

Southeastern San Diego Community Plan Update

Prepared for

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Urban and Regional Planners

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FINAL TECHNICAL REPORT

FEBRUARY 2015

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Mobility Element Update Technical Report

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Executive Summary

Introduction

This Technical Report summarizes the physical and operational conditions of the Southeastern San Diego mobility system as part of the City of San Diego's community plan update process. The evaluation includes an overview of both existing and Preferred Plan (buildout) conditions for pedestrian and bicycle facilities, transit systems, and roadways within the Southeastern San Diego community. The report also describes key terms and methodologies utilized for conducting these analyses, and identifies current deficiencies across the transportation system. This report will be utilized to support decisions about proposals and recommendations for updating the community plan mobility element.

The following sections briefly describe the proposed changes to the mobility network within the Southeastern community and reviews the results of the technical analysis under both existing and future conditions.

Walkable Communities

Existing Needs

The pedestrian count data show high pedestrian demands along the following corridors:

- 25th Street
- 28th Street
- 32nd Street
- 43rd Street
- Imperial Avenue
- Commercial Avenue
- Market Street
- National Avenue
- Ocean View Boulevard

Pedestrian deficiencies are assessed in terms of missing facility and high levels of pedestrian-involved collisions. There are currently 569 missing curb ramps within the community, 953 non-compliant curb ramps, and 87,269 lineal feet of missing sidewalks. These missing facilities are fairly evenly distributed across the community.

There are fifteen (15) intersection locations across the community where 2 or more pedestrian-involved collisions occurred between 2007 and 2012. These intersection locations are as follows:

- 24th Street / Imperial Avenue
- 25th Street / Imperial Avenue
- 28th Street / Island Avenue
- 29th Street / Imperial Avenue
- 30th Street / Ocean View Boulevard
- 30th Street / National Avenue
- 31st Street / Ocean View Boulevard
- 31st Street / National Avenue
- 32nd Street / Market Street
- 32nd Street / Ocean View Boulevard
- 32nd Street / National Avenue
- 36th Street / Imperial Avenue
- 40th Street / Alpha Street
- 42nd Street / Market Street
- Imperial Avenue, west of San Pasqual Drive

Proposed Improvements

Pedestrian Master Plan

The *Pedestrian Master Plan - Phases 2 & 3* ranked the proposed locations of pedestrian improvement concepts to develop a list of high priority project locations. Every intersection was assigned a ranking score between 0 and 15 based on Pedestrian Demand (which is comprised of Pedestrian Attractors and Pedestrian Generators), Pedestrian Detractors, Route Type, and Proximity to Public Facilities. Those intersection and corridor improvement project locations scoring 12.5 or more points were considered to be High Priority Project locations. As displayed in **Table ES-1**, two high priority locations were identified within the Southeastern San Diego community, with three additional projects scoring 12 points.

TABLE ES-1
HIGH PRIORITY PEDESTRIAN PROJECT INTERSECTIONS

Project Ranking	Street	Intersecting Street	Route Type	Utility Boxes	Score
1	32nd Street	Market Street	Connector – Corridor	SW corner	12.5
2	Boundary Street	Market Street	Connector – Corridor	None	12.5
3	24th Street	Market Street	Residential – Corridor	NW corner	12
4	32nd Street	Ocean View Boulevard	Connector – Connector	SE corner	12
5	43rd Street	Logan Avenue	Connector - Connector	None	12

Source: City of San Diego Pedestrian Master Plan – Phases 2 & 3

Commercial Imperial Corridor Master Plan

The Commercial Imperial Corridor Master Plan (CICMP) developed specific multi-modal and land use recommendations to enhance the overall mobility along Imperial Avenue and Commercial Street between 19th Street and 32nd Street. The CICMP made the following recommendations for pedestrian improvements within the project study area:

- Curb bulb outs at the 31st Street / Imperial Avenue intersection;
- Curb bulb outs at all unsignalized intersections along Imperial Avenue within the Village Area (between 22nd Street to 27th Street);
- Enhanced crosswalks at signalized intersections along Imperial Avenue, within the Master Plan area (25th Street, 30th Street and 32nd Street) and the proposed signal at 22nd Street (assumed improvement of the Com 22 Master Plan);
- Pedestrian countdown signals at all signalized intersections;
- Providing consistent sidewalk widths and connectivity along Commercial Street;
- Restriction of driveway access along Imperial Avenue for new developments; and
- Additional buffer width between the pedestrian and vehicular travel lanes, within the Village area, via mid-block curb bulb outs and on-street parking.

