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).

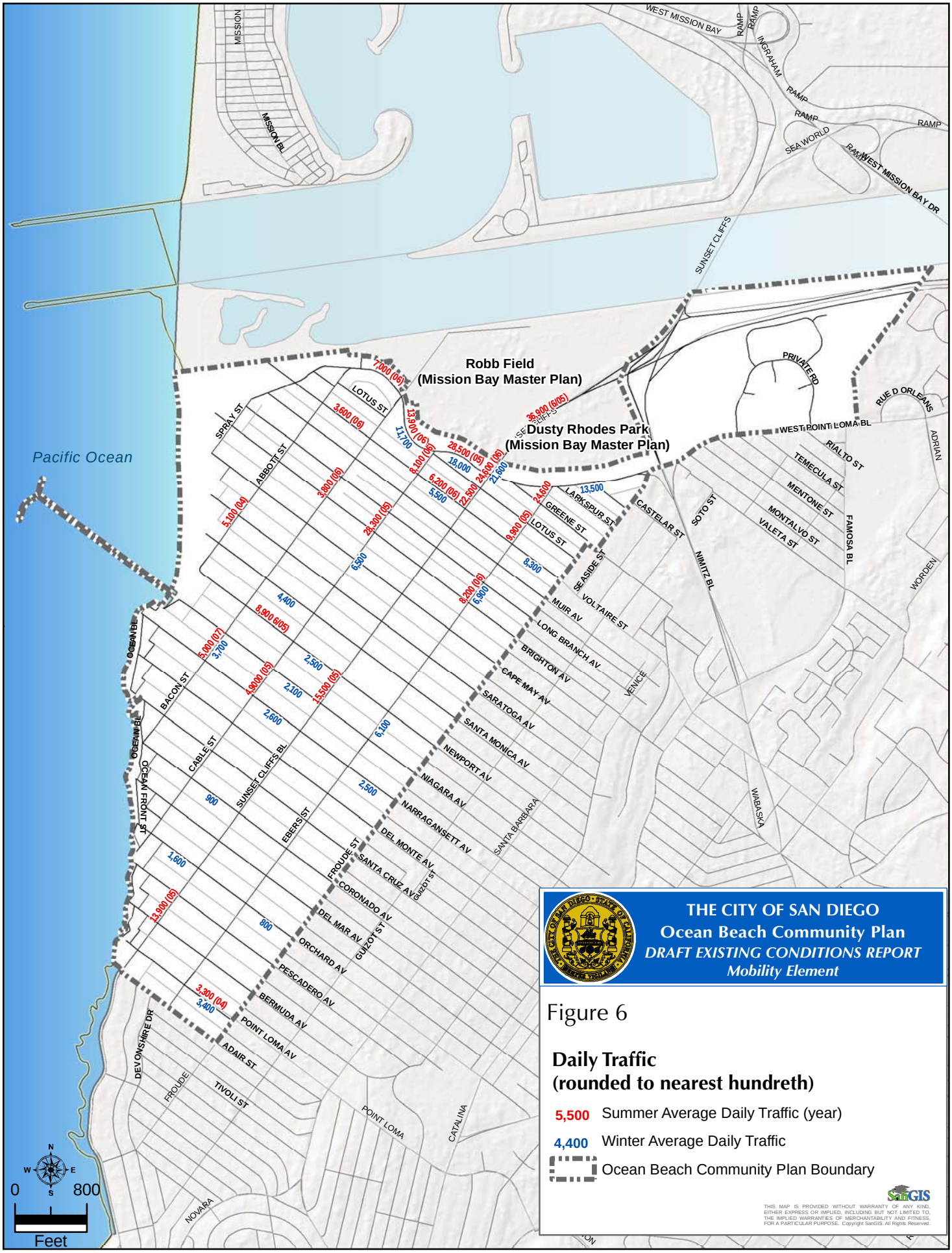
The following sections will briefly describe some of the aspects of the traffic circulation system.

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 6 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, summer counts are shown with the respective years that they were made. 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. 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 7a and 7b 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. 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.

As can be expected, summer counts, especially at the community entrances, around the beach, and at commercial areas, are significantly higher in summer than winter. For example, West Point Loma Boulevard, west of Sunset Cliffs Boulevard, has an ADT of 18,000 in winter and daily traffic of 29,000 in summer. The seasonal difference of 11,000 ADT indicates that this roadway segment is utilized 60% more in summer time than in winter. Figure 8 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 summer traffic is always more than winter traffic, for both directions. Figures 9a and 9b are a more detailed illustration of the seasonal traffic counts for two peak hours in the



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Ocean Beach Community Plan
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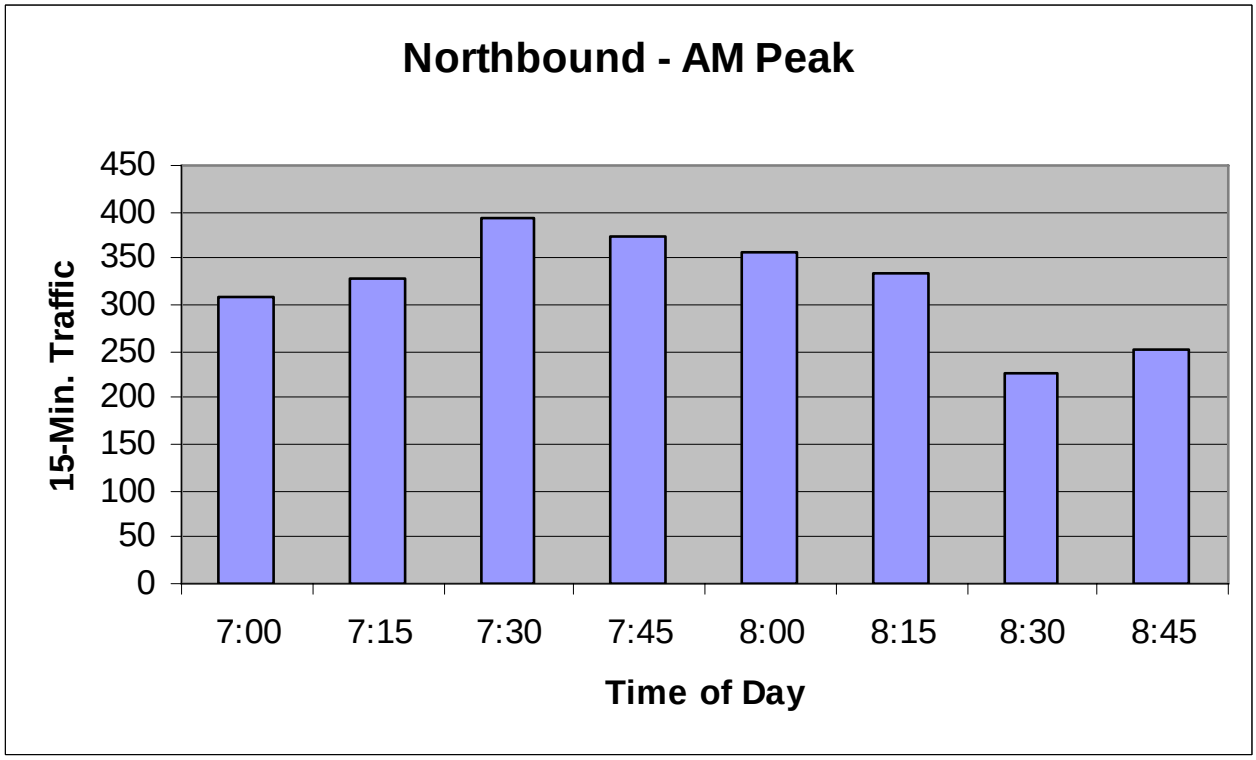
Figure 6

