OCEAN BEACH

EXISTING CONDITIONS REPORT MOBILITY ELEMENT

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City Planning & Community Investment

City of San Diego

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OCEAN BEACH

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	SECTIONS	PAGE
Street	System	1
Pedes	strian Circulation	1
	way System	6
Public	c Transit	10
Autor	mobiles	17
Parki	ng	40
Intelli	igent Transportation System (ITS)	42
Trans	portation Demand Management	42
Airpo	orts	50
Passe	nger Rail	50
Good	s Movement & Fright	50
	FIGURES	PAGE
1.	Pedestrian Circulation	
2.	Pedestrian Crossings	
3.	Bikeway System	
4.	Bicycle Crossings	
5.	Bikeway Classifications	
6.	Bus Routes 35 & 923	
7.	Detailed Bus Routes	. 14
8.	Transit Passenger Activity	
9.	Daily Traffic	
10a.	Peak Period Summer Traffic, AM	
10b.	Peak Period Summer Traffic, PM	
11.	Daily Seasonal Traffic Comparison	. 22
12a.	Peak Period Seasonal Comparison, AM	. 23
12b.	Peak Period Seasonal Comparison, PM	. 24
13.	Functional Street Classifications	. 26
14.	Street Segment Level of Service	. 29
15.	Intersection Control Locations	. 31
16a.	Intersection Movements, AM Peak, Winter	. 32

16b.	Intersection Movements, AM Peak Summer	33
17a.	Intersection Movements, PM Peak, Winter	
17b.	Intersection Movements, PM Peak, Summer	35
18a.	Signalized Intersections Level of Service, Winter.	
18b.	Signalized Intersections Level of Service, Summer	
18c.	Signalized Intersections Level of Service, Summer	
18d.	Signalized Intersections Level of Service, Summer	
19.	Public Parking Supply	
20.	Community-Identified Parking Shortage Areas	43
21.	AM Parking Occupancy – Weekdays	44
22.	AM Parking Occupancy – Weekends	
23.	Midday Parking Occupancy – Weekdays	
24.	Midday Parking Occupancy – Weekends	
25.	PM Parking Occupancy – Weekdays	48
26.	PM Parking Occupancy – Weekends	49
	TADIEC	
1 D.		PAGE
	lestrian-involved Collision Data	5
•	clist-involved Collision Data	10
	s Stop Deficiencies	17
4. ve	hicle-Vehicle Collision Data	38
	APPENDICES *	PAGE
A. M'	TS Route 35 Timetable	A-1
B. M	TS Route 923 Timetable	B-1
C. Tr	ansit Passenger Activity, MTS Route 35	C-1
D. Tr	ansit Passenger Activity, MTS Route 923	D-1
E. Tr	ansit Stop Inventory	E-1
F. Da	nily Machine Counts, Winter 2008	F-1
G. Da	aily Machine Counts, Summer	G-1
H. Ro	padway Classification Level of Service & ADT	H-1
I. Sig	gnalized Intersection Level of Service Criteria	I-1
J. Pe	ak Period Intersection LOS & Delay Per Vehicle	J-1
K. Int	tersection Lane Approaches with LOS E or F	K-1
L. Int	tersection Manual Counts	L-1

^{*} Under a separate cover

OCEAN BEACH

EXISTING CONDITIONS REPORT MOBILITY ELEMENT

This report addresses the current main motorized and non-motorized modes of travel in Ocean Beach that provide mobility opportunities for residents and visitors. Modes of travel include vehicles, public transit, bicycles, and walking. It is important that transportation be considered in conjunction with land use patterns so that proper access and circulation can be provided. Also, a balanced transportation system is required to provide equal opportunities to all modes of travel.

STREET SYSTEM

The Ocean Beach community has a grid network with streets aligned in northeast-southwest and northwest-southeast directions. The Interstate 8 (I-8), which terminates at the northern gateway to Ocean Beach, provides regional access to the community. Connections to eastbound and westbound I-8 are provided via Sunset Cliffs Boulevard. This roadway has a northeast-southwest alignment and it is practically situated in the middle of the community. West Point Loma Boulevard is another street that provides a major access to the community.

Intercommunity access between Ocean Beach and Peninsula is provided by all the northwest-southeast streets. The community is served by two transit lines of the Metropolitan Transit System, described in the Public Transit section of this report. Community streets that are designated for bicycle routes are identified by signage (see Bikeway System section).

The following sections will briefly describe some of the aspects of the mobility system.

PEDESTRIAN CIRCULATION

Ocean Beach's grid network of two-lane streets with sidewalks allows its residents to walk to local commercial districts, community facilities, and recreational attractions such as beaches and parks.

The City's Pedestrian Master Plan defines pedestrian route classifications based on the functionality of pedestrian facilities. Pedestrian routes in Ocean Beach were classified based on these definitions and are shown on Figure 1, along with planned land uses and community facilities. Figure 2 shows available data on the number of pedestrians crossing at various intersections in Ocean Beach. The intersection of Cable Street and Newport Avenue shows the greatest numbers of pedestrians crossing all legs of the intersection streets with over 200 in the morning peak hour and almost 600 in the evening peak hour.

Pedestrian Facility Assessment

The City is developing a Pedestrian Master Plan to identify pedestrian improvements where needed in a smart, cost effective, orderly, and consistent manner throughout the City. As part of that effort, an inventory of pedestrian facilities in high pedestrian priority areas of Ocean Beach

will be undertaken in order to identify deficiencies. The following discussion is a general community-wide assessment of pedestrian conditions that will provide direction for the more detailed Pedestrian Master Plan effort to follow.

Safety

Pedestrian-involved crash data for Ocean Beach is compared with city-wide collisions. The comparison is summarized in Table 1. As illustrated in this table, the overall pedestrian-involved crashes per 1,000 residents is 2.0 for the city, while in Ocean Beach it is 2.7. The higher rate of 0.7 per 1,000 pedestrian-involved crashes in Ocean Beach is due to the fact that the area's beach attracts a large number of non-residents, and high level of pedestrian activity in the community which is much more than the city-wide average. While the number of monthly visitors to the area varies during the year, in July of 2007, there were about 494,800 people who were counted by the Life Guard Services to have visited Ocean Beach.

The following locations experienced three or more pedestrian crashes from 2003 through 2007 but detailed review of the collision data did not reveal a pattern.

- Cable Street and Newport Avenue
- Cable Street and Santa Monica Avenue
- Newport Avenue and Sunset Cliffs Boulevard
- Nimitz Boulevard and West Point Loma Boulevard

Based on field observations, the following intersection locations pose difficulty for pedestrians attempting to cross the street due to intersection alignments, crossing distances, and vehicle speeds.

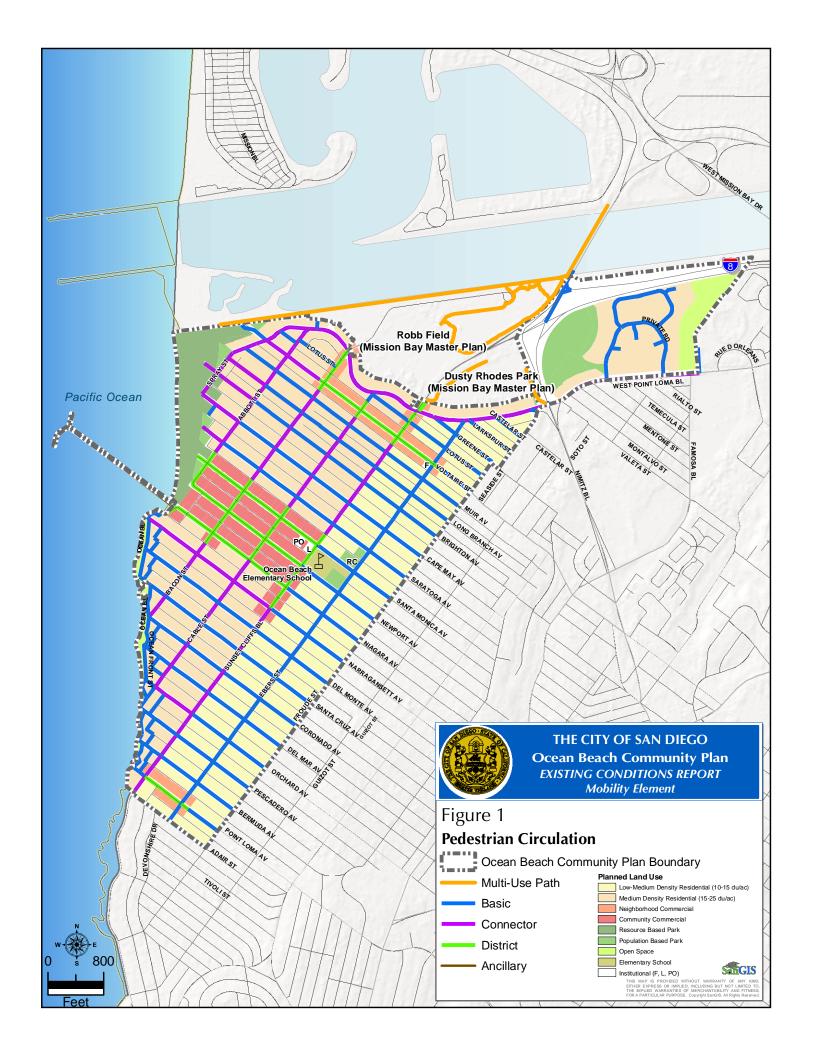
- West Point Loma Boulevard at Ebers Street/Larkspur Street
- West Point Loma Boulevard at Castelar Street
- West Point Loma Boulevard at Cable Street
- West Point Loma Boulevard at Bacon Street

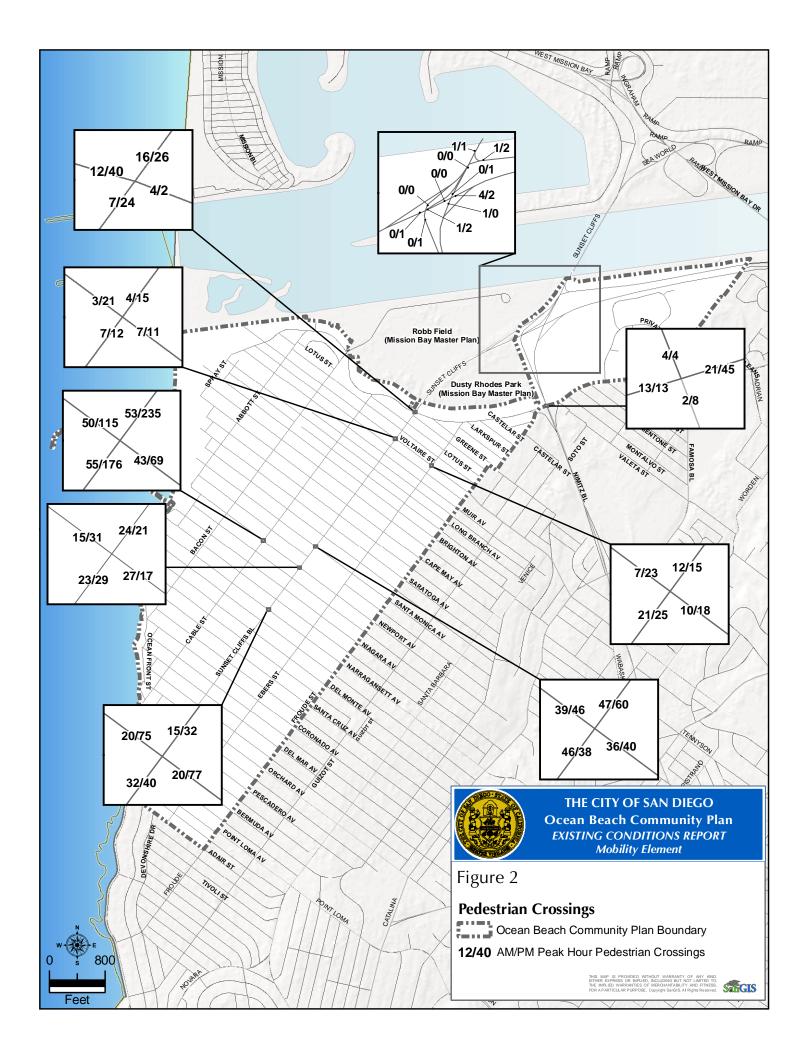
Accessibility

As a community, Ocean Beach's pedestrian facilities are generally accessible to persons with disabilities due to its network of mostly barrier-free sidewalks and presence of curb ramps at most intersections and alleys. Exceptions to this will be inventoried and specific recommendations for access-related pedestrian improvements will be identified as part of the City's Pedestrian Master Plan effort.

Connectivity

Generally, pedestrian connectivity within Ocean Beach is excellent due to its complete grid network of streets. There are pedestrian facilities within the parks that could be better connected to adjacent sidewalks, and pedestrian connections along the beach could be improved. Pedestrian connections to other communities are provided as below:





- Sunset Cliffs Boulevard sidewalk along the bridge that leads to paths to Mission Bay Park, Linda Vista and Mission Valley
- West Point Loma Boulevard across Nimitz Boulevard sidewalk exists on the north side but is missing on the south side of West Point Loma Boulevard leading to the inbound (eastbound) transit stop on West Point Loma at Nimitz.
- Voltaire Street, Point Loma Avenue, and other local streets that connect over the hill to the Peninsula community.

Table 1: Pedestrian-Involved Crash Data (2003-2007)

	Ocean Beach		Citywide	
	Crashes	%	Crashes	%
Pedestrian Crashes	45	100	2,703	100
Pedestrian Crashes Normalized by 1,000 Population*	0.54		0.40	
Location Type				
Alley	1	1.7	35	1.3
Intersection	26	61	1,344	50
Midblock	14	30	1,198	44
Other	4	7.3	126	4.7
Top Primary Cause Type				
Pedestrian at Fault	15	43	946	53
Violated Pedestrian's Right of Way	5	14	308	17
Improper Start	5	14	284	16
Ran Stop Sign	5	14	35	0.02
Unsafe Movement – Left	5	14	222	0.13
Age Group				
Under 16	10	20	589	21
16 – 65	34	70	1,950	69
65 and Over	4	10	269	9
Unknown	0	0	26	0.1
Street Class Type				
Local	30	66	1,062	39
Collector	9	20	571	21
Major	5	11	954	35
Ramp	0	0	15	0.6
Other	1	2	95	4
Lighting Type				
Dark/Dusk/Dawn	22	48	1,018	38
Daylight	23	52	1,682	62
Foggy/Darkness	0	0	2	0.07
Unknown	0	0	1	0.04

^{*} Year 2007 population estimates were used for this calculation.

Pedestrian Level of Service

A new methodology is being developed to determine the level of service for pedestrian facilities. This information will be included in the Phase 4 of the City of San Diego Pedestrian Master Plan.