National Avenue Corridor Master Plan

Similar to the CICMP, the National Avenue Corridor Master Plan developed specific multi-modal and land use recommendations enhance the overall mobility along National Avenue between 28th Street and 43rd Street. The National Avenue Corridor Master Plan made the following recommendations for pedestrian improvements within the project study area:

- Connect both sides of the street by improving and/or providing highly visible enhanced crosswalks at all intersections where they do not currently exist (final installations are to be based on applicable warrants);
- Enhance landscape along sidewalks with additional street trees and groundcover plantings in order to supplement existing trees and have more continuous shade for pedestrians;
- Curb bulb-outs at intersections (where possible) to reduce the effective width of the right-of-way and pedestrian exposure;
- Enhanced crosswalks (where warranted) to improve their visibility at all study intersections and better highlight the presence of pedestrians in the corridor;
- Implementation of pedestrian countdown heads at National Avenue and 30th Street;
- Install new traffic signals at 31st Street and 41st Street to improve crossing conditions for pedestrians and to better balance delays for all;
- Ensure ADA-compliant facilities; and
- Installation of buffers between pedestrian, bicycle, and vehicular right-of-ways in order to distinguish between designated pedestrian, bicycle, and vehicular zones.

Other Planned Pedestrian Improvements

In addition, several pedestrian facility projects have been identified by the City of San Diego and are included on their *Unfunded Transportation Needs List* (8/5/2014). A list of the pedestrian improvements located in the Encanto community are included in Appendix O. It should be noted this list is being updated on a regular basis and Appendix O only reflects a snap shot of the needs and planned improvements throughout the community at the time in which this report was prepared.

Future Deficiencies with Proposed Improvements

Pedestrian LOS was evaluated along the major urban corridors throughout the community, including Market Street, Imperial Avenue, National Avenue, and 43rd Street, using CSLOS methodologies. All of the key study Urban Street Segments analyzed within the community is projected to provide a pedestrian service at LOS D or better.

Transit First

Existing Needs

Transit needs are identified in terms of high demand and high deficiency. Areas of high demand include locations with relatively high transit boardings and alightings. Areas with high deficiencies include transit network gaps, or underserved corridors, and transit stop locations with relatively high pedestrian and bicycle-involved collisions within 500 feet.

There are currently four very high transit demand nodes across the community: at the Orange Line Trolley Stations at 25th Street (2,495 boardings/alightings) and 32nd Street (1,921 boardings/alightings); and at 38th Street (517 boardings/alightings) and 43rd Street (981 boardings/alightings) along National Avenue.

Nearly all of the community is located within ¼ mile of transit service except for the area south of the Chollas Creek South Branch (Acacia Street / Alpha Street) and the single family residential area in the northeast corner of the community, indicating that a majority of the residents have reasonable walking and cycling access to transit.

To better understand the dynamics of choosing the mode of travel, comparisons were made between roundtrip transit cost and time to those using automobiles from the 32nd Street Trolley Station to nine popular destinations within the region, such as the San Diego International Airport, San Diego State University, Fashion Valley Shopping Center, Petco Park, and San Diego City Hall. It was concluded that on average, roundtrip auto travel time is approximately one-third that of transit time but the cost is about 60% higher.

Network Gaps

While numerous transit stops are located along the east-west corridors in Southeastern San Diego, additional bus routes along the north-south streets (such as 28th, 32nd, 36th, and 40th streets) could be beneficial to local transit riders. It is important to locate transit service in areas near retail, commercial, employment and other amenities, such as child care, restaurants, and drug stores. Figure 4-4 shows locations of potential transit network gaps serving the demand for north-south transit travel.

Station Amenities Deficiencies

Transit station areas should feel safe and comfortable for waiting passengers, including adequate shelter from rain and intense sunshine. Ideally, transit schedule information is provided, along with real-time arrival and departure information. Field observation indicates very few transit stops have shelters and only about half of the bus stops have benches and trash cans in Southeastern San Diego. Given the high transit usage, better transit stop amenities would help improve the quality of experience for thousands of transit riders in this community. Secure bicycle parking should be provided at transit stations in case buses or trains do not have the capacity to allow cyclists to bring their bikes on board. Bicycle parking should be located in high traffic areas to provide natural surveillance by pedestrians and drivers.

Quality of Service Deficiencies

A multi-modal evaluation of selected corridors served by transit was conducted. This evaluation considers spacing of stops, headway between consecutive transit vehicles, and station amenities. The evaluation of existing transit service within Southeastern San Diego found that bus transit routes in the community generally operate at LOS B or better, except for Imperial Avenue, which operates at a LOS D during both the AM and PM peak hours. It is worthwhile noting that Imperial Avenue has the lowest frequency transit service, with only 30-minute headways being provided by the Route 4.

Safety Deficiencies

It is critical to design station areas with pedestrians and bicyclists in mind, since these modes are often utilized to access transit. Pedestrian and bicycle connections between the stations/stops and nearby land uses should be clear and safe. Approximately 70% (161 out of 235) of all pedestrian and bicycle-involved collisions in the last five years within Southeastern San Diego occurred within 500 feet of a transit stop. Figure 4-4 shows transit stop locations with relatively higher numbers of pedestrian and bicycle collisions (7 to 11 collisions over a five-year period), including the following:

- 24th Street / Market Street
- 25th Street / Island Avenue
- 25th Street / L Street
- 25th Street / Imperial Avenue
- 31st Street / Market Street
- 32nd Street / National Avenue
- 37th Street / Ocean View Boulevard