Daily Traffic
(rounded to nearest hundreth)

5,500 Summer Average Daily Traffic (year)

4,400 Winter Average Daily Traffic

Ocean Beach Community Plan Boundary



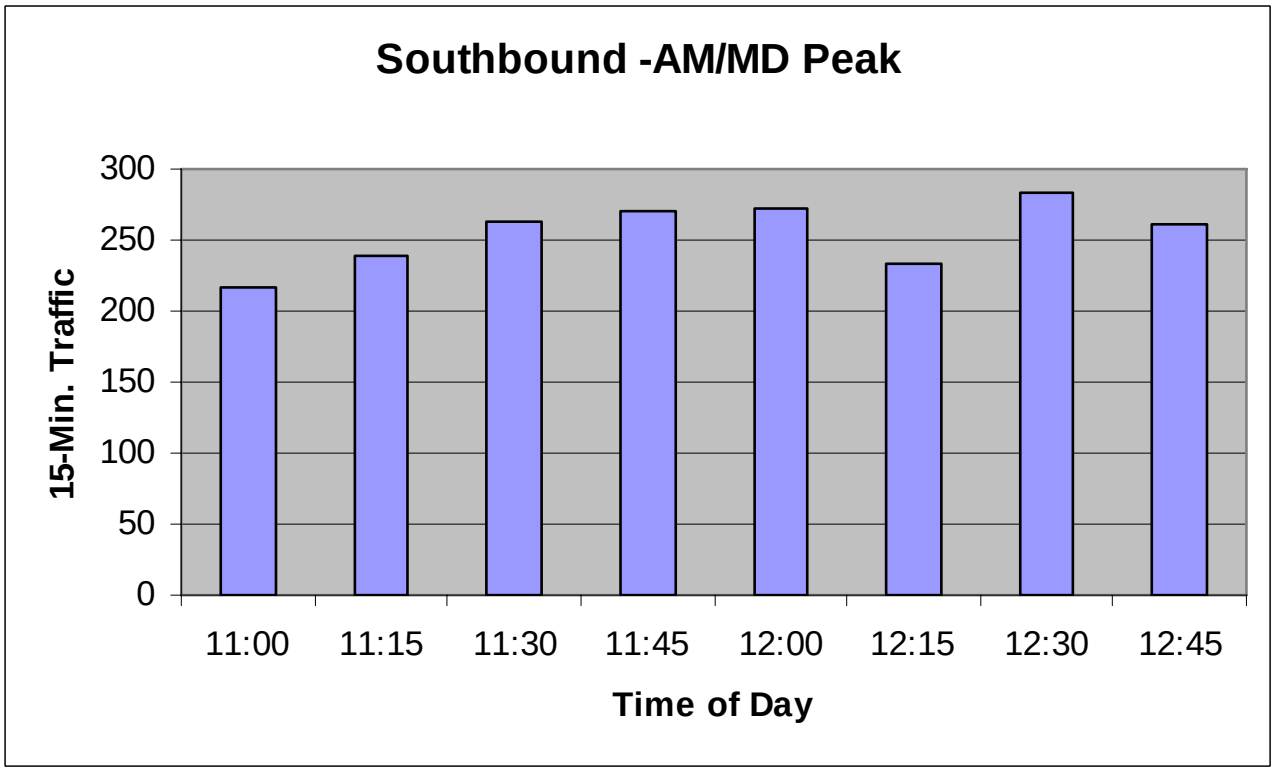


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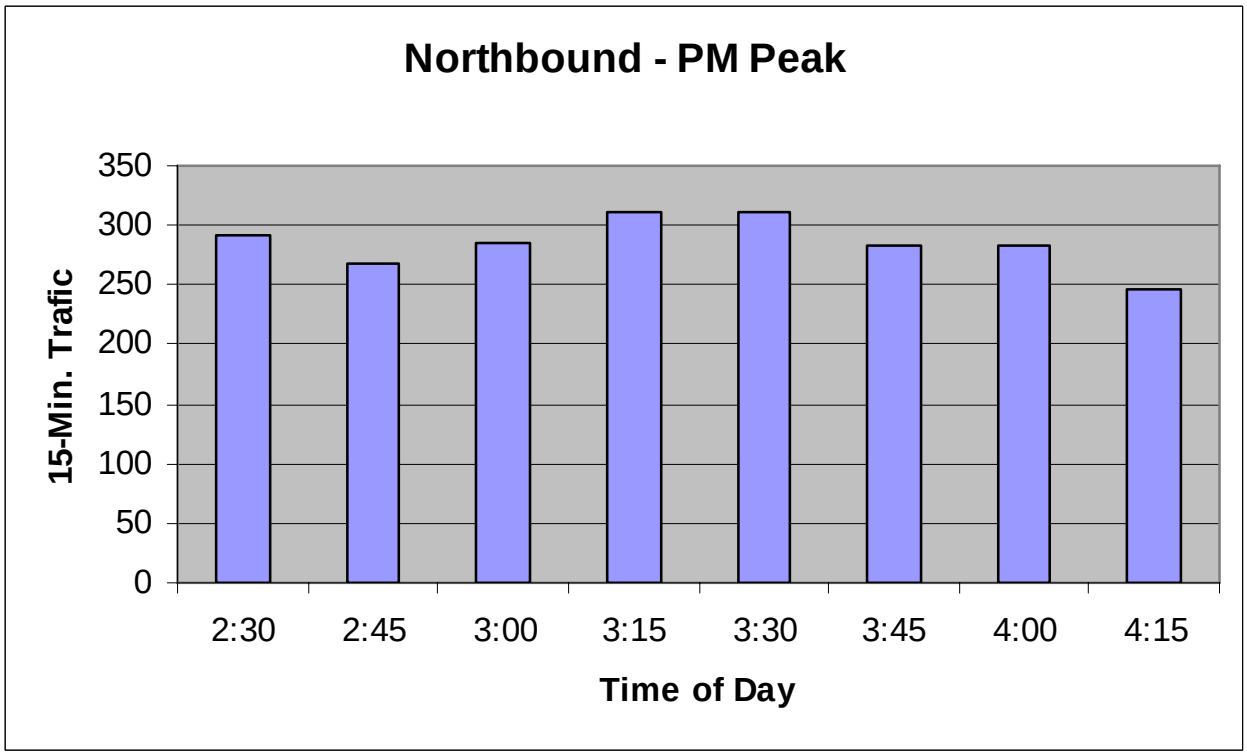
Figure 7a
Peak Period Summer Traffic
Sunset Cliffs Bl.: Nimitz-W. Pt. Loma