BIKEWAY SYSTEM

Ocean Beach is a community where bicycles are used extensively. The flat terrain near the beach areas, the grid type street pattern, the high demand for the limited automobile parking, the short distances between destinations within Ocean Beach, and the connection of Ocean Beach bikeways to the citywide system of bikeways are all factors in bicycle usage in this community. Ocean Beach's bikeway system is composed of Class I, II and III bikeways and is shown on Figure 3. All the buses that serve Ocean Beach are equipped with bicycle racks. This accommodates bikers' regional access. The number of bicyclists who crossed at signalized intersections during AM and PM peak hours is shown on Figure 4. The following is description of each classification of bicycle facility.

Class I Bicycle Path

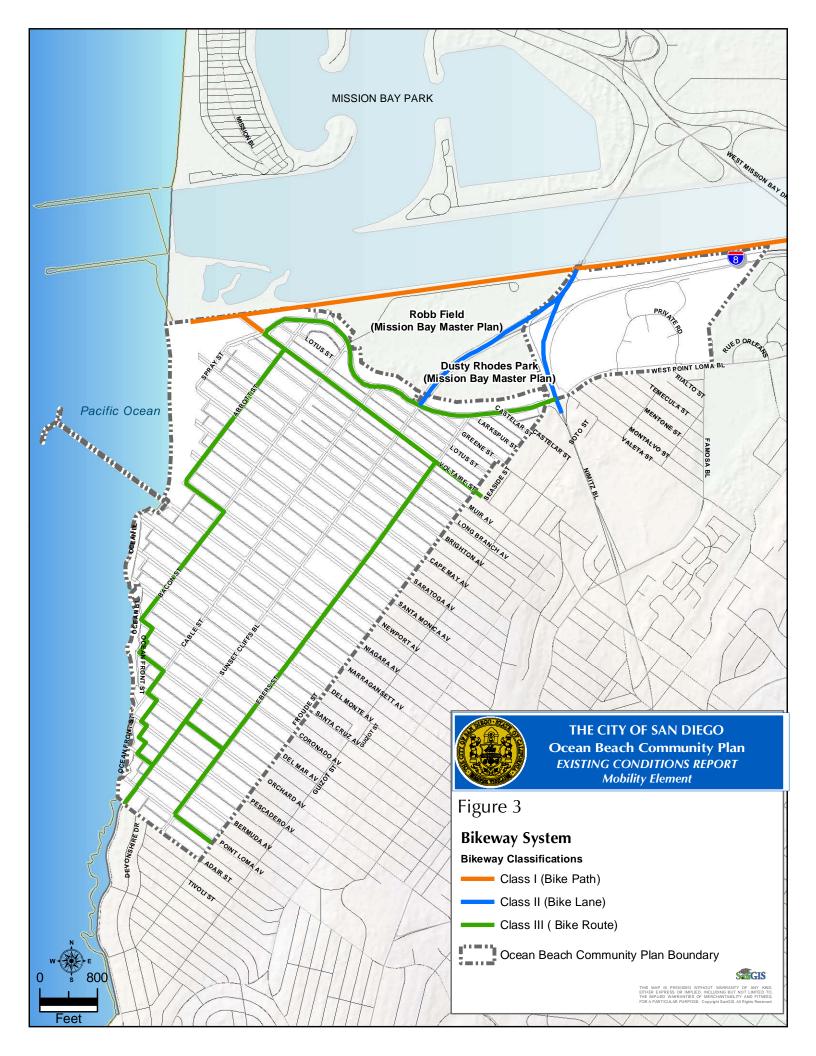
A Class I Bicycle Path is a completely separated right-of-way for the exclusive use of non-motorized vehicles and pedestrians. A Bike Path is provided along the south side of the San Diego River Flood Control Channel, from near the ocean and extending to connect onto the Bicycle Path of Sunset Cliffs Boulevard. Another Class I facility goes along the south side of the San Diego River Channel from Sunset Cliffs Boulevard eastward for 1.9 miles to Pacific Coast Highway.

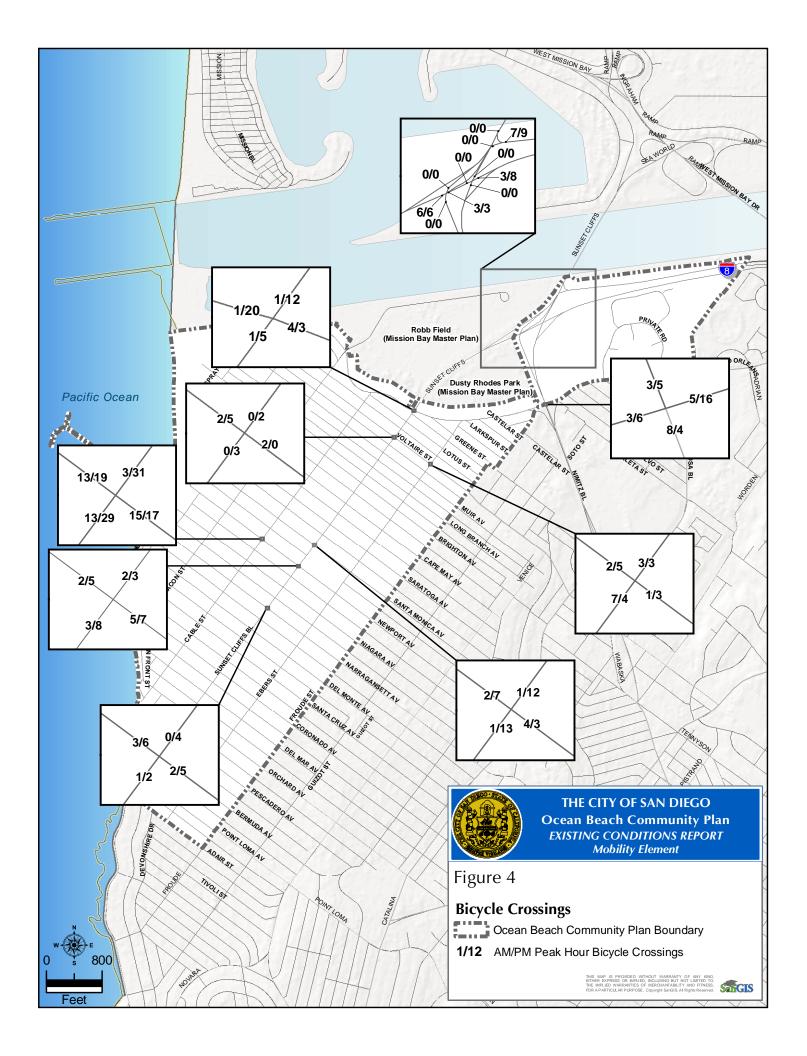
Class II Bicycle Lane

A Class II Bicycle Lane is a painted lane for bicycles, marked between the traffic lane and the curb (if parking is prohibited), or between the traffic lane and parking (if parking is allowed). Special signing is installed to identify this category. Sunset Cliffs Boulevard and Nimitz Boulevard have Bicycle Lanes between Interstate 8 and West Point Loma Boulevard.

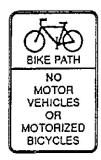
Class III Bicycle Route

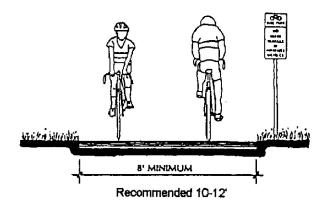
A Class III Bicycle Route is a non-exclusive street route, shared with vehicles which is designated as a preferred bicycle route and identified with special signing. In the north-south directions, Ebers Street, from Point Loma Avenue to West Point Loma Avenue is the main uninterrupted route. Connectivity to Peninsula is provided via West Point Loma Avenue, which connects to the Bike Lane on Nimitz Boulevard. On the west side of the community, the Bicycle Route zigzags through short segments of many streets to connect Sunset Cliffs Boulevard to Bacon Street. The main uninterrupted east-west Bicycle Route in the community is on Voltaire Street, between Ebers Street and Spray Street, connecting to the Bike Path south of San Diego River. Portions of Abbot Street, Bacon Street, Cable Street, Ebers Street, Sunset Cliffs Boulevard, and Voltaire Street are examples of roadways which have Bike Routes. Figure 5 illustrates each of these classes.



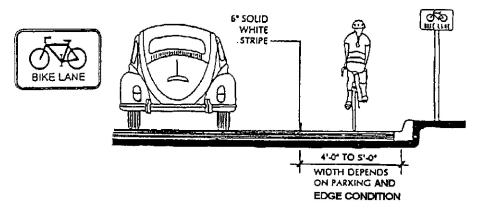


Class I Bike Path





Class II Bike Lane



Class III Bike Route

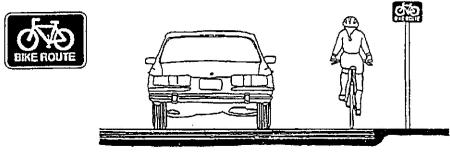




Figure 5 **Bikeway Classifications**

Collisions

The bicycle-related collisions in the community are analyzed based on various factors. A comparison is made for each of the factors between the community and the city-wide average. Table 2 includes the comparison summary.

Table 2: Bicycle-Involved Crash Data (2003-2007)

	Ocean Beach		Citywide	
	Crashes	%	Crashes	%
Total Crashes	64	3	2,163	100
Crashes Normalized by 1,000 Population *	0.92		0.32	
Location Type				
Alley	0	0	15	0
Intersection	33	50	973	45
Midblock	26	42	1,065	49
Other	5	8	107	4
Top Primary Causes				
Bike at Fault	11	17	433	20
Left-turn Didn't Yield	7	11	0	0
Improper Start	8	12	172	8
Unsafe Movement – Right-turn	0	0	272	12
Age Group				
Under 16	10	15	454	21
16 – 65	51	79	1,593	75
65 and Over + Other	2	3	57	2
Other	1	1	27	1
Lighting Type				
Dark/Dusk/Dawn	16	25	477	22
Daylight	48	75	1,680	77
Foggy/Smoky/Unknown	0	0	3	1

^{*} Year 2007 population estimates were used for this calculation.

The community-wide 64 bicycle collisions between 2003 and 2007, is about 2.9 times city-wide rate when normalized for 1,000 residents. This higher rate can be attributed to the popularity of bicycle use in the area that is more than city-wide average. Also, especially in summer time, the area beaches are enjoyed by a high number of visitors. As indicated in the section on pedestrians, there were about 494,800 Ocean Beach visitors in July of 2007.

PUBLIC TRANSIT

Ocean Beach is currently served by Metropolitan Transit System (MTS) Bus Routes 35 and 923. A detailed description of these services is presented in this section.

Route 35

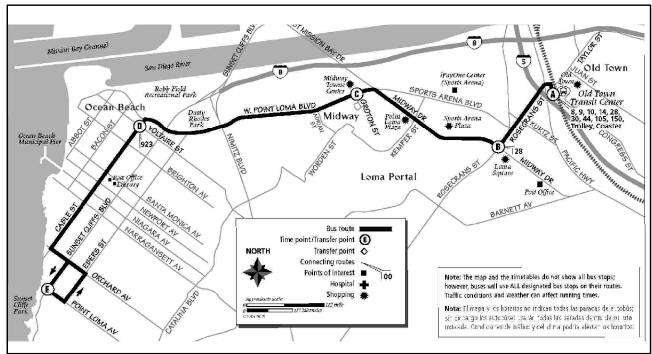
MTS Route 35, depicted on Figure 6, extends from the Old Town Transit Center to the intersection of Point Loma Avenue and Sunset Cliffs Boulevard in Ocean Beach. The Old Town Transit Center provides regional access to the COASTER, San Diego Trolley Blue and Green Lines, and MTS Routes 8, 9, 10, 14, 28, 30, 44, 105, and 150. From Old Town, the outbound Route 35 goes through the Midway community via Rosecrans Street, Midway Drive and West Point Loma Boulevard, where it enters Ocean Beach. From West Point Loma Boulevard, Route 35 follows Cable Street to Orchard Avenue to Sunset Cliffs Boulevard to Point Loma Avenue. The return trip continues from Point Loma Avenue to Ebers Street to Orchard Avenue to Cable Street where it then follows the outbound route back to Old Town. The Ocean Beach post office and library are served by this line.

Route 35 weekday service spans from approximately 5:00 AM to 11:00 PM with 35 trips in each direction at approximately 30-minute headways and 23-33 minute travel times. Weekend and holiday service spans from approximately 7:00 AM to 11:00 PM with 33 inbound trips (from Ocean Beach to Old Town) and 32 outbound trips (from Old Town to Ocean Beach) at 30-minute headways and 22-30 minute travel times. Schedule timetables for Route 35 are included in Appendix A. All buses that serve this route are equipped with wheelchair lift or ramp service and bicycle racks.

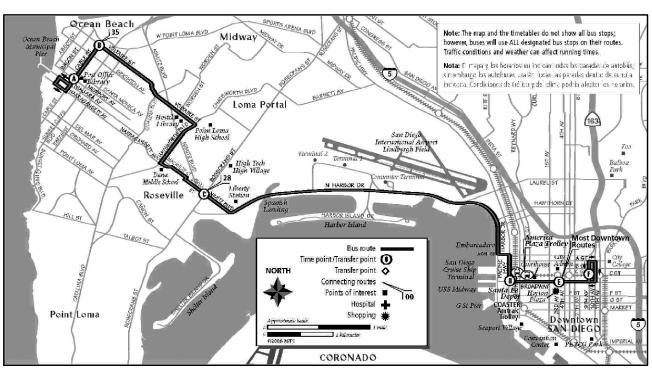
Route 923

MTS Route 923, also depicted on Figure 6, extends from downtown San Diego to the intersection of Cable Street and Newport Avenue in Ocean Beach providing access to San Diego International Airport, Santa Fe Depot with connections to Amtrak, the COASTER, San Diego Trolley Blue and Orange Lines; and other MTS routes that connect in downtown. From downtown, Route 923 goes through the Peninsula community via Broadway, Pacific Highway, Harbor Drive, North Harbor Drive, Nimitz Boulevard, McCaulay Street, Chatsworth Boulevard and Voltaire Street where it enters Ocean Beach. From Voltaire Street, Route 923 follows Cable Street to Niagara Avenue where it makes a loop via Bacon Street and Narragansett Avenue back onto Cable Street for the return trip to downtown. The Ocean Beach Post Office and Library are served by this route.

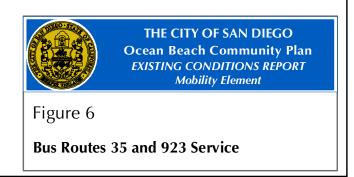
Route 923 weekday service spans from approximately 5:15 AM to 11:00 PM with 32 trips in each direction at 30-minute headways until 8:00 PM when headways become hourly, and 34-48 minute travel times. Weekend and holiday service spans from approximately 6:15 AM to 11:00 PM with 17 trips in each direction at 60-minute headways and 33-45 minute travel times. Schedule timetables for Route 923 are included in Appendix B. All buses that serve this route are equipped with wheelchair lift or ramp service and bicycle racks.



