	183	91.3%
		PM	66	41.3%	100	62.8%	110	68.5%	110	68.5%
	South to Camiones Way / Border	AM	31	19.4%	47	29.5%	51	32.2%	51	32.2%
		PM	132	82.5%	201	125.6%	219	137.0%	219	137.0%
Bus/932	North From SY Intl Border Trolley Station	AM	76	38.0%	116	57.8%	126	63.1%	126	63.1%
		PM	75	46.9%	114	71.3%	125	77.8%	125	77.8%
	South to SY Intl Border Trolley Station	AM	12	7.5%	18	11.4%	20	12.5%	20	12.5%
		PM	1	0.6%	2	1.0%	2	1.0%	2	1.0%
Trolley	North From SY Intl Border Trolley Station	AM	1,923	125.2%	2,927	142.9%	3,192	207.8%	3,192	155.9%
		PM	466	30.3%	709	34.6%	774	50.4%	774	37.8%
	South to SY Intl Border Trolley Station	AM	227	14.8%	345	16.9%	377	24.5%	377	18.4%
		PM	1,498	86.7%	2,280	99.0%	2,487	143.9%	2,487	107.9%

Table 13-5
Summary of Level of Service for Transit – Crush Capacity

			Existing		Near-term, Phase 2		Long-term, Phase 3		Long-term, Phase 3 (w/ MTS Expansion)	
Mode/Route	Direction	Peak Period	Transit Riders	V/C Crush Capacity	Transit Riders	V/C Crush Capacity	Transit Riders	V/C Crush Capacity	Transit Riders	V/C Seated Capacity
Bus/929	North From SY Intl Border Trolley Station	AM	110	33.8%	167	51.5%	183	56.2%	183	56.2%
		PM	66	25.4%	100	38.6%	110	42.1%	110	42.1%
	South to Camiones Way / Border	AM	31	11.9%	47	18.1%	51	19.8%	51	19.8%
		PM	132	50.8%	201	77.3%	219	84.3%	219	84.3%
Bus/932	North From SY Intl Border Trolley Station	AM	76	23.4%	116	35.6%	126	38.8%	126	38.8%
		PM	75	28.8%	114	43.9%	125	47.9%	125	47.9%
	South to SY Intl Border Trolley Station	AM	12	4.6%	18	7.0%	20	7.7%	20	7.7%
		PM	1	0.4%	2	0.6%	2	0.6%	2	0.6%
Trolley	North From SY Intl Border Trolley Station	AM	1,923	66.8%	2,927	101.6%	3,192	110.8%	3,192	83.1%
		PM	466	16.2%	709	24.6%	774	26.9%	774	20.1%
	South to SY Intl Border Trolley Station	AM	227	7.9%	345	12.0%	377	13.1%	377	9.8%
		PM	1,498	46.2%	2,280	70.4%	2,487	76.7%	2,487	57.6%

Bicycle Facilities

Table 13-6 summarizes the levels of service for bicycle facilities for existing, near-term and long-term conditions. Levels of service for bicycle facilities would be unaffected by the proposed LPOE project with the exception of two locations where facilities are removed.

Table 13-6
Summary of Levels of Service for Bicycles

Location	Existing			Near-Term + Project			Long-Term + Community Plan + Project		
	BCI	LOS	Bicycle Compatibility Level	BCI	LOS	Bicycle Compatibility Level	BCI	LOS	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaza	4.25	D	Moderately Low	4.65	E	Very Low	3.83	D	Moderately Low
San Ysidro Blvd north of Camino de la Plaza	2.76	C	Moderately High	3.09	C	Moderately High	3.95	D	Moderately Low
Camino de la Plaza Virginia to Camiones Way	2.54	C	Moderately High	3.11	C	Moderately High	3.40	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro Blvd	3.45	D	Moderately Low	3.72	D	Moderately Low	4.21	D	Moderately Low
Camiones Way - Bike Path	0.45	A	Extremely High	0.45	A	Extremely High	NA	NA	NA
Camiones Way south of Camino de la Plaza	2.55	C	Moderately High	1.90	B	Very High	3.12	C	Moderately High

RECOMMENDATIONS TO ADDRESS PROJECT RELATED IMPACTS

Phase 2

The following is a list of recommendations to improve mobility in the San Ysidro LPOE vicinity based on the proposed project's impacts. Appendix H provides additional recommendations for addressing other non-project related mobility issues in the San Ysidro border area. Figure 13-3 illustrates these recommendations for Phase 2 of the project.

Pedestrian

1. **Move the eastern at-grade connection of the pedestrian bridge** further away from the edge of the walkway and face it south to encourage pedestrians to walk around the San Ysidro Transit Center rather than use the crosswalk on the north end, which would create unnecessary pedestrian-vehicular conflicts.
2. **Move the eastern pedestrian staircase to the pedestrian bridge** further north and adjacent to the pedestrian bridge to prevent removing half of the width of the bridge.

Figure 13-3: Phase 2 Project Related Mobility Improvement Recommendations

Phase 3

The following is a list of recommendations to improve mobility in the San Ysidro LPOE vicinity. Appendix H provides additional recommendations addressing other non-project related mobility issues in the San Ysidro border area. Figures 13-4 illustrate these recommendations for Phase 3 of the project.

Pedestrian

3. **Relocate the Last Chance U-turn.** The current Phase 3 design creates a conflict between the southbound pedestrians at Virginia Avenue and the Last Chance U-turn location. This U-turn should be relocated to remove the pedestrian-vehicular conflict.

Transit

4. **Reconfigure or relocate the Phase 3 Camiones Way Transit Station** to accommodate MTS bus and private bus unloading and staging as well as privately owned vehicle unloading. It should provide convenient access to the southbound port at Virginia Avenue. The planned bus rapid transit (BRT) route would be served with convenient access to Interstate 5 and out of direction travel would be minimized.

Figure 13-4: Phase 3 Project Related Mobility Improvement Recommendations

Prepared By:
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APPENDIX A

PEDESTRIAN COUNTS

A-1 - Existing Network

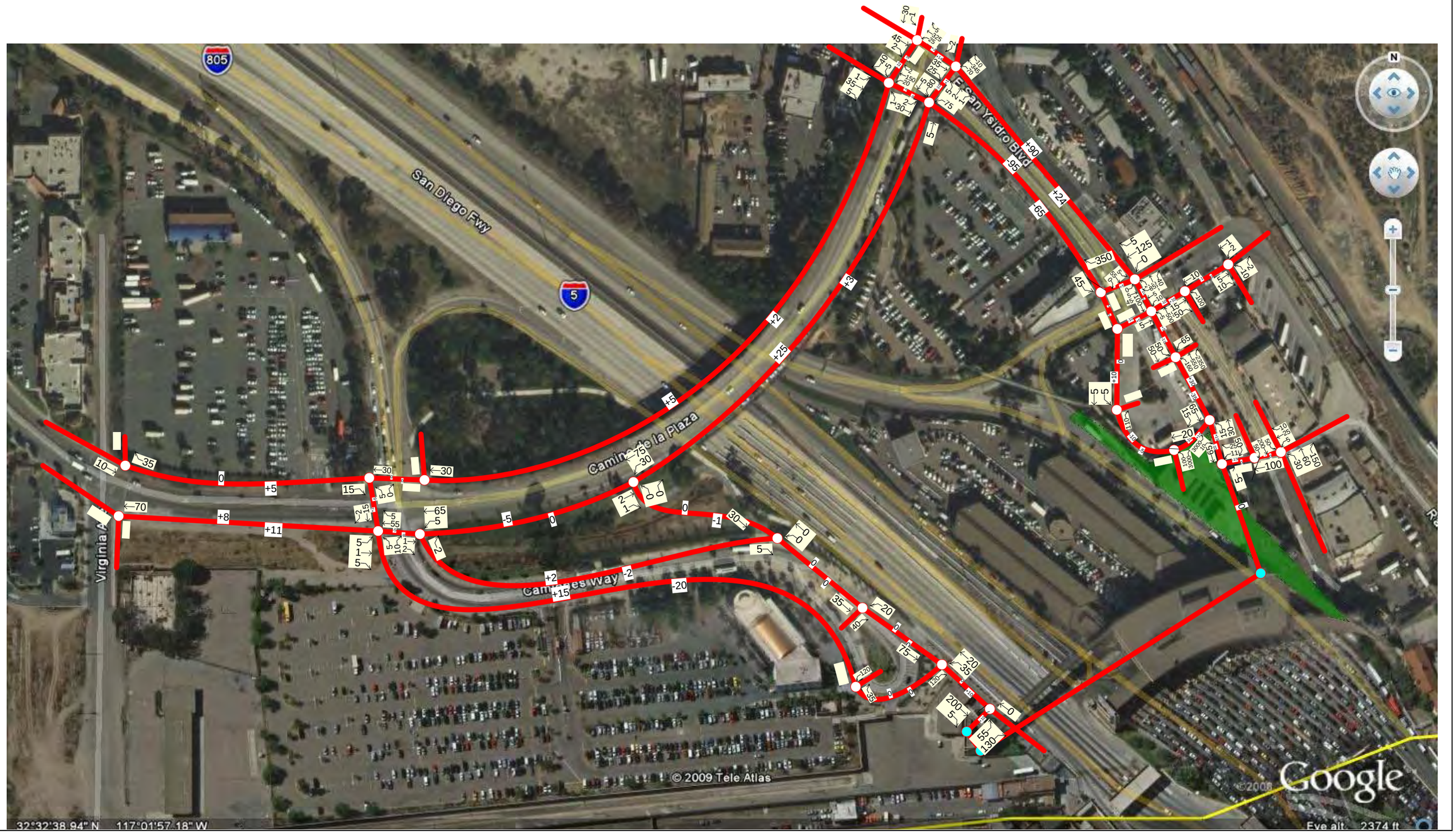
A-2 - Phase 2 Network

4/8/2009

A-3 - Phase 3 Network

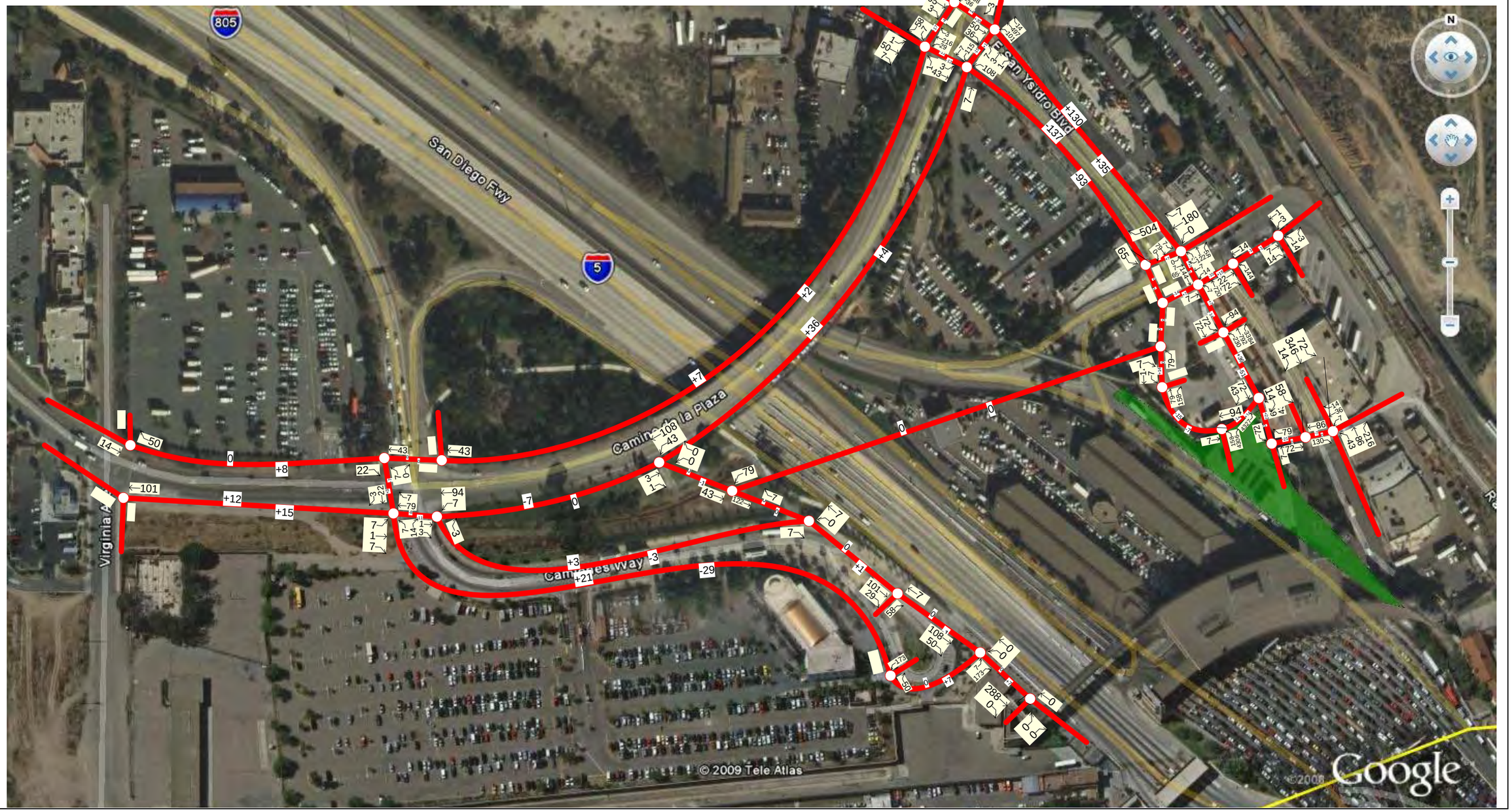
4/8/2009

A-4 - Existing AM Pedestrian Volumes



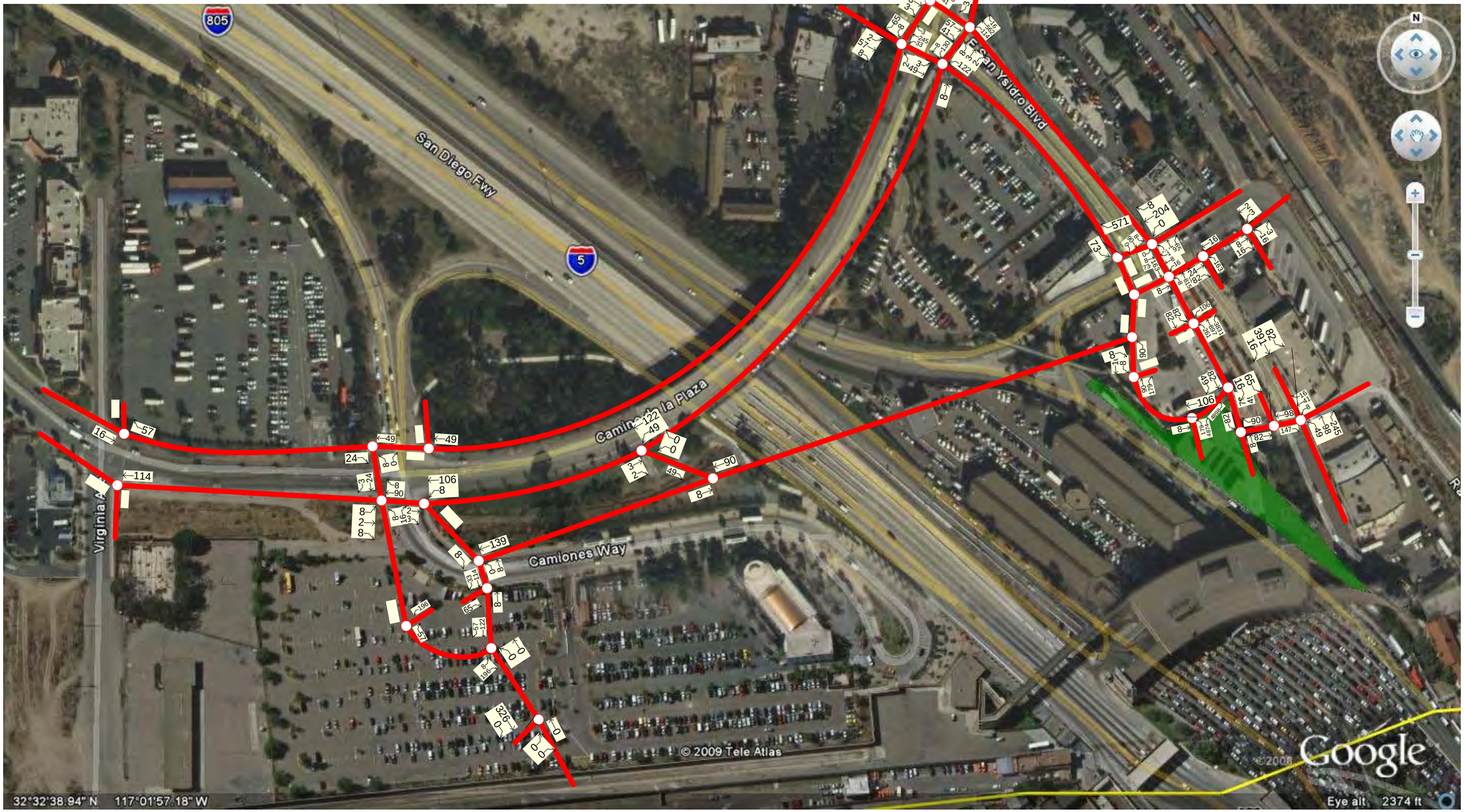
A-5 - Existing PM Pedestrian Volumes

A-6 - Phase 2 AM Pedestrian Volumes



A-7 - Phase 2 PM Pedestrian Volumes

A-8 - Long Term Phase 3 AM Pedestrian Volumes



A-9 - Long Term Phase 3 PM Pedestrian Volumes

APPENDIX B

PEDESTRIAN INTERCEPT SURVEY & TABULATIONS

Survey	What city are you coming from	What city are you going to	Trip Purpose From	Trip Purpose To	Mode of Transporation
1	San Diego San Ysidro Tijuana ✓ Other:_____	San Diego San Ysidro ✓ Tijuana Other:_____	Home ✓ Medical Work Shopping School Other:_____ Didn't Answer	Home Medical Work Shopping School ✓ Other:_____ Didn't Answer	Trolley Bus Taxi Private Vehicle Walking ✓
2	San Diego San Ysidro Tijuana ✓ Other:_____	San Diego San Ysidro ✓ Tijuana Other:_____	Home ✓ Medical Work Shopping School Other:_____ Didn't Answer	Home Medical Work Shopping School Other: MAIL Didn't Answer	Trolley ✓ Bus Taxi Private Vehicle Walking
3	San Diego San Ysidro Tijuana ✓ Other:_____	San Diego ✓ San Ysidro Tijuana Other:_____	Home ✓ Medical Work Shopping School Other:_____ Didn't Answer	Home Medical Work Shopping School ✓ Other:_____ Didn't Answer	Trolley ✓ Bus Taxi Private Vehicle Walking
4	San Diego San Ysidro Tijuana ✓ Other:_____	San Diego ✓ San Ysidro Tijuana Other:_____	Home ✓ Medical Work Shopping School Other:_____ Didn't Answer	Home Medical Work Shopping School ✓ Other:_____ Didn't Answer	Trolley ✓ Bus Taxi Private Vehicle Walking
5	San Diego San Ysidro Tijuana ✓ Other:_____	San Diego ✓ San Ysidro Tijuana Other:_____	Home ✓ Medical Work Shopping School Other:_____ Didn't Answer	Home Medical Work Shopping ✓ School Other:_____ Didn't Answer	Trolley ✓ Bus Taxi Private Vehicle Walking

Pedestrian Intercept Survey Tabulations
San Ysidro LPOE Expansion - Mobility Study

Origin	AM PEAK Count	AM PEAK %	PM PEAK Count	PM PEAK %	Total Count	Total %
Tijuana	174	62.8%	146	41.7%	320	51.0%
San Diego	51	18.4%	119	34.0%	170	27.1%
San Ysidro	29	10.5%	75	21.4%	104	16.6%
Los Angeles	4	1.4%	3	0.9%	7	1.1%
Other	19	6.9%	7	2.0%	26	4.1%
Chula Vista	3		2		5	
Ensenada	2		2		4	
Rosarito	4		0		4	
Escondido	2		0		2	
Imperial Beach	0		2		2	
Oceanside	2		0		2	
San Bernardino	2		0		2	
Phoenix	1		0		1	
Ramona	1		0		1	
San Marcos	1		0		1	
Santa Ana	1		0		1	
Spring Valley	0		1		1	
Subtotal	277	100.0%	350	100.0%	627	100.0%