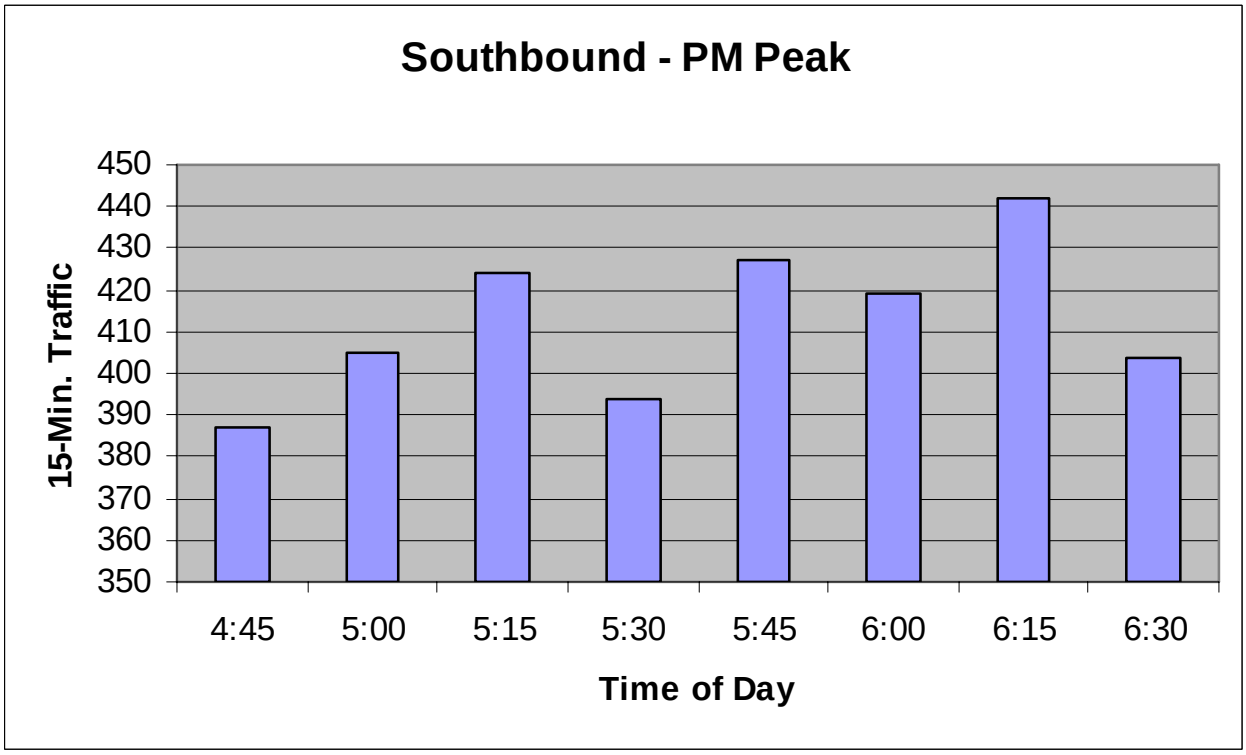


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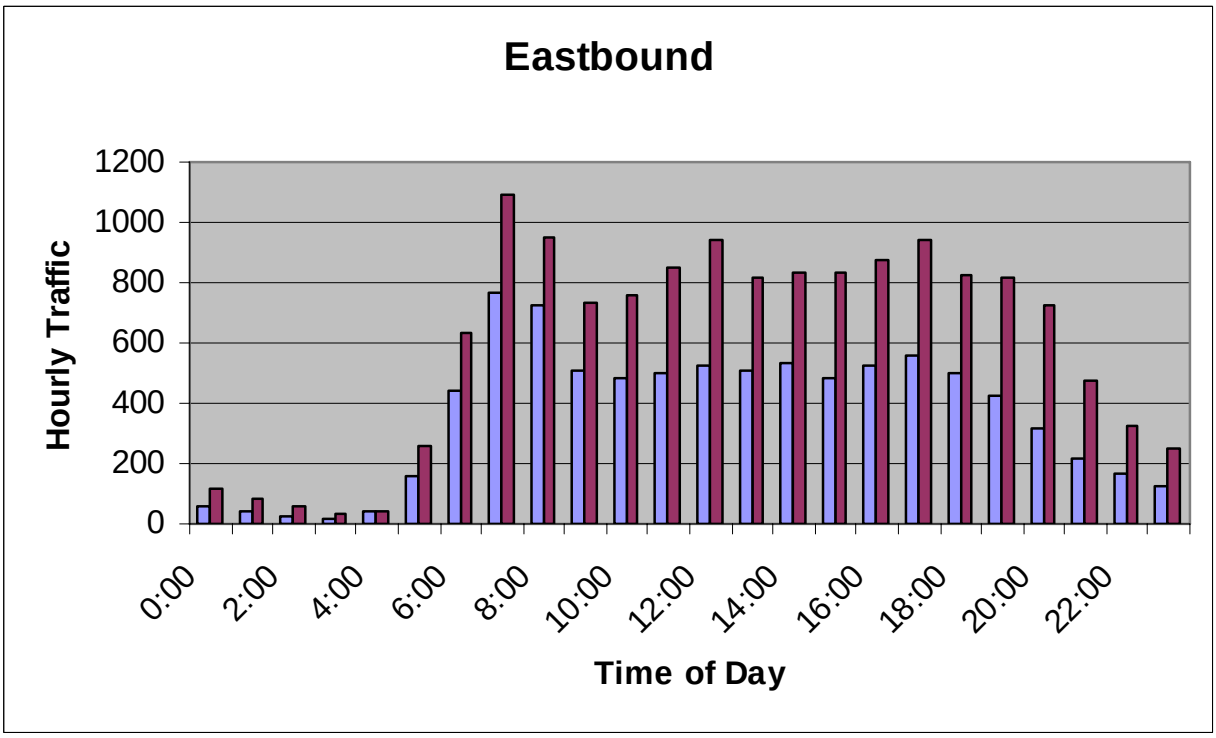
Figure 7b
Peak Period Summer Traffic
Sunset Cliffs Bl.: Nimitz-W. Pt. Loma