MTS Route 35



MTS Route 923



Transit Ridership Counts

Transit ridership data was provided by SANDAG and MTS. At the time of data collection, Route 35 had approximately 840 and Route 923 had approximately 550 daily weekday riders whose trips originated or ended in Ocean Beach. Detailed route alignment for MTS service in Ocean Beach is illustrated on Figure 7. A summary of transit stop use within Ocean Beach based on information collected in Fiscal Year 2006 for Route 35 and Fiscal Year 2007 for Route 923 is presented on Figure 8. Since the time of data collection, Routes 35 and 923 were changed as part of an MTS system-wide transit service restructuring; therefore data is not available for all existing transit stops and doesn't fully reflect the current service. However, these counts still provide a good indication of the level of passenger activity along the routes. Locations with the most passenger activity were:

- Cable Street and Newport Avenue with 364 boardings (ons) and alightings (offs)
- Cable Street and Voltaire Street with 223 boardings and alightings
- Cable Street and Santa Monica Avenue with 176 boardings and alightings
- Point Loma Avenue and Sunset Cliffs Blvd with 152 boardings and alightings

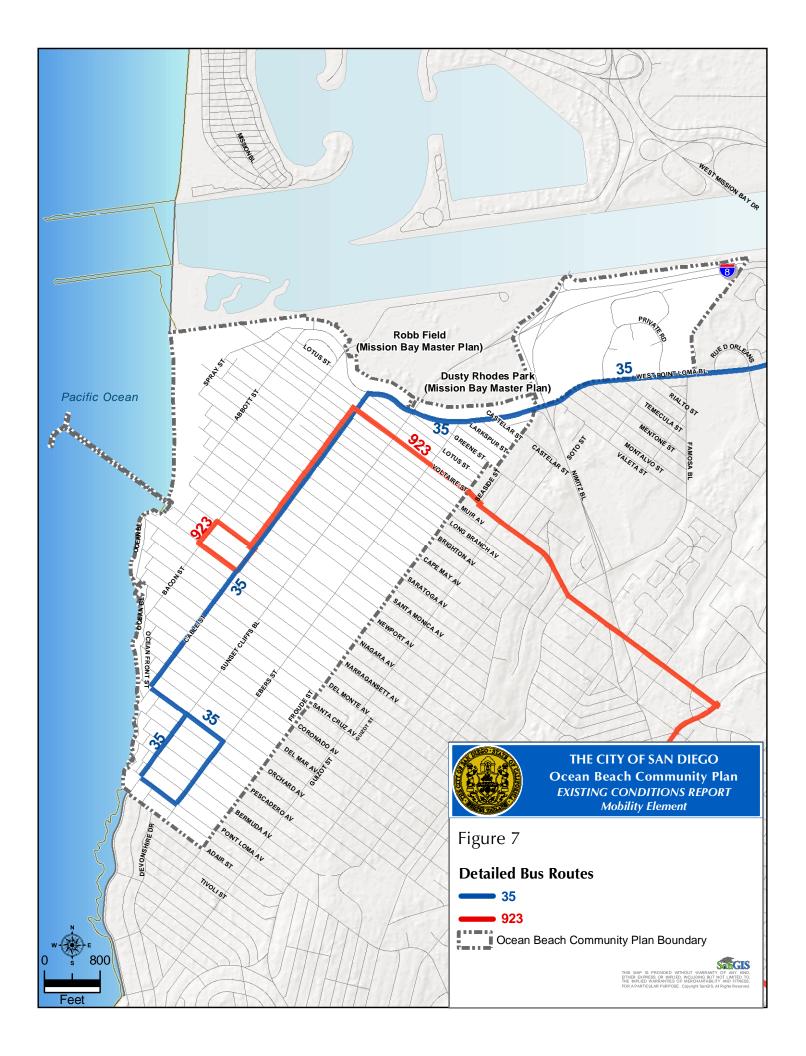
Tables from the SANDAG Transit Passenger Counting Program showing passenger activities for each of the routes in their entirety and in more detail, including utilization of the services by time of day, are included in Appendix C for Route 35 and in Appendix D for Route 923.

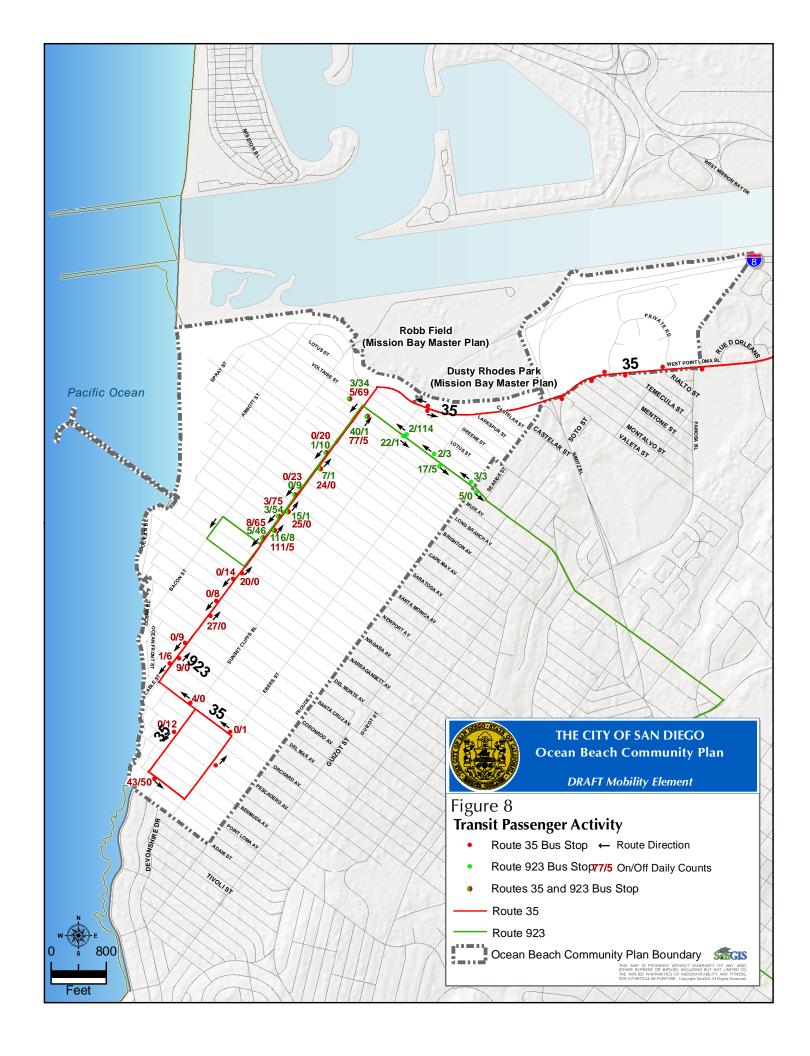
Bus Stops

There are a total of 29 bus stops in Ocean Beach with a spacing of approximately every two blocks. Route 35 serves 23 stops and Route 923 serves 14 stops, with both routes serving 9 stops on Cable Street. An inventory of bus stops including a photograph and information on the routes served, number of daily boardings and alightings, and presence of shelter, seating, lighting, trash receptacles, and concrete pad is provided in Appendix E. Fifteen of the 29 stops that serve Ocean Beach have one or two benches; twenty-two have lighting (nearby street lighting); seven have permanent trash receptacles; and two have a concrete pad or concrete street. Concrete pads prolong the life of the street by protecting it from the wear and tear of repeated bus decelerations and accelerations, which can cause asphalt heaving over time.

Stop and Operations Assessment

The primary deficiency for bus stops in the community is the inconsistency of amenities. The bus stop inventory found that no bus stops currently have shelters/kiosks and several stops do not have benches, lighting, and/or trash receptacles. The stops with the highest number of boardings, such as Cable Street and Newport Avenue, and Cable Street and Voltaire Street have the highest number of amenities. Based on providing a strong profile for public transit in the community and considering the passenger activity at individual bus stops, a list of deficiencies was developed in consultation with MTS staff. Table 2 presents the deficiencies identified for bus stops in Ocean Beach.





Additionally, although it is a maintenance issue, Cable Street is in need of resurfacing to address cracking and potholes to improve the quality of the ride and the experience for bus riders.

Operational Issues

Ocean Beach transit services provide good regional connectivity due to their connections to Old Town Transit Center and downtown. They also provide good local connectivity by serving the community public facilities and commercial areas. Most of the community is within one-quarter mile of a transit stop with the maximum distance to a transit stop of approximately 2,000 feet for just a small residential area of the community.

Operational issues contribute to delays and affect the quality of transit service. Based on field observations and in consultation with MTS staff the following location was determined to adversely impact transit travel times:

West Point Loma Boulevard at Nimitz Boulevard outbound (westbound) – Buses experience delays on westbound West Point Loma Blvd at Nimitz Boulevard as a result of congestion and queuing, especially during the evening peak period. This intersection approach has one left-turn, one through, and one right-turn lane.
 Traffic queues in the center through lane, especially during the evening peak period.

Transit operating conditions outside the community, such as on Midway Drive also impact travel times to and from Ocean Beach.

VEHICULAR TRAFFIC

This section addresses movements of vehicles in the community.

Daily Traffic Volumes

Mechanical traffic counters are used to quantify the number of vehicles that utilize a street segment. Counts are recorded by each direction in 15-minute increments. Due to the seasonal nature of the area, traffic data collection typically takes place in June. To learn about the off-season traffic conditions of the community, traffic counts were made in January of 2008.

Figure 9 depicts the daily traffic in Ocean Beach. The average daily traffic (ADT) for winter 2008 is the result of two days of counts made in January. In this figure, former summer counts are shown with the respective years that they were made, along with July 2008 counts. The traffic counts taken in June of 2005 for Sunset Cliffs Boulevard, between Nimitz Boulevard and West Point Loma Boulevard, indicate that about 18,500 vehicles travel from the community toward I-8, and approximately 18,300 vehicles travel toward Ocean Beach, for a total of 36,800. The counts done in summer of 2008 show a reduction of 600 vehicles on this segment.

Table 3: Bus Stop Deficiencies

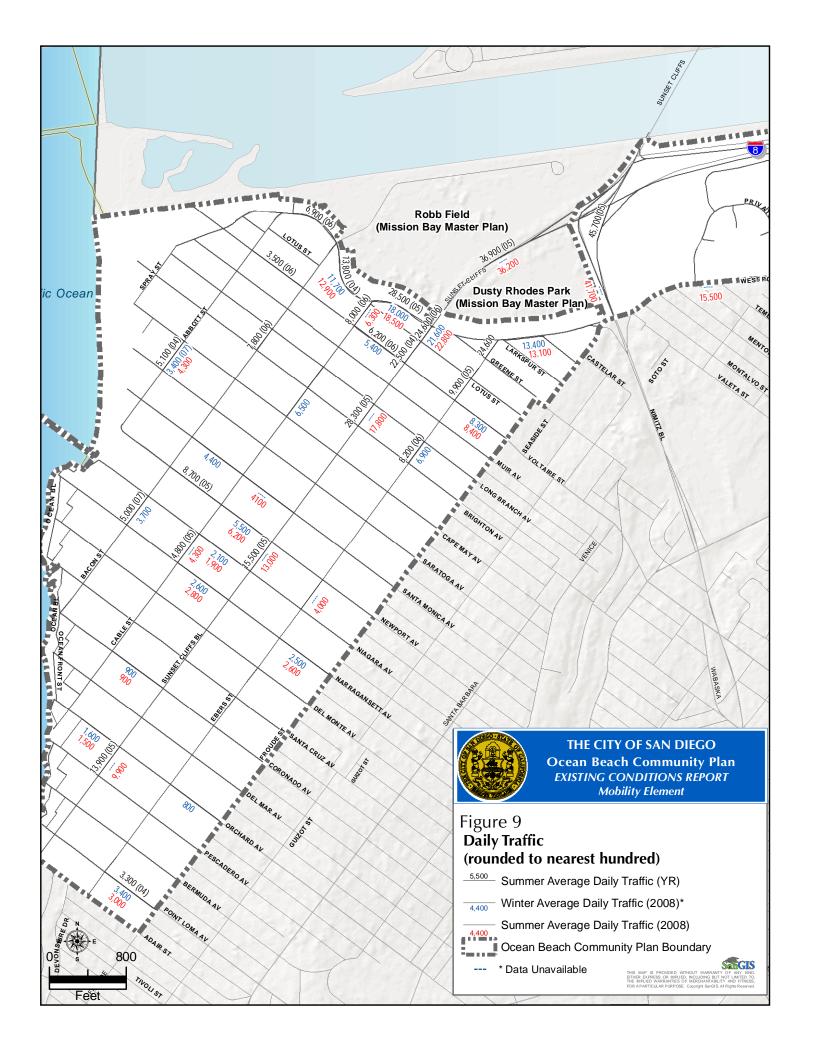
Existing Bus Stop (direction)*	Shelter	Bench	Lighting	Trash Container	Concrete Pad #	Sidewalk Concrete
W. Pt. Loma at Nimitz (IB)	X			X		
Cable at Voltaire (IB)	X					
Cable at Voltaire (OB)				X		
Cable at Brighton (OB)						X
Cable at Cape May (IB)			X			
Cable at Saratoga (OB)						X
Cable at Santa Monica (IB)		X				
Cable at Newport (IB)	X					
Cable at Narragansett (IB)		X	X			X
Cable at Narragansett (OB)						X
Cable at Santa Cruz (IB)			X			
Cable at Coronado (OB)						X
Cable at Del Mar (IB)		X	X			
Pt. Loma at Sunset Cliffs (both)			X			
Ebers at Pescadero (IB)						X
Orchard at Sunset Cliffs (IB)			X			
Voltaire at Ebers (IB)	X					

^{*} IB = Inbound (from Ocean Beach to Old Town or downtown)

The morning peak hour towards the freeway system is at 7:30 and the afternoon peak hour towards the community is at 5:45. Figures 10a and 10b detail15-minute traffic counts for morning and afternoon peak periods for both directions of Sunset Cliffs Boulevard, between Nimitz Boulevard and West Point Loma Boulevard. As illustrated on Figure 10a, the southbound traffic between 11:00 AM and 1:00 PM, is more evenly distributed in each 15-minute interval. The peak two-hour traffic in the PM, is more even in the northbound direction than the southbound direction. The traffic volumes on Sunset Cliffs Boulevard decrease further south to 15,500, between Newport Avenue and Niagara Avenue, and to 13,900, between Orchard Avenue and Pescadero Avenue.