Destination	AM PEAK Count	AM PEAK %	PM PEAK Count	PM PEAK %	Total Count	Total %
Tijuana	91	32.9%	181	51.7%	272	43.4%
San Diego	131	47.3%	90	25.7%	221	35.2%
San Ysidro	33	11.9%	43	12.3%	76	12.1%
Chula Vista	5	1.8%	19	5.4%	24	3.8%
Los Angeles	5	1.8%	4	1.1%	9	1.4%
Other	12	4.3%	13	3.7%	25	4.0%
Rosarito	0		4		4	
Imperial Beach	3		0		3	
Tecate	0		3		3	
Long Beach	0		2		2	
Mexico City	2		0		2	
Mexico D.F.	0		2		2	
National City	2		0		2	
Ensenada	0		1		1	
Escondido	1		0		1	
Mazatlan	1		0		1	
Otay	1		0		1	
Riverside	0		1		1	
Spring Valley	1		0		1	
Tapachula	1		0		1	
Subtotal	277	100.0%	350	100.0%	627	100.0%

Pedestrian Intercept Survey Tabulations
San Ysidro LPOE Expansion - Mobility Study

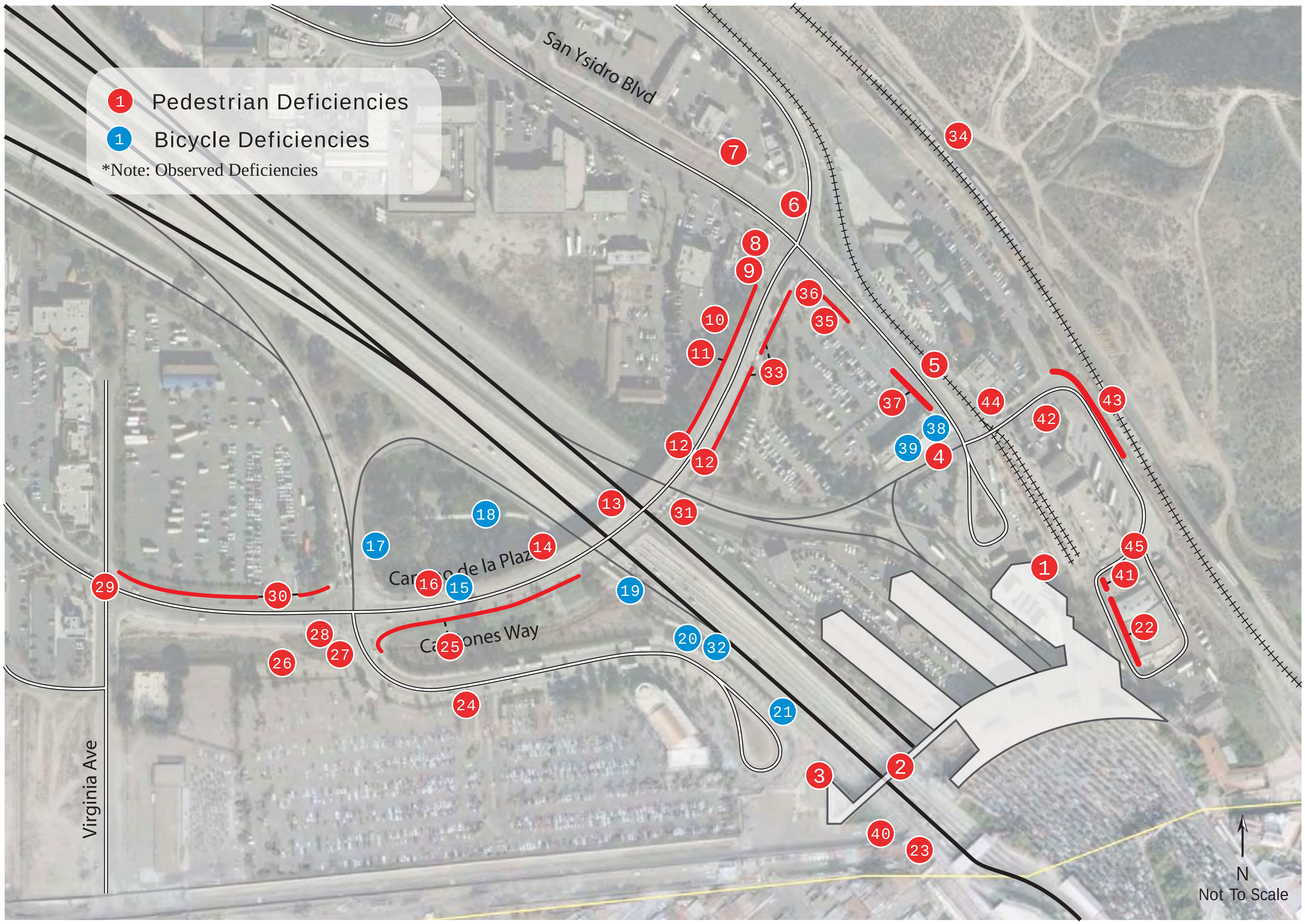
	AM PEAK		PM PEAK		Total	
Purpose From	Count	%	Count	%	Count	%
Home	227	81.9%	107	30.6%	334	53.3%
Work	20	7.2%	67	19.1%	87	13.9%
School	2	0.7%	65	18.6%	67	10.7%
Shopping	5	1.8%	43	12.3%	48	7.7%
Tourism	13	4.7%	24	6.9%	37	5.9%
Business	3	1.1%	21	6.0%	24	3.8%
Medical	1	0.4%	18	5.1%	19	3.0%
No Response	6	2.2%	5	1.4%	11	1.8%
Subtotal	277	100.0%	350	100.0%	627	100.0%

	AM PEAK		PM PEAK		Total	
Purpose To	Count	%	Count	%	Count	%
Home	45	16.2%	220	62.9%	265	42.3%
Work	91	32.9%	11	3.1%	102	16.3%
Shopping	20	7.2%	62	17.7%	82	13.1%
Tourism	35	12.6%	31	8.9%	66	10.5%
School	55	19.9%	1	0.3%	56	8.9%
Business	12	4.3%	12	3.4%	24	3.8%
Medical	7	2.5%	7	2.0%	14	2.2%
Other	4	1.4%	0	0.0%	4	0.6%
No Response	8	2.9%	6	1.7%	14	2.2%
Subtotal	277	100.0%	350	100.0%	627	100.0%

	AM PEAK		PM PEAK		Total	
Mode	Count	%	Count	%	Count	%
Trolley	170	61.4%	91	26.0%	261	41.6%
Private Vehicle	41	14.8%	95	27.1%	136	21.7%
Bus	39	14.1%	69	19.7%	108	17.2%
Walking	24	8.7%	67	19.1%	91	14.5%
Taxi	3	1.1%	26	7.4%	29	4.6%
No Response	0	0.0%	2	0.6%	2	0.3%
Subtotal	277	100.0%	350	100.0%	627	100.0%

APPENDIX C

PEDESTRIAN AND BICYCLE FACILITY INVENTORY



1 Pedestrian Deficiencies
1 Bicycle Deficiencies
*Note: Observed Deficiencies
San Ysidro Blvd
Camino de la Plaza
Camiones Way
Virginia Ave
N
Not To Scale

San Ysidro LPOE Study Area - Summary of Facility Deficiencies*

Code	Walkability Issue	Description of Feature
A	Aesthetics	Trash, graffiti, poor landscaping, lack of shade/direct sun, lack of signage
M	Maintenance	Gaps in sidewalks, poorly maintained facilities, unpaved
S	Safety	Unmarked crossings, tripping hazards, non-compliance with ADA regulations, lack of lighting/poor lighting
W	Walkability	High percentage of obstructions, high volumes, high speed traffic, trash, graffiti, lack of buffer to traffic, potential to feel unsafe

NODE	Facility	Issue	Description
1	Pedestrian Bridge	S	Dimly lit in daytime
		W	Closed Tue & Thur from 2:00am to 5:00am
		W	Ramps are divided for directional flow but no striping so it's hard to walk against stream of traffic
		S	Ramp is too steep/not ADA compliant
2	Pedestrian Bridge	A	Portion is uncovered & lacks vegetation
3	Building	A	Abandoned building covered with graffiti
4	Crosswalk	S	No crosswalk on west side but still used heavily
5	Sidewalk	W	Metro fence is a little busted up
		W	Metro flashing control box is blocking sidewalk
6	Pedestrian Island	S	Uneven and missing pavement- possible tripping hazard
7	Sidewalk	W	Many sidewalk obstructions spaced closely
8	Light Pole	A	Graffiti and for sale signs on pole
9	Sidewalk	S	Sidewalk cracked - possible tripping hazard
10	Sidewalk	A	Trash/litter along the road on the back side of the fence
11	Sidewalk	M	Sidewalk cracked and falling apart, cheap material that is not smooth lines road on both sides
12	Sidewalk	S	Possible tripping hazard - both sides of bridge sidewalk do not join up with bridge smoothly
13	Bridge	A	Bridge, guardrail, signs, and fence are heavily tagged with graffit
14	Fence	M	Gap in bridge fence blocked with wire, people hop fence to cut to border along bike path
15	Bike Path	S	Uneven bike path - trench running length of bike path is highly dangerous for bicyclis
16	Signage	A	Graffiti and stickers covering most traffic signs; sign pole laying on side of walk path
17	Bike Path	A	Trash and overgrown vegetation obstruct path
18	Bike Path	A,S	Too overgrown with vegetation to accommodate many bicyclists
19	Bike and Ped	S	Safety conflicts because pedestrians use bike path
20	Bike Parking	S	Not safe, abandoned bikes stripped for parts, scooters use area for parking
21	Bike Path	A,S,W	Ends abruptly without any signs, marking or striping; light pole in the middle of the bike path
22	Curb	S	Drainage cub cover is missing and needs to be fixed - potential tripping hazard
23	Border Crossing	A	Gate covered in graffiti and stickers, dirty
24	Sidewalk	S	Sidewalk cracked and uneven, not a good transition
25	Sidewalk	M	Repairs underway to replace sidewalk
26	Sidewalk	W	Pedestrians cut across empty lot as a short cut
27	Sidewalk	A,M	Two types of sidewalk coming together not a smooth transition and graffiti presen
28	Sidewalk Ramp	M	Old sidewalk ramp not removed in realignment, does not line up with crosswalk
29	Crosswalk	S	Stop Bars for stop signs but no crosswalk striping
30	Sidewalk	M	Sidewalk missing, road curb missing in places
31	Sidewalk	W	Taxi cab drivers waiting in taxi loading area obstruct sidewalk flow
32	Bike Path	S	Pedestrians use the bike path as a shortcut
33	Sidewalk	M	Sidewalk cracked and falling apart, cheap material that is not smooth lines road on both sides
34	Train	A	Old train left to rust with heavy graffiti - visually unappealing
35	Sidewalk	M	Sidewalk is missing large section
36	Sidewalk	M,W	Trash cans obstruct sidewalk, uneven sidewalk
37	Sidewalk	S	Excessive number of parking driveways obstruct sidewalk forcing pedestrians into the stree
38	Sidewalk	W	Homeless person sleeping in bike parking lot
39	Bike Parking	A	Abandoned bike stripped for parts; area is dirty, graffiti presen
40	Sidewalk	S	Criminals lined up on fence to be deported, causing rubbernecking of ped's
41	Sidewalk	W	Uneven sidewalk
		W	Cluttered with signs, too many trash cans trash cans and merchandise spilling onto the sidewalk
42	Sidewalk	W	Parking lot traffic blocks sidewalk
43	Parking	W	Private cars parked illegally at red curb for passenger pick-up, blocking buses and driveways
44	Walkway	A	Individuals loitering outside facilities
45	Sidewalk	S	Inadequate sidewalk and lighting pose high potential for vehicular/pedestrian conflic

** A good faith effort was made to document pedestrian and bicycle facilities in the San Ysidro LPOE project study area. However, this list is not intended to encompass all pedestrian and bicycle deficiencies.*