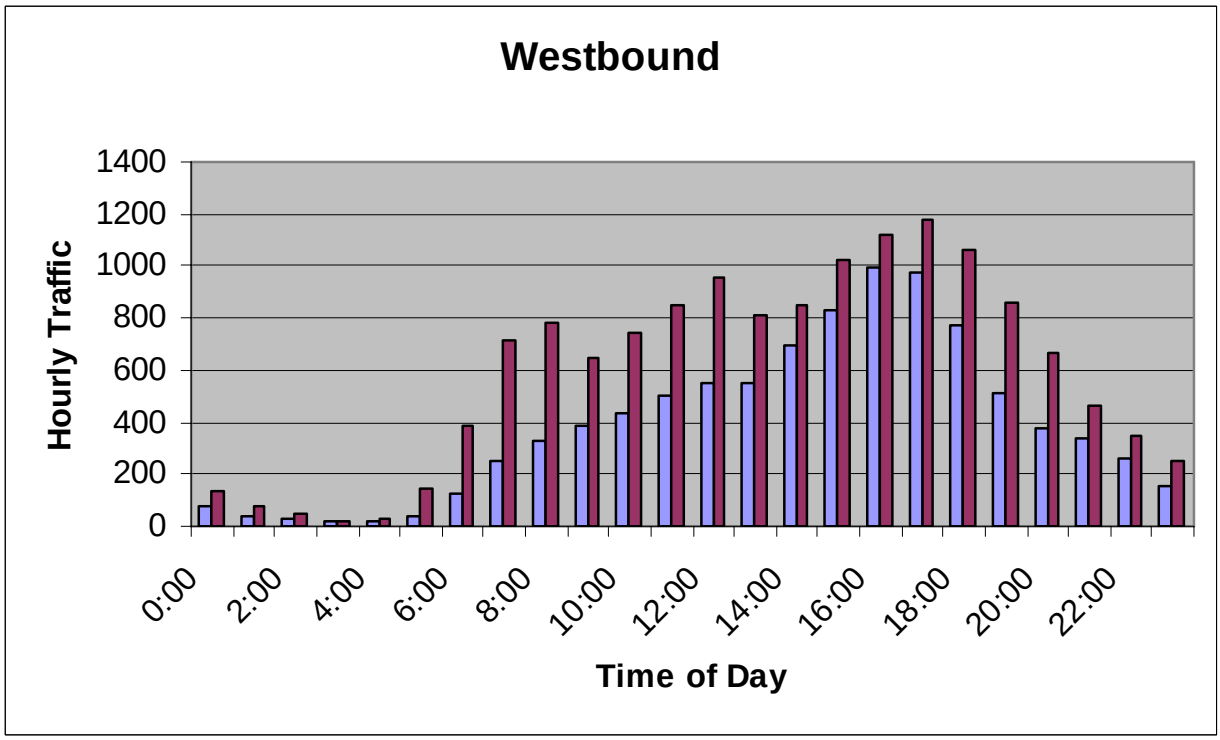


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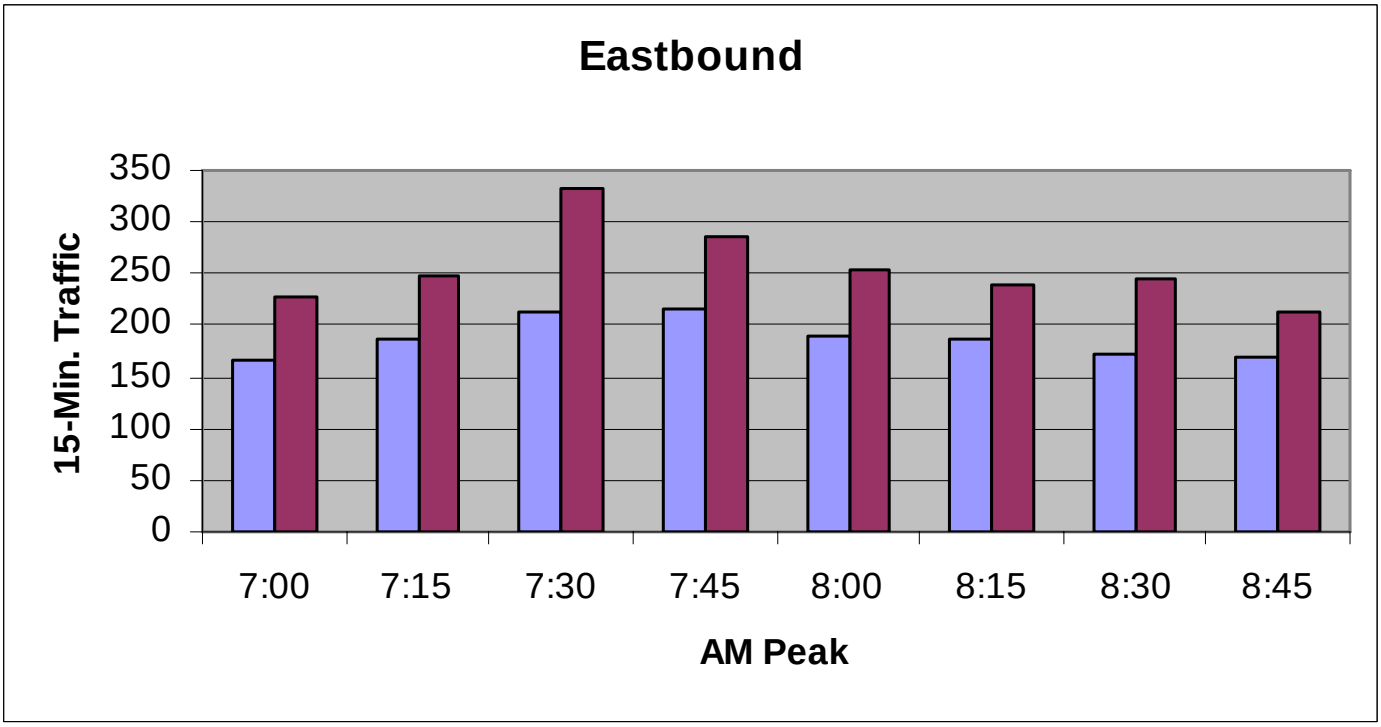
Figure 8
Daily Seasonal Traffic Comparison
W. Pt. Loma Bl.: Cable-Sunset Cliffs
Winter
Summer