 $OB = Outbound \ (from \ Old \ Town \ or \ downtown \ to \ Ocean \ Beach)$

[#] No deficiency was identified



As can be expected, summer counts, especially at the community entrances, around the beach, and at commercial areas, are higher than winter. For example, West Point Loma Boulevard, west of Sunset Cliffs Boulevard, has an ADT of 18,000 in winter. The same location registered a daily traffic of 28,500 in summer of 2005. Due to the economic conditions and higher fuel costs, the summer or 2008 count for this location was 18,500. Also, the traffic count in summer of 2006 for Sunset Cliffs Boulevard, just south of West Point Loma Boulevard was 1,800 more than the traffic count for summer of 2008. Figure 11 illustrates the daily traffic volumes for both directions of West Point Loma Boulevard, between Cable Street and Sunset Cliffs Boulevard. This is one of the main gateways to the community. As is shown on the figure, the typical summer traffic is always higher than winter traffic, for both directions. Also, the trend in increase and decrease of traffic volumes throughout the day for both seasons are about the same. Figures 12a and 12b are a more detailed illustration of the typical seasonal traffic counts for two peak hours in the morning and two peak hours in the afternoon, for each direction. Again, all summer traffic volumes are higher than winter in each 15-minute counts for both directions.

Winter counts in 2009 were done for the purpose of seasonal comparisons. The following locations registered lower average daily traffic in summer, than in winter:

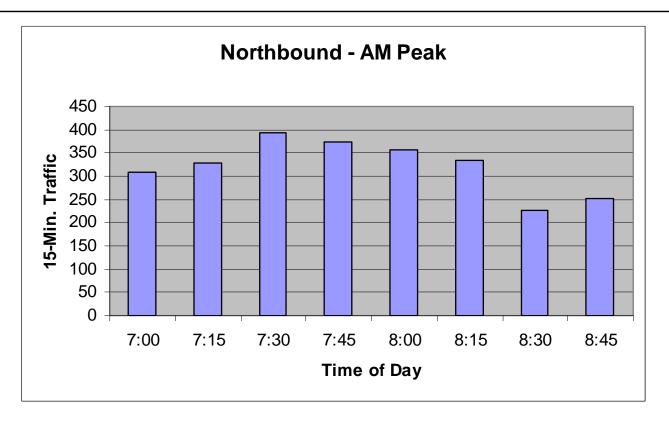
- Niagara Avenue, between Sunset Cliffs Boulevard and Cable Street
- Orchard Avenue, between Sunset Cliffs Boulevard and Cable Street
- Point Loma Avenue, between Froude Street and Ebers Street
- West Point Loma Boulevard, between Castelar Street and Larkspur Street

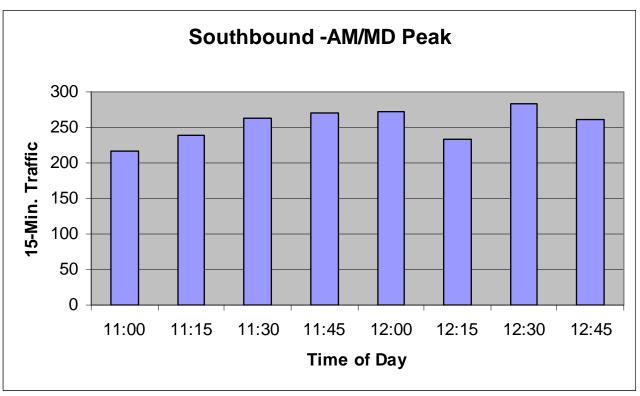
Appendix F includes the daily counts that were taken in the January of 2008. The two-day average of hourly counts is also illustrated. The summer traffic counts are presented in Appendix G, with illustration of hourly counts. As can be seen in the illustrations of traffic volumes, the morning and afternoon peak periods are more spread throughout the day and typical peaks of morning and afternoon hours with significant drops in traffic volumes during off peak periods are not experienced in the area.

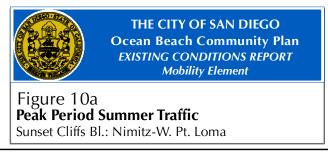
Functional Street Classifications

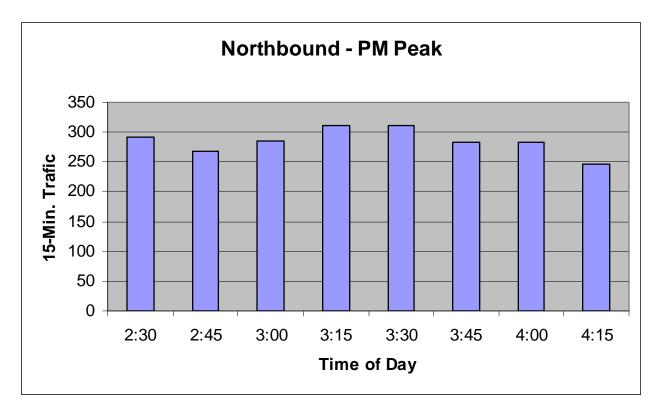
Roadways have different designations, depending on their respective functions. The ascending order of a roadway classification system in a community is from Local Street to Primary Arterial. Freeways are the highest roadway classification that provide regional access to communities.

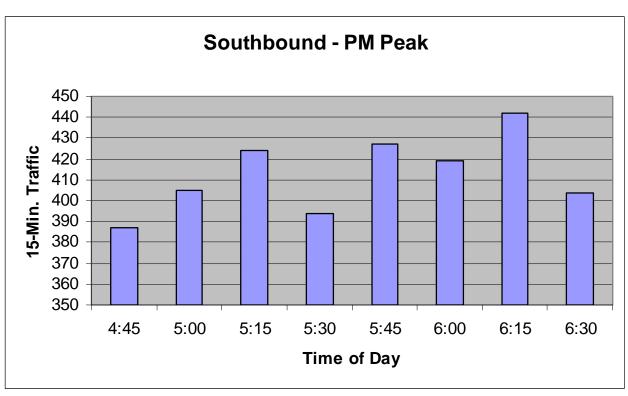
Local Streets provide access to dwelling units. These streets feed into Collector Streets; Collector Streets in turn feed into Major Streets. These streets serve various land uses. Major Streets are typically 4-lane facilities that are divided by painted or raised median. Primary Arterials are next in the classification hierarchy and are at least 4 lanes. Land use access is very limited to and from these roadways that typically connect Major Streets to carry the through traffic at high speed.



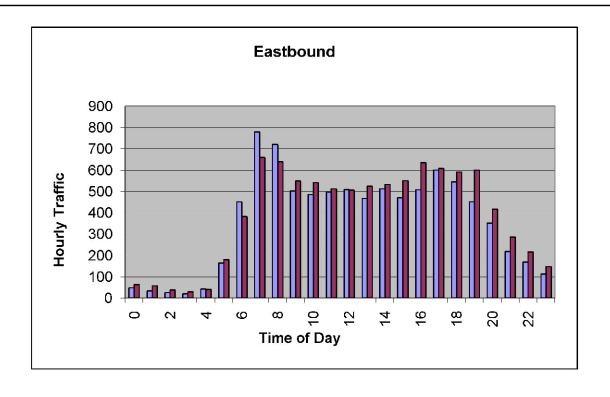


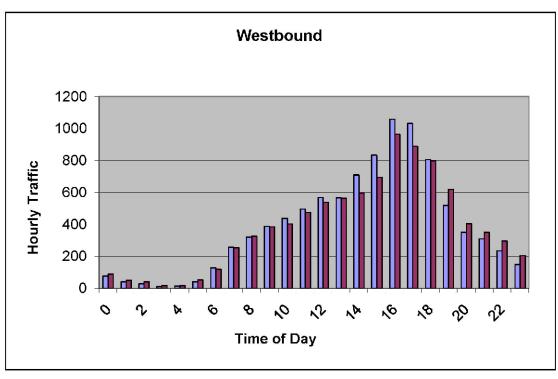




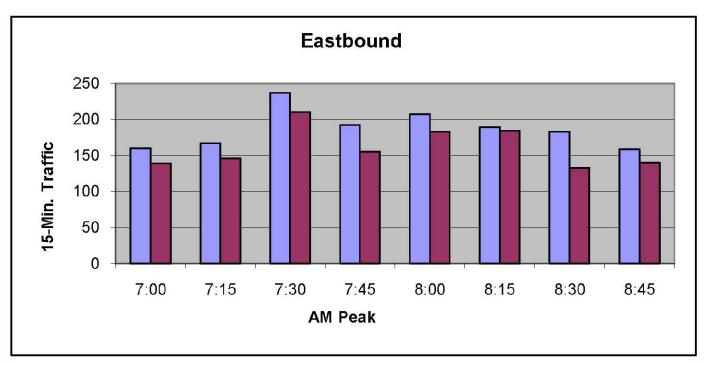


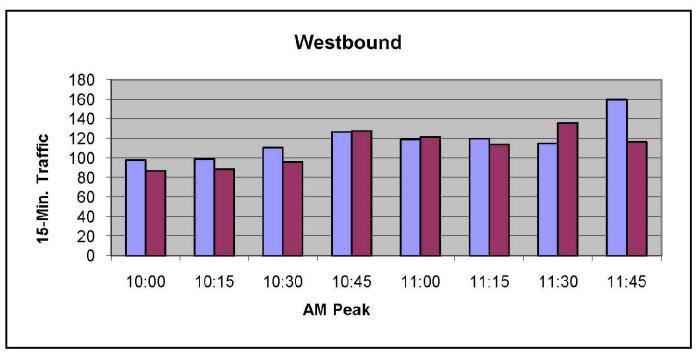




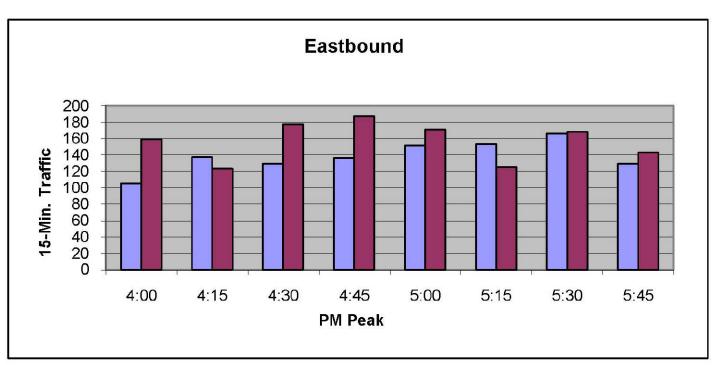












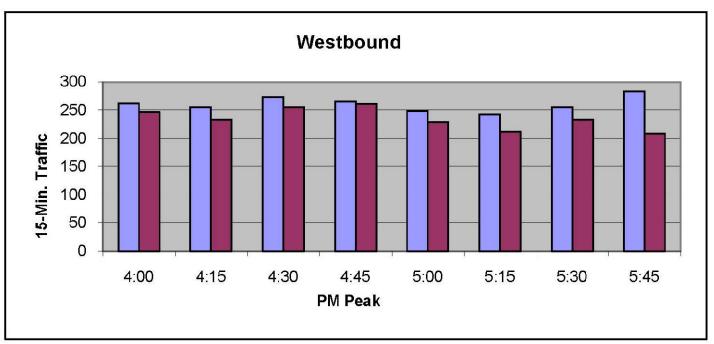




Figure 13 illustrates the Functional Street Classifications in Ocean Beach. Because this is an older urbanized area with many narrow roadways, some of the streets are functioning above their desired level of service due to carrying high traffic volumes. As indicated above, a Major Street is typically a 4-lane divided roadway, but 2-lane roadways such as Sunset Cliffs Boulevard, and segments of West Point Loma Boulevard and Voltaire Street are designated as Major Streets due to their function and the traffic volumes that they carry.

The following is a description of the classified streets in this community. It should be noted that only a segment of a street may be classified, and that the classification may change in different segments. The streets or segments that are not described are Local Streets.

Abbott Street, between Newport Street and West Point Loma Boulevard

This is a 2-Lane Collector Street with northeast-southwest alignment. It is 40' wide and has 60' of right-of way. The segment between Cape May Avenue and Saratoga Avenue registered a daily count of 5,090 in summer of 2004, 4,300 in summer of 2008, and 3,400 in winter of 2007.

Bacon Street, between Santa Cruz Avenue and West Point Loma Boulevard

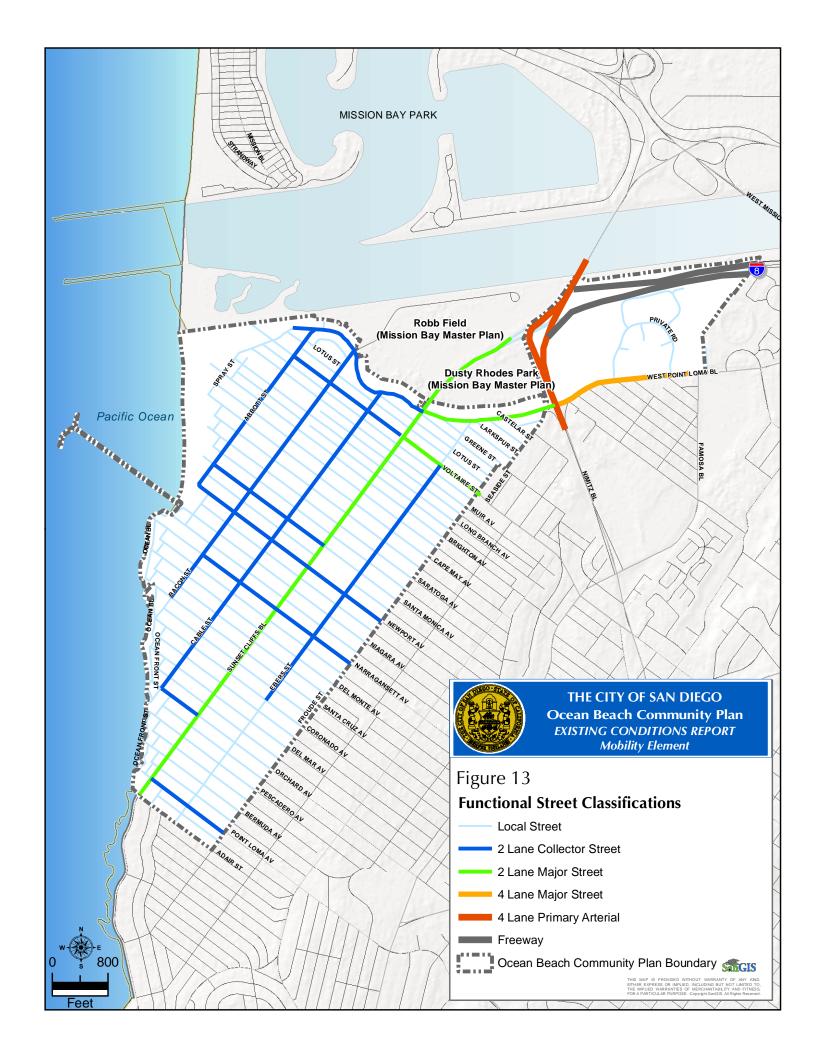
This is a 2-Lane Collector Street with northeast-southwest alignment. It is 40' wide and has 60' of right-of-way between Brighton Avenue and West Point Loma Boulevard, and narrows to 36' south of Brighton Avenue. Right-of-way remains the same. The segment between Brighton Avenue and Long Branch Avenue registered daily traffic counts of 6,500 in summer of 2003, and 7,810 in summer of 2006. The segment between Narragansett Avenue and Niagara Avenue registered 5,000 vehicles in summer of 2007, and 3,700 vehicles in winter of 2008.