APPENDIX D

PEDESTRIAN LEVEL OF SERVICE WORKSHEETS

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	10	4	0.05	0.00	A
2: South Sidewalk	5.5	70	24	0.29	0.01	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	50	37	0.62	0.03	A
4: South Sidewalk	5.5	81	32	0.39	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	35	18	0.22	0.01	A
6: South Sidewalk	5.5	73	27	0.33	0.01	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	110	42	0.51	0.02	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	36	12	0.15	0.01	A
9: South Sidewalk	5.5	12	12	0.15	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	30	14	0.13	0.01	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	7	5	0.07	0.00	A
12: South Sidewalk	4.5	15	9	0.13	0.01	A
Camiones Transit Station						
13: East Plaza	10	35	13	0.09	0.00	A
14: East Plaza	9	95	36	0.27	0.01	A
15: South Plaza	8	155	58	0.48	0.02	A
Transit Station to Border						
16: n/o Ped Bridge	27	260	98	0.24	0.01	A
17: n/o Border	6	330	124	1.38	0.06	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	372	136	2.27	0.10	A
19: West Sidewalk	5	232	91	1.21	0.05	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	485	178	2.97	0.13	A
21: West Sidewalk	4	300	108	1.80	0.08	A
E San Ysidro Transit Station						
22: East Plaza	12	655	190	1.06	0.05	A
23: East Plaza	13	3140	911	4.67	0.20	A
24: West Plaza	6	10	3	0.03	0.00	A
25: West Plaza	5	115	33	0.44	0.02	A
26: South Plaza	8	3030	880	7.33	0.32	C
South of Transit Loop						
27: n/o Ped Bridge	8	70	20	0.17	0.01	A
28: e/o Ped Bridge	8	185	54	0.45	0.02	A
29: e/o Ped Bridge	14	100	29	0.14	0.01	A
30: Trolley Middle Pad South	13	50	15	0.08	0.00	A
31: Trolley East Pad South	9	370	107	0.79	0.03	A
32: Trolley Middle Pad North	8	150	44	0.37	0.02	A
33: Trolley East Pad North	9	12	3	0.02	0.00	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	180	52	0.63	0.03	A
35: South Sidewalk	3	75	22	0.49	0.02	A
36: South Sidewalk	3	26	8	0.18	0.01	A
37: South Sidewalk	5.5	10	3	0.04	0.00	A
South/West of Cul de Sac						
38: West Sidewalk	0	240	70	46.67	2.03	F
39: South Sidewalk	9.5	475	138	0.97	0.04	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	12	180	52	0.29	0.01	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	85	27	0.33	0.01	A
2: South Sidewalk	5.5	295	93	1.13	0.05	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	95	35	0.58	0.03	A
4: South Sidewalk	5.5	295	23	0.28	0.01	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	60	23	0.28	0.01	A
6: South Sidewalk	5.5	147	51	0.62	0.03	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	275	86	1.04	0.05	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	80	37	0.45	0.02	A
9: South Sidewalk	5.5	58	39	0.47	0.02	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	122	39	0.37	0.02	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	18	9	0.12	0.01	A
12: South Sidewalk	4.5	215	78	1.16	0.05	A
Camiones Transit Station						
13: East Plaza	10	141	44	0.29	0.01	A
14: East Plaza	9	450	142	1.05	0.05	A
15: South Plaza	8	1010	319	2.66	0.12	A
Transit Station to Border						
16: n/o Ped Bridge	27	1495	472	1.17	0.05	A
17: n/o Border	6	2860	902	10.02	0.44	C
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	520	167	2.78	0.12	A
19: West Sidewalk	5	345	124	1.65	0.07	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	555	186	3.10	0.13	A
21: West Sidewalk	4	375	134	2.23	0.10	A
E San Ysidro Transit Station						
22: East Plaza	12	690	325	1.81	0.08	A
23: East Plaza	13	1320	622	3.19	0.14	A
24: West Plaza	6	9	4	0.04	0.00	A
25: West Plaza	5	25	12	0.16	0.01	A
26: South Plaza	8	1070	504	4.20	0.18	A
South of Transit Loop						
27: n/o Ped Bridge	8	1030	486	4.05	0.18	A
28: e/o Ped Bridge	8	1150	542	4.52	0.20	A
29: e/o Ped Bridge	14	290	137	0.65	0.03	A
30: Trolley Middle Pad South	13	900	424	2.17	0.09	A
31: Trolley East Pad South	9	355	167	1.24	0.05	A
32: Trolley Middle Pad North	8	170	80	0.67	0.03	A
33: Trolley East Pad North	9	45	21	0.16	0.01	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	215	101	1.22	0.05	A
35: South Sidewalk	3	215	101	2.24	0.10	A
36: South Sidewalk	3	45	21	0.47	0.02	A
37: South Sidewalk	5.5	20	9	0.11	0.00	A
South/West of Cul de Sac						
38: West Sidewalk	0	225	106	70.67	3.07	F
39: South Sidewalk	9.5	270	127	0.89	0.04	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	12	740	349	1.94	0.08	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	14	5	0.06	0.00	A
2: South Sidewalk	5.5	101	35	0.42	0.02	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	72	53	0.88	0.04	A
4: South Sidewalk	5.5	116	46	0.56	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	50	25	0.30	0.01	A
6: South Sidewalk	5.5	105	38	0.46	0.02	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	158	60	0.73	0.03	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	52	18	0.22	0.01	A
9: South Sidewalk	5.5	17	17	0.21	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	43	20	0.19	0.01	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	10	8	0.11	0.00	A
12: South Sidewalk	4.5	22	13	0.19	0.01	A
Camiones Transit Station						
13: East Plaza	10	50	19	0.13	0.01	A
14: East Plaza	9	137	52	0.39	0.02	A
15: South Plaza	8	223	84	0.70	0.03	A
Transit Station to Border						
16: n/o Ped Bridge	27	374	141	0.35	0.02	A
17: n/o Border	6	474	178	1.98	0.09	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	535	195	3.25	0.14	A
19: West Sidewalk	5	333	131	1.75	0.08	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	697	256	4.27	0.19	A
21: West Sidewalk	4	431	155	2.58	0.11	A
E San Ysidro Transit Station						
22: East Plaza	12	941	273	1.52	0.07	A
23: East Plaza	13	4512	1310	6.72	0.29	B
24: West Plaza	6	14	4	0.04	0.00	A
25: West Plaza	5	165	48	0.64	0.03	A
26: South Plaza	8	4354	1264	10.53	0.46	D
South of Transit Loop						
27: n/o Ped Bridge	8	101	29	0.24	0.01	A
28: e/o Ped Bridge	8	266	77	0.64	0.03	A
29: e/o Ped Bridge	14	144	42	0.20	0.01	A
30: Trolley Middle Pad South	13	72	21	0.11	0.00	A
31: Trolley East Pad South	9	532	154	1.14	0.05	A
32: Trolley Middle Pad North	8	216	63	0.53	0.02	A
33: Trolley East Pad North	9	17	5	0.04	0.00	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	259	75	0.91	0.04	A
35: South Sidewalk	3	108	31	0.69	0.03	A
36: South Sidewalk	3	37	11	0.24	0.01	A
37: South Sidewalk	5.5	14	4	0.05	0.00	A
South/West of Cul de Sac						
38: West Sidewalk	0	345	100	66.67	2.90	F
39: South Sidewalk	9.5	683	198	1.39	0.06	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	12	259	75	0.42	0.02	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	122	38	0.46	0.02	A
2: South Sidewalk	5.5	424	133	1.61	0.07	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	137	51	0.85	0.04	A
4: South Sidewalk	5.5	424	33	0.40	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	86	32	0.39	0.02	A
6: South Sidewalk	5.5	211	74	0.90	0.04	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	395	124	1.50	0.07	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	115	54	0.65	0.03	A
9: South Sidewalk	5.5	83	55	0.67	0.03	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	175	56	0.53	0.02	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	26	14	0.19	0.01	A
12: South Sidewalk	4.5	309	111	1.64	0.07	A
Camiones Transit Station						
13: East Plaza	10	203	64	0.43	0.02	A
14: East Plaza	9	647	204	1.51	0.07	A
15: South Plaza	8		0	0.00	0.00	A
Transit Station to Border						
16: n/o Ped Bridge	27	2148	677	1.67	0.07	A
17: n/o Border	6	4110	1296	14.40	0.63	D
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	747	239	3.98	0.17	A
19: West Sidewalk	5	496	179	2.39	0.10	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	798	267	4.45	0.19	A
21: West Sidewalk	4	539	192	3.20	0.14	A
E San Ysidro Transit Station						
22: East Plaza	12	992	468	2.60	0.11	A
23: East Plaza	13	1897	894	4.58	0.20	A
24: West Plaza	6	13	6	0.07	0.00	A
25: West Plaza	5	36	17	0.23	0.01	A
26: South Plaza	8	1538	725	6.04	0.26	B
South of Transit Loop						
27: n/o Ped Bridge	8	1480	698	5.82	0.25	B
28: e/o Ped Bridge	8	1653	779	6.49	0.28	B
29: e/o Ped Bridge	14	417	197	0.94	0.04	A
30: Trolley Middle Pad South	13	1293	610	3.13	0.14	A
31: Trolley East Pad South	9	510	240	1.78	0.08	A
32: Trolley Middle Pad North	8	244	115	0.96	0.04	A
33: Trolley East Pad North	9	65	31	0.23	0.01	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	309	146	1.77	0.08	A
35: South Sidewalk	3	309	146	3.24	0.14	A
36: South Sidewalk	3	65	31	0.69	0.03	A
37: South Sidewalk	5.5	29	14	0.17	0.01	A
South/West of Cul de Sac						
38: West Sidewalk	0	323	152	101.33	4.41	F
39: South Sidewalk	9.5	388	183	1.28	0.06	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	12	1063	501	2.78	0.12	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	14	5	0.06	0.00	A
2: South Sidewalk	5.5	116	40	0.48	0.02	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	72	53	0.88	0.04	A
4: South Sidewalk	5.5	116	46	0.56	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	45	23	0.28	0.01	A
6: South Sidewalk	5.5	105	38	0.46	0.02	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	158	60	0.73	0.03	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	54	19	0.23	0.01	A
9: South Sidewalk	5.5	20	20	0.24	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	129	60	0.57	0.02	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	10	8	0.11	0.00	A
12: South Sidewalk	4.5	50	31	0.46	0.02	A
Camiones Transit Station						
13: East Plaza	10	137	52	0.35	0.02	A
14: East Plaza	9	165	62	0.46	0.02	A
15: South Plaza	8	230	87	0.73	0.03	A
Transit Station to Border						
16: n/o Ped Bridge	10	468	176	1.17	0.05	A
17: n/o Border	10	288	108	0.72	0.03	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	534	195	3.25	0.14	A
19: West Sidewalk	5	333	131	1.75	0.08	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	698	257	4.28	0.19	A
21: West Sidewalk	4	432	155	2.58	0.11	A
E San Ysidro Transit Station						
22: East Plaza	12	943	274	1.52	0.07	A
23: East Plaza	13	4521	1312	6.73	0.29	B
24: West Plaza	30	100	29	0.06	0.00	A
25: West Plaza	30	244	71	0.16	0.01	A
26: South Plaza	20	4421	1283	4.28	0.19	A
South of Transit Loop						
27: n/o Ped Bridge	10	180	52	0.35	0.02	A
28: e/o Ped Bridge	20	151	44	0.15	0.01	A
29: e/o Ped Bridge	20	216	63	0.21	0.01	A
30: Trolley Middle Pad South	13	72	21	0.11	0.00	A
31: Trolley East Pad South	9	532	154	1.14	0.05	A
32: Trolley Middle Pad North	8	216	63	0.53	0.02	A
33: Trolley East Pad North	9	31	9	0.07	0.00	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	259	75	0.91	0.04	A
35: South Sidewalk	3	237	69	1.53	0.07	A
36: South Sidewalk	3	35	10	0.22	0.01	A
37: South Sidewalk	5.5	14	4	0.05	0.00	A
South/West of Cul de Sac						
38: West Sidewalk	30	273	79	0.18	0.01	A
39: South Sidewalk	60	180	52	0.06	0.00	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	NA	0	0	NA	NA	NA
41: e/o Ped Stairway/Ramp	7.5	86	25	0.22	0.01	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	122	38	0.46	0.02	A
2: South Sidewalk	5.5	425	134	1.62	0.07	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	136	51	0.85	0.04	A
4: South Sidewalk	5.5	425	33	0.40	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	50	19	0.23	0.01	A
6: South Sidewalk	5.5	212	74	0.90	0.04	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	396	124	1.50	0.07	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	116	54	0.65	0.03	A
9: South Sidewalk	5.5	17	11	0.13	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	346	111	1.06	0.05	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	25	13	0.17	0.01	A
12: South Sidewalk	4.5	310	112	1.66	0.07	A
Camiones Transit Station						
13: East Plaza	10	375	118	0.79	0.03	A
14: East Plaza	9	670	211	1.56	0.07	A
15: South Plaza	8	1476	466	3.88	0.17	A
Transit Station to Border						
16: n/o Ped Bridge	10	1404	443	2.95	0.13	A
17: n/o Border	10	2002	631	4.21	0.18	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	749	240	4.00	0.17	A
19: West Sidewalk	5	497	179	2.39	0.10	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	800	268	4.47	0.19	A
21: West Sidewalk	4	539	192	3.20	0.14	A
E San Ysidro Transit Station						
22: East Plaza	12	1052	496	2.76	0.12	A
23: East Plaza	13	1937	913	4.68	0.20	A
24: West Plaza	30	175	83	0.18	0.01	A
25: West Plaza	30	209	99	0.22	0.01	A
26: South Plaza	20	1656	781	2.60	0.11	A
South of Transit Loop						
27: n/o Ped Bridge	10	1555	733	4.89	0.21	B
28: e/o Ped Bridge	20	1555	733	2.44	0.11	A
29: e/o Ped Bridge	20	2441	1151	3.84	0.17	A
30: Trolley Middle Pad South	13	1296	611	3.13	0.14	A
31: Trolley East Pad South	9	511	241	1.79	0.08	A
32: Trolley Middle Pad North	8	238	112	0.93	0.04	A
33: Trolley East Pad North	9	58	27	0.20	0.01	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	309	146	1.77	0.08	A
35: South Sidewalk	3	278	131	2.91	0.13	A
36: South Sidewalk	3	65	31	0.69	0.03	A
37: South Sidewalk	5.5	28	13	0.16	0.01	A
South/West of Cul de Sac						
38: West Sidewalk	30	266	125	0.28	0.01	A
39: South Sidewalk	60	2477	1168	1.30	0.06	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	NA	0	0	NA	NA	NA
41: e/o Ped Stairway/Ramp	7.5	173	82	0.73	0.03	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	16	6	0.07	0.00	A
2: South Sidewalk	5.5	114	40	0.48	0.02	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	81	60	1.00	0.04	A
4: South Sidewalk	5.5	132	52	0.63	0.03	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	57	29	0.35	0.02	A
6: South Sidewalk	5.5	119	43	0.52	0.02	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	179	68	0.82	0.04	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	59	20	0.24	0.01	A
9: South Sidewalk	5.5	20	20	0.24	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	49	23	0.22	0.01	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	11	8	0.11	0.00	A
12: South Sidewalk	4.5	24	15	0.22	0.01	A
Camiones Transit Station						
13: East Plaza	10	57	21	0.14	0.01	A
14: East Plaza	9	155	58	0.43	0.02	A
15: South Plaza	8	252	95	0.79	0.03	A
Transit Station to Border						
16: n/o Ped Bridge	27	423	159	0.39	0.02	A
17: n/o Border	6	537	202	2.24	0.10	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	605	221	3.68	0.16	A
19: West Sidewalk	5	377	149	1.99	0.09	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	789	290	4.83	0.21	B
21: West Sidewalk	4	488	176	2.93	0.13	A
E San Ysidro Transit Station						
22: East Plaza	12	1066	309	1.72	0.07	A
23: East Plaza	13	5109	1483	7.61	0.33	C
24: West Plaza	6	16	5	0.06	0.00	A
25: West Plaza	5	187	54	0.72	0.03	A
26: South Plaza	8	4930	1431	11.93	0.52	D
South of Transit Loop						
27: n/o Ped Bridge	8	114	33	0.28	0.01	A
28: e/o Ped Bridge	8	301	87	0.73	0.03	A
29: e/o Ped Bridge	14	163	47	0.22	0.01	A
30: Trolley Middle Pad South	13	81	24	0.12	0.01	A
31: Trolley East Pad South	9	602	175	1.30	0.06	A
32: Trolley Middle Pad North	8	244	71	0.59	0.03	A
33: Trolley East Pad North	9	20	6	0.04	0.00	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	293	85	1.03	0.04	A
35: South Sidewalk	3	122	35	0.78	0.03	A
36: South Sidewalk	3	42	12	0.27	0.01	A
37: South Sidewalk	5.5	16	5	0.06	0.00	A
South/West of Cul de Sac	0					
38: West Sidewalk	0.1	390	113	75.33	3.28	F
39: South Sidewalk	9.5	773	224	1.57	0.07	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	12	293	85	0.47	0.02	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	138	43	0.52	0.02	A
2: South Sidewalk	5.5	480	151	1.83	0.08	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	155	58	0.97	0.04	A
4: South Sidewalk	5.5	480	37	0.45	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	98	37	0.45	0.02	A
6: South Sidewalk	5.5	239	83	1.01	0.04	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	447	140	1.70	0.07	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	130	61	0.74	0.03	A
9: South Sidewalk	5.5	94	63	0.76	0.03	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	198	63	0.60	0.03	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	29	15	0.20	0.01	A
12: South Sidewalk	4.5	350	126	1.87	0.08	A
Camiones Transit Station						
13: East Plaza	10	229	72	0.48	0.02	A
14: East Plaza	9	732	231	1.71	0.07	A
15: South Plaza	8	1643	518	4.32	0.19	A
Transit Station to Border						
16: n/o Ped Bridge	27	2432	767	1.89	0.08	A
17: n/o Border	6	4653	1468	16.31	0.71	E
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	846	271	4.52	0.20	A
19: West Sidewalk	5	561	202	2.69	0.12	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	903	302	5.03	0.22	B
21: West Sidewalk	4	610	217	3.62	0.16	A
E San Ysidro Transit Station						
22: East Plaza	12	1123	529	2.94	0.13	A
23: East Plaza	13	2148	1013	5.19	0.23	B
24: West Plaza	6	15	7	0.08	0.00	A
25: West Plaza	5	41	19	0.25	0.01	A
26: South Plaza	8	1741	821	6.84	0.30	B
South of Transit Loop						
27: n/o Ped Bridge	8	1676	790	6.58	0.29	B
28: e/o Ped Bridge	8	1871	882	7.35	0.32	C
29: e/o Ped Bridge	14	472	223	1.06	0.05	A
30: Trolley Middle Pad South	13	1464	690	3.54	0.15	A
31: Trolley East Pad South	9	578	273	2.02	0.09	A
32: Trolley Middle Pad North	8	277	131	1.09	0.05	A
33: Trolley East Pad North	9	73	34	0.25	0.01	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	350	165	2.00	0.09	A
35: South Sidewalk	3	350	165	3.67	0.16	A
36: South Sidewalk	3	73	34	0.76	0.03	A
37: South Sidewalk	5.5	33	16	0.19	0.01	A
South/West of Cul de Sac						
38: West Sidewalk	0.1	366	173	115.33	5.01	F
39: South Sidewalk	9.5	439	207	1.45	0.06	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	12	1204	568	3.16	0.14	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	17	6	0.07	0.00	A
2: South Sidewalk	5.5	138	48	0.58	0.03	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	86	63	1.05	0.05	A
4: South Sidewalk	5.5	138	55	0.67	0.03	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	54	27	0.33	0.01	A
6: South Sidewalk	5.5	125	46	0.56	0.02	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	188	71	0.86	0.04	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	64	22	0.27	0.01	A
9: South Sidewalk	5.5	24	24	0.29	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	154	72	0.69	0.03	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	12	9	0.12	0.01	A
12: South Sidewalk	4.5	60	37	0.55	0.02	A
Camiones Transit Station						
13: East Plaza	10	163	61	0.41	0.02	A
14: East Plaza	9	196	74	0.55	0.02	A
15: South Plaza	8	274	103	0.86	0.04	A
Transit Station to Border						
16: n/o Ped Bridge	10	557	210	1.40	0.06	A
17: n/o Border	10	343	129	0.86	0.04	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	635	232	3.87	0.17	A
19: West Sidewalk	5	396	156	2.08	0.09	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	831	306	5.10	0.22	B
21: West Sidewalk	4	514	185	3.08	0.13	A
E San Ysidro Transit Station						
22: East Plaza	12	1122	326	1.81	0.08	A
23: East Plaza	13	5380	1562	8.01	0.35	C
24: West Plaza	30	119	35	0.08	0.00	A
25: West Plaza	30	290	84	0.19	0.01	A
26: South Plaza	20	5261	1527	5.09	0.22	B
South of Transit Loop						
27: n/o Ped Bridge	10	214	62	0.41	0.02	A
28: e/o Ped Bridge	20	180	52	0.17	0.01	A
29: e/o Ped Bridge	20	257	75	0.25	0.01	A
30: Trolley Middle Pad South	13	86	25	0.13	0.01	A
31: Trolley East Pad South	9	633	184	1.36	0.06	A
32: Trolley Middle Pad North	8	257	75	0.63	0.03	A
33: Trolley East Pad North	9	37	11	0.08	0.00	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	308	89	1.08	0.05	A
35: South Sidewalk	3	282	82	1.82	0.08	A
36: South Sidewalk	3	42	12	0.27	0.01	A
37: South Sidewalk	5.5	17	5	0.06	0.00	A
South/West of Cul de Sac						
38: West Sidewalk	30	325	94	0.21	0.01	A
39: South Sidewalk	60	214	62	0.07	0.00	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	NA	0	0	NA	NA	NA
41: e/o Ped Stairway/Ramp	7.5	102	30	0.27	0.01	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	145	45	0.55	0.02	A
2: South Sidewalk	5.5	506	159	1.93	0.08	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	162	60	1.00	0.04	A
4: South Sidewalk	5.5	506	39	0.47	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	60	23	0.28	0.01	A
6: South Sidewalk	5.5	252	88	1.07	0.05	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	471	148	1.79	0.08	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	138	64	0.78	0.03	A
9: South Sidewalk	5.5	20	13	0.16	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	412	132	1.26	0.05	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	30	16	0.21	0.01	A
12: South Sidewalk	4.5	369	133	1.97	0.09	A
Camiones Transit Station						
13: East Plaza	10	446	141	0.94	0.04	A
14: East Plaza	9	797	251	1.86	0.08	A
15: South Plaza	8	1756	554	4.62	0.20	A
Transit Station to Border						
16: n/o Ped Bridge	10	1671	527	3.51	0.15	A
17: n/o Border	10	2382	751	5.01	0.22	B
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	891	286	4.77	0.21	A
19: West Sidewalk	5	591	213	2.84	0.12	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	952	319	5.32	0.23	B
21: West Sidewalk	4	641	228	3.80	0.17	A
E San Ysidro Transit Station						
22: East Plaza	12	1252	590	3.28	0.14	A
23: East Plaza	13	2305	1087	5.57	0.24	B
24: West Plaza	30	208	98	0.22	0.01	A
25: West Plaza	30	249	117	0.26	0.01	A
26: South Plaza	20	1971	929	3.10	0.13	A
South of Transit Loop						
27: n/o Ped Bridge	10	1850	872	5.81	0.25	B
28: e/o Ped Bridge	20	1850	872	2.91	0.13	A
29: e/o Ped Bridge	20	2905	1370	4.57	0.20	A
30: Trolley Middle Pad South	13	1542	727	3.73	0.16	A
31: Trolley East Pad South	9	608	287	2.13	0.09	A
32: Trolley Middle Pad North	8	283	133	1.11	0.05	A
33: Trolley East Pad North	9	69	33	0.24	0.01	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	368	174	2.11	0.09	A
35: South Sidewalk	3	331	156	3.47	0.15	A
36: South Sidewalk	3	77	36	0.80	0.03	A
37: South Sidewalk	5.5	33	16	0.19	0.01	A
South/West of Cul de Sac						
38: West Sidewalk	30	317	149	0.33	0.01	A
39: South Sidewalk	60	2948	1390	1.54	0.07	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	NA	0	0	NA	NA	NA
41: e/o Ped Stairway/Ramp	7.5	206	97	0.86	0.04	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	16	6	0.07	0.00	A
2: South Sidewalk	5.5	114	40	0.48	0.02	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	81	60	1.00	0.04	A
4: South Sidewalk	5.5	132	52	0.63	0.03	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	53	27	0.33	0.01	A
6: South Sidewalk	5.5	119	43	0.52	0.02	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	179	68	0.82	0.04	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	59	20	0.24	0.01	A
9: South Sidewalk	5.5	22	22	0.27	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	50	23	0.22	0.01	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	16	12	0.16	0.01	A
12: South Sidewalk	4.5	32	20	0.30	0.01	A
Camiones Transit Station						
13: East Plaza	10	155	58	0.39	0.02	A
14: East Plaza	9	187	70	0.52	0.02	A
15: South Plaza	8	261	98	0.82	0.04	A
Transit Station to Border						
16: n/o Ped Bridge	10	522	196	1.31	0.06	A
17: n/o Border	10	326	123	0.82	0.04	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	606	221	3.68	0.16	A
19: West Sidewalk	5	382	150	2.00	0.09	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	790	291	4.85	0.21	B
21: West Sidewalk	4	488	176	2.93	0.13	A
E San Ysidro Transit Station						
22: East Plaza	12	1069	310	1.72	0.07	A
23: East Plaza	13	5120	1486	7.62	0.33	C
24: West Plaza	30	114	33	0.07	0.00	A
25: West Plaza	30	277	80	0.18	0.01	A
26: South Plaza	20	5004	1453	4.84	0.21	B
South of Transit Loop						
27: n/o Ped Bridge	10	204	59	0.39	0.02	A
28: e/o Ped Bridge	20	172	50	0.17	0.01	A
29: e/o Ped Bridge	20	245	71	0.24	0.01	A
30: Trolley Middle Pad South	13	81	24	0.12	0.01	A
31: Trolley East Pad South	9	489	142	1.05	0.05	A
32: Trolley Middle Pad North	8	245	71	0.59	0.03	A
33: Trolley East Pad North	9	38	11	0.08	0.00	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	293	85	1.03	0.04	A
35: South Sidewalk	3	269	78	1.73	0.08	A
36: South Sidewalk	3	24	7	0.16	0.01	A
37: South Sidewalk	5.5	8	2	0.02	0.00	A
South/West of Cul de Sac						
38: West Sidewalk	30	65	19	0.04	0.00	A
39: South Sidewalk	60	539	156	0.17	0.01	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	NA	0	0	NA	NA	NA
41: e/o Ped Stairway/Ramp	7.5	98	28	0.25	0.01	A
42: w/o Ped Stairway/Ramp	15	147	43	0.19	0.01	A

Location	W_E Effective Walkway Width (ft)	Peak Hour Pedestrian Volume	Peak 15-min Pedestrian Volume	Pedestrians Per Minute Per Foot	v/c Ratio	Level of Service
Camino de la Plaza						
West of Virginia Ave						
1: North Sidewalk	5.5	139	44	0.53	0.02	A
2: South Sidewalk	5.5	481	151	1.83	0.08	A
Virginia Ave to Camiones Wy						
3: North Sidewalk	4	155	58	0.97	0.04	A
4: South Sidewalk	5.5	481	37	0.45	0.02	A
Camiones Way to Ped Stairway						
5: North Sidewalk	5.5	57	21	0.25	0.01	A
6: South Sidewalk	5.5	245	86	1.04	0.05	A
Ped Stairway to San Ysidro Blvd						
7: South Sidewalk	5.5	449	141	1.71	0.07	A
East of San Ysidro Blvd						
8: North Sidewalk	5.5	130	61	0.74	0.03	A
9: South Sidewalk	5.5	19	13	0.16	0.01	A
Ped Stairway down to Camiones Way						
10: Sidewalk	7	199	64	0.61	0.03	A
Camiones Way						
Camino de la Plaza to Stair Walkway/Transit Station						
11: North Sidewalk	5	42	22	0.29	0.01	A
12: South Sidewalk	4.5	350	126	1.87	0.08	A
Camiones Transit Station						
13: East Plaza	10	426	134	0.89	0.04	A
14: East Plaza	9	758	239	1.77	0.08	A
15: South Plaza	8	1671	527	4.39	0.19	A
Transit Station to Border						
16: n/o Ped Bridge	10	1589	501	3.34	0.15	A
17: n/o Border	10	2266	715	4.77	0.21	A
San Ysidro Boulevard						
North of Camino de la Plaza						
18: East Sidewalk	4	847	271	4.52	0.20	A
19: West Sidewalk	5	563	203	2.71	0.12	A
Camino de la Plaza to I-5 NB Ramp Entrance						
20: East Sidewalk	4	905	303	5.05	0.22	B
21: West Sidewalk	4	611	218	3.63	0.16	A
E San Ysidro Transit Station						
22: East Plaza	12	1192	562	3.12	0.14	A
23: East Plaza	13	2193	1034	5.30	0.23	B
24: West Plaza	30	199	94	0.21	0.01	A
25: West Plaza	30	236	111	0.25	0.01	A
26: South Plaza	20	1874	884	2.95	0.13	A
South of Transit Loop						
27: n/o Ped Bridge	10	1760	830	5.53	0.24	B
28: e/o Ped Bridge	20	1761	830	2.77	0.12	A
29: e/o Ped Bridge	20	2762	1302	4.34	0.19	A
30: Trolley Middle Pad South	13	1468	692	3.55	0.15	A
31: Trolley East Pad South	9	579	273	2.02	0.09	A
32: Trolley Middle Pad North	8	277	131	1.09	0.05	A
33: Trolley East Pad North	9	73	34	0.25	0.01	A
Rail Court						
East of San Ysidro Blvd						
34: North Sidewalk	5.5	350	165	2.00	0.09	A
35: South Sidewalk	3	351	165	3.67	0.16	A
36: South Sidewalk	3	74	35	0.78	0.03	A
37: South Sidewalk	5.5	32	15	0.18	0.01	A
South/West of Cul de Sac						
38: West Sidewalk	30	343	162	0.36	0.02	A
39: South Sidewalk	60	3122	1472	1.64	0.07	A
Pedestrian Bridge						
40: Existing Pedestrian Bridge	NA	0	0	NA	NA	NA
41: e/o Ped Stairway/Ramp	7.5	195	92	0.82	0.04	A
42: w/o Ped Stairway/Ramp	15	391	184	0.82	0.04	A