Proposed Improvements

The San Diego Association of Government's 2050 *Regional Transportation Plan* Revenue Constrained scenario identifies several public transit improvements that will affect the Southeastern San Diego community, as follows:

- I-805 BRT, Route 680 - Otay Mesa to Sorrento Mesa via I-805 Corridor, Otay Ranch/Millenia, National City, Southeastern San Diego, Kearny Mesa. A Bus Rapid Transit (BRT) service is planned for San Diego along the Interstate 805 corridor as part of the TransNet program. The BRT will connect the Otay Mesa Port of Entry to Kearny Mesa, Sorrento Mesa, UCSD and UTC, providing access to employment and activity centers in a rapid and reliable manner. The 2050 RTP indicates this route will be implemented by the year 2018. Members of the Southeastern San Diego community have expressed an interest in having the South Bay BRT service the 47th Street Trolley Station. This was included in the 2050 RTP unconstrained network and SANDAG is conducting a planning study to evaluate potential station design concepts.
- Rapid Bus, Route 11 – between Spring Valley and SDSU via Southeastern San Diego, Downtown, Hillcrest, and Mid-City. The 2050 RTP indicates this route will be implemented by the year 2035.
- Rapid Bus, Route 637 – between North Park to 32nd Street Trolley Station via Golden Hill. The 2050 RTP indicates this route will be implemented by the year 2035.

-
- Light Rail Transit (LRT), Orange Line – The 2050 RTP indicates the Orange Line will have increased service frequencies by the year 2030 to 7.5-minute peak / 15-minute off-peak, and a further increase by 2040 to 7.5-minute off-peak. An extended linkage to the Airport Intermodal Transit Center is also planned by the year 2035.
 - LRT, Orange Line Express - between El Cajon and downtown San Diego. The 2050 RTP indicates this route will not be implemented until the year 2040.
 - LRT, New Line - between UTC and San Ysidro via Kearny Mesa, Mission Valley, Mid-City, Southeastern San Diego, National City/Chula Vista via Highland Avenue/4th Avenue. The 2050 RTP indicates this route will not be implemented until the year 2050.
 - Local Buses - The 2050 RTP also identifies that local bus service frequencies will be improved to 15-minute headways along key corridors (all urban routes) by the year 2020, with further improvements to 10-minute (all day) frequency by 2030.

In addition to the planned transit improvements identified above, a number of BRT routes throughout the region are also planned with stations in downtown San Diego. Given the close proximity of downtown San Diego and Southeastern San Diego, these improvements should be beneficial to residents of the Southeastern San Diego community.

Future Deficiencies with Proposed Improvements

Transit LOS was evaluated along the major urban corridors throughout the community, including Market Street, Imperial Avenue, National Avenue, and 43rd Street, using the CSLOS methodologies. Based on the CSLOS analysis all transit facilities are projected to operate at LOS D or better under buildout of the Preferred Plan, with the following exceptions:

- Eastbound and westbound Market Street, between 32nd Street and I-15 SB Ramps – LOS E (PM peak hour);
- Eastbound Market Street, between I-15 SB Ramps and I-15 NB Ramps – LOS E (AM and PM peak hours);
- Eastbound Market Street, between I-15 NB Ramps and I-805 SB Ramps – LOS E (PM Peak hour); and
- Westbound Imperial Avenue, between 17th Street and 19th Street – LOS E (AM and PM Peak Hours).

The assumed transit improvements outlined in SANDAG's RTP are projected to maintain or improve the transit CSLOS along the majority of the urban corridors (with the exception of Market Street) within the Southeastern San Diego community, when compared to the current levels of operation.

Street and Freeway System

Existing Needs

Capacity Deficiencies

The existing conditions evaluations found fourteen (14) roadway segments and eight (8) freeway segments to have below acceptable LOS (E or F) results and these are:

Roadway Segments

- Imperial Avenue, between I-805 SB Ramps and I-805 NB Ramps (LOS E);
- Ocean View Boulevard, between 32nd Street and I-15 SB Ramps (LOS E);
- Ocean View Boulevard, between I-15 NB Ramps and 36th Street (LOS E);
- National Avenue, between 28th Street and I-5 NB Ramps (LOS F);
- Division Street, between Main Street and Osborn Street (LOS F);
- 28th Street, between SR-94 WB Ramps and SR-94 EB Ramps (LOS F);
- 28th Street, between SR-94 EB Ramps and Market Street (LOS F);
- 28th Street, between Market Street and Imperial Avenue (LOS E);
- 28th Street, between Ocean View Boulevard and National Avenue (LOS F);
- 35th Street/Rigel Street, between Ocean View Boulevard and Main Street (LOS E);
- 43rd Street, between Logan Avenue and Newton Avenue (LOS E);
- 43rd Street, between Beta Street and Delta Street (LOS F);
- National Avenue, between 26th Street and 27th Street/I-5 SB Off-Ramps (LOS F); and
- 28th Street, between National Avenue and Boston Avenue (LOS E).