Cable Street, between Orchard Avenue and West Point Loma Boulevard

This is a 2-Lane Collector Street with northeast-southwest alignment. It is 40' wide and has 60' of right-of-way between Brighton Avenue and West Point Loma Boulevard, and narrows to 36' south of Brighton Avenue. Right-of-way remains the same. The segment between Narragansett Avenue and Niagara Avenue had a daily traffic of 4,800 in summer of 2005 and 4,300 in summer of 2008. The segment between Voltaire Street and West Point Loma Boulevard had a summer ADT of 6,600 daily traffic in 2003, 8,000 in 2006, and 6,300 in 2008.

Ebers Street, between Coronado Avenue and Voltaire Street

This is a 2-Lane Collector Street with northeast-southwest alignment. It is 40' wide and has 60' of right-of-way between West Point Loma Boulevard and Brighton Avenue, and narrows to 36' south of Brighton Avenue. Right-of-way remains the same. The segment between Brighton Avenue and Long Branch Avenue registered 8,200 vehicles in summer of 2006 and 6,900 in winter of 2008. The summer of 2008 count between Newport Avenue and Niagara Avenue was 4,000.



Narragansett Avenue, between Bacon Street and Froude Street

This is a 2-Lane Collector Street with northwest-southeast alignment. It is 40' wide and has 80' of right-of-way. The winter 2008 traffic counts between Cable Street and Sunset Cliffs Boulevard showed 2,600 vehicles, and 2,800 vehicles in summer. The segment between Ebers Street and Froude Street showed the winter traffic to be 2,500 and the summer traffic 2,600.

Newport Avenue, between Abbott Street and Froude Street

This is a 2-Lane Collector Street with northwest-southeast alignment. It is 52' wide and has 80' of right-of-way. The winter 2008 daily traffic counts between Cable Street and Sunset Cliffs Boulevard showed 5,500 vehicles, and the summer counts were 6,200. The segment between Bacon Street and Cable Street showed 8,700 vehicles utilizing this street.

Orchard Avenue, between Cable Street and Sunset Cliffs Boulevard

This is a 2-Lane Collector Street with northwest-southeast alignment. It is 40' wide and has 80' of right-of-way. In 2008, there were 1,600 vehicles in winter and 1,500 vehicles in summer. The segment between Ebers Street and Froude Street registered 800 vehicles on this block.

Point Loma Avenue, between Froude Street and Sunset Cliffs Boulevard

This is a 2-Lane Collector Street with northwest-southeast alignment. It is 55' wide and has 80' of right-of-way. The winter 2008 average daily traffic is 3,300 between Ebers Street and Froude Street. The summer count in the same segment was 3,300 in 2004 and 3,000 in 2008.

Santa Monica Avenue, between Abbott Street and Sunset Cliffs Boulevard

This is a 2-Lane Collector Street with northwest-southeast alignment. It is 40' to 52' wide and has 80' of right-of-way. The winter 2008 average daily traffic between Bacon Street and Cable Street was 4,400. The segment between Cable Street and Sunset Cliffs Boulevard registered 4,100 vehicles in summer of 2008.

Sunset Cliffs Boulevard, between Adair Street and West Point Loma Boulevard

This is a 2-Lane Major Street with northeast-southwest alignment. It is 40' wide and has 60' of right-of-way between Brighton Avenue and West Point Loma Boulevard, and narrows to 36' south of Brighton Avenue. Right-of-way remains the same. The segment between Lotus Street and West Point Loma Boulevard is one of the entry points to the community. It had a daily traffic volume of 24,600 in summer of 2006. This volume was reduced in summer of 2008 to 22,800. The summer of 2005 had 28,300 daily traffic between Brighton and Long Branch. This traffic volume was significantly reduced to 17,800 in summer of 2008. The daily traffic for summer of 2005 between Newport Avenue and Niagara Avenue was 15,500 and 13,000 in summer of 2008. The segment between Orchard Avenue and Pescadero Avenue had a daily traffic volume of 13,900 in summer of 2005 and was reduced to 9,900 in summer of 2008.

Voltaire Street, between Abbott Street and Froude Street

The segment between Abbott Street and Sunset Cliffs Boulevard is a 2-Lane Collector Street with northwest-southeast alignment that is 52' wide and has 80' of right-of-way. The segment between Cable Street and Sunset Cliffs Boulevard showed 6,200 ADT for summer of 2006 and 5,400 ADT for winter of 2008.

The segment between Froude Street and Sunset Cliffs Boulevard is a 2-Lane Major Street. It is 52' wide and has 80' of right-of-way. The winter 2008 count registered an average daily traffic of 8,000 and the summer count was 8,400.

West Point Loma Boulevard, between Nimitz Boulevard and Spray Street

The segment between Nimitz Boulevard and Sunset Cliffs Boulevard is a 2-Lane Major Street with northeast-southwest alignment. It is 52' wide and has 80' of right-of-way. The winter 2008 counts were made between Castelar Street and Larkspur Street that showed an ADT of 13,400. Summer 2008 counts for the same location was 13,100.

The segment between Spray Street and Sunset Cliffs Boulevard is a 2-Lane Collector Street with varying alignments. It is 52' wide and has 80' of right-of-way. The segment between Bacon Street and Cable Street had an average daily traffic of 11,700 in winter of 2008. The summer count was 12,900 in 2009. This compares with 13,800 vehicle count in summer of 2004.

Street Segment Level of Service (LOS)

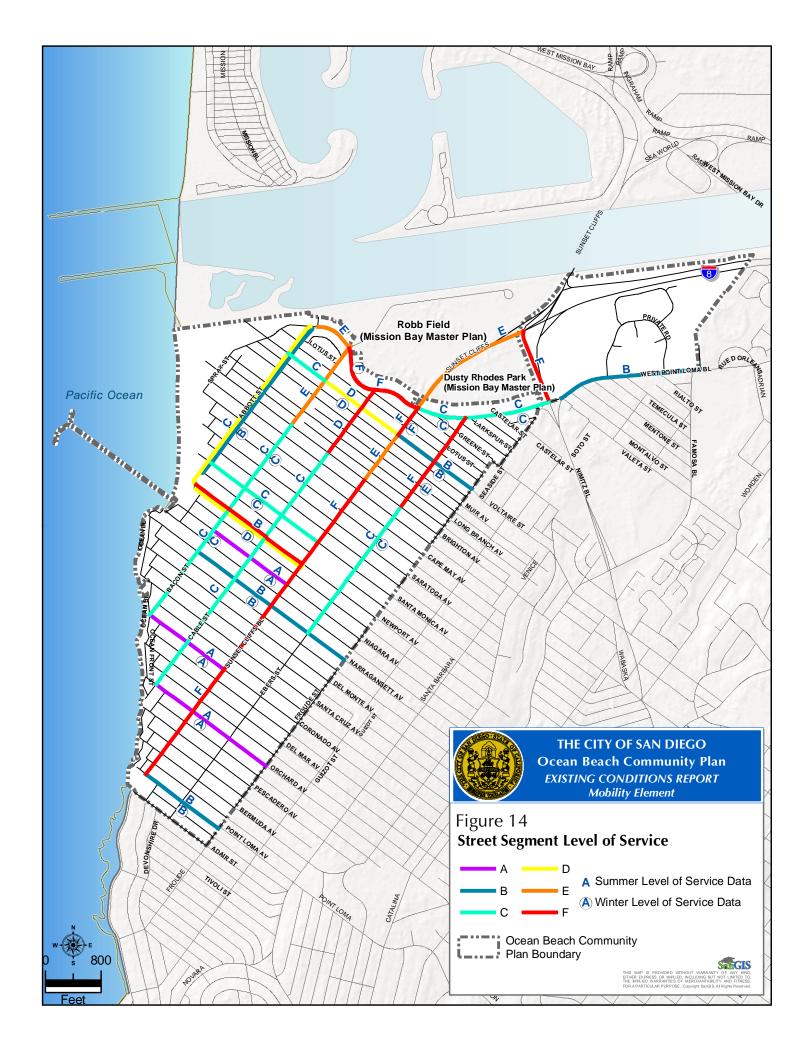
Factors such as increases in the area land use intensity have resulted in additional trips in the community that have caused congestion and long delays, especially on routes to and from I-8. The roadway segment level of service (LOS) is a measure of traffic volume relative to the capacity of the roadway. A letter grade from A through F is used to show the congestion of the roadway. Appendix H provides information on roadway classifications and their respective LOS, depending on the traffic volumes they carry. In urbanized areas of the city, such as Ocean Beach, street segments with levels of service E and F are considered congested and undesirable. There are four street segments within the community that operate at undesirable LOS in winter. These segments are:

- Ebers Street, between Brighton Avenue and West Point Loma Boulevard
- Sunset Cliffs Boulevard, between Voltaire Street and West point Loma Boulevard
- West Point Loma Boulevard, between Bacon Street and Cable Street
- West Point Loma Boulevard, between Cable Street and Sunset Cliffs Boulevard

Based on the daily traffic volumes that were counted during July of 2008, and depending on the Functional Street Classifications, the level of service for various street segments in Ocean Beach was determined. The street segments that perform at undesirable level of service in summer are:

- Bacon Street, between Brighton and West Point Loma Boulevard (E)
- Ebers Street, between Brighton Avenue and West Point Loma Boulevard (F)
- Nimitz Boulevard, between Sunset Cliffs Boulevard and West Point Loma Boulevard (F)
- Sunset Cliffs Boulevard, between Nimitz Boulevard and West Point Loma Boulevard (E)
- Sunset Cliffs Boulevard, between Voltaire Street and West Point Loma Blvd. (F)

Figure 14 illustrates the Street Segment Level of Service for winter and summer of 2008.



Intersections

The movement of traffic is regulated at crossings of more heavily traveled roadways. For the streets that carry about the same volume of traffic, all-way stop signs are installed where they cross. Traffic signals are installed at the busiest locations to allow orderly traffic movement. The locations for the all-way stop signs and signalized intersections are shown on Figure 15.

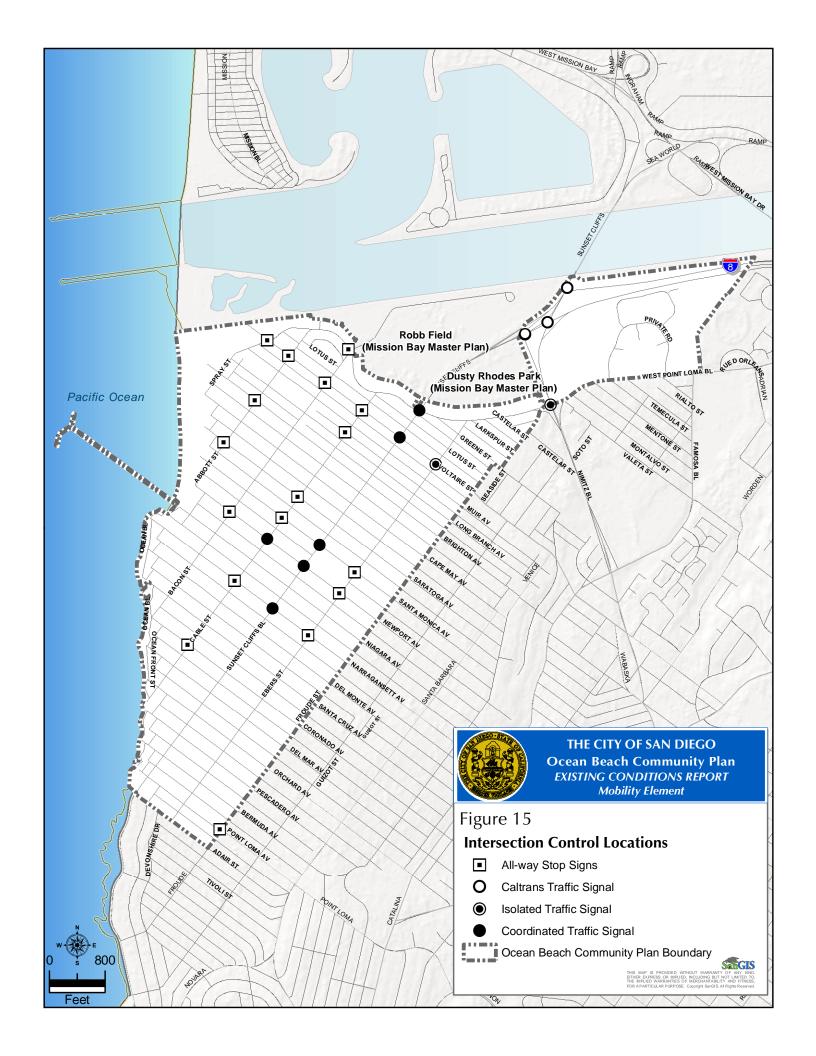
Traffic counts were made in January and July of 2008 to determine the traffic volume for each through and turning movements at nine signalized intersections within the community and at the I-8 ramps. Turning movement counts were made for morning and afternoon peak periods. Figures 16a, 16b, 17a, and 17b show the lane configurations and traffic movements for each of the counted signalized intersections for the morning and afternoon peak periods in winter and summer. These counts are used to determine the level of service at the intersections. The results of intersection LOS for morning and afternoon peak periods in winter and summer are shown on Figure 18a and 18b. To illustrate the differences between the winter and summer LOSs for the signalized intersections, refer to Figure 18c for morning and Figure 18d for afternoon peak periods. General description of evaluation criteria that corresponds to various levels of service is provided in Appendix I. For example, if the stopped delay per vehicle is more than 80 seconds, then the intersection is operating at level of service F.