APPENDIX E

TRANSIT RIDERSHIP DATA

4-Detail By Stop - FY 2007

Company: San Diego Trolley Inc. Route: 510 Weekdays

Direction: Inbound

	Daily Total				AM				Mid-Day				PM				Other			
Bus Stop	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU
INTERNATIONAL BORDER STAT	11226	0	0	0	4091	0	0	0	2789	0	0	0	1056	0	0	0	3290	0	0	0
BEYER ST TROLLEY STATION	1095	599	11226	10627	338	234	4091	3857	389	160	2789	2629	181	69	1056	987	187	136	3290	3154
IRIS AV TROLLEY STATION	2123	1594	11722	10128	669	670	4195	3525	721	387	3018	2631	341	195	1168	973	392	342	3341	2999
PALM CITY STATION	1500	901	12251	11350	471	341	4194	3853	537	243	3352	3109	206	128	1314	1186	286	189	3391	3202
PALOMAR ST TROLLEY STATIO	2010	2425	12850	10425	503	824	4324	3500	718	881	3646	2765	400	317	1392	1075	389	403	3488	3085
H ST TROLLEY STATION	1693	1725	12435	10710	489	614	4003	3389	507	579	3483	2904	275	235	1475	1240	422	297	3474	3177
E ST BAYFRONT TROLLEY STA	1285	1036	12403	11367	480	328	3878	3550	362	310	3411	3101	151	166	1515	1349	292	232	3599	3367
24TH ST TROLLEY STATION &	1029	1563	12652	11089	355	505	4030	3525	318	509	3463	2954	141	276	1500	1224	215	273	3659	3386
8TH ST TROLLEY STATION &	785	786	12118	11332	249	208	3880	3672	227	246	3272	3026	101	126	1365	1239	208	206	3601	3395
PACIFIC FLEET -32ND ST ST	419	318	12117	11799	51	69	3921	3852	145	69	3253	3184	141	44	1340	1296	82	136	3603	3467
HARBORSIDE - 28TH ST STAT	576	970	12218	11248	107	144	3903	3759	227	175	3329	3154	111	61	1437	1376	131	590	3549	2959
CROSBY ST TROLLEY STATION	407	470	11824	11354	122	107	3866	3759	143	138	3381	3243	81	57	1487	1430	61	168	3090	2922
12TH & IMPERIAL STATION	2139	3557	11761	8204	693	958	3881	2923	784	1106	3386	2280	349	538	1511	973	313	955	2983	2028
MARKET & 12TH ST STATION	904	941	10343	9402	266	226	3616	3390	325	319	3064	2745	122	184	1322	1138	191	212	2341	2129
CITY COLLEGE STATION	975	2738	10306	7568	247	1114	3656	2542	444	753	3070	2317	128	323	1260	937	156	548	2320	1772
5TH AV STATION - C ST	1230	2335	8543	6208	216	644	2789	2145	474	908	2761	1853	295	377	1065	688	245	406	1928	1522
CIVIC CENTER STATION	1059	1547	7438	5891	153	644	2361	1717	403	448	2327	1879	351	173	983	810	152	282	1767	1485
AMERICAN PLAZA	1337	1538	6950	5412	390	616	1870	1254	398	331	2282	1951	366	301	1161	860	183	290	1637	1347
SANTA FE DEPOT	524	340	6749	6409	108	49	1644	1595	185	155	2349	2194	125	64	1226	1162	106	72	1530	1458
COUNTY CENTER - LITTLE IT	374	596	6933	6337	93	197	1703	1506	153	180	2379	2199	71	108	1287	1179	57	111	1564	1453
MIDDLETOWN PALM STATION	105	269	6711	6442	16	40	1599	1559	45	100	2352	2252	21	55	1250	1195	23	74	1510	1436
WASHINGTON ST STATION	191	399	6547	6148	34	104	1575	1471	92	122	2297	2175	41	80	1216	1136	24	93	1459	1366
OLD TOWN TRANSIT CENTER	0	6339	6339	0	0	1505	1505	0	0	2267	2267	0	0	1177	1177	0	0	1390	1390	0
Totals	32986	32986			10141	10141			10386	10386			5054	5054			7405	7405		

Total Passengers: 32986 (AM: 10141 Mid-Day: 10386 PM: 5054 Other: 7405)

Passenger Miles:	209832.4
Average Trip Length:	6.4
Revenue Miles:	1917.4
Passengers/Mile:	17.2
Miles Over Seated Capacity:	261.6
Percent Miles Over Seated Capacity:	13.6

Direction: Outbound

	Daily Total				AM				Mid-Day				PM				Other			
Bus Stop	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU	ON	OFF	ON BRD	THRU
OLD TOWN TRANSIT CENTER	6398	0	0	0	1327	0	0	0	2046	0	0	0	1890	0	0	0	1135	0	0	0
WASHINGTON ST STATION	463	194	6398	6204	85	51	1327	1276	161	52	2046	1994	158	64	1890	1826	59	27	1135	1108
MIDDLETOWN PALM STATION	203	112	6667	6555	45	28	1361	1333	56	33	2155	2122	64	22	1984	1962	38	29	1167	1138
COUNTY CENTER - LITTLE IT	634	370	6758	6388	80	114	1378	1264	216	114	2178	2064	233	85	2026	1941	105	57	1176	1119
SANTA FE DEPOT	355	479	7022	6543	110	100	1344	1244	153	194	2280	2086	44	110	2174	2064	48	75	1224	1149
AMERICAN PLAZA	1044	945	6898	5953	172	344	1354	1010	302	266	2239	1973	472	211	2108	1897	98	124	1197	1073
CIVIC CENTER STATION	1603	1105	6997	5892	107	306	1182	876	432	420	2275	1855	845	259	2369	2110	219	120	1171	1051
5TH AV STATION - C ST	1911	1223	7495	6272	127	326	983	657	578	414	2287	1873	939	337	2955	2618	267	146	1270	1124
CITY COLLEGE STATION	2450	835	8183	7348	255	182	784	602	893	329	2451	2122	966	236	3557	3321	336	88	1391	1303
MARKET & 12TH ST STATION	831	837	9798	8961	137	96	857	761	251	295	3015	2720	259	350	4287	3937	184	96	1639	1543
12TH & IMPERIAL STATION	3428	2002	9792	7790	471	179	898	719	1003	663	2971	2308	1080	835	4196	3361	874	325	1727	1402
CROSBY ST TROLLEY STATION	367	406	11218	10812	40	71	1190	1119	113	129	3311	3182	139	112	4441	4329	75	94	2276	2182
HARBORSIDE - 28TH ST STAT	800	623	11179	10556	75	83	1159	1076	353	162	3295	3133	277	124	4468	4344	95	254	2257	2003
PACIFIC FLEET -32ND ST ST	391	355	11356	11001	27	61	1151	1090	95	109	3486	3377	151	77	4621	4544	118	108	2098	1990
8TH ST TROLLEY STATION &	744	774	11392	10618	116	77	1117	1040	256	251	3472	3221	255	283	4695	4412	117	163	2108	1945
24TH ST TROLLEY STATION &	1349	1176	11362	10186	236	148	1156	1008	510	457	3477	3020	432	398	4667	4269	171	173	2062	1889
E ST BAYFRONT TROLLEY STA	903	1361	11535	10174	133	136	1244	1108	318	433	3530	3097	289	555	4701	4146	163	237	2060	1823
H ST TROLLEY STATION	1588	1626	11077	9451	134	279	1241	962	568	530	3415	2885	629	591	4435	3844	257	226	1986	1760
PALOMAR ST TROLLEY STATIO	2384	2093	11039	8946	151	299	1096	797	976	710	3453	2743	893	725	4473	3748	364	359	2017	1658
PALM CITY STATION	767	1537	11330	9793	91	161	948	787	270	513	3719	3206	309	577	4641	4064	97	286	2022	1736
IRIS AV TROLLEY STATION	929	2430	10560	8130	119	280	878	598	299	895	3476	2581	369	888	4373	3485	142	367	1833	1466
BEYER ST TROLLEY STATION	503	995	9059	8064	56	135	717	582	193	356	2880	2524	165	332	3854	3522	89	172	1608	1436
INTERNATIONAL BORDER STAT	0	8567	8567	0	0	638	638	0	0	2717	2717	0	0	3687	3687	0	0	1525	1525	0
Totals	30045	30045			4094	4094			10042	10042			10858	10858			5051	5051		

Total Passengers: 30045 (AM: 4094 Mid-Day: 10042 PM: 10858 Other: 5051)
Passenger Miles: 187472.6
Average Trip Length: 6.2
Revenue Miles: 1861.8
Passengers/Mile: 16.1
Miles Over Seated Capacity: 202.0
Percent Miles Over Seated Capacity: 10.8

TOTALS BOTH DIRECTIONS

Total Passengers: 63031 (AM: 14235 Mid-Day: 20428 PM: 15912 Other: 12456)
Passenger Miles: 397305.0
Average Trip Length: 6.3
Revenue Miles: 3779.2
Passengers/Mile: 16.7
Miles Over Seated Capacity: 463.6
Percent Miles Over Seated Capacity: 6.1

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday — *Route #929 - North*

				All Day						AM Peak						Midday						PM Peak							
			Stop				Load						Load					Load						Load					
Sort	Stop	Dir	ID	Trips	Board	Alight	Avg	Max	Total	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max	Bicycle Event	Ramp Event
10	E SAN YSIDRO BL/INTL BORDER T		64001	63	969	.	15	37	969	12	205	.	17	32	24	490	.	20	37	12	138	.	11	20	.	1
20	CAMINO DE LA PLAZA/E SAN YSID		99416	63	24	7	16	37	986	12	1	1	17	32	24	14	4	21	37	12	5	1	12	21	.	.
30	CAMINO DE LA PLAZA/VIRGINIA AV		60582	63	14	60	15	32	940	12	1	1	17	32	24	6	34	20	32	12	6	25	10	18	.	.
40	CAMINO DE LA PLAZA/VIA NACION		60581	63	76	67	15	37	949	12	4	11	16	32	24	37	31	20	37	12	24	15	11	20	.	1
50	CAMINO DE LA PLAZA/4330		60580	63	58	37	15	37	970	12	3	5	16	32	24	29	20	20	37	12	17	12	11	21	.	.
60	CAMINO DE LA PLAZA/WILLOW RD		60579	63	79	79	15	45	970	12	5	17	15	33	24	42	39	20	45	12	19	15	12	27	.	1
70	WILLOW RD/CAMINO DE LA PLAZA		60578	63	54	25	16	45	999	12	17	5	16	33	24	19	13	21	45	12	2	3	12	27	.	.
80	WILLOW RD/CALLE PRIMERA		60577	63	52	42	16	48	1,009	12	22	4	18	35	24	10	21	20	48	12	13	13	12	27	.	.
90	CALLE PRIMERA/WILLOW RD		60576	63	20	22	16	46	1,007	12	4	1	18	35	24	11	15	20	46	12	2	4	11	23	.	.
100	CALLE PRIMERA/SYCAMORE RD		60575	63	52	23	16	46	1,036	12	27	5	20	38	24	17	8	20	46	12	6	8	11	23	.	.
110	SAN YSIDRO BL/CYPRESS DR		60574	63	56	19	17	46	1,073	12	21	4	21	42	24	22	9	21	46	12	3	3	11	23	.	.
120	SAN YSIDRO BL/COTTONWOOD R		60573	63	43	51	17	46	1,065	12	6	3	22	42	24	18	35	20	46	12	13	7	12	23	.	1
130	SAN YSIDRO BL/SMYTHE AV		60572	63	30	50	17	43	1,045	12	3	6	21	42	24	18	38	19	43	12	7	5	12	22	.	1
140	SAN YSIDRO BL/ALVERSON RD		60571	63	46	53	16	41	1,038	12	5	9	21	39	24	26	31	19	41	12	9	7	12	22	.	.
150	SAN YSIDRO BL/AVERIL RD		60570	63	30	29	16	39	1,039	12	10	2	22	39	24	15	21	19	37	12	2	2	12	21	.	1
160	SAN YSIDRO BL/525-611		60569	63	42	34	17	41	1,047	12	12	3	22	41	24	20	16	19	37	12	4	10	12	17	2	1
170	SAN YSIDRO BL/SUNSET LN		60568	63	29	23	17	42	1,053	12	5	3	23	42	24	17	4	20	37	12	4	7	11	18	.	1
180	SAN YSIDRO BL/DAIRY MART RD		60567	63	108	57	18	62	1,104	12	48	12	26	62	24	38	20	20	38	12	11	17	11	17	.	.
190	SAN YSIDRO BL/ISLA DEL GARME		60566	63	57	34	18	67	1,127	12	25	9	27	67	24	22	11	21	39	12	6	7	11	19	.	.
200	HOWARD AV/VIA COSTINA		60565	63	18	18	18	68	1,127	12	8	.	28	68	24	6	14	21	39	12	3	3	11	17	.	.
210	HOWARD AV/1683		60564	63	19	11	18	68	1,135	12	8	.	28	68	24	7	9	20	36	12	2	2	11	17	.	.
220	HOWARD AV/VIA SUSPIRO		60605	63	15	22	18	66	1,128	12	2	11	27	66	24	7	8	20	35	12	5	3	11	18	.	.
230	IRIS AV TROLLEY STATION		70025	63	460	649	15	41	939	12	154	179	25	41	24	176	288	16	26	12	75	87	10	21	3	3
240	BEYER BL/IRIS AV (I-905 RAMP)		99412	62	1	3	15	41	937	12	1	1	25	41	24	.	2	16	26	11	.	.	11	21	.	.
250	BEYER BL/CARNELL AV		12933	62	14	12	15	43	939	12	3	2	25	43	24	7	7	16	25	11	2	.	11	21	.	.
260	DEL SOL BL/BEYER BL		10668	62	25	31	15	43	933	12	6	6	25	43	24	8	17	15	25	11	4	4	11	22	.	.
270	DEL SOL BL/OCEAN BLUFFS		10272	62	6	14	15	43	925	12	1	3	25	43	24	3	6	15	25	11	1	3	11	22	.	.
280	DEL SOL BL/DEL SOL LN		10680	62	24	9	15	43	940	12	18	.	27	43	24	2	3	15	25	11	2	3	11	22	.	.

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday — *Route #929 - North*

			Stop	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
							Load					Load					Load					Load					
Sort	Stop	Dir	ID	Trips	Board	Alight	Avg	Max	Total	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max		
290	DEL SOL BL/DEL SUR BL		10684	62	15	24	15	43	931	12	6	.	27	43	24	8	6	15	25	11	1	10	10	19	.	.
300	PICADOR BL/DEL SOL BL		12960	62	27	23	15	44	935	12	7	2	28	44	24	7	7	15	27	11	11	9	10	22	1	.
310	PICADOR BL/CEDAR GLEN WY		12957	62	4	13	15	43	926	12	1	9	27	43	24	.	2	15	27	11	3	.	10	23	.	.
320	PICADOR BL/AREY DR		12950	62	18	24	15	43	920	12	13	11	27	43	24	2	3	15	27	11	2	8	10	22	.	.
330	PICADOR BL/VIA TONGA		12949	62	5	18	15	43	907	12	1	4	27	43	24	2	9	15	26	11	2	3	10	20	.	.
340	PICADOR BL/BEYER WY		12565	62	6	12	15	43	901	12	3	4	27	43	24	.	2	15	26	11	3	6	10	21	.	1
350	BEYER WY/PALM AV		12946	62	161	110	15	46	952	12	44	62	25	46	24	67	32	16	25	11	24	12	11	23	2	.
360	3RD AV/MAIN ST		12938	62	42	64	15	51	930	12	15	26	24	51	24	13	18	16	25	11	8	7	11	21	1	.
370	3RD AV/ANITA ST		12939	62	30	26	15	51	934	12	9	6	25	51	24	14	13	16	25	11	4	5	11	19	.	.
380	3RD AV/AVENIDA ROSA		12942	62	10	7	15	51	937	12	.	.	25	51	24	8	5	16	25	11	.	2	10	18	.	.
390	3RD AV/ORANGE AV		12940	62	59	31	16	54	965	12	20	3	26	54	24	28	13	17	25	11	7	4	11	18	.	.
400	3RD AV/QUINTARD ST		12935	62	76	126	15	47	915	12	15	70	22	47	24	38	42	17	27	11	16	12	11	19	.	.
410	3RD AV/PALOMAR ST		12932	62	180	59	17	52	1,036	12	48	22	24	52	24	79	23	19	30	11	24	11	12	19	.	4
420	3RD AV/OXFORD ST		12930	62	61	49	17	52	1,048	12	22	9	25	52	24	20	21	19	30	11	11	12	12	19	.	1
430	3RD AV/NAPLES ST		12927	62	99	61	18	50	1,086	12	24	11	26	50	24	50	25	20	32	11	13	19	12	22	.	2
440	3RD AV/MOSS ST		12559	62	71	58	18	50	1,099	12	14	25	25	50	24	40	24	21	37	11	13	6	12	21	.	.
450	3RD AV/L ST		12924	62	61	63	18	50	1,097	12	15	23	24	50	24	36	30	21	42	11	7	6	12	24	1	1
460	3RD AV/K ST		12557	62	135	140	18	43	1,092	12	30	66	21	29	24	75	53	22	43	11	18	9	13	27	1	1
470	3RD AV/J ST		12920	62	128	69	19	48	1,151	12	7	16	21	32	24	103	49	24	48	11	13	1	14	27	.	.
480	3RD AV/I ST		12918	62	35	34	19	48	1,152	12	4	8	20	36	24	22	18	24	48	11	4	4	14	26	.	1
490	3RD AV/H ST		12553	62	115	196	17	44	1,071	12	23	46	18	37	24	66	104	23	44	11	19	27	14	26	.	.
500	3RD AV/G ST		12547	62	49	55	17	46	1,065	12	11	10	18	38	24	24	28	22	46	11	9	12	13	25	2	1
510	3RD AV/F ST		12903	62	137	143	17	46	1,059	12	25	42	17	29	24	87	76	23	46	11	15	14	13	25	1	1
520	E AV/3RD AV		11385	62	48	47	17	48	1,060	12	7	12	17	28	24	26	17	23	48	11	8	10	13	24	1	1
530	E AV/4TH AV		11008	62	44	36	17	48	1,068	12	13	6	17	27	24	20	21	23	48	11	9	8	13	25	.	1
540	4TH AV/E ST		12539	62	43	36	17	48	1,075	12	5	2	17	26	24	32	27	23	48	11	1	3	13	24	1	1
550	4TH AV/D ST		12889	62	54	44	17	46	1,085	12	9	4	18	27	24	37	32	24	46	11	1	5	13	24	.	1
560	4TH AV/C ST		13179	62	158	99	18	47	1,144	12	33	26	18	31	24	65	48	24	47	11	28	14	14	24	2	1

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday *Route #929 - North*

Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
570	HIGHLAND AV/30TH ST		12532	62	96	118	18	48	1,122	12	10	31	17	30	24	67	68	24	48	11	8	12	14	25	.	1
580	HIGHLAND AV/28TH ST		12884	62	128	33	20	49	1,217	12	12	9	17	31	24	105	20	28	49	11	7	3	14	26	.	.
590	HIGHLAND AV/2605		13150	62	32	35	20	50	1,214	12	2	2	17	31	24	26	30	28	50	11	1	2	14	26	.	1
600	HIGHLAND AV/24TH ST		12877	62	76	41	20	48	1,249	12	16	6	18	30	24	37	26	28	48	11	7	7	14	26	2	.
610	HIGHLAND AV/22ND ST		12876	62	20	36	20	48	1,233	12	7	.	18	30	24	3	30	27	48	11	5	4	14	24	.	.
620	HIGHLAND AV/20TH ST		12874	62	24	39	20	45	1,218	12	2	8	18	28	24	14	24	27	45	11	3	5	14	24	.	2
630	HIGHLAND AV/18TH ST		12873	62	58	103	19	50	1,173	12	10	20	17	25	24	24	57	25	50	11	10	15	13	21	.	.
640	HIGHLAND AV/16TH ST		12522	62	76	98	19	48	1,151	12	13	13	17	25	24	46	78	24	48	11	7	4	14	21	1	.
650	HIGHLAND AV/13TH ST		12520	62	46	66	18	48	1,131	12	5	12	16	25	24	31	41	23	48	11	8	6	14	21	.	1
660	HIGHLAND AV/E 12TH ST (WALMA		12519	62	128	185	17	43	1,074	12	14	23	16	25	24	63	108	22	43	11	26	37	13	21	.	.
670	HIGHLAND AV/PLAZA BL		12867	62	31	97	16	43	1,008	12	10	16	15	24	24	12	46	20	41	11	7	24	11	18	3	.
680	8TH ST/G AV		11362	62	39	147	15	43	900	12	9	14	15	25	24	13	97	17	33	11	5	12	11	17	2	2
690	TH ST/E AV		11358	62	24	55	14	44	869	12	12	10	15	27	24	4	28	16	32	11	2	15	9	17	.	.
700	8TH ST/B AV		13411	62	35	96	13	44	808	12	5	14	14	26	24	16	67	14	32	11	4	9	9	14	1	1
710	NATIONAL CITY BL/7TH ST		60507	62	18	30	13	42	796	12	5	8	14	25	24	9	11	13	33	11	2	5	9	14	.	.
720	NATIONAL CITY BL/6TH ST		12849	62	12	15	13	42	793	12	1	2	14	25	24	9	13	13	33	11	.	.	9	14	1	.
730	NATIONAL CITY BL/4TH ST		12505	62	3	20	13	42	776	12	1	.	14	25	24	.	12	13	32	11	.	2	9	14	.	.
740	NATIONAL CITY BL/2ND ST		12503	62	19	27	12	41	768	12	10	.	15	30	24	8	13	13	31	11	1	12	8	12	.	.
750	NATIONAL CITY BL/W DIVISION ST		12500	62	24	7	13	41	785	12	7	2	15	31	24	4	3	13	31	11	5	1	8	13	.	.
760	MAIN ST/WODEN ST		12497	62	3	11	13	39	777	12	1	4	15	31	24	1	3	13	31	11	1	1	8	13	1	.
770	MAIN ST/VESTA ST		12496	62	61	38	13	40	800	12	21	12	16	32	24	23	12	13	31	11	3	4	8	13	.	.
780	MAIN ST/UNA ST		12495	62	14	11	13	36	803	12	.	2	15	32	24	8	4	13	33	11	2	1	8	13	.	.
790	MAIN ST/THOR ST		12493	62	10	6	13	36	807	12	.	1	15	32	24	10	4	13	36	11	.	.	8	13	.	.
800	MAIN ST/SIVA ST		12490	62	6	7	13	36	806	12	.	1	15	31	24	5	2	14	36	11	1	.	8	13	1	.
810	MAIN ST/RIGEL ST		12488	62	2	7	13	36	801	12	1	2	15	30	24	1	5	13	36	11	.	.	8	13	.	.
820	MAIN ST/32ND ST		11308	62	25	30	13	36	796	12	1	7	15	29	24	9	15	13	36	11	7	5	8	15	.	.
830	MAIN ST/31ST ST		11306	62	10	3	13	36	803	12	1	.	15	29	24	2	1	13	36	11	5	2	8	15	.	.
840	MAIN ST/30TH ST		10927	62	4	6	13	35	801	12	1	.	15	29	24	1	5	13	35	11	2	1	9	15	.	.