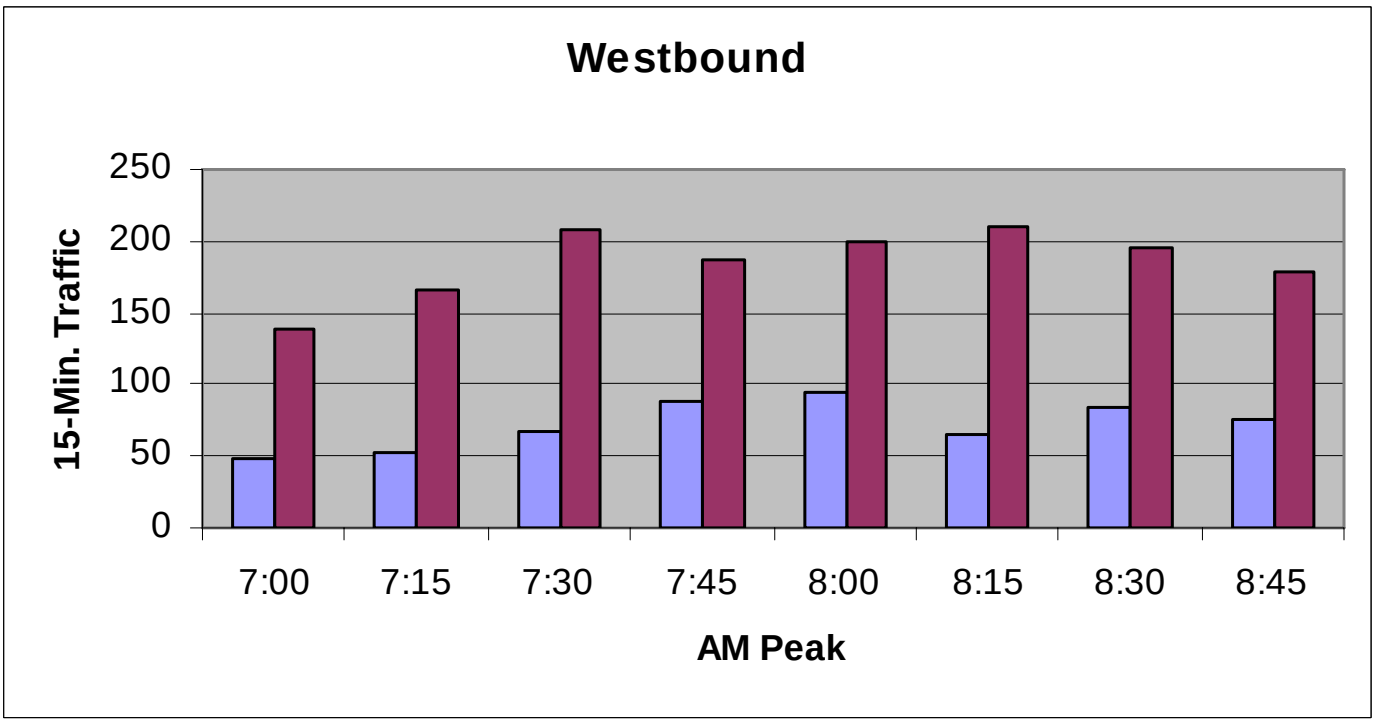


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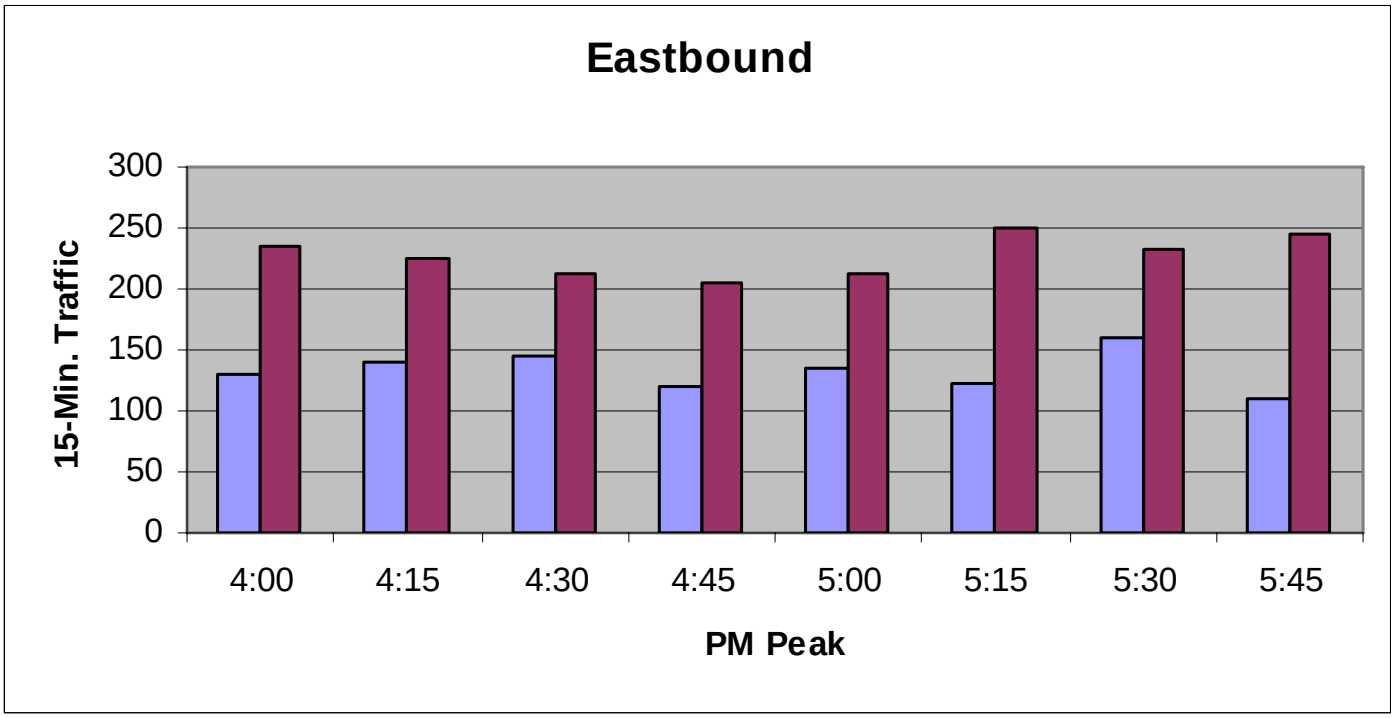
Figure 9a
Peak Period Seasonal Comparison
West Pt. Loma Bl.: Cable-Sunset Cliffs
Winter
Summer



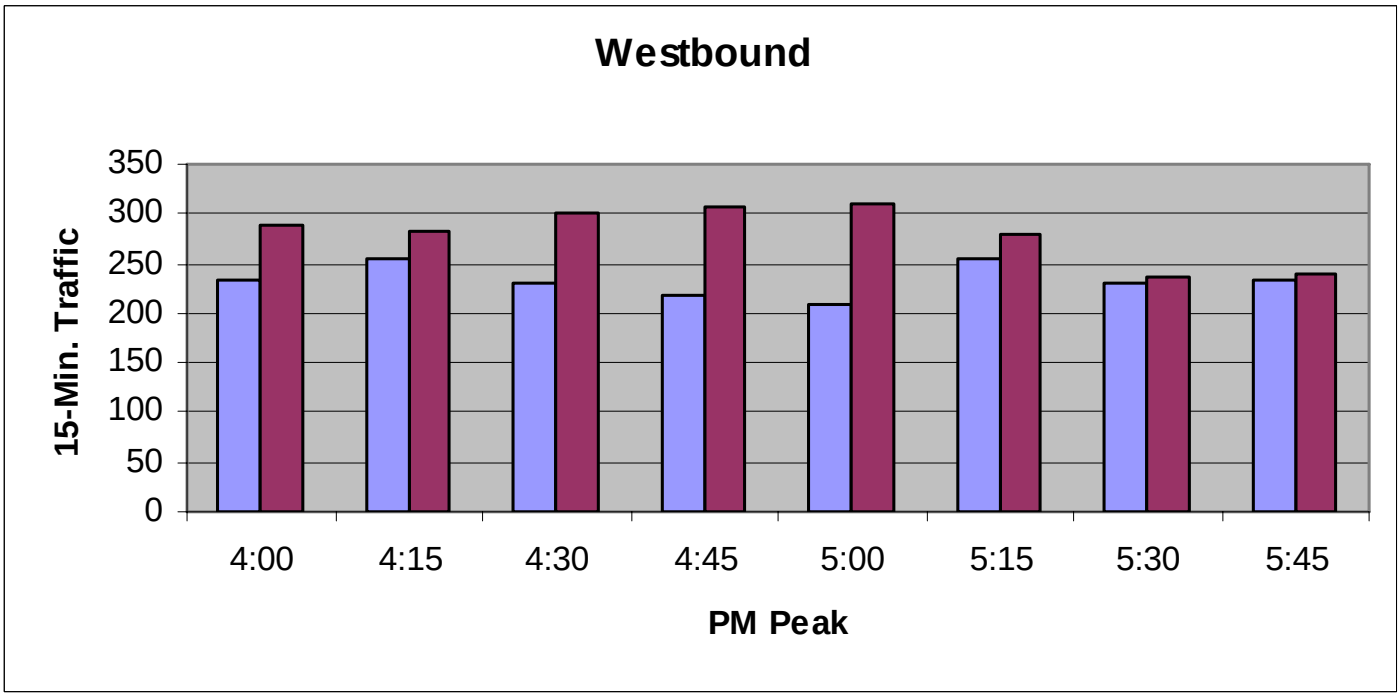


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Figure 9b

Peak Period Seasonal Comparison

West Pt. Loma Bl.: Cable-Sunset Cliffs

Winter

Summer

morning and two peak hours in the afternoon, for each direction. Again, all summer traffic volumes are higher than winter in each 15-minutes of counts for both directions.

Winter counts registered traffic volume of less than 800 ADT, for Orchard Avenue, between Froude Street and Ebers Street. This is a predominantly residential area around the southeast segment of the community.

Appendix F includes the daily counts that were taken in the January of 2008. The two-day average of hourly counts are 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 10 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.