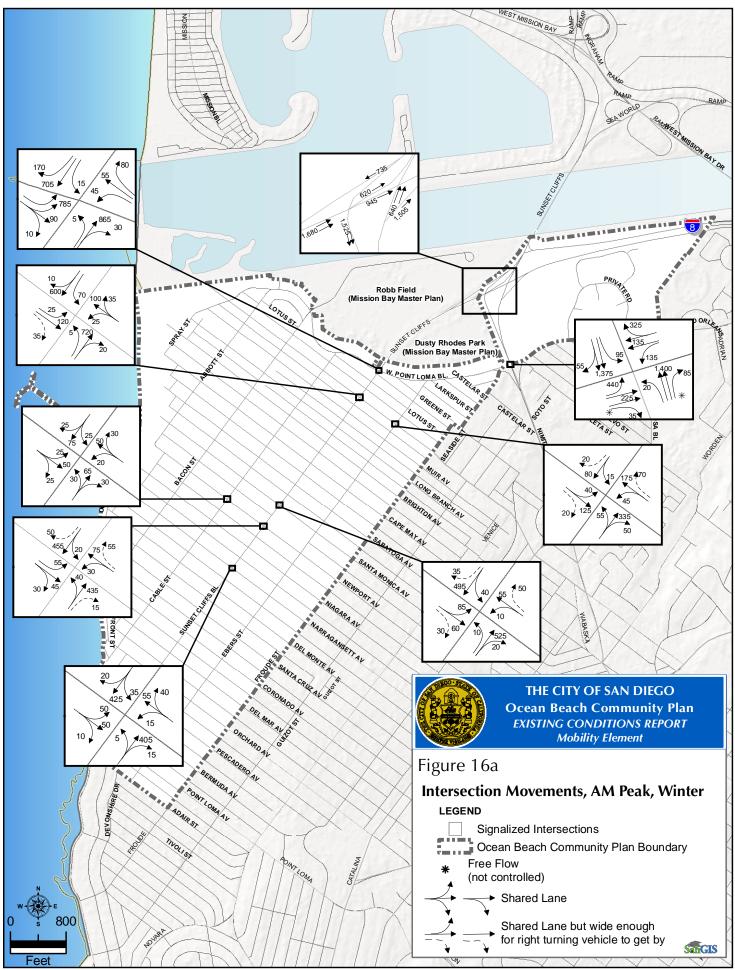
Appendix J provides a summary of intersection LOS for the morning and afternoon peak periods. The table in this appendix also shows the average delay that is experienced by each driver. Appendix K describes delays per each move for the signalized intersections that operate at LOS E or F in the community. The manual intersection counts are in Appendix L.

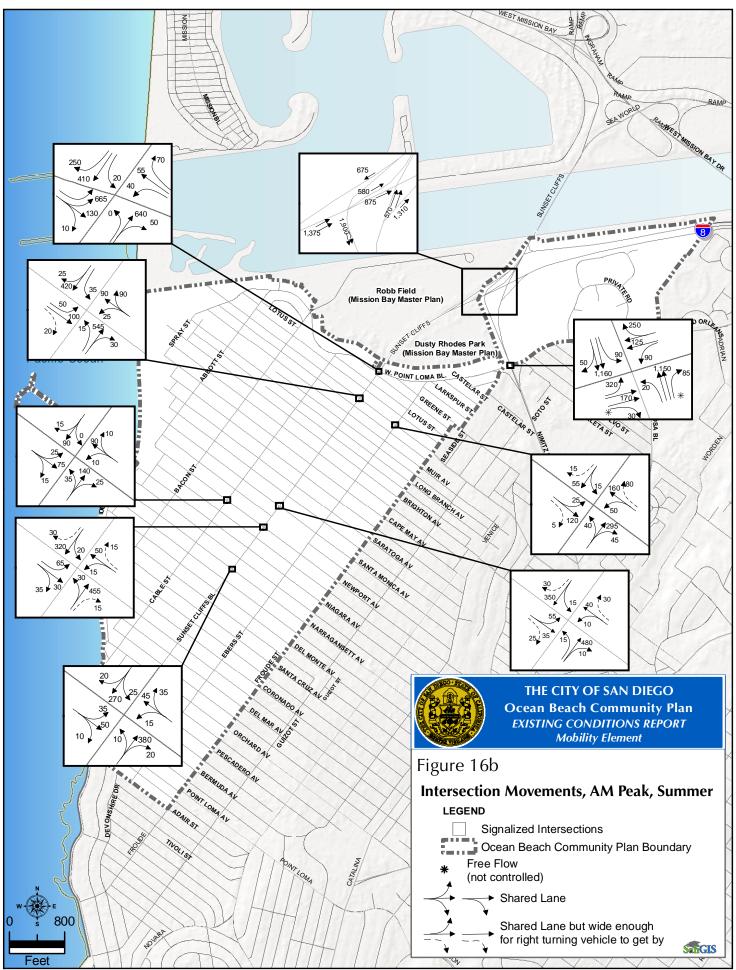
Collisions

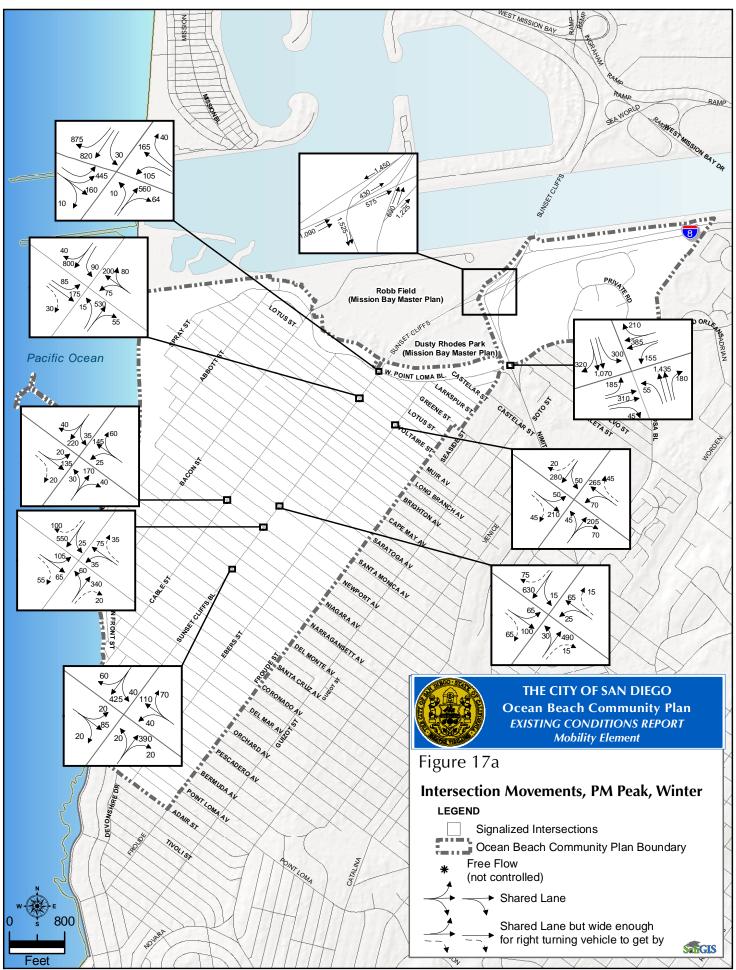
The vehicle-vehicle collisions in the community are analyzed based on various factors. A comparison is made for each of the factors between the community and the city-wide average. Table 4 is a summary of collision reports. For each category of crashes, comparison can be made between Ocean Beach and city-wide figures. Ocean Beach has proportionally lower crashes in head-on, hit fixed object, rear ends, right angle, run off road, and side swipe in the same direction accidents. However, for the remaining categories, this community's proportional share is more than city-wide figure.

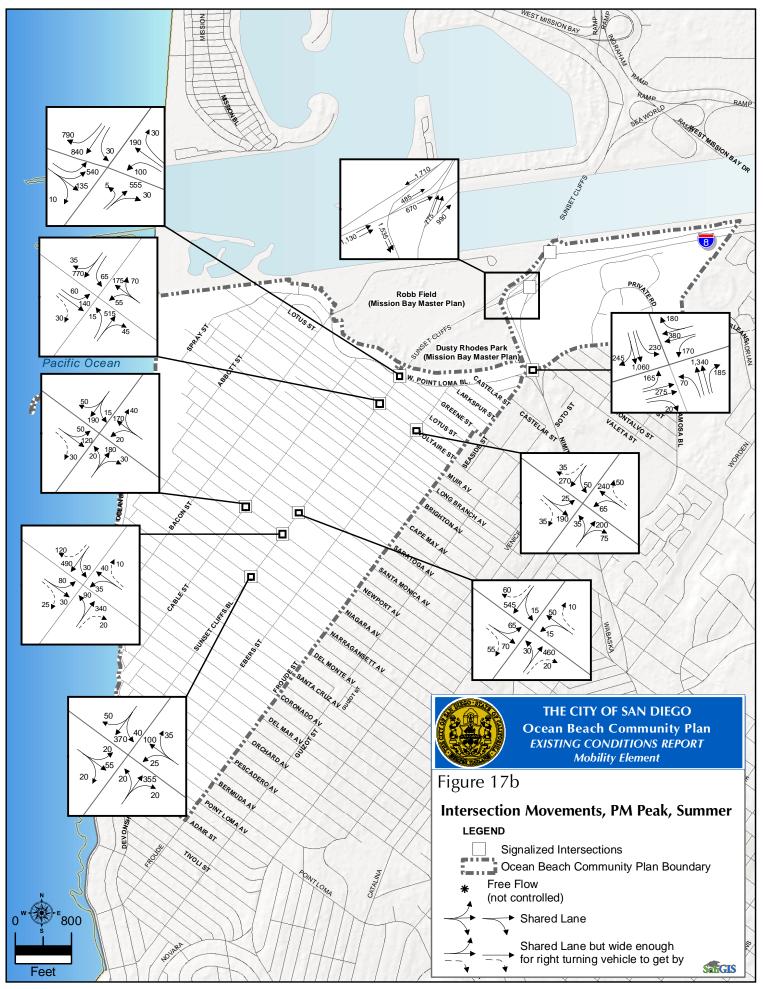
The rate of vehicle-vehicle collisions for 1,000 population in Ocean Beach is just under 2.2 times the city-wide rate, even though categories such as head-on, hit fixed object, rear ends, right angle, run off road, and same direction swipe show below city-wide collision rate. The explanation for Ocean Beach's higher area-wide collision rate is because of the area's regional attractiveness that brings in many visitors, especially in the summer time.