Ridership by Route and Stop

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Sort	Stop	Dir	Stop ID	All Day Trips	All Day Board	All Day Alight	All Day Load Avg	All Day Load Max	All Day Load Total	AM Peak Trips	AM Peak Board	AM Peak Alight	AM Peak Load Avg	AM Peak Load Max	Midday Trips	Midday Board	Midday Alight	Midday Load Avg	Midday Load Max	PM Peak Trips	PM Peak Board	PM Peak Alight	PM Peak Load Avg	PM Peak Load Max	Bicycle Event	Ramp Event
850	MAIN ST/29TH ST		10920	62	4	6	13	35	799	12	3	.	15	30	24	1	3	13	35	11	.	1	8	15	.	1
860	MAIN ST/28TH ST		10913	62	10	60	12	31	749	12	6	8	15	31	24	1	22	12	30	11	.	4	8	15	2	.
870	MAIN ST/27TH ST		10902	62	6	4	12	32	751	12	2	.	15	31	24	2	1	12	30	11	.	2	8	15	.	.
880	MAIN ST/26TH ST		11279	62	4	5	12	32	750	12	.	1	15	31	24	2	.	12	30	11	1	3	8	15	.	.
890	MAIN ST/SICARD ST		12467	62	3	.	12	32	753	12	2	.	15	31	24	1	.	12	30	11	.	.	8	15	.	.
900	MAIN ST/SAMPSON ST		12463	62	4	21	12	31	736	12	.	4	15	31	24	3	8	12	29	11	.	3	7	15	.	.
910	MAIN ST/EVANS ST		12462	62	2	5	12	31	733	12	1	1	15	31	24	.	2	12	29	11	1	.	8	15	.	.
920	MAIN ST/DEWEY ST		12459	62	10	8	12	32	735	12	1	4	15	31	24	4	.	12	29	11	2	.	8	15	.	.
930	MAIN ST/CESAR E CHAVEZ PKWY		12451	62	2	10	12	31	727	12	.	5	14	31	24	1	2	12	29	11	1	.	8	15	.	.
940	MAIN ST/BEARDSLEY ST		12794	62	12	3	12	32	736	12	3	1	14	32	24	8	1	12	29	11	1	.	8	15	1	.
950	SIGSBEE ST/NEWTON AV		12447	62	14	7	12	32	743	12	.	.	14	32	24	14	7	13	28	11	.	.	8	15	.	.
960	NATIONAL AV/16TH ST		60119	62	3	9	12	32	737	12	.	2	14	32	24	3	2	13	28	11	.	3	8	15	.	.
970	12TH/IMPERIAL TRANSIT CENTER		91102	62	61	342	7	19	456	12	13	67	10	17	24	41	143	8	18	11	2	44	4	11	1	.
980	PARK BL/10TH AV (PETCO PARK)		99006	62	5	3	7	19	458	12	1	2	10	17	24	.	1	8	18	11	.	.	4	11	.	.
990	11TH AV/J ST		99007	62	6	28	7	19	436	12	.	4	9	17	24	6	18	8	16	11	.	.	4	11	.	.
1000	11TH AV/MARKET ST		12441	62	4	25	7	19	415	12	2	5	9	16	24	1	14	7	15	11	1	3	4	10	.	.
1010	11TH ST/F ST		12781	62	1	30	6	15	386	12	.	6	9	15	24	1	10	7	14	11	.	6	3	8	1	.
1020	BROADWAY/9TH AV		10851	62	25	118	5	14	293	12	9	33	7	14	24	6	44	5	14	11	3	9	3	6	.	1
1030	BROADWAY/6TH AV		10845	62	3	50	4	14	246	12	1	12	6	14	24	2	21	5	14	11	.	4	2	5	1	.
1040	BROADWAY/4TH AV		10841	62	7	119	2	9	134	12	.	35	3	5	24	6	56	2	8	11	1	14	1	3	.	1
1050	BROADWAY/1ST AV		10840	62	3	75	1	5	62	12	1	18	1	3	24	1	29	1	5	11	1	2	1	3	.	.
1060	BROADWAY/UNION ST		10839	62	.	57	0	3	5	12	.	14	0	2	24	.	32	0	0	11	.	7	0	3	.	.
1070	STATE ST/B ST		99020	62	.	5	0	0	0	12	.	2	0	0	24	.	.	0	0	11	.	3	0	0	.	.
All Stops		Total		5,505	5,505					1,271	1,271				2,711	2,711				802	802				36	40
535		Average		13	13	14				14	14	18			27	26	17			9	9	10				
		Maximum					68						68					50						27		

Ridership by Route and Stop

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Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
10	STATE ST/B ST		99020	68	.	.	0	0	0	12	.	.	0	0	24	.	.	0	0	12	.	.	0	0	.	.
20	BROADWAY/FRONT ST		10090	68	49	.	1	8	49	12	4	.	0	1	24	19	.	1	5	12	17	.	1	8	.	.
30	BROADWAY/3RD AV		10094	68	209	1	4	17	257	12	16	.	2	5	24	76	1	4	9	12	68	.	7	17	3	5
40	BROADWAY/5TH AV		10097	68	127	3	6	17	381	12	30	.	4	11	24	39	1	5	17	12	24	1	9	17	.	.
50	BROADWAY/8TH AV		10102	68	79	23	6	21	437	12	11	3	5	11	24	37	12	7	17	12	19	3	10	21	.	1
60	BROADWAY/10TH AV		10104	68	89	57	7	21	469	12	19	27	4	11	24	39	10	8	19	12	13	13	10	21	.	1
70	10TH AV/F ST		12048	68	27	11	7	20	485	12	2	2	4	11	24	18	7	8	19	12	3	2	10	20	3	1
80	10TH AV/MARKET ST		11657	68	21	6	7	20	500	12	1	2	4	11	24	9	1	9	19	12	6	2	11	20	.	1
90	10TH AV/ISLAND AV		12050	68	4	2	7	20	502	12	.	.	4	11	24	1	.	9	19	12	1	1	11	20	.	.
100	10TH AV/PARK BL (PETCO PARK)		99005	68	12	4	7	20	510	12	.	2	4	11	24	6	2	9	19	12	1	.	11	20	2	.
110	12TH/IMPERIAL TRANSIT CENTER		91101	68	424	80	13	43	854	12	67	2	9	16	24	163	51	13	25	12	103	17	18	43	3	3
120	NATIONAL AV/16TH ST		60061	68	2	6	12	43	850	12	.	1	9	16	24	1	3	13	25	12	1	1	18	43	.	.
130	SIGSBEE ST/NEWTON AV		11663	68	11	16	12	46	845	12	.	2	9	16	24	4	4	13	24	12	3	7	18	46	.	.
140	MAIN ST/BEARDSLEY ST		11664	68	25	26	12	46	844	12	2	12	8	16	24	10	8	13	24	12	13	5	18	46	.	1
150	MAIN ST/CESAR E CHAVEZ PKWY		11667	68	17	7	13	46	854	12	2	.	8	16	24	9	7	13	26	12	4	.	19	46	.	.
160	MAIN ST/DEWEY ST		11676	68	6	13	12	46	847	12	1	4	8	13	24	3	3	13	26	12	1	3	18	46	1	.
170	MAIN ST/EVANS ST		11679	68	5	4	12	46	848	12	1	.	8	13	24	2	1	14	26	12	2	1	19	46	.	.
180	MAIN ST/SAMPSON ST		11681	68	19	14	13	46	853	12	3	.	8	14	24	8	7	14	26	12	3	3	19	46	1	.
190	MAIN ST/SICARD ST		11685	68	1	6	12	46	848	12	.	1	8	13	24	.	2	13	26	12	.	1	18	46	.	.
200	MAIN ST/26TH ST		12077	68	8	6	12	46	850	12	3	.	9	15	24	3	1	14	26	12	1	1	18	46	.	.
210	MAIN ST/27TH ST		10143	68	4	3	13	46	851	12	.	.	9	15	24	3	2	14	26	12	.	.	18	46	.	.
220	MAIN ST/28TH ST		99414	68	78	15	13	46	914	12	18	1	10	15	24	34	7	15	31	12	8	2	19	46	.	.
230	MAIN ST/29TH ST		10155	68	9	6	13	46	917	12	2	.	10	15	24	4	1	15	31	12	1	2	19	46	.	.
240	MAIN ST/30TH ST		10165	68	6	2	14	46	921	12	3	.	10	15	24	1	.	15	31	12	2	1	19	46	.	.
250	MAIN ST/31ST ST		10175	68	5	19	13	46	907	12	.	1	10	15	24	3	5	15	31	12	2	7	19	46	.	.
260	MAIN ST/32ND ST		10551	68	38	19	14	46	926	12	6	9	10	15	24	17	6	15	31	12	4	2	19	46	.	1
270	MAIN ST/RIGEL ST		12110	68	14	3	14	46	937	12	.	.	10	15	24	9	.	16	31	12	2	.	19	46	.	.
280	MAIN ST/SIVA ST		10562	68	4	10	14	46	931	12	.	4	10	15	24	1	.	16	31	12	3	.	19	46	.	.

Ridership by Route and Stop

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Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
290	MAIN ST/THOR ST		12115	68	7	10	14	46	928	12	.	5	9	14	24	3	1	16	31	12	4	2	19	46	.	.
300	MAIN ST/UNA ST		12118	68	3	18	13	46	913	12	.	5	9	14	24	2	4	16	32	12	.	4	19	46	.	.
310	MAIN ST/VESTA ST		12119	68	18	49	13	45	882	12	7	5	9	15	24	3	23	15	30	12	4	15	18	45	1	.
320	MAIN ST/YAMA ST		60226	68	8	11	13	42	879	12	.	1	9	15	24	4	5	15	32	12	1	4	18	42	1	.
330	NATIONAL CITY BL/ROOSEVELT A		60279	68	22	31	13	38	870	12	14	3	10	16	24	4	18	14	30	12	1	8	17	38	1	.
340	NATIONAL CITY BL/W 3RD ST		11714	68	23	11	13	38	882	12	10	3	11	15	24	5	5	14	30	12	4	2	17	38	1	.
350	NATIONAL CITY BL/W 5TH ST		11715	68	11	16	13	33	877	12	9	.	11	16	24	2	2	14	30	12	.	9	17	33	.	.
360	8TH ST/NATIONAL CITY BL		10593	68	68	79	13	32	866	12	16	15	11	18	24	27	36	14	24	12	12	16	16	32	.	1
370	8TH ST/B AV		10600	68	56	15	13	37	907	12	19	3	13	18	24	26	3	15	26	12	10	7	17	37	.	.
380	8TH ST/D AV		10602	68	75	29	14	33	953	12	31	7	15	28	24	33	11	16	28	12	7	9	16	33	.	.
390	8TH ST/F AV		10228	68	49	18	14	33	984	12	27	.	17	33	24	20	10	16	28	12	1	8	16	31	.	1
400	HIGHLAND AV/8TH ST		12137	68	122	69	15	52	1,037	12	57	6	21	52	24	25	27	16	27	12	25	14	17	31	1	.
410	HIGHLAND AV/PLAZA BL		12138	68	178	137	16	56	1,078	12	57	25	24	56	24	56	81	15	27	12	32	22	18	30	.	3
420	HIGHLAND AV/14TH ST		11730	68	50	37	16	57	1,091	12	13	3	25	57	24	16	24	15	27	12	15	6	18	31	.	1
430	HIGHLAND AV/16TH ST		12143	68	91	64	16	57	1,118	12	24	11	26	57	24	39	31	15	32	12	17	14	19	33	.	2
440	HIGHLAND AV/18TH ST		11733	68	95	42	17	58	1,171	12	31	9	28	58	24	35	18	16	29	12	20	5	20	32	.	1
450	HIGHLAND AV/20TH ST		11734	68	21	23	17	56	1,169	12	3	4	28	56	24	10	11	16	29	12	7	4	20	32	.	1
460	HIGHLAND AV/22ND ST		11736	68	15	30	17	56	1,154	12	5	5	28	56	24	10	7	16	30	12	.	14	19	30	2	.
470	HIGHLAND AV/24TH ST		12147	68	71	72	17	52	1,153	12	21	23	27	52	24	26	25	16	30	12	8	13	18	29	3	.
480	HIGHLAND AV/2605		13138	68	20	43	17	49	1,130	12	2	19	26	49	24	13	14	16	36	12	4	6	18	31	.	.
490	HIGHLAND AV/30TH ST		11742	68	135	180	16	35	1,085	12	36	86	22	35	24	64	51	16	31	12	20	16	19	30	2	2
500	4TH AV/C ST		11743	68	97	124	16	32	1,058	12	14	35	20	31	24	47	44	16	31	12	23	32	18	32	1	1
510	4TH AV/C ST		30626	68	90	29	16	33	1,119	12	10	5	20	31	24	45	8	18	33	12	21	11	19	31	2	1
520	4TH AV/D ST		11745	68	42	33	17	35	1,128	12	16	4	21	35	24	17	13	18	33	12	4	6	19	30	.	.
530	4TH AV/FLOWER ST		11748	68	18	21	17	35	1,125	12	5	.	22	35	24	9	5	18	33	12	2	10	18	31	.	.
540	E ST/4TH AV		30080	68	37	47	16	33	1,115	12	16	7	23	33	24	7	24	18	33	12	6	10	18	30	1	2
550	E ST/3RD AV		10254	68	57	51	16	36	1,121	12	8	9	23	36	24	31	21	18	33	12	11	13	17	30	.	.
560	3RD AV/F ST		11754	68	138	130	17	38	1,129	12	17	35	21	34	24	86	58	19	38	12	19	25	17	29	.	2

Ridership by Route and Stop

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Sort	Stop	Dir	Stop ID	All Day Trips	All Day Board	All Day Alight	All Day Load Avg	All Day Load Max	All Day Load Total	AM Peak Trips	AM Peak Board	AM Peak Alight	AM Peak Load Avg	AM Peak Load Max	Midday Trips	Midday Board	Midday Alight	Midday Load Avg	Midday Load Max	PM Peak Trips	PM Peak Board	PM Peak Alight	PM Peak Load Avg	PM Peak Load Max	Bicycle Event	Ramp Event
570	3RD AV/MADRONA ST		30347	68	49	33	17	38	1,145	12	7	6	21	35	24	30	11	20	38	12	3	8	16	27	.	.
580	3RD AV/G ST		12180	68	47	33	17	37	1,159	12	11	3	22	37	24	27	19	20	37	12	8	4	17	27	1	.
590	3RD AV/H ST		12189	68	208	115	18	46	1,252	12	52	38	23	35	24	120	52	23	46	12	24	14	18	29	3	2
600	3RD AV/I ST		30299	68	25	26	18	45	1,251	12	5	5	23	35	24	15	19	23	45	12	5	1	18	33	.	.
610	3RD AV/648		30531	68	58	50	19	43	1,259	12	6	11	23	35	24	45	34	23	43	12	7	5	18	36	1	.
620	3RD AV/J ST		12194	68	37	71	18	40	1,225	12	3	21	21	34	24	23	43	23	39	12	8	3	19	40	2	2
630	3RD AV/K ST		12196	68	127	122	18	44	1,230	12	19	39	19	27	24	84	41	24	44	12	19	23	18	43	2	1
640	3RD AV/L ST		11769	68	72	50	18	42	1,252	12	12	15	19	27	24	42	21	25	42	12	13	11	18	38	1	1
650	3RD AV/L ST		12197	68	26	15	19	47	1,263	12	3	4	19	27	24	16	6	26	47	12	6	1	19	38	.	.
660	3RD AV/MOSS ST		12201	68	34	57	18	47	1,240	12	5	15	18	25	24	20	20	26	47	12	5	11	18	36	.	.
670	3RD AV/NAPLES ST		11771	68	78	88	18	45	1,230	12	14	17	18	25	24	39	47	25	45	12	13	7	19	39	1	1
680	3RD AV/OXFORD ST		11773	68	66	82	18	41	1,214	12	9	9	18	25	24	31	43	25	41	12	13	14	19	41	1	1
690	3RD AV/PALOMAR ST		11777	68	131	224	16	41	1,121	12	11	44	15	18	24	80	131	23	41	12	23	39	17	35	2	2
700	3RD AV/QUINTARD ST		11779	68	157	127	17	59	1,151	12	20	33	14	22	24	103	49	25	59	12	12	23	16	29	1	2
710	3RD AV/ORANGE AV		12213	68	44	49	17	59	1,146	12	6	18	13	21	24	30	21	25	59	12	7	6	17	28	1	.
720	3RD AV/ANITA ST		12212	68	40	52	17	59	1,134	12	17	12	14	20	24	12	27	25	59	12	10	4	17	30	1	.
730	BEYER WY/MAIN ST		12211	68	58	32	17	59	1,160	12	7	11	13	18	24	35	14	26	59	12	8	5	17	27	.	.
740	BEYER WY/PALM AV		11783	68	103	181	16	54	1,082	12	21	34	12	22	24	59	88	24	54	12	15	30	16	29	.	.
750	PICADOR BL/BEYER WY		11784	68	41	32	16	55	1,091	12	6	4	12	21	24	26	17	25	55	12	4	3	16	29	1	.
760	PICADOR BL/CAMINITO QUIXOTE		11786	68	35	42	16	55	1,084	12	5	3	12	21	24	22	18	25	55	12	3	10	16	30	.	.
770	PICADOR BL/CEDAR GLEN WY		11788	68	39	20	16	56	1,103	12	6	4	13	22	24	30	10	26	56	12	2	4	15	30	.	.
780	PICADOR BL/DEL SOL BL		11789	68	31	46	16	55	1,088	12	5	6	13	22	24	13	27	25	55	12	2	7	15	30	.	.
790	DEL SOL BL/RUETTE PARC LIDO		60158	68	40	34	16	55	1,094	12	11	2	13	23	24	16	13	25	55	12	11	12	15	32	.	.
800	DEL SOL BL/OCEAN BLUFFS		11414	68	6	25	16	55	1,075	12	4	2	13	23	24	2	20	25	55	12	.	1	15	31	.	.
810	BEYER BL/DEL SOL BL		12204	68	24	25	16	54	1,074	12	8	5	14	23	24	12	15	24	54	12	3	3	15	29	.	.
820	BEYER BL/CARNELL AV		12208	68	14	20	16	54	1,068	12	3	1	14	23	24	8	16	24	54	12	1	2	15	30	.	1
830	IRIS AV TROLLEY STATION		70025	69	703	531	18	58	1,240	13	102	89	14	30	24	368	330	26	58	12	166	62	23	43	1	3
840	HOWARD AV/VIA SUSPIRO		60583	69	13	7	18	58	1,246	13	2	3	14	30	24	5	1	26	58	12	5	1	24	44	1	.