Freeway Segments

- I-5, between 17th Street and SR-94 (southbound) – LOS E;
- I-5, between SR-94 and Imperial Avenue (northbound) – LOS F;
- I-5, between 28th Street & I-15 (northbound) – LOS F;
- I-5, between I-15 and Main Street (northbound and southbound) – LOS E;
- I-805, between Home Avenue and SR-94 (northbound and southbound) – LOS F;
- I-805, between SR-94 and Market Street (northbound and southbound) – LOS F;
- I-805, between Imperial Avenue and 43rd Street (southbound) – LOS E; and
- SR-94, between I-805 and 47th Street (westbound) – LOS E.

Operational Deficiencies

The existing conditions evaluations found eight (8) intersections to have below acceptable LOS (E or F) results and these are:

- I-5 SB On-Ramp / Logan Avenue - LOS E during the PM peak hour;
- 28th Street / SR-94 WB Ramps/Treat Street - LOS F during the PM peak hour;
- 28th Street / SR-94 EB Ramps - LOS E during the AM peak hour and LOS F during the PM peak hour;
- I-5 SB On-Ramp / Boston Avenue - LOS F during the PM peak hour;

-
- Broadway / SR-94 WB Ramps - LOS E during the AM peak hour and LOS F during the PM peak hour;
 - I-15 NB Ramps / Ocean View Boulevard - LOS E during the AM peak hour;
 - I-5 NB Ramps / Osborn Street - LOS F during both the AM and PM peak hours; and
 - Osborn Street / Division Street - LOS F during the AM peak hour.

In addition, queuing analysis was also conducted to assess potential overflow issues at exclusive turn lanes and closely spaced intersections. This analysis found that twenty-two (22) study intersections are operating with potential queuing issues during either the AM or PM peak hour that may degrade traffic operations within the intersection or the associated closely spaced upstream intersections.

Lastly, ramp metering analysis for all metered on-ramps within the study area was conducted and no queuing issues were discovered.

Quality of Service Deficiencies

A multi-modal evaluation of selected Urban Street corridors, including Market Street, Imperial Avenue, National Avenue/Logan Avenue, and 43rd Street, was conducted. This evaluation considers number of stops per mile, delay at intersection, travel speed and overall driver's experience. This evaluation showed that all of the Urban Street corridors provide LOS C or better driving experience.

Safety Deficiencies

The existing conditions analysis also reviewed vehicular-vehicular collisions data, obtained from the City of San Diego, for the past five years. Based on the roadway classifications, collision analysis, and citywide collision rates, a majority of roadways in Southeastern San Diego are more prone to collisions than the average street in the City of San Diego. Roadway safety should be evaluated during the CPU process.

The following four (4) locations have more than 10 vehicle-vehicle collisions over the five-year span from 2007 to 2012:

- At or near the 32nd Street and Market Street intersection;
- At or near the I-805 SB Ramps and Imperial Avenue intersection;
- At or near the 30th Street and Ocean View Boulevard intersection; and
- At or near the 33rd Street and Ocean View Boulevard intersection.

Proposed Improvements

Roadway

A guiding strategy for street system planning for the Southeastern San Diego community is to make recommendations limited to modifications within the current roadway curb-to-curb widths. This strategy facilitates implementation of the recommendations since they tend to be lower cost by avoiding property acquisition and major construction involving moving curbs and drainage.

While the majority of roadways in Southeastern San Diego would remain as the current cross-sections, the Preferred Plan includes the implementation of a number of proposed road diets and lane diets (reducing the number of travel lanes and lane widths) to provide a balance between vehicular, bicycle, and pedestrian travel across the community. Facilities with proposed roadway diets include:

Market Street - Under the Preferred Plan alternative, Market Street, between 19th Street and 32nd Street, will be reduced from its current functional classification (Four-Lane Collector with Center Turn-Lane), and its Adopted Community Plan classification (Four-Lane Major Arterial), to a Two-Lane Collector Street with Center Turn-Lane. The section of Market Street, between 32nd Street and Boundary Street will remain as the existing four travel lanes, but on-street parking will be removed in order to accommodate bicycle facilities. Specific parking discussion is provided in Section 5.7 of this report. One-way cycle tracks will be provided in each direction of the roadway, as shown in the typical cross-sections and concept plans on the following pages.

Imperial Avenue – Under the buildout of the Preferred Plan the continuous left-turn lane along Imperial Avenue will be removed between 19th Street and 36th Street, to provide the right-of-way for buffered bike lanes in each direction, as shown in the typical cross-section below.

National Avenue – Under the buildout of the Preferred Plan the continuous left-turn lane along National Avenue will be removed between 19th Street and Logan Street to provide the right-of-way for buffered bike lanes in each direction, as shown in the typical cross-section below.