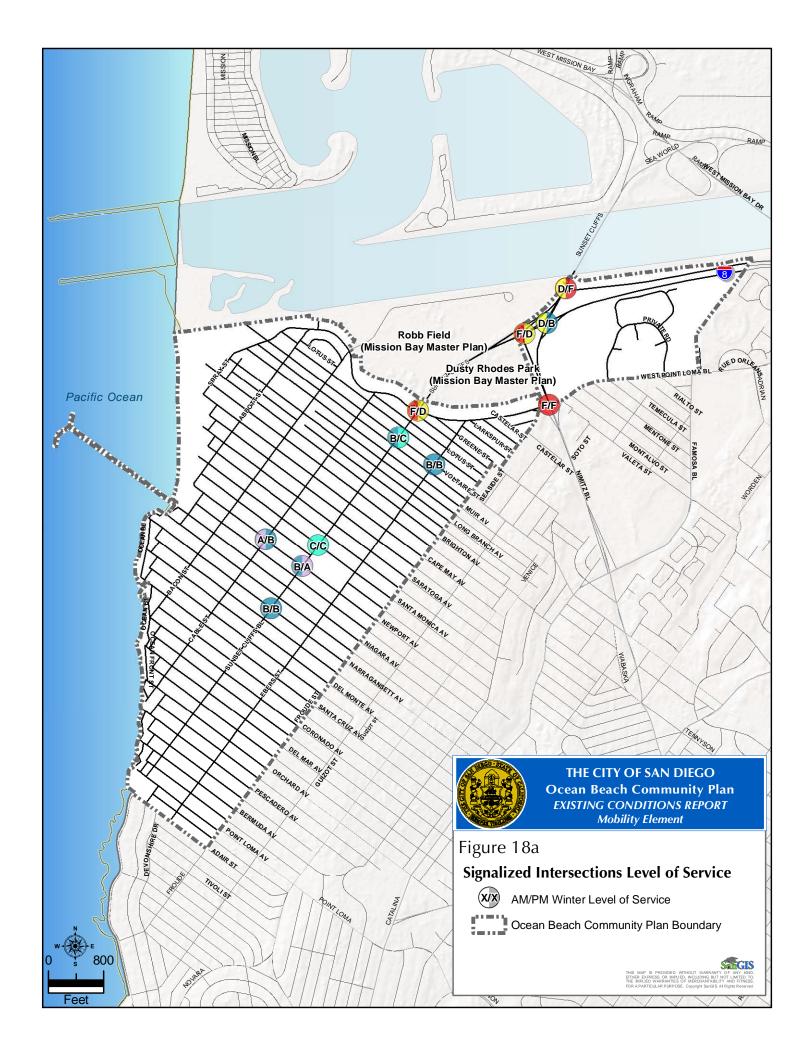


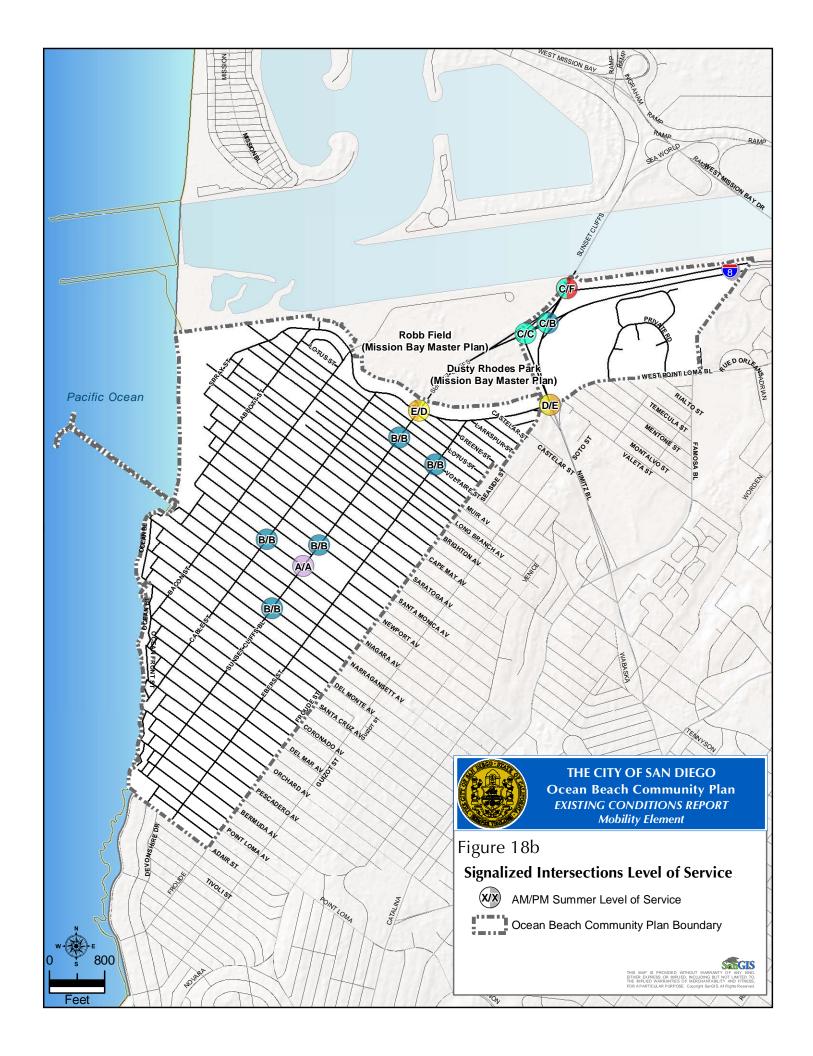


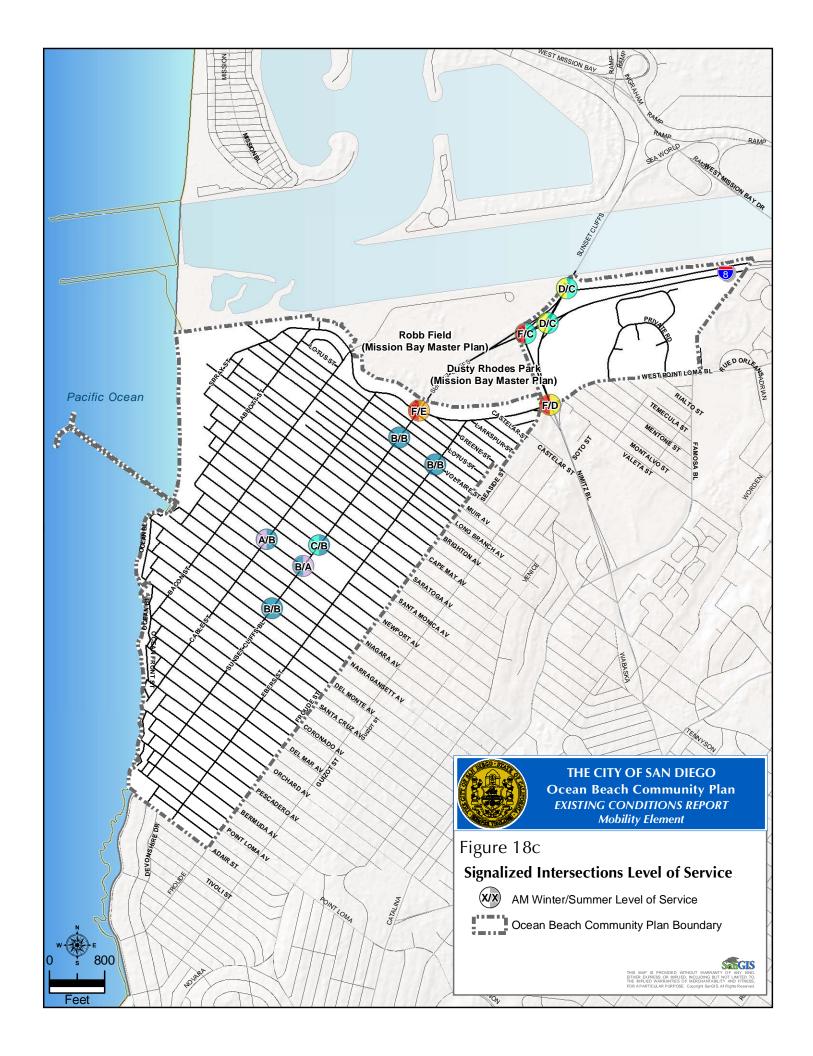












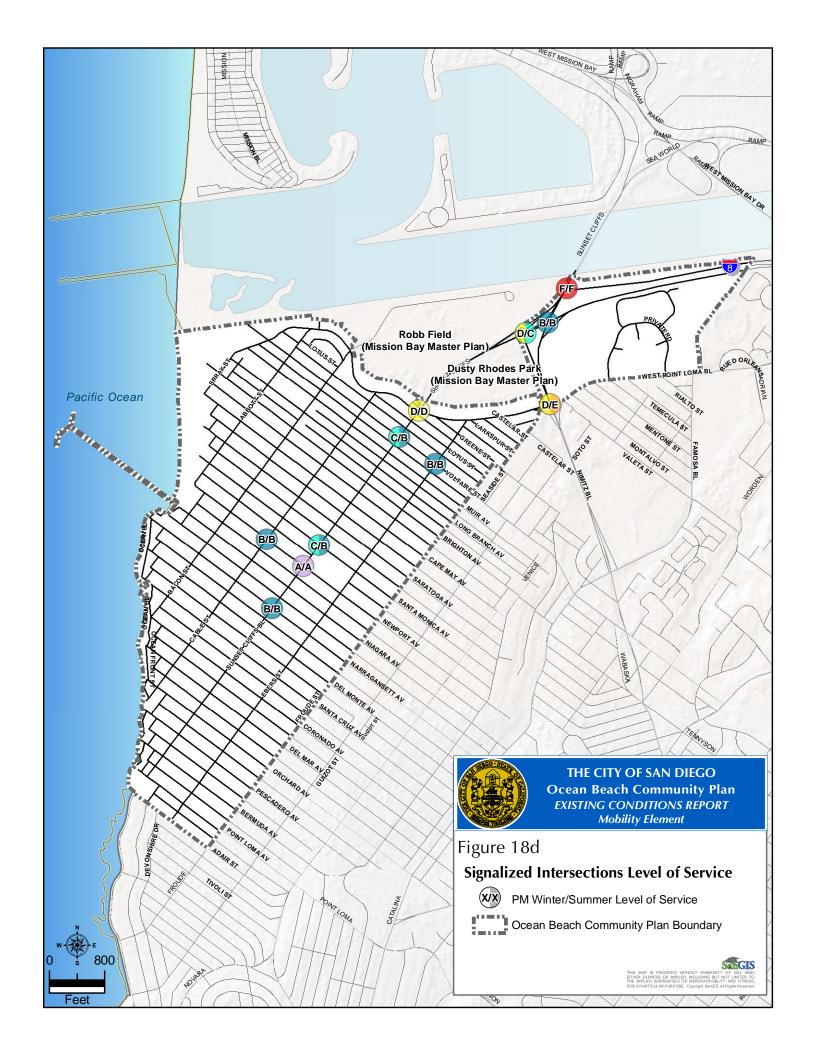


Table 4: Vehicle-Vehicle Crash Data (2003-2007)

	Ocean Beach		Citywide	
	Crashes	%	Crashes	%
Total Crashes	852	2	37,589	100
Crashes Normalized by 1,000 Population *	12.2		5.6	
Collision Type				
Head-On	9	1.1	513	1.36
Hit Object	2	0.2	32	0.08
Hit Parked Vehicle	411	48	11,532	30.68
Hit Fixed Object	1	0.1	102	0.27
Non-Collision Accident	1	0.1	18	0.05
Rear End/Backing	9	1.1	510	1.36
Rear End Accident	166	19.5	8,492	22.59
Right Angle Accident	198	23.2	12,635	33.61
Run Off Road/Hit Object	5	0.6	390	1.04
Side Swipe, Opposing	14	1.6	316	0.84
Side Swipe, Same Direction	34	4	2,822	7.51
Other	2	0.05	227	0.61

^{*} Year 2007 population estimates were used for this calculation.

PARKING

Both on- and off-street parking are in high demand in most areas of Ocean Beach. Much of the development in Ocean Beach took place many years ago when the number of cars and the car ownership ratio were less. Currently, multi-car households create a high demand for the limited available on- and off-street parking.

Figure 19 shows a conservative estimate of on-street curb use which includes parking passenger zones and commercial loading zones. Also, three beach oriented City of San Diego off-street parking lots are shown. A greater number of cars may actually park on the streets than shown on the map, depending on the length of the vehicles the distance left between the cars and the placement of the vehicles along the curb.

To increase on-street parking supply, the following parking management strategies may be pursued: convert some of the on-street spaces to time-limited parking; remove red painted curb segments; and close off driveways. Conversion of parallel parking to diagonal configuration has been done in the core commercial area. However, most of the streets in Ocean beach are not wide enough to allow the streets to accommodate diagonal parking. Also, there should be at least 100 feet of uninterrupted curb length before a gain can be made from converting parallel spaces to diagonal configuration. All of these alternatives will need to be considered on a block by block basis to determine their suitability for implementation.



Community members do not favor paid parking in Ocean Beach. In order to determine what other strategies may be used to address parking management in the community, the Mobility Planning section staff requested community input to identify and rank three tiers of parking severity in Ocean Beach. Figure 20 illustrates these three areas of parking shortage. They are characterized as "always," in the area west of Sunset Cliffs Boulevard and north of Del Mar Avenue; "at night" east of Sunset Cliffs Boulevard and south of Del Mar Avenue; and "less often," south of Del Mar Avenue.

To quantify the parking utilization in the three identified tiers, several blocks from each tier were studied as representative samples. Weekday observations were made from 6:30 to 6:45 AM; 1:00 to 1:15 PM; and from 7:00 to 7:15 PM. Saturday observations were made from 8:00 to 8:15 AM; 1:00 to 1:15 PM; and from 7:00 to 7:15 PM. City staff and community members observed and recorded the number of on street parked vehicles along the pre designated blocks and in the two public lots as shown in parking occupancy figures. The number of parked vehicles was compared with the total available parking space to measure the parking utilization for each street block and parking lot. The parking utilization is reported between 85 to 100%; 70 to 84%; 50 to 69%; and 0 to 49% for each time period in weekday and weekend. Figures 21 through 26 illustrate the result of the parking utilization study that was conducted in summer of 2009. Each figure illustrates the parking utilization for the studied blocks and parking lots. The average of parking utilization was determined to identify the parking utilization for the three community-identified parking shortage areas. The area-wide parking utilization averages are illustrated by color dots for each of the three parking shortage areas identified by community members.

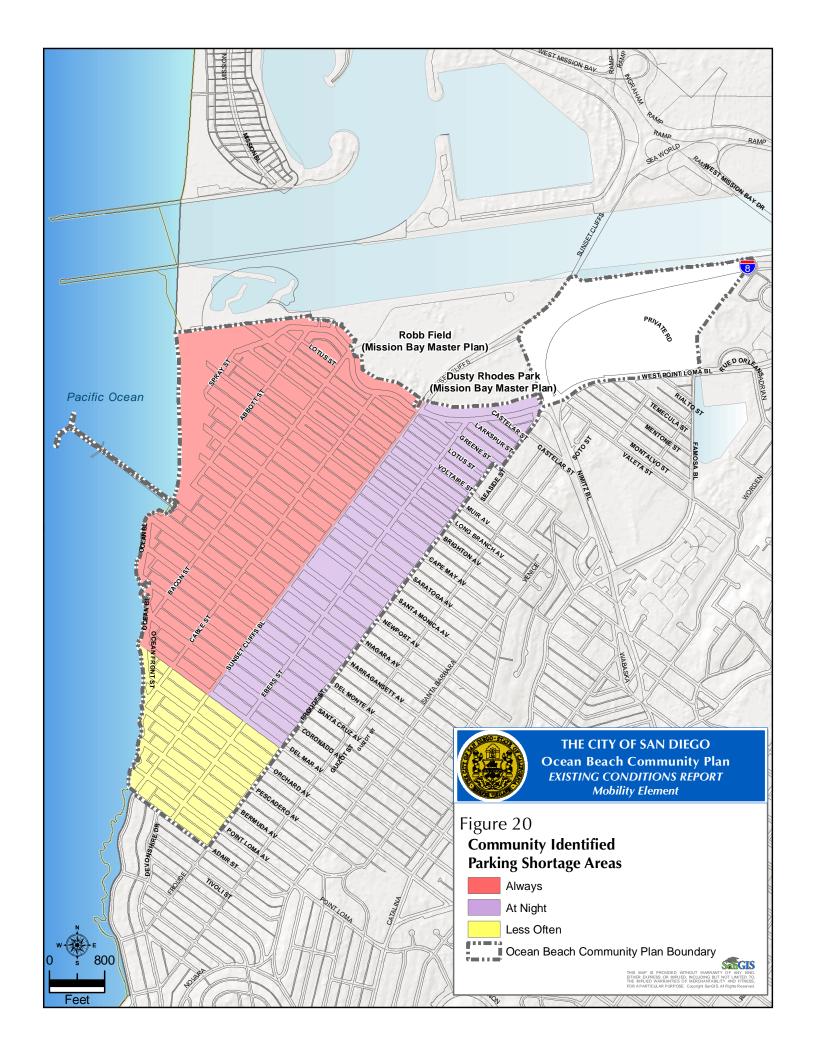
The area south of Del Mar Avenue was identified by the community members to be the least parking impacted area. The study; however, shows that in the weekday mornings, this area's onstreet parking is 85 to 100% utilized, while the areas that were identified to be "Always" or "At Night" short on parking supply have between 50 and 69% of their parking spaces utilized. The same area shows 70 to 84% parking utilization in the weekend morning. The area identified to have parking shortage at night, that is located east of Sunset Cliffs Boulevard and north of Del Mar Avenue, shows to be less impacted tan the other areas, with the exception of weekend night that is equal in parking occupancy with the "Less Often Area." The area west of Sunset Cliffs Boulevard and north of Del Mar Avenue was identified to "Always" have parking shortage. The parking utilization for this area was 85 to 100% for PM period on weekdays, and for midday and PM on weekends, which is half the study periods.

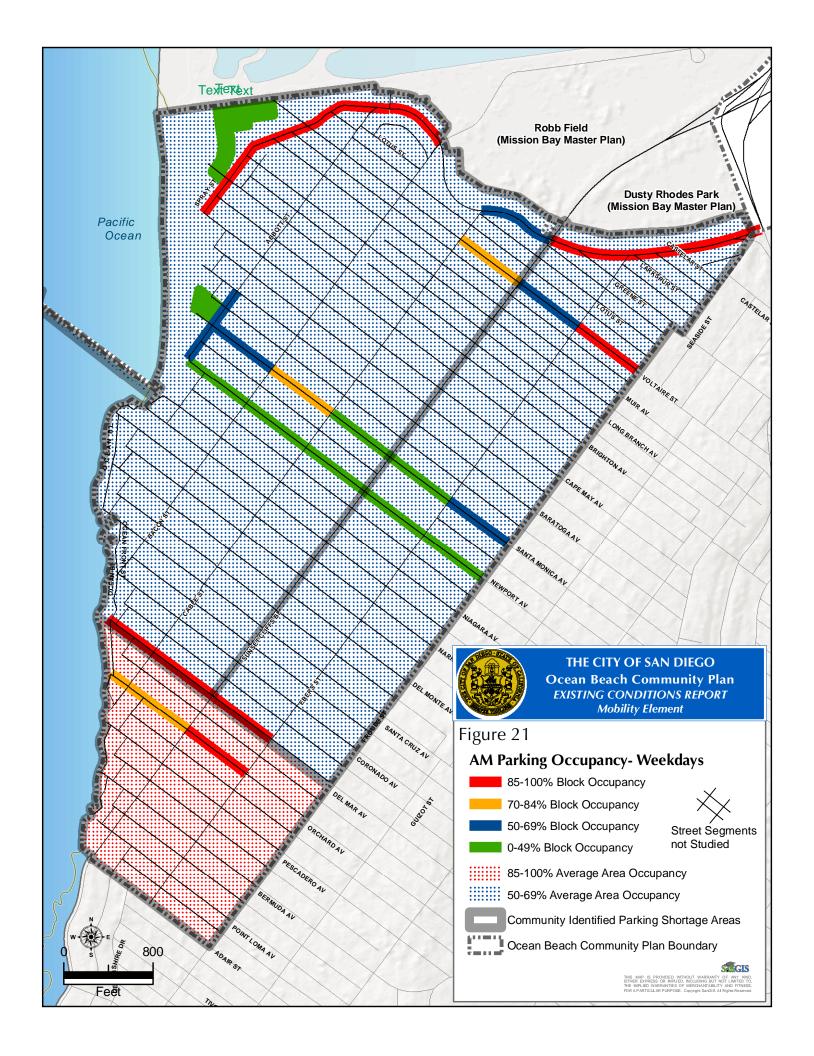
INTELLIGENT TRANSPORTATION SYSTEM (ITS)