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday — *Route #929 - South*

Sort	Stop	Dir	Stop ID	All Day Trips	All Day Board	All Day Alight	All Day Load Avg	All Day Load Max	All Day Load Total	AM Peak Trips	AM Peak Board	AM Peak Alight	AM Peak Load Avg	AM Peak Load Max	Midday Trips	Midday Board	Midday Alight	Midday Load Avg	Midday Load Max	PM Peak Trips	PM Peak Board	PM Peak Alight	PM Peak Load Avg	PM Peak Load Max	Bicycle Event	Ramp Event
850	HOWARD AV/1683		60584	69	5	7	18	58	1,244	13	1	1	14	30	24	4	5	26	58	12	.	1	24	44	.	.
860	HOWARD AV/VIA COSTINA		60585	69	12	15	18	55	1,241	13	3	.	14	30	24	4	13	25	55	12	3	1	24	47	.	.
870	W SAN YSIDRO BL/EL PORVENIR		60586	69	29	34	18	56	1,236	13	5	4	14	30	24	21	22	25	56	12	2	8	23	45	.	.
880	SAN YSIDRO BL/1010		60587	69	15	22	18	56	1,229	13	2	4	14	30	24	9	13	25	56	12	3	2	23	47	.	.
890	SAN YSIDRO BL/DAIRY MART RD		60588	69	35	70	17	56	1,194	13	11	13	14	29	24	12	32	24	56	12	3	14	22	42	.	.
900	SAN YSIDRO BL/SUNSET LN		60589	69	3	32	17	55	1,165	13	.	4	13	29	24	1	18	24	55	12	.	8	22	40	1	.
910	SAN YSIDRO BL/AVERIL RD		60591	69	19	65	16	50	1,119	13	10	10	13	29	24	2	35	22	50	12	3	13	21	38	1	.
920	SAN YSIDRO BL/ALVERSON RD		60592	69	50	60	16	50	1,109	13	11	9	14	30	24	29	30	22	50	12	4	17	20	34	.	2
930	SAN YSIDRO BL/SMYTHE AV		60593	69	66	41	16	49	1,134	13	3	5	13	30	24	39	30	23	49	12	16	3	21	39	.	.
940	SAN YSIDRO BL/COTTONWOOD R		60594	69	29	38	16	49	1,125	13	12	10	14	32	24	15	22	22	49	12	1	6	21	39	.	.
950	SAN YSIDRO BL/VIA DE SAN YSIDR		60595	69	16	49	16	48	1,092	13	3	7	13	31	24	6	29	21	48	12	4	6	20	38	1	.
960	CALLE PRIMERA/SYCAMORE RD		60596	69	36	74	15	49	1,054	13	8	15	13	30	24	16	32	21	49	12	8	17	20	35	.	.
970	CALLE PRIMERA/WILLOW RD		60597	69	13	21	15	49	1,046	13	3	2	13	30	24	10	18	20	49	12	.	.	20	35	.	.
980	WILLOW RD/241-265		60599	69	4	26	15	48	1,024	13	.	8	12	30	24	4	10	20	48	12	.	5	19	35	.	.
990	WILLOW RD/CAMINO DE LA PLAZA		60600	69	3	24	15	47	1,003	13	2	1	12	30	24	1	7	20	47	12	.	12	18	33	.	.
1000	CAMINO DE LA PLAZA/WILLOW RD		60601	69	47	128	13	45	922	13	6	32	10	19	24	19	56	18	45	12	15	31	17	31	.	1
1010	CAMINO DE LA PLAZA/VIA NACION		60602	69	86	40	14	45	968	13	1	5	10	19	24	38	24	19	45	12	32	8	19	37	.	.
1020	CAMIONES WY/CAMINO DE LA PLA		60484	69	14	14	14	51	968	13	2	4	10	19	24	8	8	19	51	12	.	1	19	37	.	.
1030	CAMIONES WY/INTL BORDER		99346	69	4	791	3	28	181	13	.	97	2	18	24	4	369	4	20	12	.	198	2	28	.	1
1040	E SAN YSIDRO BL/INTL BORDER T		64001	52	.	181	0	0	0	13	.	31	0	0	24	.	91	0	0	6	.	28	0	0	.	.
All Stops		Total			5,702	5,702					1,122	1,122				2,739	2,739				1,073	1,073			52	52
623		Average			13	13	14				13	13	14			27	28	18			12	11	17				
		Maximum						59						58					59					47		

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday — *Route #932 - North*

				All Day						AM Peak						Midday						PM Peak							
			Stop				Load						Load						Load						Load			Bicycle Event	Ramp Event
Sort	Stop	Dir	ID	Trips	Board	Alight	Avg	Max	Total	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max	Trips	Board	Alight	Avg	Max		
10	E SAN YSIDRO BLVD/SAN YSIDRO		99347	66	966	.	15	77	966	12	180	.	15	22	25	374	.	15	28	11	151	.	14	23	5	.
20	SAN YSIDRO BL/E BEYER WY		60441	66	50	29	15	77	987	12	4	1	15	22	25	38	21	16	27	11	5	6	14	23	.	.
30	SAN YSIDRO BL/BORDER VILLAGE		60368	66	77	85	15	77	979	12	2	9	15	23	25	57	35	17	34	11	10	34	11	21	1	.
40	SAN YSIDRO BL/VIRGINIA AV		60440	66	147	77	16	77	1,049	12	8	5	15	23	25	84	37	18	35	11	32	27	12	19	.	.
50	SAN YSIDRO BL/CENTER ST		60367	66	50	33	16	77	1,066	12	17	5	16	25	25	27	15	19	34	11	3	7	12	18	.	.
60	SAN YSIDRO BL/I-805 (RAMP)		60439	66	42	56	16	77	1,052	12	9	11	16	24	25	23	24	19	36	11	7	12	11	19	.	.
70	SAN YSIDRO BL/W PARK AV		60365	66	41	46	16	77	1,047	12	10	7	16	27	25	20	18	19	37	11	7	7	11	19	.	.
80	SAN YSIDRO BL/CYPRESS DR		60574	66	39	22	16	77	1,064	12	10	.	17	27	25	13	10	19	37	11	7	8	11	20	1	1
90	COTTONWOOD RD/SAN YSIDRO B		60436	66	83	64	16	76	1,083	12	18	7	18	27	25	45	41	19	32	11	9	4	11	20	.	.
100	COTTONWOOD RD/SEAWARD AV		60364	66	14	17	16	76	1,080	12	3	1	18	27	25	11	12	19	32	11	.	4	11	20	.	.
110	SOUTH VISTA AV/COTTONWOOD		60205	66	49	112	15	77	1,017	12	4	24	16	27	25	28	51	18	30	11	10	18	10	18	.	1
120	BEYER BL/POPLAR ST		60204	66	47	42	15	77	1,022	12	17	6	17	30	25	20	25	18	30	11	4	5	10	18	.	.
130	BEYER BL/DEL SUR BL		60361	66	88	66	16	76	1,044	12	34	15	19	31	25	30	25	18	29	11	8	10	10	18	.	.
140	BEYER BL/PRECISION PARK LN		60360	66	50	27	16	76	1,067	12	14	14	19	31	25	22	7	19	29	11	10	2	11	19	.	.
150	BEYER BL/DAIRY MART RD		60359	66	6	6	16	76	1,067	12	.	3	18	31	25	.	2	19	29	11	2	.	11	19	.	.
160	IRIS AV TROLLEY STATION		70025	66	301	426	14	27	942	12	52	88	15	24	25	138	180	17	27	11	57	44	12	21	1	.
170	BEYER BL/IRIS AV (I-905 RAMP)		99412	66	.	4	14	27	938	12	.	2	15	24	25	.	1	17	27	11	.	.	12	21	.	.
180	BEYER BL/CARNELL AV		12933	66	10	22	14	27	926	12	.	2	15	24	25	9	11	17	27	11	1	4	12	21	.	.
190	BEYER BL/DEL SOL BL		60431	66	17	42	14	29	901	12	1	5	15	24	25	7	13	17	29	11	5	9	12	21	.	.
200	CORONADO AV/MADDEN AV		60155	66	37	99	13	27	839	12	12	25	14	25	25	13	37	16	27	11	4	19	10	19	.	.
210	CORONADO AV/DEARBORN DR		60196	66	6	15	13	27	830	12	1	.	14	25	25	4	9	16	27	11	.	2	10	19	.	.
220	CORONADO AV/27TH ST		60194	66	28	21	13	27	837	12	11	6	14	26	25	9	10	16	27	11	4	1	10	19	.	.
230	CORONADO AV/25TH ST		60152	66	50	53	13	28	834	12	13	6	15	26	25	20	22	15	28	11	4	12	10	18	1	.
240	OUTER RD/CORONADO AV		60458	66	31	15	13	31	850	12	3	5	15	26	25	22	3	16	31	11	3	6	9	18	.	.
250	HOLLISTER ST/ELM ST		60421	66	5	6	13	31	849	12	2	.	15	26	25	1	5	16	31	11	.	1	9	18	.	.
260	HOLLISTER ST/PALM AV		60354	66	200	110	14	38	939	12	70	25	19	30	25	66	46	17	38	11	31	13	11	25	.	1
270	HOLLISTER ST/409		60460	66	.	4	14	38	935	12	.	1	18	30	25	.	3	17	38	11	.	.	11	25	.	.
280	HOLLISTER ST/MAIN ST		60355	66	5	46	14	38	894	12	.	24	16	26	25	4	10	16	38	11	1	3	11	24	.	.

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday *Route #932 - North*

Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
290	MAIN ST/HOLLISTER ST		60085	66	11	12	14	39	893	12	.	4	16	26	25	7	6	17	39	11	.	1	11	24	.	.
300	MAIN ST/JACQUA ST		60045	66	6	34	13	38	865	12	.	14	15	26	25	6	9	16	38	11	.	6	10	21	.	.
310	MAIN ST/SILVAS ST		60046	66	14	61	12	38	818	12	5	21	14	22	25	7	15	16	38	11	2	4	10	20	1	1
320	BROADWAY/MAIN ST		60430	66	44	44	12	40	818	12	4	3	14	23	25	22	20	16	40	11	8	9	10	22	1	.
330	BROADWAY/SOMMERSET PLAZA		60463	66	17	15	12	39	820	12	.	4	13	20	25	14	7	16	39	11	1	2	10	22	.	.
340	BROADWAY/ANITA ST		30463	66	40	36	12	39	824	12	10	8	14	20	25	22	10	17	39	11	4	1	10	22	2	1
350	BROADWAY/1427		60462	66	15	11	13	43	828	12	1	6	13	19	25	9	1	17	43	11	5	.	10	22	.	.
360	BROADWAY/PALOMAR ST		60426	66	186	96	14	41	918	12	23	7	14	23	25	117	59	20	41	11	32	14	12	21	.	1
370	BROADWAY/1225		60461	66	18	33	14	41	903	12	2	3	14	24	25	11	24	19	41	11	4	5	12	21	.	.
380	BROADWAY/OXFORD ST		60424	66	115	109	14	42	909	12	28	21	15	27	25	50	65	18	42	11	26	8	14	25	1	.
390	BROADWAY/NAPLES ST		60358	66	101	73	14	46	937	12	14	13	15	28	25	49	47	19	46	11	21	4	15	29	.	1
400	BROADWAY/CRESTED BUTTE ST		60357	66	21	30	14	44	928	12	4	1	15	28	25	6	23	18	44	11	6	4	15	29	.	.
410	BROADWAY/MOSS ST		60423	66	100	64	15	45	964	12	26	15	16	29	25	42	33	18	45	11	12	11	15	30	.	2
420	BROADWAY/ARIZONA ST		60356	66	29	19	15	45	974	12	2	4	16	28	25	18	11	18	45	11	4	4	15	29	1	.
430	BROADWAY/L ST		60422	66	107	99	15	44	982	12	22	35	15	27	25	63	50	19	44	11	12	8	16	27	.	2
440	BROADWAY/K ST		60416	66	120	60	16	58	1,042	12	10	29	13	25	25	88	9	22	58	11	9	11	16	24	1	.
450	BROADWAY/J ST		60415	66	35	34	16	58	1,043	12	6	8	13	25	25	22	20	22	58	11	3	6	15	25	.	.
460	BROADWAY/I ST		60351	66	26	61	15	56	1,008	12	5	3	13	23	25	11	50	21	56	11	5	6	15	24	.	.
470	BROADWAY/H ST		60506	66	69	205	13	47	872	12	4	40	10	17	25	39	116	18	47	11	15	25	14	25	.	2
480	BROADWAY/H ST		60414	66	83	44	14	48	911	12	6	13	10	17	25	43	19	19	48	11	21	8	15	29	.	.
490	BROADWAY/G ST		60413	66	64	53	14	46	922	12	13	10	10	20	25	25	19	19	46	11	8	15	15	28	.	3
500	F ST/BROADWAY		60148	66	50	56	14	46	916	12	20	5	11	22	25	17	29	18	46	11	11	10	15	28	.	.
510	F ST/667		60453	66	24	27	14	46	913	12	3	2	11	22	25	15	15	18	46	11	2	8	14	27	.	.
520	WOODLAWN AV/F ST		60080	66	20	56	13	37	877	12	3	4	11	22	25	12	39	17	37	11	4	8	14	27	.	.
530	BAYFRONT/E ST TROLLEY STATIO		91007	66	180	436	9	30	621	12	37	85	7	23	25	61	196	12	30	11	39	68	11	23	1	5
540	WOODLAWN AV/E ST		30402	66	11	20	9	32	612	12	2	1	7	22	25	5	10	12	32	11	2	6	11	22	.	.
550	E ST/JEFFERSON AV		60445	66	17	25	9	32	604	12	1	6	7	22	25	10	13	12	32	11	5	3	11	22	.	.
560	BROADWAY/E ST		60411	66	29	63	9	26	570	12	10	3	8	26	25	10	46	10	24	11	5	7	11	23	.	3

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday

Route #932 - North

Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
570	BROADWAY/FLOWER ST		60410	66	17	33	8	28	554	12	4	1	8	28	25	9	19	10	24	11	4	6	11	24	1	.
580	BROADWAY/D ST		60409	66	9	60	8	28	503	12	2	3	8	28	25	3	24	9	21	11	2	14	10	20	.	.
590	BROADWAY/MACINTOSH ST		60408	66	20	37	7	29	486	12	7	4	8	29	25	3	15	8	21	11	2	11	9	19	.	.
600	NATIONAL CITY BL/35TH ST		60025	66	38	126	6	22	398	12	2	39	5	19	25	25	38	8	22	11	6	14	8	17	.	2
610	NATIONAL CITY BL/33RD ST		60073	66	24	17	6	22	405	12	7	1	5	19	25	8	5	8	22	11	6	9	8	17	.	.
620	NATIONAL CITY BL/30TH ST		60068	66	6	22	6	20	389	12	.	5	5	19	25	1	7	8	20	11	2	7	7	15	.	.
630	NATIONAL CITY BL/24TH ST		50168	66	33	82	5	19	340	12	17	8	6	19	25	6	51	6	15	11	1	12	6	15	2	.
640	NATIONAL CITY BL/20TH ST		50164	66	4	7	5	19	337	12	1	.	6	19	25	3	1	6	15	11	.	5	6	12	.	.
650	NATIONAL CITY BL/18TH ST		50163	66	12	33	5	19	316	12	2	9	5	19	25	4	12	6	15	11	3	9	5	12	.	.
660	NATIONAL CITY BL/16TH ST		50144	66	16	24	5	18	308	12	.	1	5	18	25	12	11	6	14	11	3	10	5	10	1	1
670	NATIONAL CITY BL/W 12TH ST (CIT		50142	66	27	48	4	17	287	12	15	17	5	17	25	10	25	5	14	11	1	4	5	10	.	3
680	NATIONAL CITY BL/PLAZA BL		50141	66	11	37	4	13	261	12	4	13	4	11	25	4	8	5	13	11	1	14	3	6	1	1
690	W 8TH ST/ROOSEVELT AV		10966	66	17	42	4	14	236	12	7	6	4	14	25	7	19	4	14	11	2	12	2	5	.	.
700	W 8TH ST/8TH ST TROLLEY STATI		70018	66	.	236	0	0	0	12	.	52	0	0	25	.	112	0	0	11	.	27	0	0	3	2
All Stops		Total			4,225	4,225					824	824				1,981	1,981				674	674			25	33
350		Average			15	14	12				14	13	13			30	29	15			11	10	11				
		Maximum						77						31					58					30		

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday — *Route #932 - South*

Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
10	W 8TH ST/8TH ST TROLLEY STATI		70018	66	163	.	2	10	163	12	20	.	2	4	25	79	.	3	10	12	37	.	3	6	1	1
20	HARBOR DR/W 8TH ST		99406	66	3	1	2	10	165	12	.	.	2	4	25	3	1	3	10	12	.	.	3	6	.	.
30	CIVIC CENTER DR/WILSON AV		60775	66	.	16	2	8	149	12	.	4	1	4	25	.	5	3	8	12	.	4	3	5	.	.
40	ROOSEVELT AV/CIVIC CENTER DR		60776	66	5	7	2	8	147	12	.	2	1	4	25	1	3	3	8	12	3	.	3	7	.	1
50	ROOSEVELT AV/PLAZA BL		60777	66	1	3	2	7	145	12	1	1	1	4	25	.	2	3	7	12	.	.	3	7	.	.
60	NATIONAL CITY BL/W 8TH ST		60280	66	90	15	3	13	220	12	19	4	2	5	25	33	8	4	8	12	25	1	5	13	.	.
70	NATIONAL CITY BL/W 12TH ST		50108	66	26	9	4	11	237	12	6	1	3	7	25	8	4	4	8	12	7	4	5	11	.	.
80	NATIONAL CITY BL/W 16TH ST		50109	66	28	8	4	12	257	12	1	.	3	7	25	20	5	5	11	12	4	1	5	12	.	2
90	NATIONAL CITY BL/W 18TH ST		50111	66	36	5	4	15	288	12	11	.	4	9	25	9	.	5	12	12	13	3	6	15	.	.
100	NATIONAL CITY BL/W 21ST ST		50112	66	7	2	4	15	293	12	.	.	4	9	25	4	2	5	12	12	2	.	6	15	1	.
110	NATIONAL CITY BL/MILE OF CARS		50096	66	37	16	5	15	314	12	12	5	4	10	25	12	6	5	15	12	5	1	7	14	.	.
120	NATIONAL CITY BL/30TH ST		99420	66	14	13	5	14	315	12	6	2	5	10	25	2	5	5	12	12	1	4	7	14	.	.
130	NATIONAL CITY BL/W 33RD ST		99417	66	19	18	5	14	316	12	4	1	5	10	25	7	5	5	13	12	5	8	6	14	.	.
140	NATIONAL CITY BL/W 35TH ST		99418	66	87	41	5	18	362	12	3	17	4	9	25	20	13	6	12	12	30	6	8	18	.	1
150	BROADWAY/SEA VALE ST		60232	66	46	8	6	20	400	12	13	.	5	9	25	16	5	6	12	12	13	1	9	20	.	.
160	BROADWAY/CHULA VISTA ST		60233	66	44	6	7	22	438	12	16	.	6	13	25	15	1	7	12	12	7	2	10	22	.	.
170	BROADWAY/D ST		60287	66	36	5	7	21	469	12	10	.	7	13	25	14	3	7	14	12	6	1	10	21	.	.
180	BROADWAY/FLOWER ST		60288	66	29	14	7	21	484	12	8	2	8	12	25	10	5	7	13	12	10	3	11	21	.	.
190	E ST/BROADWAY		30219	66	56	20	8	23	520	12	6	1	8	16	25	41	10	8	23	12	3	4	11	21	.	1
200	WOODLAWN AV/E ST		30341	66	16	16	8	23	520	12	2	4	8	17	25	10	1	9	23	12	1	6	10	20	.	.
210	BAYFRONT/E ST TROLLEY STATIO		91007	66	319	165	10	28	674	12	41	41	8	13	25	118	56	11	19	12	115	44	16	28	.	2
220	WOODLAWN AV/F ST		30288	66	14	5	10	28	683	12	5	.	8	14	25	3	5	11	18	12	5	.	17	28	.	.
230	F ST/WOODLAWN AV		99419	66	18	13	10	27	688	12	7	.	9	15	25	5	4	11	18	12	6	7	16	27	.	.
240	BROADWAY/F ST		60291	66	67	49	11	30	706	12	15	5	10	18	25	30	20	12	19	12	11	14	16	30	.	2
250	BROADWAY/G ST		60292	66	59	44	11	26	721	12	14	7	10	18	25	26	9	12	19	12	9	16	16	26	1	.
260	BROADWAY/H ST		30342	66	301	89	14	38	933	12	35	17	12	25	25	148	37	17	29	12	75	25	20	38	2	1
270	BROADWAY/I ST		60294	66	92	23	15	43	1,002	12	5	3	12	26	25	43	16	18	36	12	29	4	22	43	.	.
280	BROADWAY/J ST		60295	66	56	25	16	46	1,033	12	5	4	12	27	25	25	10	18	35	12	20	7	23	46	.	1