Intersection

It was assumed under buildout of the Preferred Plan, the intersection geometries at several locations would be improved, as follows:

- I-5 SB On-Ramp / Logan Avenue – Signalize intersection;
- 25th Street / SR-94 WB Off-Ramp/F Street – Signalize intersection;
- 25th Street / SR-94 EB On-Ramp/G Street – Signalize intersection;
- 28th Street / SR-94 WB Ramps/Treat Street – Signalize intersection and restripe WB approach to include an exclusive left-turn movement;
- 28th Street / SR-94 EB On-Ramp – Signalize intersection;
- I-5 SB On-Ramp / Boston Avenue - Signalize intersection and restripe the EB approach to include an exclusive left-turn lane;
- Broadway / SR-94 WB Ramps – Signalize intersection;
- I-5 NB Ramps / Osborn Street - Signalize intersection and restripe the WB approach to include an exclusive left-turn lane and shared right/left-turn lane;
- Osborn Street / Division Street - Signalize intersection and widen roadway to include the following geometries:
 - NB approach: Dual left-turn lanes, single through-lane, exclusive right-turn lane with overlap phase;
 - SB approach: Exclusive left-turn lane, shared through/right-lane;

-
- WB approach: Exclusive left-turn lane, single through lane, exclusive right-turn lane with overlap phase.
 - I-805 SB Ramps & Market Street - Restripe EB approach to include an exclusive right-turn lane.

In addition to the improvements proposed as part of this plan (as described above), there are several other roadway and intersection improvements that were identified by previous planning and engineering efforts. These improvements tend to be very specific or minor in nature and therefore were not analyzed/addressed at the community planning level. The following summarizes the additional specific and/or minor improvements within the Southeastern community that were identified through other studies.

Public Facilities Financing Plan

The adopted *Public Facilities Financing Plan* (PFFP) for Southeastern San Diego currently contains planned transportation improvement projects that have not yet been completed. The following list summarizes some of the top ranked transportation projects planned for Southeastern San Diego, as outlined in the 2003 PFFP:

- SESD-T2 Sherman Heights Street and Sidewalk Improvements – This project provides for the improvements for streets and sidewalks throughout the community as needed. (\$300,000, unfunded)
- SESD-T23 Traffic Signal Upgrades – This project provides for upgrading existing traffic signals as necessary to improve traffic flow and promote safety. Locations may include: 19th Street and Imperial Avenue (\$70,000, unfunded) and 25th Street and Imperial Avenue (\$5,000, unfunded)
- SESD-T24 street connections – This project will provide for the connection of existing sections of fully improved streets through locations where only partial street improvements exist. (\$7 million, unfunded)
- SESD-T26 street improvements and upgrades – This project will provide for the improvements of existing streets at locations where there are inadequate gutters, cross gutters and curbs as a result of street resurfacing and/or deterioration. (\$3.0 million, unfunded).

Note that this PFFP was adopted in 2003. Projects identified above could be no longer needed and by the same token, new projects could be added.

Additional transportation related improvements within the Southeastern San Diego community have been identified in the City of San Diego's Transportation Unfunded Needs List (TUNL) and Transportation and Storm Water Department's FY14 Transportation Plan. However, these improvements are typically too minor to analyze at the Community Plan level and therefore were not taken into account for this study. A list of the current projects on the City of San Diego's TUNL within the Southeastern San Diego community are included in Appendix O. It should be noted this list is being updated on a regular basis and Appendix O only reflects a snap shot of the

needs and planned improvements throughout the community at the time in which this report was prepared.

Freeway

The Preferred Plan network includes freeway improvements that would directly impact the community as described in the SANDAG 2050 Regional Transportation Plan 2050. Planned freeway improvements include the following:

- SR-94 Express Lane Project (Alternative 1): includes two HOV/Express Lanes within the freeway median (one in each direction) between I-5 and I-805, with a direct freeway-to-freeway High Occupancy Vehicle (HOV) connector at I-805. The Express Lanes would accommodate carpools/vanpools, in addition to new Bus Rapid Transit (BRT) service. The SR-94 Express Lane Project (Alternative 1) also proposes the following modification to interchanges along the SR-94 corridors:
 - Removal of Eastbound SR-94/32nd Street On-ramp
 - Replace On and Off-ramps at Market Street and SR 15
 - Replacement of Left-side Freeway-to-Freeway Interchange with Standard Right-side connectors
 - Replacement of Westbound SR-94/Home Avenue On-Ramp
 - Removal of Northbound SR-15 to Westbound SR-93 Loop Connector
 - Replacement of Westbound SR-94 to Southbound SR-15 connector
 - Removal of Westbound SR-94/49th Street/A Street On-Ramp
- I-805 South Project (Phase 1): Includes two HOV/Express Lanes within the freeway median (one in each direction) between East Palomar Street in Chula Vista and the I-805/SR-15 interchange in San Diego.