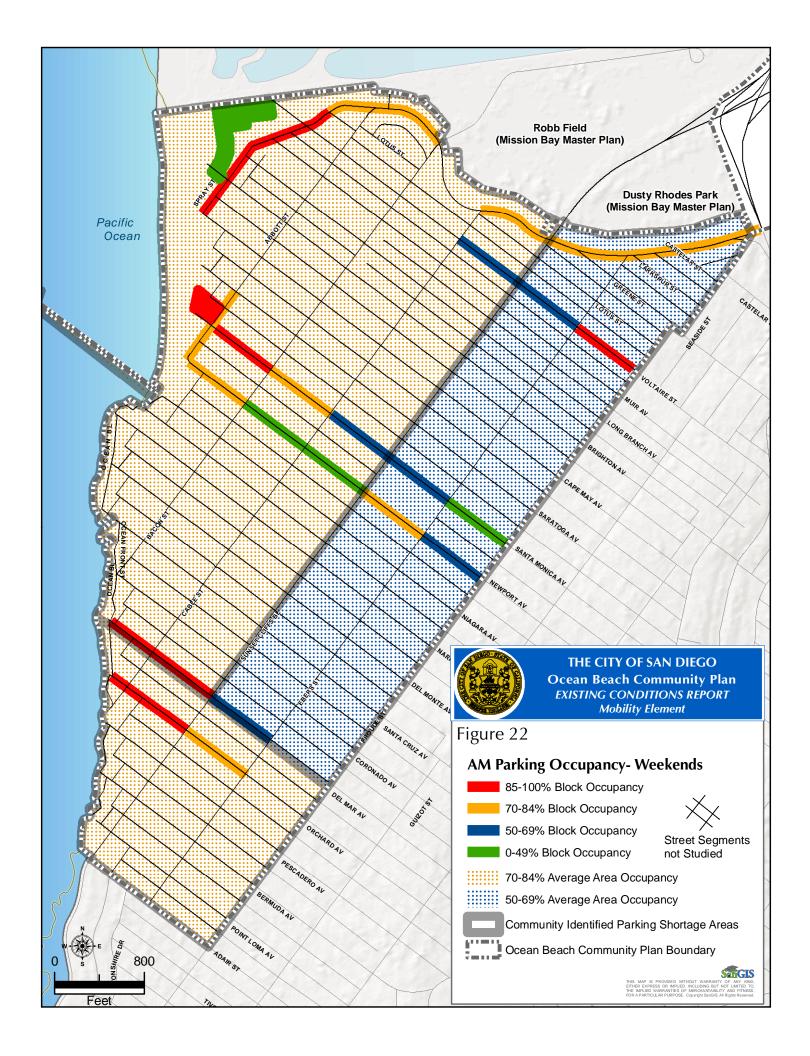
Coordinated traffic signals in the community are along Sunset Cliffs Boulevard (see Figure 15). No other ITS technologies have been implemented in the community.

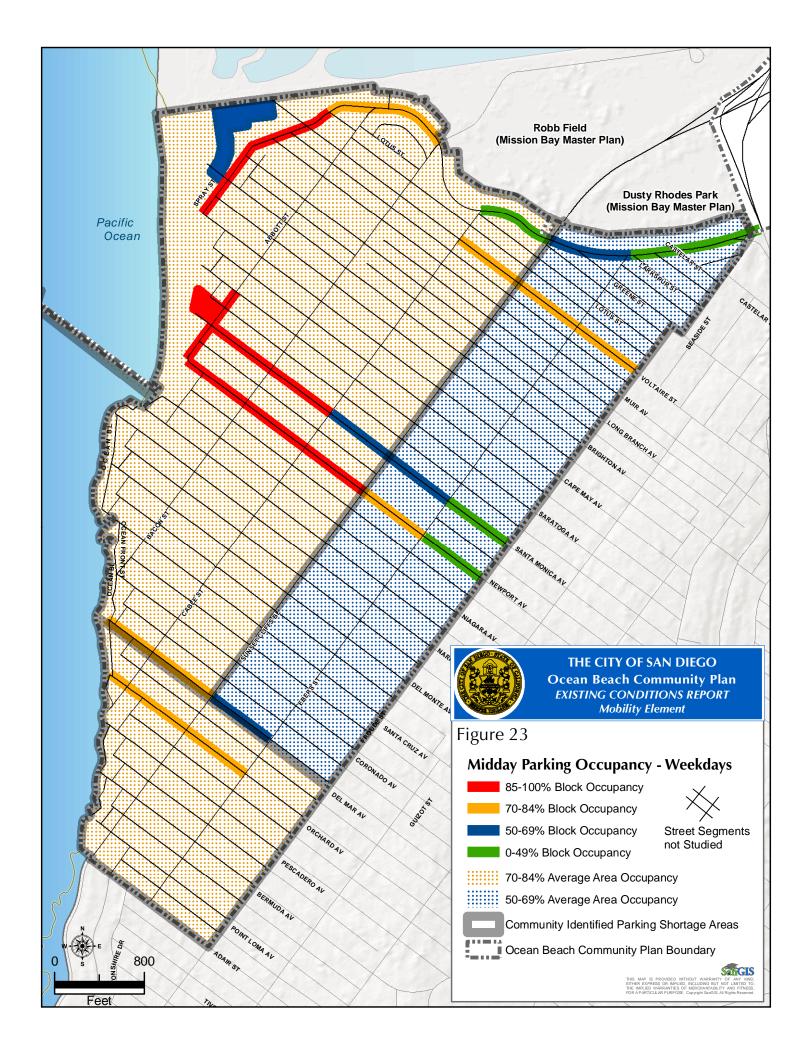
TRANSPORTATION DEMAND MANAGEMENT (TDM)

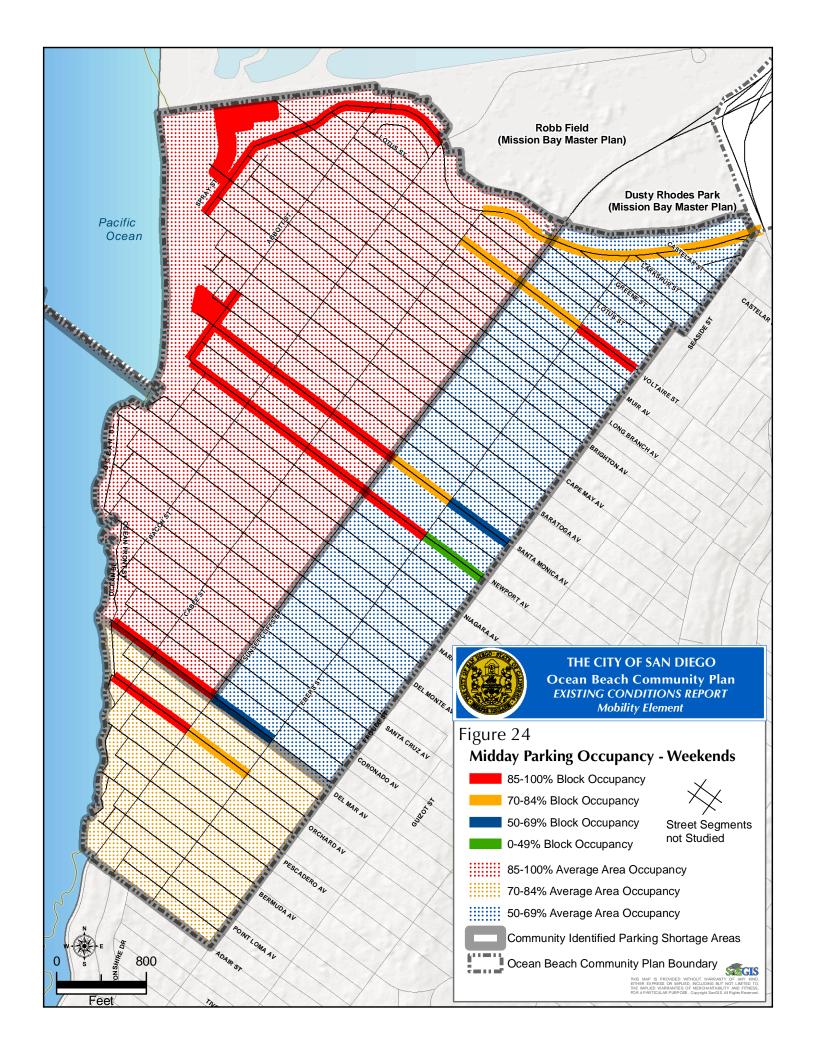
The nature of employment in Ocean Beach is such that there are not employers with high enough number of employees that would result in preparing and implementing a TDM plan.

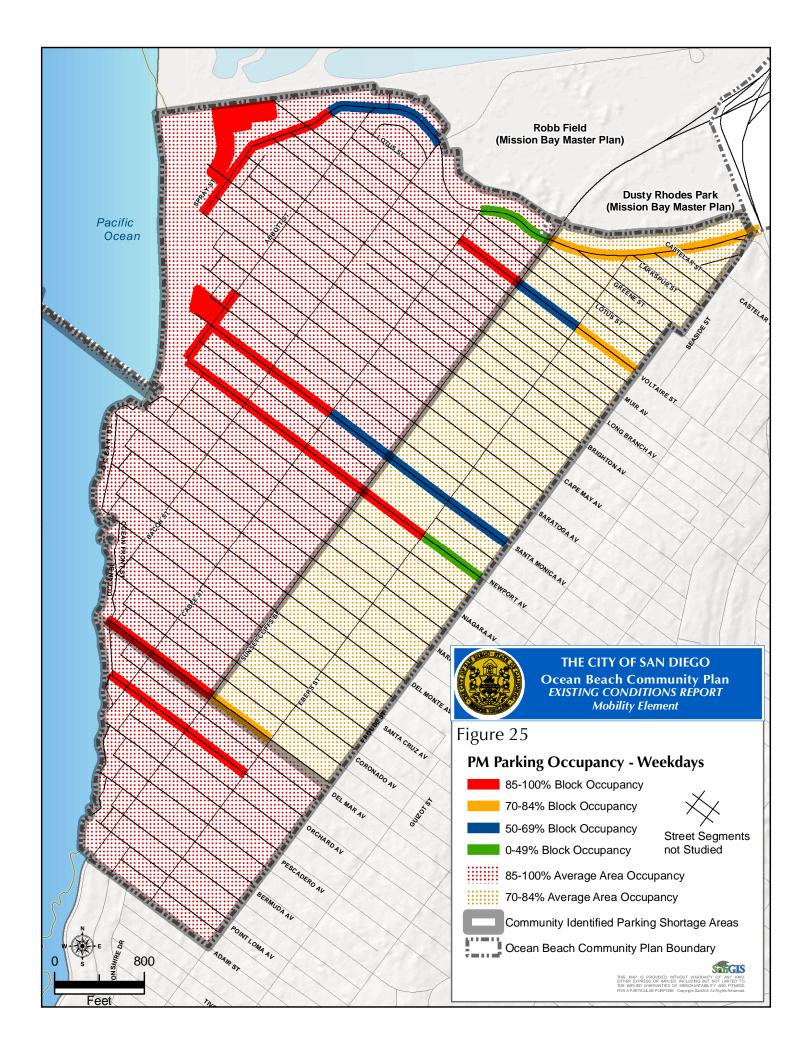


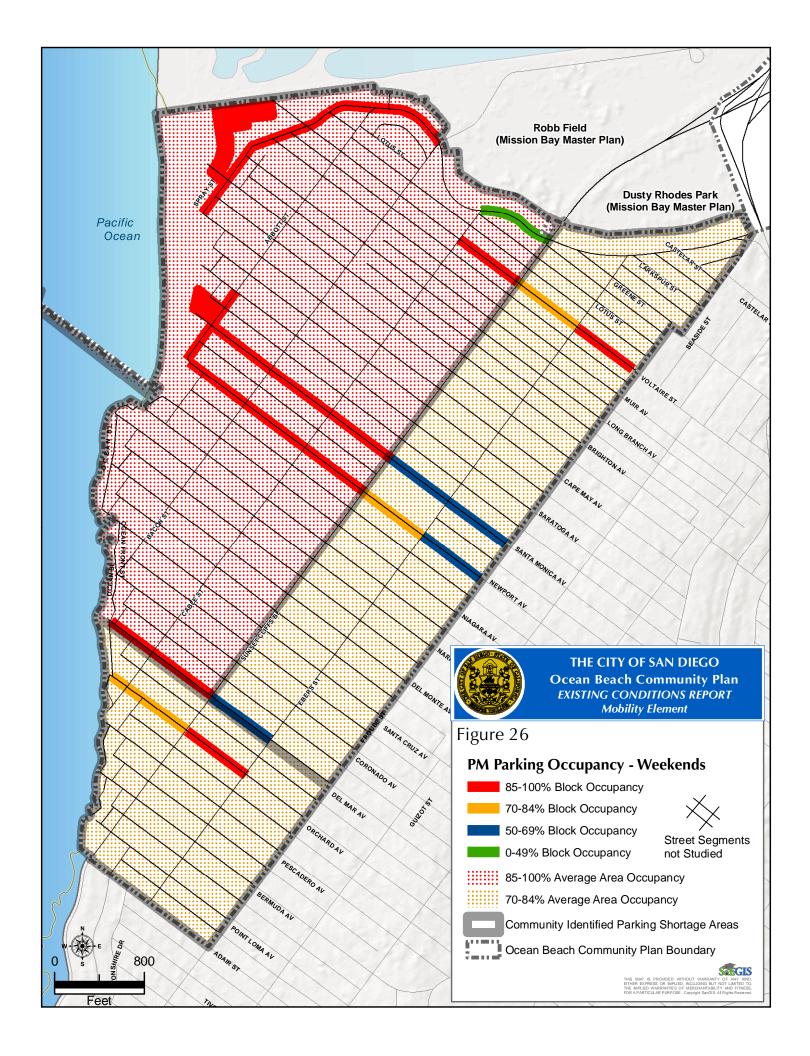












AIRPORTS

There is no airport in the Ocean Beach community. However, land use compatibility and noise issues in the land use and noise elements of the community plan. Ocean Beach is affected by the over-flight of aircraft and associated noise from the San Diego International Airport.

PASSENGER RAIL

Ocean Beach has no direct access to passenger rail; however, the connection to Old Town Transit Station that has trolley service is provided by bus lines 35 and 923.

GOODS MOVEMENT & FREIGHT

There are no industrial activities that would require raw material delivery to the community or movement of finished goods from it. The community has no truck route. Commercial good movements are limited to local deliveries to businesses.