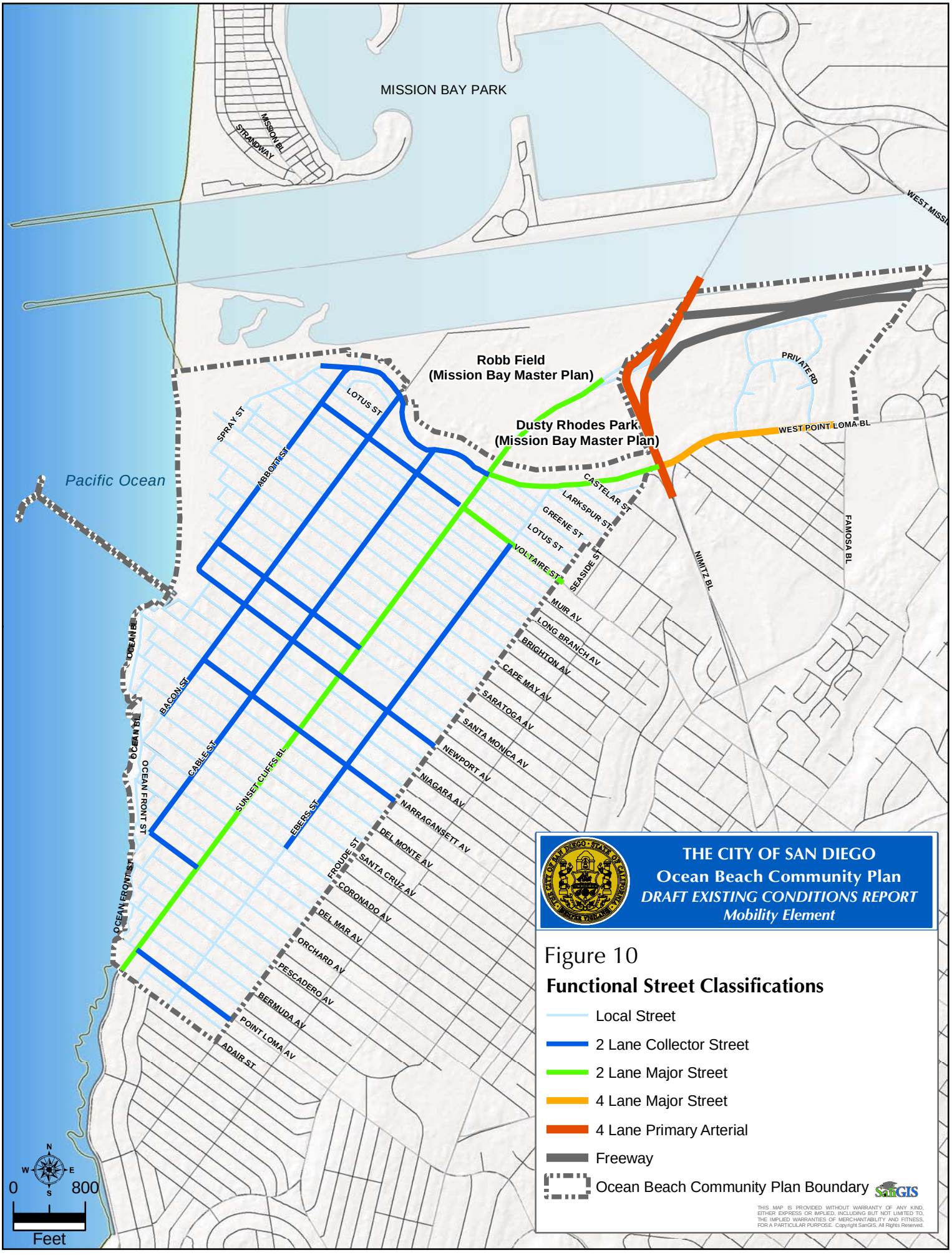
The following is a description of the classified streets in this community. It should be noted that only a segment of a street may be classified, and that the classification may change in different segments. The streets or segments that are not described are Local Streets.

<u>Abbott Street, between Newport Street and West Point Loma Boulevard</u>

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 and 3,400 in winter of 2007.

<u>Bacon Street, between Santa Cruz Avenue and West Point Loma Boulevard</u>

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,


MISSION BAY PARK
MISSION BL
STRANDWAY
WEST MISSI
Robb Field
(Mission Bay Master Plan)
Dusty Rhodes Park
(Mission Bay Master Plan)
PRIVATE RD
WEST POINT LOMA BL
Pacific Ocean
LOTUS ST
SPRAY ST
ABBOTT ST
CASTELAR ST
LARKSPUR ST
GREENE ST
LOTUS ST
VOLTAIRE ST
SEASIDE ST
NIMITZ BL
FAMOSA BL
MUIR AV
LONG BRANCH AV
BRIGHTON AV
CAPE MAY AV
SARATOGA AV
SANTA MONICA AV
NEWPORT AV
NIAGARA AV
NARRAGANSETT AV
DEL MONTE AV
SANTA CRUZ AV
CORONADO AV
DEL MAR AV
ORCHARD AV
PESCADERO AV
BERMUDA AV
POINT LOMA AV
ADAIR ST
FROUDE ST
OCEAN BL
OCEAN BL
OCEAN FRONT ST
OCEAN FRONT ST
BACON ST
CABLE ST
SUNSET CLIFFS BL
EBERS ST
THE CITY OF SAN DIEGO
Ocean Beach Community Plan
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Mobility Element
Figure 10
Functional Street Classifications
Local Street
2 Lane Collector Street
2 Lane Major Street
4 Lane Major Street
4 Lane Primary Arterial
Freeway
Ocean Beach Community Plan Boundary
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and 7,810 in summer of 2006. The segment between Narragansett Avenue and Niagara Avenue registered 5,010 vehicles and in 2007, 4,930 vehicles.

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 4,820 in summer of 2005. The segment between Voltaire Street and West Point Loma Boulevard had 6,620 daily traffic in summer of 2003 and 8,020 daily traffic in summer of 2006.

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 8,160 vehicles in summer of 2006 and 6,890 in winter of 2008. The winter of 2008 count between Newport Avenue and Niagara Avenue was 4,100.

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 2,610, and the segment between Ebers Street and Froude Street showed 2,460 daily traffic.

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 segment between Bacon Street and Cable Street showed 8,670 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. The winter 2008 average daily traffic is 760 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 3,330 between Ebers Street and Froude Street. The summer count in the same segment is 3,280 vehicles.

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 is 4,420. Summer counts have not been taken for this roadway.

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 had a daily traffic volume of 24,550 in summer of 2006. The segment between Lotus Street and Voltaire Street had 22,480 daily traffic in summer of 2004. The summer of 2005 had 28,310 daily traffic between Brighton and Long Branch. The daily traffic for summer of 2005 between Newport Avenue and Niagara Avenue was 15,470. The segment between Orchard Avenue and Pescadero Avenue had a daily traffic volume of 13,860 in summer of 2005.

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 Abbott Street and Bacon Street had a traffic count of 3,540 in summer of 2006. Winter count was not taken at this segment. The segment between Cable Street and Sunset Cliffs Boulevard showed 5,430 ADT for winter 2008 and 6,170 for summer of 2006.

The segment between Nimitz Boulevard 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 8,290 between Ebers Street and Froude Street. No summer count is available for this segment.

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 13,420. Summer counts are not available for this segment.

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 11,651. This compares with 13,840 vehicle count in summer of 2004. The winter 2008 count between Cable Street and Sunset Cliffs was 17,940, while 28,480 in summer of 2005.