Future Deficiencies with Proposed Improvements

Roadway

The following forty-eight (48) study area roadway segments are projected to operate at LOS E or F under buildout of the Preferred Plan:

- Market Street, between 25th Street and 28th Street (LOS E)
- Market Street, between 28th Street and 32nd Street (LOS F)
- Market Street, between Boundary Street and I-805 SB Ramps (LOS F)
- Market Street, between I-805 SB Ramps & I-805 NB Ramps (LOS F)
- Imperial Avenue, between 17th Street and 19th Street (LOS E)
- Imperial Avenue, between 19th Street and 25th Street (LOS F)
- Imperial Avenue, between 25th Street and 28th Street (LOS F)
- Imperial Avenue, between 28th Street and 30th Street (LOS E)
- Imperial Avenue, between 32nd Street & 36th Street (LOS F)
- Imperial Avenue, between 36th Street and 40th Street (LOS F)
- Imperial Avenue, between I-805 SB Ramps and I-805 NB Ramps (LOS E)
- Commercial Street, between 17th Street and 19th Street (LOS E)
- Ocean View Boulevard, between 28th Street and 30th Street (LOS E)

-
- Ocean View Boulevard, between 32nd Street and I-15 SB Ramps (LOS F)
 - Ocean View Boulevard, between I-15 NB Ramps and 36th Street (LOS E)
 - Ocean View Boulevard, between 36th Street and 40th Street (LOS E)
 - Ocean View Boulevard, between 40th Street and 47th Street (LOS F)
 - National Avenue, between Commercial Street and Beardsley Street (LOS E)
 - National Avenue, between Beardsley Street and SR-75 Off-Ramp (LOS F)
 - National Avenue, between 26th Street and 27th Street (LOS F)
 - National Avenue, between 27th Street and 28th Street (LOS F)
 - National Avenue, between 28th Street and I-5 NB Ramps (LOS F)
 - National Avenue, between I-5 NB Ramps and 32nd Street (LOS F)
 - National Avenue, between 32nd Street and 43rd Street (LOS F)
 - Logan Avenue, 45th Street and 47th Street (LOS E)
 - Alpha Street, between 38th Street and 43rd Street (LOS E)
 - Division Street, between Main Street and Osborn Street (LOS F)
 - Cesar Chavez Parkway, between Commercial Street and I-5 NB Ramps (LOS F)
 - 25th Street, between SR-94 WB Off-Ramp and SR-94 EB On-Ramp (LOS F)
 - 25th Street, between SR-94 EB On-Ramp and Market Street (LOS F)
 - 25th Street, between Market Street and Imperial Avenue (LOS F)
 - 28th Street, between SR-94 WB Ramps and SR-94 EB Ramps (LOS F)
 - 28th Street, between SR-94 EB Ramps and Market Street (LOS F)
 - 28th Street, between Market Street and Imperial Avenue (LOS F)
 - 28th Street, between Commercial Street and Ocean View Boulevard (LOS E)
 - 28th Street, between Ocean View Boulevard and National Avenue (LOS F)
 - 28th Street, between National Avenue and Boston Avenue (LOS F)
 - 30th Street, between E Street and Imperial Avenue (LOS E)
 - 32nd Street, between SR-94 EB On-Ramp/F Street and Market Street (LOS F)
 - 32nd Street, between Market Street and Imperial Avenue (LOS F)
 - 32nd Street, between Ocean View Boulevard and National Avenue (LOS E)
 - 32nd Street, between National Avenue and Boston Avenue (LOS F)
 - 35th / Rigel Street, between Ocean View Boulevard and Main Street (LOS F)
 - San Pasqual Drive, between Ocean View Boulevard and Logan Avenue (LOS F)
 - 43rd Street, between Logan Avenue and Newton Avenue (LOS E)
 - 43rd Street, between Newton Avenue and Beta Street (LOS F)
 - 43rd Street, between Beta Street and Delta Street (LOS F)
 - 43rd Street / Highland Avenue, between Delta Street and Division Street (LOS E)

Arterial

The majority of segments in which a roadway diet is proposed are projected to operate at LOS D or better during both the AM and PM peak hours. There would be some minor pinch points along the roadways; however, roadway speeds are not anticipated to drop below 10 mph hour, with the exception of the following segments:

- Eastbound Market Street, between I-15 SB Ramps & I-15 NB Ramps (AM: LOS F, 6.6 mph);

- Westbound Imperial Avenue, between I-805 SB Ramps & I-805 NB Ramps (AM: LOS F, 3.7 mph);
- Eastbound National Avenue, between 27th Street & I-5 NB Ramps (AM: LOS F, 3.8 mph / PM: LOS F, 4.3 mph); and
- Westbound National Avenue, between 27th Street & I-5 NB Ramps (AM: LOS F, 3.3 mph / PM: LOS F, 4.6 mph).