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday *Route #932 - South*

Sort	Stop	Dir	Stop ID	All Day						AM Peak					Midday					PM Peak					Bicycle Event	Ramp Event
				Trips	Board	Alight	Load Avg	Load Max	Load Total	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max	Trips	Board	Alight	Load Avg	Load Max		
290	BROADWAY/K ST		60296	66	92	87	16	45	1,038	12	8	34	10	16	25	46	14	20	39	12	28	21	24	45	.	.
300	BROADWAY/L ST		60299	66	98	78	16	50	1,058	12	8	10	10	19	25	68	44	21	42	12	20	15	24	50	.	1
310	BROADWAY/ARIZONA ST		60237	66	36	25	16	50	1,069	12	.	2	9	19	25	28	9	21	43	12	5	10	24	50	.	.
320	BROADWAY/MOSS ST		60300	66	58	83	16	48	1,044	12	9	10	9	21	25	30	30	21	42	12	17	28	23	48	.	2
330	BROADWAY/CRESTED BUTTE ST		60238	66	24	35	16	49	1,033	12	1	2	9	21	25	5	6	21	42	12	15	20	22	49	.	.
340	BROADWAY/NAPLES ST		60301	66	97	103	16	56	1,027	12	19	9	10	27	25	36	58	21	43	12	35	27	23	56	.	2
350	BROADWAY/OXFORD ST		60302	66	188	143	16	51	1,072	12	23	24	10	28	25	92	67	22	44	12	38	35	23	51	4	1
360	BROADWAY/PALOMAR ST		60192	66	172	150	17	57	1,094	12	7	16	9	27	25	88	79	22	39	12	54	36	25	57	.	1
370	BROADWAY/1410		60456	66	17	23	16	55	1,088	12	5	.	10	28	25	4	15	21	39	12	4	6	24	55	.	.
380	BROADWAY/ANITA ST		60239	66	46	37	17	57	1,097	12	2	4	10	27	25	21	18	22	40	12	19	8	25	57	.	.
390	BROADWAY/ANITA ST		60457	66	34	25	17	57	1,106	12	3	6	9	26	25	15	17	21	41	12	12	1	26	57	.	.
400	BROADWAY/MAIN ST		60241	66	37	44	17	60	1,099	12	7	7	9	26	25	9	28	21	39	12	10	6	27	60	.	1
410	BROADWAY/SILVAS ST		60153	66	13	12	17	59	1,100	12	1	1	9	25	25	8	10	21	40	12	3	1	27	59	.	.
420	MAIN ST/JACQUA ST		60151	66	23	22	17	58	1,101	12	.	2	9	24	25	13	12	21	40	12	6	5	27	58	.	.
430	HOLLISTER ST/MAIN ST		60298	66	13	7	17	58	1,107	12	1	1	9	24	25	3	4	21	39	12	8	.	28	58	.	.
440	HOLLISTER ST/I408		60455	66	4	4	17	58	1,107	12	.	1	9	24	25	3	2	21	39	12	1	1	28	58	.	1
450	HOLLISTER ST/CONIFER AV		60236	66	19	71	16	53	1,055	12	.	10	8	24	25	9	31	20	39	12	9	26	26	53	2	.
460	HOLLISTER ST/PALM AV		60297	66	175	108	17	58	1,122	12	22	17	9	24	25	63	54	20	41	12	58	22	29	58	.	.
470	HOLLISTER ST/ELM ST		60235	66	18	6	17	58	1,134	12	1	.	9	24	25	6	5	20	40	12	8	1	30	58	.	.
480	OUTER RD/CORONADO AV		60454	66	18	38	17	58	1,114	12	3	3	9	24	25	8	15	20	38	12	7	15	29	58	1	.
490	CORONADO AV/25TH ST		60086	66	51	43	17	57	1,122	12	9	4	9	26	25	30	12	21	42	12	7	13	29	57	.	1
500	CORONADO AV/27TH ST		60047	66	29	25	17	56	1,126	12	5	4	9	26	25	13	11	21	42	12	4	7	28	56	.	.
510	CORONADO AV/MADDEN AV		60089	66	88	58	18	59	1,156	12	20	5	10	26	25	38	29	21	45	12	16	20	28	59	.	1
520	BEYER BL/CORONADO AV		60305	66	33	24	18	59	1,165	12	3	.	11	26	25	13	14	21	45	12	17	7	29	59	.	.
530	BEYER BL/DEL SOL BL		12204	66	24	16	18	59	1,173	12	3	6	10	26	25	17	6	21	45	12	2	2	29	59	.	.
540	BEYER BL/CARNELL AV		12208	66	11	13	18	58	1,171	12	2	3	10	26	25	8	7	22	46	12	.	1	29	58	.	.
550	IRIS AV TROLLEY STATION		70025	66	896	352	26	74	1,715	12	95	56	14	26	25	360	173	29	51	12	322	87	48	74	1	7
560	BEYER BL/IRIS AV		60308	66	2	.	26	74	1,717	12	.	.	14	26	25	1	.	29	51	12	.	.	48	74	.	.

Ridership by Route and Stop

Copy of Copy of FY09 MTS Contract_Weekday *Route #932 - South*

Sort	Stop	Dir	Stop ID	All Day Trips	All Day Board	All Day Alight	All Day Load Avg	All Day Load Max	All Day Load Total	AM Peak Trips	AM Peak Board	AM Peak Alight	AM Peak Load Avg	AM Peak Load Max	Midday Trips	Midday Board	Midday Alight	Midday Load Avg	Midday Load Max	PM Peak Trips	PM Peak Board	PM Peak Alight	PM Peak Load Avg	PM Peak Load Max	Bicycle Event	Ramp Event
570	BEYER BL/DAIRY MART RD		60309	66	15	31	26	74	1,701	12	1	2	14	26	25	9	16	29	51	12	3	11	48	74	.	.
580	BEYER BL/PRECISION PARK LN		60310	66	17	43	25	73	1,675	12	2	16	12	24	25	8	13	29	53	12	6	7	48	73	.	.
590	BEYER BL/DEL SUR BL		60311	66	63	103	25	73	1,635	12	8	6	13	24	25	39	45	28	53	12	5	24	46	73	.	.
600	BEYER BL/POPLAR ST		60245	66	19	35	25	73	1,619	12	7	3	13	25	25	9	20	28	55	12	.	5	46	73	.	.
610	SOUTH VISTA AV/SUNSET LN		60052	66	123	101	25	73	1,641	12	19	17	13	26	25	87	50	29	61	12	7	13	45	73	1	.
620	COTTONWOOD RD/SEAWARD AV		60247	66	19	20	25	73	1,640	12	1	3	13	26	25	11	5	30	61	12	4	11	44	73	.	.
630	COTTONWOOD RD/SAN YSIDRO B		60246	66	45	37	25	74	1,648	12	6	4	13	29	25	24	22	30	61	12	12	8	45	74	.	.
640	SAN YSIDRO BL/VIA DE SAN YSIDR		60595	66	37	74	24	72	1,611	12	7	10	13	23	25	22	39	29	62	12	6	16	44	72	.	.
650	SAN YSIDRO BL/E PARK AV		60313	66	46	38	25	72	1,619	12	9	6	13	24	25	25	17	29	62	12	11	3	45	72	.	2
660	SAN YSIDRO BL/I-805 (RAMP)		60314	66	30	27	25	72	1,622	12	2	1	13	24	25	23	20	29	62	12	4	4	45	72	.	1
670	SAN YSIDRO BL/CENTER ST		60315	66	61	73	24	70	1,610	12	2	5	13	23	25	48	49	29	62	12	4	10	44	70	.	.
680	SAN YSIDRO BL/VIRGINIA AV		60249	66	158	175	24	75	1,593	12	8	16	12	23	25	98	112	29	62	12	39	43	44	75	.	.
690	SAN YSIDRO BL/BORDER VILLAGE		60250	66	101	108	24	83	1,586	12	6	12	12	22	25	58	70	28	63	12	28	22	44	83	.	1
700	SAN YSIDRO BL/CAMINO DE LA PL		60251	66	51	50	24	81	1,587	12	5	9	11	19	25	40	23	29	65	12	4	15	43	81	.	.
710	CAMIONES WY/CAMINO DE LA PLA		60484	66	10	55	23	79	1,542	12	.	8	11	17	25	1	33	28	62	12	9	12	43	79	.	.
720	CAMIONES WY/INTL BORDER		99346	66	2	1,470	1	20	74	12	.	104	2	13	25	2	660	1	20	12	.	517	0	1	1	.
730	E SAN YSIDRO BLVD/SAN YSIDRO		99347	55	.	74	0	0	0	12	.	25	0	0	25	.	36	0	0	8	.	1	0	0	.	1
All Stops		Total			4,782	4,782					605	605				2,241	2,241				1,309	1,309			15	35
365		Average			17	17	14				10	10	9			32	32	17			20	20	24				
		Maximum						83						29					65					83		

APPENDIX F

BICYCLE LEVEL OF SERVICE WORKSHEETS

BCI = 3.67 - 0.966**BL** - 0.410**BLW** - 0.498**CLW** + 0.002**CLV** + 0.0004**OLV** + 0.022**SPD** + 0.506**PKG** - 0.264**AREA** + **AF**

where:

BL = presence of a bicycle lane or paved shoulder ≥ 0.9 m
no = 0
yes = 1

BLW = bicycle lane (or paved shoulder) width
m (to the nearest tenth)

CLW = curb lane width
m (to the nearest tenth)

CLV = curb lane volume
vph in one direction

OLV = other lane(s) volume - same direction
vph

SPD = 85th percentile speed of traffic
km/h

PKG = presence of a parking lane with more than 30 percent occupancy
no = 0
yes = 1

AREA = type of roadside development
residential = 1
other type = 0

AF = $f_t + f_p + f_{rt}$

where:

f_t = adjustment factor for truck volumes *(see below)*

f_p = adjustment factor for parking turnover *(see below)*

f_{rt} = adjustment factor for right-turn volumes *(see below)*

Adjustment Factors

Hourly Curb Lane Large Truck Volume[1]	f_t	Parking Time Limit (min)	f_p
≥ 120	0.5	≤ 15	0.6
60 - 119	0.4	16 - 30	0.5
30 - 59	0.3	31 - 60	0.4
20 - 29	0.2	61 - 120	0.3
10 - 19	0.1	121 - 240	0.2
< 10	0.0	241 - 480	0.1
		> 480	0.0

Hourly Right-Turn Volume[2]	f_{rt}
≥ 270	0.1
< 270	0.0

arge trucks are defined as all vehicles with six or more tires.
ıcludes total number of right turns into driveways or minor intersections along a roadway gment.

ing the perspectives of more than 200 study participants in three locations (Olympia, WA; Austin, TX; and Chapel Hill, NC), the BCI model was veloped for all bicyclists as shown in table 1 (see appendix A for the English units version). The participants rated each of 67 sites included on a leotape with respect to how comfortable they would be riding there under the conditions shown. The ratings were made using a six-point scale ıere a ***one*** indicated that the individual would be "extremely comfortable" riding there while a ***six*** indicated that the individual would be "extremely comfortable" riding in those conditions. This model predicts the overall comfort level rating of a bicyclist using the eight significant (at p £ 0.01) riables shown and an adjustment factor (AF) to account for three additional operational characteristics. The basic model (excluding the justment factor) has an R^2-value of 0.89, indicating that 89 percent of the variance in the index or comfort level of the bicyclist is explained by the ght variables included in the model. In other words, the model is a reliable predictor of the expected comfort level of bicyclists on the basis of these ght variables describing the geometric and operational conditions of the roadway. The variable with the largest effect on the index is the presence absence of a bicycle lane or paved shoulder (**BL**); the presence of a bicycle lane (paved shoulder) that is at least 0.9 m wide reduces the index almost a full point, indicating an increased level of comfort for the bicyclist. Increasing the width of the bicycle lane or paved shoulder (**BLW**) or e curb lane (**CLW**) also reduces the index as does the presence of residential development along the roadside (**AREA**). On the other hand, an crease in traffic volume (**CLV** and **OLV**) or motor vehicle speeds (**SPD**) increases the index, indicating a lower level of comfort for the bicyclist. ıe presence of on-street parking (**PKG**) also increases the index.

addition to the primary variables included in the BCI model, three additional variables defining specific operating conditions were also examined. ıese supplemental variables were identified during the pilot phase of the study as having a potential impact on the comfort level of bicyclists and cluded the presence of: 1) large trucks or buses, 2) vehicles turning right into driveways, and 3) vehicles pulling into or out of on-street parking aces. An analysis of the overall comfort level ratings made when viewing video clips illustrating these conditions showed all three of these riables to significantly increase the index, thus indicating a lower level of comfort when these conditions were present. For all bicyclists, the overall ean rating increased by 0.50 when large trucks or buses were present. When there were vehicles pulling into or out of parking spaces, the erage rating increased by 0.60. And finally, the presence of right-turning vehicles resulted in an increase in the mean rating of 0.10.

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	0	0.0	15.0	803	0	30	0	0	0.2	4.25	D	Moderately Low
San Ysidro Blvd north of Camino de la Plaza	1	8.0	12.0	384	384	30	1	0	0.4	2.76	C	Moderately High
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	473	473	30	0	0	0.1	2.54	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	476	476	30	1	0	0.5	3.45	D	Moderately Low
Camiones Way - Bike Path	1	6.0	12.0	0	0	9	0	0	0	0.45	A	Extremely High
Camiones Way south of Camino de la Plaza	1	2.0	16.0	638	0	30	0	0	0.2	2.55	C	Moderately High

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	0	0.0	15.0	975	0	30	0	0	0.2	4.59	E	Very Low
San Ysidro Blvd north of Camino de la Plaza	1	8.0	12.0	465	465	30	1	0	0.5	3.05	C	Moderately High
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	568	568	30	0	0	0.1	2.77	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	573	573	30	1	0	0.5	3.69	D	Moderately Low
Camiones Way - Bike Path	1	6.0	12.0	0	0	9	0	0	0	0.45	A	Extremely High
Camiones Way south of Camino de la Plaza	1	2.0	16.0	638	0	30	0	0	0.2	2.55	C	Moderately High

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	0	0.0	15.0	1006	0	30	0	0	0.2	4.65	E	Very Low
San Ysidro Blvd north of Camino de la Plaza	1	8.0	12.0	481	481	30	1	0	0.5	3.09	C	Moderately High
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	667	667	30	0	0	0.2	3.11	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	588	588	30	1	0	0.5	3.72	D	Moderately Low
Camiones Way Bike Path	1	6.0	12.0	0	0	9	0	0	0	0.45	A	Extremely High
Camiones Way south of Camino de la Plaza	1	2.0	16.0	364	0	30	0	0	0.1	1.90	B	Very High

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	0	0.0	15.0	1304	0	30	0	0	0.3	5.35	F	Extremely Low
San Ysidro Blvd north of Camino de la Plaza	1	8.0	12.0	623	623	30	1	0	0.6	3.53	D	Moderately Low
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	686	686	30	0	0	0.2	3.15	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	732	732	30	1	0	0.6	4.17	D	Moderately Low
Camiones Way Bike Path	1	6.0	12.0	0	0	9	0	0	0	0.45	A	Extremely High
Camiones Way south of Camino de la Plaza	1	2.0	16.0	638	0	30	0	0	0.2	2.55	C	Moderately High

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	1	5.0	15.0	1304	0	30	0	0	0.3	3.76	D	Moderately Low
San Ysidro Blvd north of Camino de la Plaza	1	5.0	12.0	623	623	30	1	0	0.6	3.91	D	Moderately Low
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	686	686	30	0	0	0.2	3.15	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	732	732	30	1	0	0.6	4.17	D	Moderately Low
Camiones Way Bike Path	1	6.0	12.0	0	0	9	0	0	0	0.45	A	Extremely High
Camiones Way south of Camino de la Plaza	1	2.0	16.0	638	0	30	0	0	0.2	2.55	C	Moderately High

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	0	0.0	15.0	1342	0	30	0	0	0.3	5.42	F	Extremely Low
San Ysidro Blvd north of Camino de la Plaza	1	8.0	12.0	642	642	30	1	0	0.6	3.58	D	Moderately Low
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	788	788	30	0	0	0.2	3.40	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	750	750	30	1	0	0.6	4.21	D	Moderately Low
Camiones Way south of Camino de la Plaza	0	0.0	16.0	364	0	30	0	0	0.1	3.12	C	Moderately High

BCI & LOS Computations Spreadsheet

Bicycle Compatibility Index and Level of Service Computations												
Location	BCI Model Variables									Results		
Midblock Identifier (Route/Intersecting Streets, Segment Number, Link Number, Etc.)	BL	BLW	CLW	CLV	OLV	SPD	PKG	AREA	AF	BCI	Level of Service	Bicycle Compatibility Level
San Ysidro Blvd I-5 NB Ramps to Camino de la Plaz	1	5.0	15.0	1342	0	30	0	0	0.3	3.83	D	Moderately Low
San Ysidro Blvd north of Camino de la Plaza	1	5.0	12.0	642	642	30	1	0	0.6	3.95	D	Moderately Low
Camino de la Plaza Virginia to Camiones Way	1	5.0	12.0	788	788	30	0	0	0.2	3.40	C	Moderately High
Camino de la Plaza Camiones Way to San Ysidro B	1	5.0	12.0	750	750	30	1	0	0.6	4.21	D	Moderately Low
Camiones Way south of Camino de la Plaza	0	0.0	16.0	364	0	30	0	0	0.1	3.12	C	Moderately High

APPENDIX G

RECOMMENDATIONS FOR NON-PROJECT SPECIFIC MOBILITY IMPROVEMENTS

The following list of recommendations would improve overall mobility in the San Ysidro LPOE vicinity. These recommendations are based on the results of the extensive analysis conducted for the LPOE project; however, these recommended improvements are not attributed to the LPOE project and therefore are not within the purview of the proposed project. The recommended improvements would ameliorate the mobility deficiencies anticipated in the near-term and long-term.

Recommendations for Non-Project Related Mobility Improvements

The following recommendations are based on the near-term condition upon completion of the proposed LPOE project. Figure G-1 depicts the locations for the following recommendations:

1. **Construct pedestrian enhancements at the intersection of E. San Ysidro Boulevard and Interstate 5 northbound ramps.** This signalized intersection experiences the most pedestrian crossings in the project vicinity. Additional traffic calming enhancements would improve pedestrian safety and capacity. This includes pedestrian pop outs on the northwest, northeast and southeast corners (while providing for truck turning radii) and in-pavement crosswalk delineation.

2. **Provide a loop ramp connecting Camino de la Plaza to northbound Interstate 5**. The eastbound to northbound only loop ramp would alleviate traffic congestion at the existing San Ysidro Boulevard/Interstate 5 northbound ramps. This congestion degrades transit, pedestrian, bicycle and vehicular conditions at the San Ysidro International Border Station. In the PM peak hour there are over 500 vehicles that turn right from San Ysidro Boulevard to Interstate 5 northbound. The proposed loop ramp would serve most of these vehicles. This would substantially reduce the number of pedestrian and vehicle conflicts. It would also reduce delays experienced by vehicles especially during rail preemption signal phases. Public and private bus and taxi operations would improve as well. A concept plan for the ramp in included as Figure G-5.

3. **Provide a loading/unloading area on the east side of Interstate 5 for privately owned vehicles.** Currently there are no loading/unloading facilities provided for privately owned vehicles on the east side of Interstate 5 nor does the proposed LPOE expansion make any provisions for this mode of travel. However, private vehicles are an important component of a comprehensive port facility. Pedestrian surveys conducted for this project indicate that approximately 20% of all pedestrians crossing the border will use a private vehicle to continue to their final destination. Field observations indicate that drivers are illegally loading/unloading passengers on Rail Court on the east side of the road, thus necessitating passengers to cross Rail Court. This creates pedestrian conflicts with private buses that use the nearby loading facility. The Rail Court cul-de-sac may provide a good opportunity to provide passenger loading and unloading that would improve this existing deficiency. It is also located at a proximate location to the northbound LPOE (approximately a 350-foot walk along a pedestrian-only plaza). However, there may be constraints that might make this infeasible.

4. **Provide a privately owned vehicle staging area on the east side of Interstate 5.** Currently staging/waiting areas for privately owned vehicles are not accommodated. The western edge of Rail Court is used as a loading area for private buses and vans. The width of Rail Court does not provide adequate room for vehicles to park on the east side of the street and forces pedestrians to cross the street. The east side of the Rail Court is also adjacent to railroad right-of-way. Therefore, Rail Court does not provide a location for staging. Private vehicle staging needs to occur nearby in a convenient location so that drivers could be called and

arrive shortly to load their passengers without undue circuitous routing. One convenient location is the parcel immediately northwest of the intersection of E. San Ysidro Boulevard and Interstate 5 northbound ramps. This lot is nearby and provides a direct route to the Rail Court cul-de-sac without any circuitous routing.