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. The only two street segments within the community that operate at undesirable LOS in winter are listed on the next page.

- Sunset Cliffs Boulevard, between Voltaire Street and West point Loma Boulevard
- West Point Loma Boulevard, between Cable Street and Sunset Cliffs Boulevard

Based on the daily traffic volumes that were counted during winter and summer periods, 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 level of service F are:

- Cable Street, between Brighton and West Point Loma Boulevard
- Ebers Street, between Narragansett and West Point Loma Boulevard
- Nimitz Boulevard, between Sunset Cliffs Boulevard and West Point Loma Boulevard
- Sunset Cliffs Boulevard, between Pt. Loma Avenue and West Point Loma Boulevard

Figure 11 illustrates the Street Segment Level of Service.

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 12.

Counts were made in January 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 13 and 14 show the lane configurations and traffic movements for each of the counted signalized intersections for the morning and afternoon peak periods. These counts are used to determine the level of service at the intersections. The results of intersection LOS for morning and afternoon peak periods are shown on Figure 15. 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. This information is used to determine traffic signal timing and propose improvements for the legs of an intersection that perform poorly. Improvements may be in form of adjustment to the allocated green times, and additional lanes where possible. Summer counts are scheduled to be taken in July 2008. The summer level of service will be analyzed and presented in the next update of this report. The manual intersection counts are in Appendix L.

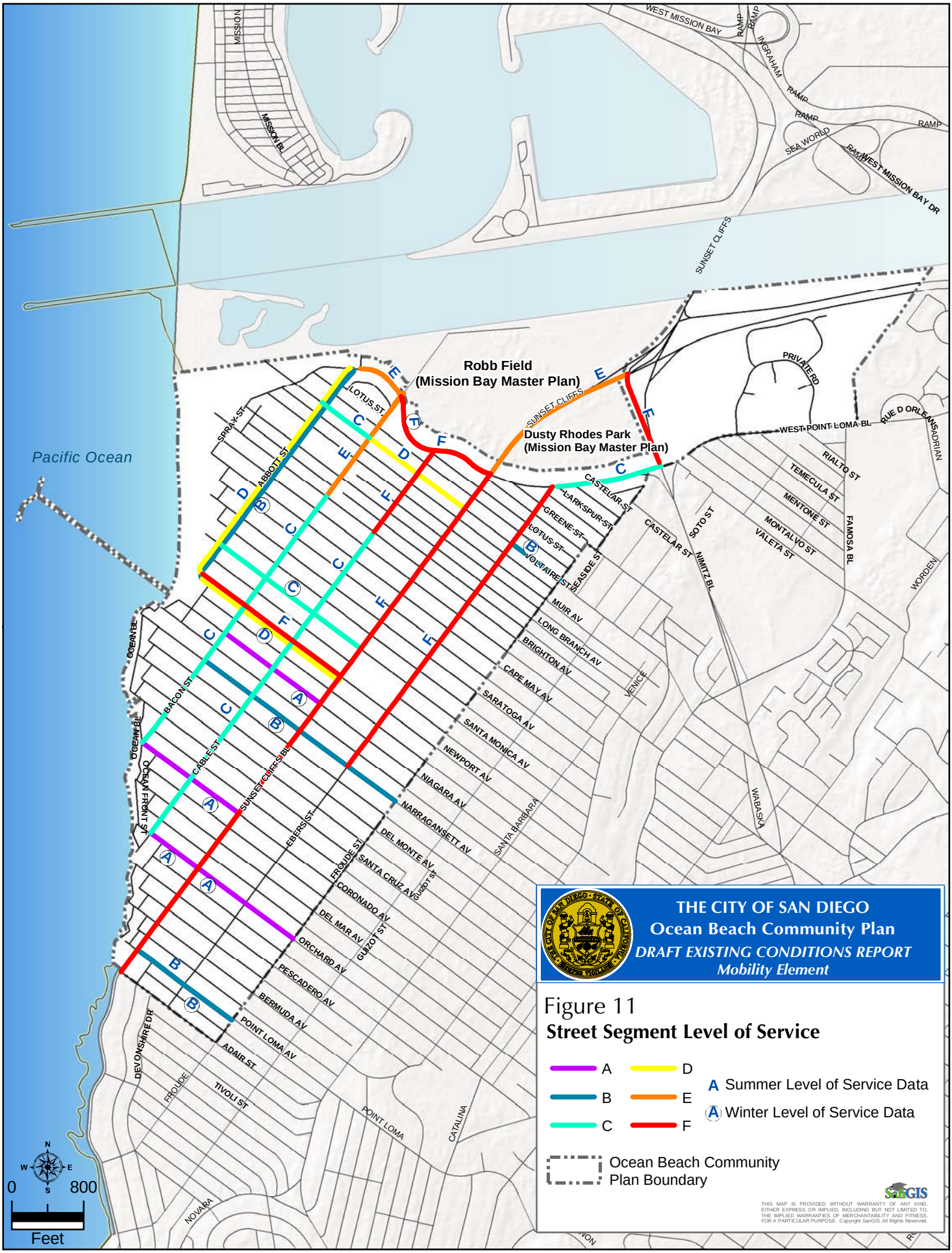

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Figure 11
Street Segment Level of Service