Intersection

The following eight (8) study intersections are anticipated to operate at LOS E or F under buildout of the Preferred Plan:

- 19th Street / I-5 NB Off-Ramp / J Street – LOS E during PM Peak Hour
- I-5 SB Off-Ramp / Beardsley Street / Logan Avenue – LOS E during PM Peak Hour
- Broadway / SR-94 WB Ramps – LOS E during AM Peak Hour
- I-15 Ramps / Main Street – LOS E during PM Peak Hour
- I-5 SB Off-Ramp/Yama Street/Main Street – LOS F during PM Peak Hour
- I-5 NB Ramps / Osborn Street _ LOS E during AM Peak Hour
- 40th Street / Imperial Avenue – LOS E during PM Peak Hour
- 47th Street / I-805 SB Ramps – LOS E during PM Peak Hour

Freeway

Under buildout of the Preferred Plan, numerous study area freeway segments are anticipated to operate at less than desirable LOS E or F within the mainline. In addition, all of the proposed HOV lanes along I-15, I-805 and SR-94 are anticipated to operate at LOS D or better, with the exception of the following:

- I-805 Southbound, between Market Street and Imperial Avenue (LOS E)
- I-805 Northbound, between Market Street and Imperial Avenue (LOS E)
- I-805 Southbound, Imperial Avenue & 43rd Street (LOS E)

Intelligent Transportation Systems (ITS)

The implementation of Intelligent Transportation Systems (ITS) can provide many benefits to the local roadway network, including improving roadway traffic operations, improving transit operations, relaying valuable traffic-related information and providing guidance to drivers (e.g. locations of available parking, traffic congestion points, and the location of accidents). Coordinated traffic signals and transit signal priority treatments are examples of ITS programs that can help improve both transit and roadway operations.

The City of San Diego should investigate the feasibility of the following ITS improvements within the Southeast San Diego community:

- Expand signal coordination along major roadway corridors including: Market Street, Imperial Avenue, National Avenue, 25th Street, 28th Street, 43rd Street and 47th Street.
- Regularly update the timing of traffic signals to reflect shifting travel patterns
- Use traffic responsive or adaptive traffic control in areas with variable traffic patterns

-
- Implement transit signal priority treatments at signalized intersections serving rapid bus routes

Use variable message signs to direct motorists to available parking and to alert them of street closures.

Transportation Demand Management (TDM)

The goal of the City's Transportation Demand Management (TDM) program is to improve mobility, reduce congestion and air pollution, and provide options for employees and residents to commute to and from work. Typical TDM strategies include promoting the following:

- Teleworking
- Alternative Work Schedules
- Walking
- Bicycling
- Carpooling
- Vanpooling
- Transit
- Car-sharing
- Mixed-Use Development
- Other Transportation Options

TDM measures improve the efficiency of the transportation system by helping to reduce vehicle trips during peak periods of demand. The San Diego Association of Governments (SANDAG) has an established program (iCommute) that serves as the administrator for TDM programs throughout the region. iCommute provides the following services:

- RideMatcher – resources for finding carpool partners or available vanpool seats
- SchoolPool – a program that enrolls schools to encourage parents to carpool
- Transit Information - provides a linkage to transit service provider web pages
- Bicycle Information – provides a link to SANDAG’s Regional Bikeway Master Plan, which has been updated to show bicycle paths, lanes and routes in the region
- Guaranteed Ride Home – a program that allows vanpool riders affordable rides home to deal with emergency meetings or illness

In addition to the iCommute program, Caltrans owns and/or maintains several park-and-ride lots in the region that are used to promote carpool activity.

Bicycling

Existing Needs

Cycling needs include areas of high demands and high deficiencies. High demand is evaluated through the bicycle count data collected for this report, as well as through the Cycling Propensity Model developed for SANDAG’s Regional Bicycle Plan; while high deficiency is evaluated through bicycle network gaps and bicycle-involved collisions.

The bicycle count data show higher cycling demands along the following corridors:

- 25th Street
- 28th Street
- Imperial Avenue
- Commercial Street

-
- Cesar Chavez Parkway

In addition, the Cycling Propensity Models shows high potential bicycle demands throughout the entire western portion of the community, as well as in the portion of the community south of Imperial Avenue and east of 38th Street.

In relation to areas of high deficiencies, there are a total of seven (7) intersection locations where more than two bicycle-involved collisions have occurred over the past 5 years, as follows:

- 25th Street / Imperial Avenue
- 32nd Street / Market Street
- 33rd Street / J Street
- 36th Street / Ocean View Boulevard
- 38th Street / National Avenue
- 39th Street / F Street
- 41st Street / Hilltop Drive

In addition, the National Avenue / Logan Urban Street corridor had the highest level of bicycle-involved collisions relative to the other Urban Street corridors, with a total of 11 over the previous 5 years.

The bicycle network in Southeastern San Diego is extremely sparse, with many bicycle network gaps in both the east-west and north-south directions. As noted in Chapter 3, only 8.3% of roadways in Southeastern San Diego have bicycle facilities versus 12.6% of City of San Diego roadways. In addition, recent San Diego State University's Active Transportation Research concluded that an average of 55% of cyclists are riding on the sidewalk in Southeastern San Diego. This is a strong indication of the need and desire for separated bicycle facilities in this community.

Proposed Improvements

The Preferred Plan proposes a well-connected network of bicycle facilities. The plan proposes a variety of standard and innovative bicycle facilities in Southeastern San Diego, most notably:

- Market Street, between 19th Street and 32nd Street – One-way cycle track in both directions;
- Imperial Avenue, between 19th Street and 36th Street – Buffered bike lanes in both directions; and
- National Avenue, between 19th Street and Logan Avenue - Buffered bike lanes in both directions.