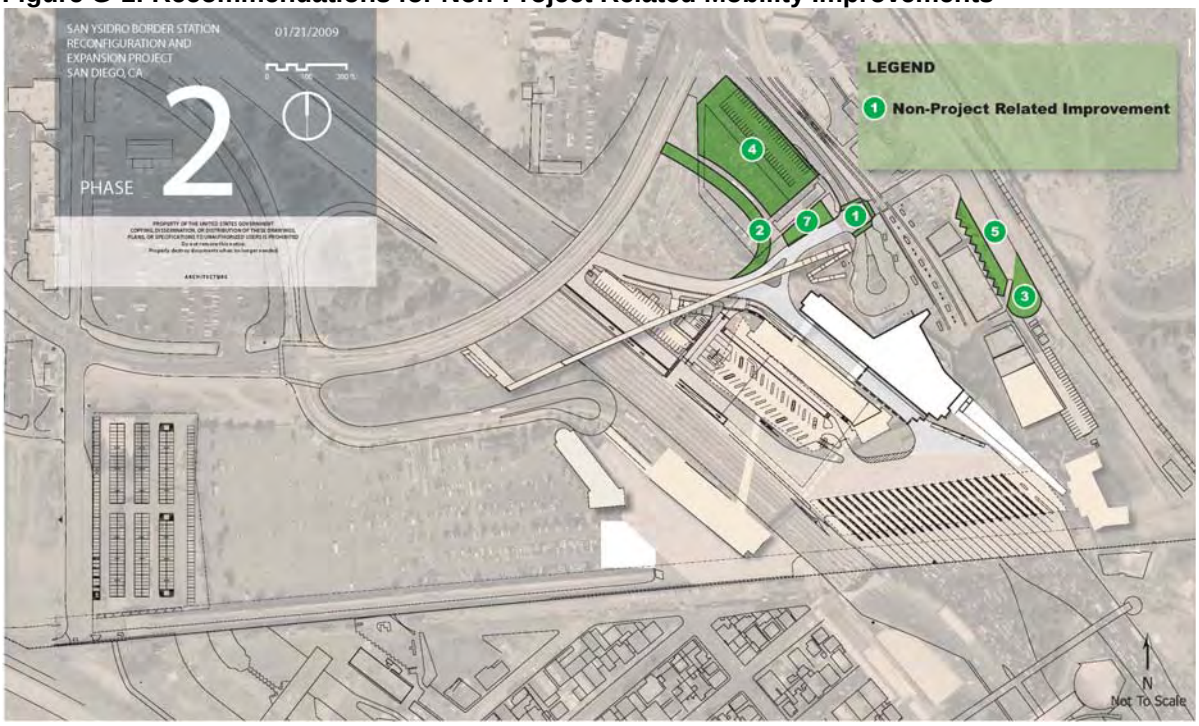
5. **Relocate the Greyhound Bus Station** on the east side of Interstate 5 south of the Interstate 5 northbound ramps. Approximately 26% of private bus trips originate from this location. There are over 20 scheduled trips to downtown San Diego per day. Northbound buses crossing into the U.S. unload their passengers to be processed as pedestrians through the LPOE. These passengers must then reload on the U.S. side of the border. As such, it is important for the bus loading to be as close to the northbound LPOE as possible in order to provide a convenient and safe location for these northbound bus passengers. Ticketing and loading/unloading should be provided in the immediate retail area south of Rail Court. The existing private bus loading/unloading area should be expanded to provide adequate bus bays to offset the future loss of the Greyhound loading/unloading area.

6. **Promote or require private bus operators to stage outside the immediate vicinity of the port.** With limited available land near the northbound LPOE, private bus staging should be accommodated off-site. The proposed off-site staging should have minimal disruption to private bus operations as the majority of private bus companies currently operate this way. Drivers and the operations center can communicate by way of radio when a bus is needed at the loading area.

7. **Replace the existing bike racks with bike lockers**. Bike lockers provide more theft resistance than bike racks where wheels, seats, lights and other components of a bike are prone to theft. However, overriding concerns pertaining to national security may preclude including bike racks.

8. **Provide additional facilities on the Trolley and MTS buses to accommodate more bicycles.** One of the City of San Diego's General Plan goals is to make bicycling a viable mode of travel. Bicycles can provide convenient transportation for destinations ranging between one and five miles. Major regional employment centers and other destinations for cyclists are located at distances in excess of 15 miles from the border crossing. Consequently, bicyclists with destination points beyond the five-mile radius are dependent on other modes of transportation to link them to their final destination. Other transportation modes available to cyclists at the border crossing are public and private buses and Trolley. However, these modes offer few accommodations for bicyclists. Additional facilities for bikes on public transit are needed in order to create a viable link between the border and the major employment centers.

Figure G-1: Recommendations for Non-Project Related Mobility Improvements



Intermodal Transportation Center

During the environmental outreach process there have been discussions regarding the need for an intermodal transportation center. Intermodal transportation involves more than one mode of transport used by passengers. The Land Port of Entry is an important opportunity to provide an intermodal transportation center because of the interaction of vehicular, transit, and pedestrian uses within a concentrated location. An intermodal center would provide a connected space accommodating light rail, private and public buses, jitneys, taxis, and privately owned vehicles. Ancillary facilities would include retail, pedestrian spaces, restrooms, ticketing facilities, information kiosks, and other facilities related to passenger travel.

The planning and design of such a facility is not part of the scope of this study; however, KOA Corporation has developed several recommendations regarding the site location of the intermodal center based on the preceding findings of the mobility analysis. The recommendations also discuss key features of the facility that relate to mobility. Several criteria are considered in determining the ideal location for the San Ysidro LPOE intermodal transportation center. These include:

- Proximity to the proposed northbound and southbound LPOE pedestrian egress and ingress locations.
- Direct/contiguous pedestrian connectivity without vehicular conflicts arising at the northbound and southbound LPOE pedestrian egress and ingress locations.
- Proximity to the existing Trolley Station to accommodate the existing infrastructure that is unlikely to move and maintain proximity for the cross-border pedestrians that use the Trolley to connect to other destinations (approximately 40% of all cross-border pedestrian trips).
- Site constraints such as the railroad right-of-way to the east, the international border to the south, Interstate 5 to the west, and the port facilities and buildings.

Facility Needs

The intermodal transportation center would provide a connected space for the variety of transportation services that include: light rail, private and public buses, jitneys, taxis, and privately owned vehicles as well as ancillary facilities that would include retail, pedestrian spaces, restrooms, ticketing facilities, information kiosks, and other facilities related to passenger travel. Each transportation mode requires different amenities at the LPOE. Table G-1 illustrates the different facility needs by transportation mode.

Table G-1
Intermodal Transportation Center Facility Needs By Mode

	Facility Needs				
Mode	Unloading	Loading	Ticketing	Staging	Ancillary Facilities
Trolley	Yes	Yes	Yes	Yes	Yes
MTS bus	Yes	Yes	No	No[1]	Yes
Private bus	Yes	Yes	Yes	No	Yes
Jitney	Yes	Yes	No	No	No
Taxi	Yes	Yes	No	No[1]	No
P.O.V.	Yes	Yes	No	No	Yes

[1] MTS buses are assumed to stage on Virginia Avenue.Taxis are assumed to stage on Camino de la Plaza.

Unloading/Loading Area

As shown in Table G-1, all transportation modes require unloading and loading areas at the intermodal transportation center in order to accommodate northbound pedestrian crossings (loading) and southbound pedestrian crossings (unloading). The areas should be proximate to the border crossing locations in order to minimize potential vehicular conflicts. The areas must also be large enough for private and public buses to maneuver easily.

Ticketing

Ticketing facilities are needed only for the Trolley and private bus operators. Other modes of transportation do not require ticketing facilities as tickets or fares are collected on the vehicles by the operator (MTS buses and jitneys) or do not require tickets (privately owned vehicles).

Staging

Staging at the intermodal center is needed only for the Trolley because the fixed rail system provides all necessary staging as well. MTS buses operate on a fixed route and their staging can be efficiently and conveniently accommodated after their previous stop on Virginia Avenue. Private bus staging can be efficiently and conveniently accommodated outside of the immediate port vicinity and coordinated by radio with the loading area similar to the existing operations. Jitneys operate on a fixed route and adequate staging can be provided anywhere along their route. Taxis currently stage at the Interstate 5 overcrossing along Camino de la Plaza, which provides an excellent location within view of the San Ysidro Transit Station taxi loading area. Privately owned vehicle staging should be nearby; however, their staging does not have to be at the immediate port facility. For example, a cell phone lot similar to the one provided currently at Lindberg Field Airport is an adequate facility for staging that is not located at the immediate loading area.

Ancillary Facility Needs

Ancillary facility needs include those functions in support of the Trolley, MTS bus, private buses, and privately owned vehicles. These transportation modes would require ticketing stations, information kiosks, retail uses, waiting areas, and restrooms at the intermodal transportation center. Privately owned vehicles also need parking within walking distance of the LPOE and the designated privately owned vehicle loading area. Passengers that do not have cell phones to communicate with the driver

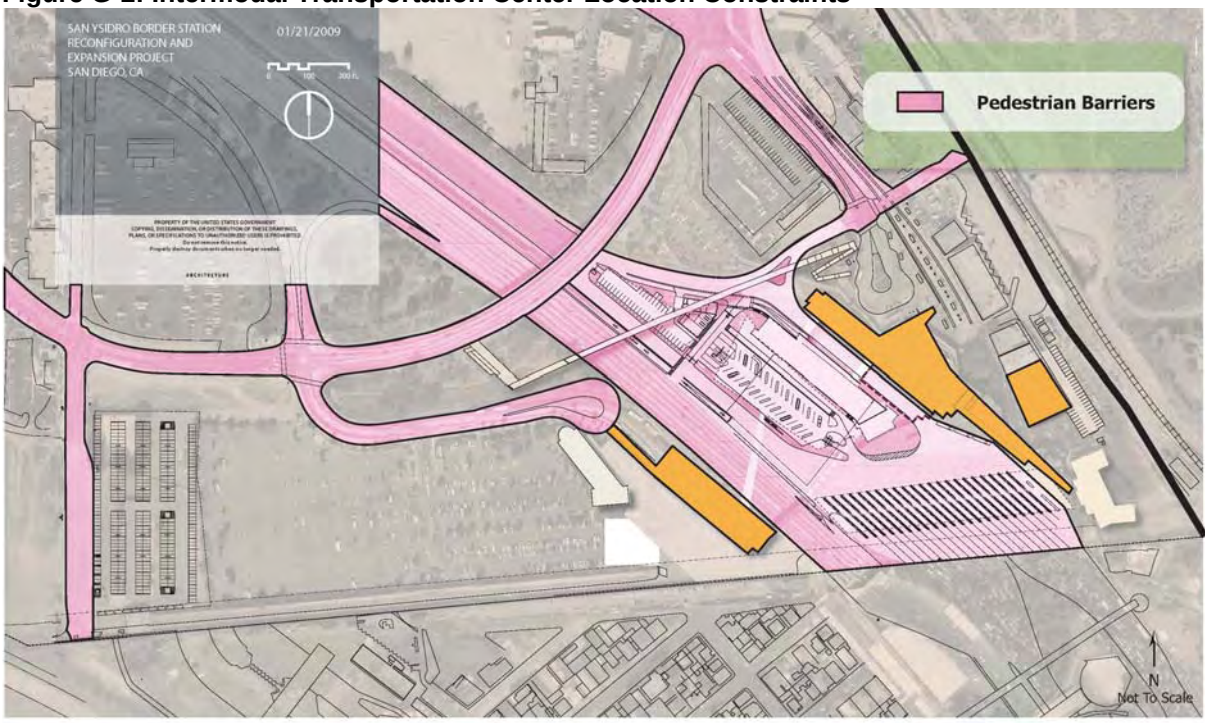
or require special assistance benefit from having the driver meeting them on foot at the border. This requires the driver to park their vehicle in a convenient location within walking distance to the LPOE.

The need for ancillary facilities for passenger waiting is a function of the frequency of vehicles for each mode. For example, a pedestrian that crosses the border and uses a taxi experiences nominal wait time for available taxis; therefore, minimal waiting facilities are required. However, a northbound private bus passenger processed through the port as a pedestrian may have to wait for up to an hour before the next private bus is available because of private bus schedules. This pedestrian requires a sheltered waiting area, restrooms, an information kiosk, food and other travel-related facilities.

Location Constraints

The location of the intermodal transportation center is physically constrained by the railroad right-of-way to the east, the international border to the south, and Interstate 5 to the west as well as the existing port facilities and buildings. In addition, the intermodal transportation center requires direct pedestrian connectivity without vehicular conflicts to the northbound and southbound LPOE pedestrian egress and ingress locations. Figure G-2 illustrates these constraints.

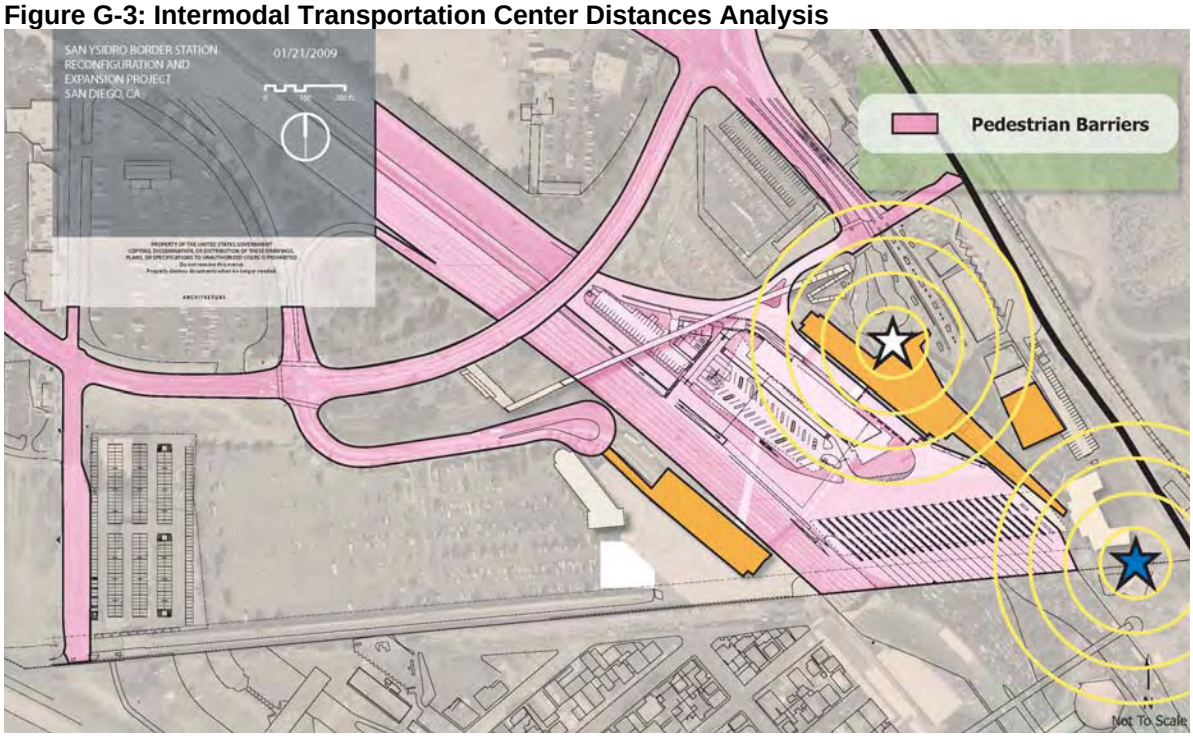
Figure G-2: Intermodal Transportation Center Location Constraints



The constraints exercise shows that Interstate 5 and the LPOE facility create the western pedestrian barrier. The northern pedestrian barrier is Camino de la Plaza and further south are the Interstate 5 northbound ramps. These ramps dissect two to three acres of useable land to the north between the ramps and Camino de la Plaza. However, relocating the existing freeway ramps would be costly and may be infeasible due to weaving constraints to the north and the port facility to the south. The eastern barrier is the railroad right-of-way. The southern barrier is the U.S.-Mexico border. Also, the proposed central plant creates a southern barrier as well. The existing trolley tracks create pedestrian barriers near the northbound LPOE itself. The area of Rail Court and the San Ysidro Transit Center were not considered barriers for this exercise.

The contiguous space left for developing the intermodal transportation center averages approximately 400 feet wide and approximately 1,800 feet long – generally the area between Interstate 5 and the railroad right-of-way and the U.S-Mexican border and Camino de la Plaza. However, one of the criteria for the ideal location for the intermodal center is the proximity to the northbound and southbound LPOE locations. Proximity to the existing trolley station is also a key factor because it is assumed the trolley station will remain at its current location. Figure G-3 shows distance from the northbound and southbound LPOE in 100-foot increments.

Figure G-3: Intermodal Transportation Center Distances Analysis



Use of Available Space

SANDAG has estimated that 3.5 acres are necessary for a "multimodal transit center and staging facility"[1]. SANDAG's estimated space for the Intermodal Transit Center assumes 3.0 acres will be required to provide 8 bus bays for MTS and BRT buses, 4 taxi spaces, 2 jitney spaces, and staging space for Greyhound and other private operator buses. SANDAG has also estimated 0.5 acres will be required off-site to provide 13 spaces for jitneys and 25 spaces for taxis. As discussed earlier, we recommend maintaining some staging area within the intermodal transportation center and locating other staging off-site. In addition, we also recommend that some privately owned vehicle parking be accommodated at the facility.

Ideally, the intermodal transit center would incorporate SANDAG's 3.5-acre size requirement in contiguous acres as near to the LPOE as possible. More weight should be given to the proximity of the intermodal transportation center to the northbound port since there are two southbound ports and only one northbound port. The proximity to the existing trolley station should also be a key factor. It is assumed that the trolley station itself is not included in SANDAG's 3.5-acre estimate; KOA has included 0.5 acres for the trolley station in its recommendations since this mode of travel is a key component of mobility at the LPOE. As Figure G-4 shows, a 3.5-acre intermodal transportation center could be located and be contiguous with both the northbound LPOE and the trolley. Each of the facilities listed in Table G-1 would be accommodated within the 3.5 acres shown in Figure G-4. Additionally, we recommend parking be located just north of rail court in a convenient location for drivers to park and assist loading passengers with special needs.

[1] Source: SANDAG's "San Ysidro Port of Entry Reconfiguration and Expansion Project" presentation to Borders Committee, February 27, 2009

Figure G-4: Intermodal Transportation Center Location and Space Needs

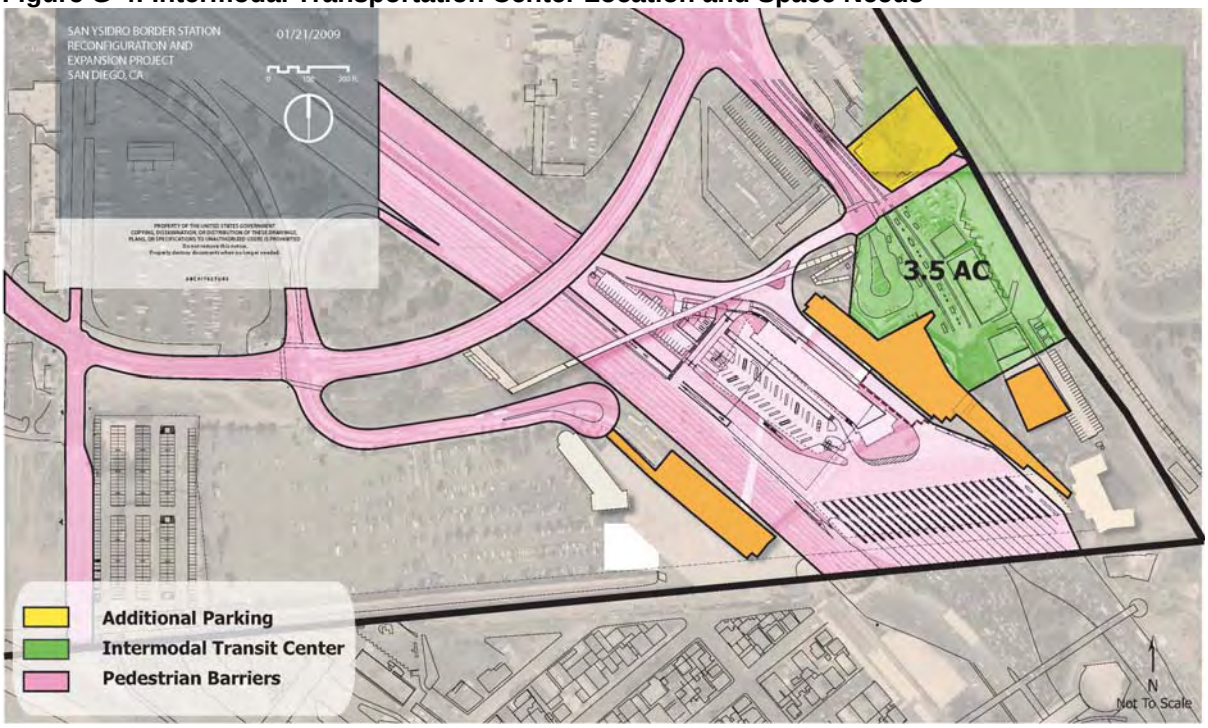


Figure G-5: Proposed NB I-5 Loop Ramp

N
Not To Scale