A
B
C
D
E
F

A Summer Level of Service Data
(A) Winter Level of Service Data

Ocean Beach Community Plan Boundary

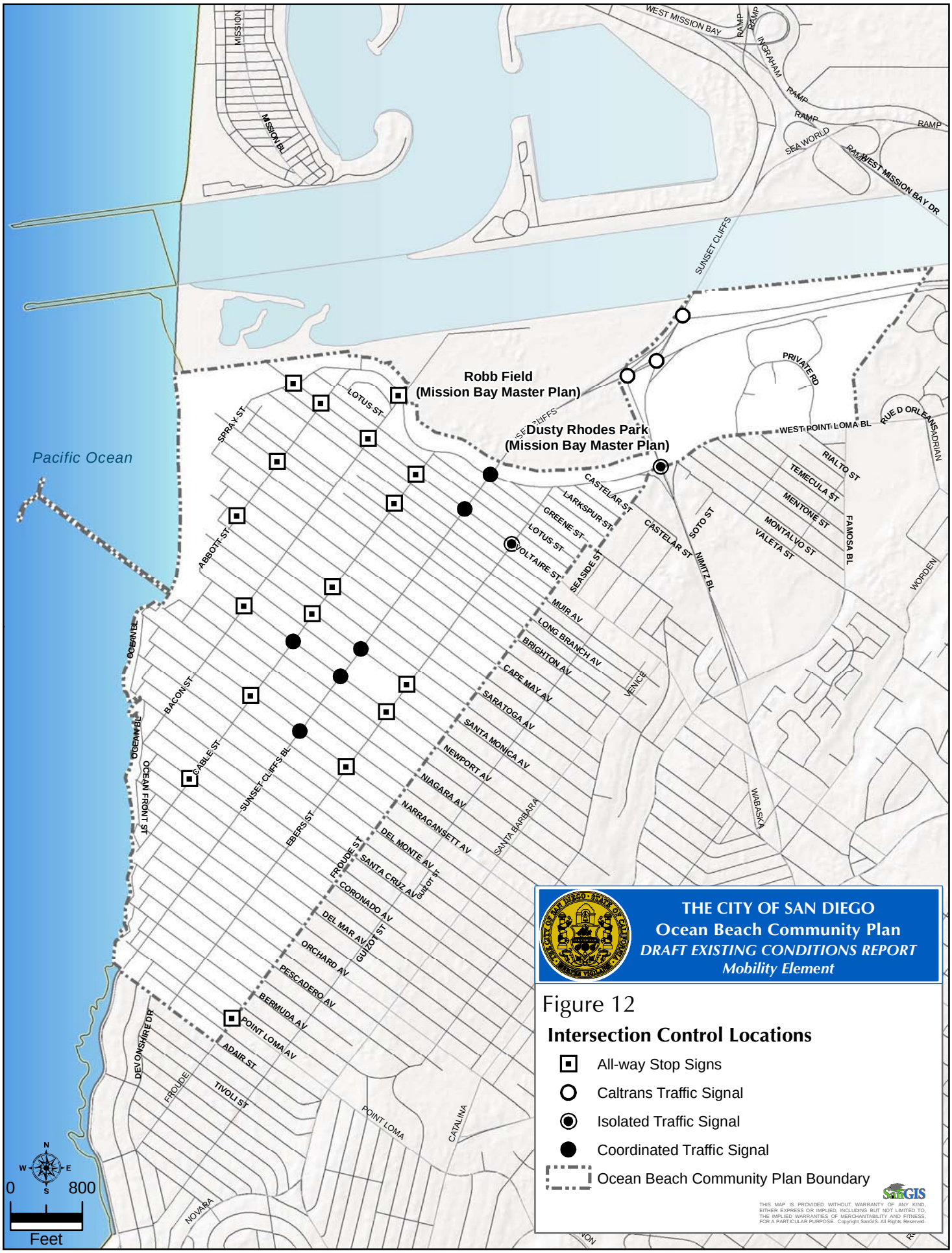
Pacific Ocean
Robb Field
(Mission Bay Master Plan)
Dusty Rhodes Park
(Mission Bay Master Plan)
WEST MISSION BAY
MISSION BL
INGRAHAM
RAMP
SEA WORLD
WEST MISSION BAY DR
SUNSET CLIFFS
PRIVATE RD
RUE D ORLEANS
ADRIAN
WEST POINT LOMA BL
RIALTO ST
TEMECULA ST
MENTONE ST
MONTALVO ST
VALETA ST
FAMOSA BL
WORDEN
SOTO ST
NIMITZ BL
CASTELAR ST
LARKSPUR ST
GREENE ST
LOTUS ST
VOLTAIRE ST
SEASIDE ST
MUIR AV
LONG BRANCH AV
BRIGHTON AV
CAPE MAY AV
SARATOGA AV
SANTA MONICA AV
NEWPORT AV
NIAGARA AV
NARRAGANSETT AV
DEL MONTE AV
SANTA CRUZ AV
CORONADO AV
DEL MAR AV
ORCHARD AV
PESCADERO AV
BERMUDA AV
POINT LOMA AV
ADAIR ST
TIVOLI ST
SANTA BARBARA
VENICE
WABASKA
SPRAY ST
ABBOTT ST
OCEAN BL
BACON ST
CABLE ST
OCEAN FRONT ST
SUNSET CLIFFS BL
EBERS ST
FROUDE ST
GUIZOT ST
DEVONSHIRE DR
POINT LOMA
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Figure 12
Intersection Control Locations
All-way Stop Signs
Caltrans Traffic Signal
Isolated Traffic Signal
Coordinated Traffic Signal
Ocean Beach Community Plan Boundary
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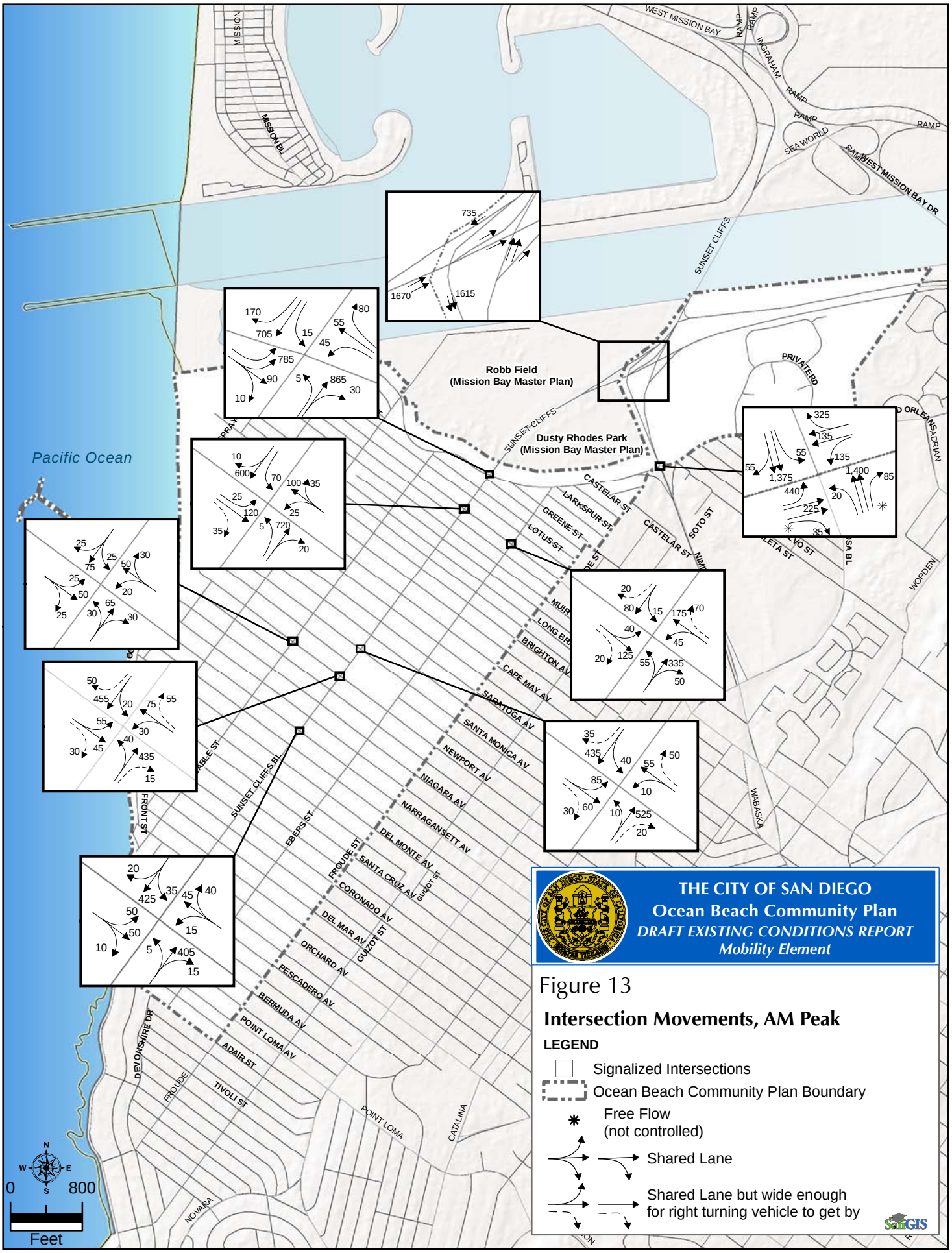

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Figure 13

Intersection Movements, AM Peak

LEGEND

- Signalized Intersections
- Ocean Beach Community Plan Boundary
- Free Flow (not controlled)
- Shared Lane
- Shared Lane but wide enough for right turning vehicle to get by

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