Additionally, the Preferred Plan Bicycle Network includes a Class I Multi-Use Path within the existing MTS Trolley right-of-way. This Class I Path is included in the *City of San Diego Bicycle Master Plan, December 2013* and is carried over to the community plan. However, it should be noted that a feasibility analysis has not yet been conducted for this facility and it is unclear if it can be constructed due to constraints to the right-of-way, and the right-of-way being on structure for portions of it.

Future Deficiencies with Proposed Improvements

All of the urban street facilities within the Southeastern San Diego community are expected to operate at LOS D or better for cyclists during the AM peak hour. A majority of the facilities would operate at LOS D or better during the PM peak hour, with the exceptions of eastbound Market Street, between I-15 NB ramps and I-905 SB ramps (LOS E), and southbound 43rd Street, between I-805 Ramps and Division Street (LOS E). The bicycle improvements proposed under the Preferred Plan alternative, are projected to improve the bicycle CSLOS along all of the urban corridors within the community, when compared to the current levels of operation.

Parking Management

It is anticipated that any additional parking demand associated with future developments will be accommodated on-site. It is assumed that all on-street public parking spaces will be maintained under community buildout conditions, with the exception of the following:

- An estimated 130 on-street parking spaces on Market Street between 32nd Street and Boundary Street. Specific segments include between 32nd Street and I-15 (both sides), and between I-15 and Boundary Street (north side). These spaces are proposed to be removed to provide additional right-of-way for a new cycle track along Market Street. These on-street parking spaces are not currently, nor are projected to be, heavily utilized (8% occupancy or 11 occupied spaces during the peak period). The parking demand for the removed spaces (both current and future) should be able to be absorbed by the available capacity of on adjacent side streets (32nd Street, 33rd Street, Gateway Center Drive, and Gateway Center Way) which currently have an occupancy rate of 39%.
- Additional on-street parking spaces will need to be removed on either side of driveways or other access points (30 feet to allow for adequate visibility) along Market Street with the proposed cycle track. Based on national research this typically results in the loss of 15-25% of on-street parking spaces along roadway corridors with cycle tracks. East of 25th Street within the Southeastern San Diego community, Market Street should be able to easily absorb the 15-25% loss of on-street parking (all segments are under 50% occupancy during all times of the day as per the existing parking occupancy survey). However, Market Street between 19th Street and 25th Street which has an occupancy rate between 70% and 84% during most hours of the day, may be impacted from the loss of parking associated with the implementation of the cycle track.

1.0 Introduction

1.1 Study Background and Purpose

This Technical Report summarizes the physical and operational conditions of the Southeastern San Diego mobility system as part of the City of San Diego’s community plan update process. The evaluation includes an overview of both existing and Preferred Plan (buildout) conditions for pedestrian and bicycle facilities, transit systems, and roadways within the Southeastern San Diego community. The report also describes key terms and methodologies utilized for conducting these analyses, and identifies current deficiencies across the transportation system. This report will be utilized to support decisions about proposals and recommendations for updating the community plan mobility element.



The Southeastern San Diego mobility network is comprised of diverse elements, including roadway and freeway systems, public transit, light rail, and bicycle and pedestrian infrastructure. Each of these elements is discussed in the following chapters.

Several key planning efforts and legislative actions of the past decade have redefined the way community transportation planning is carried out. An important unifying theme is to achieve a more balanced, multi-modal transportation system that allows people of varying physical and economic conditions to accomplish daily activities without making a single-occupant vehicle trip.

The most noteworthy planning effort and legislative action includes adoption of the City of San Diego’s updated General Plan in 2008. This document defines a land use-transportation strategy for the City of San Diego predicated on new growth occurring in already urbanized areas of the City – or “villages” – that are served by high-capacity transit and provide high quality pedestrian and bicycle networks. The San Diego Association of Government (SANDAG) for example has adopted a Smart Growth Concept Map (2008) in their *Regional Comprehensive Plan* proposing a land use-transportation strategy whereby new growth is directed to already urbanized areas, in mixed-used high-density nodes served by high capacity transit and including high quality bicycle and pedestrian improvements. SANDAG incentivizes implementation of these types of strategies within local jurisdictions through grant funding programs like the Smart Growth Incentive Program and the Active Transportation Grant Program.

On September 30, 2008, the State of California approved Assembly Bill 1358 – The Complete Streets Act. This act requires, commencing January 1, 2011, that the legislative body of a city or county, plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan. In addition, the adoption of the 2008 Senate Bill 375 required metropolitan planning organizations in the state to formulate a “sustainable communities strategy” as part of their regional transportation plans, specifically identifying how the region will achieve targeted reductions in greenhouse gas emissions from automobiles and light trucks. SANDAG adopted the region’s first SCS in October 2011, making it the first agency in California to do so.

Taken together, these developments and associated planning initiatives reflect a growing recognition that our communities should be working to reduce reliance on automobile travel and to increase the ease of walking, bicycling and using transit to support daily life.

City of San Diego’s General Plan Mobility Element Goal ... “To improve mobility through development of a balanced, multi-modal transportation network.”

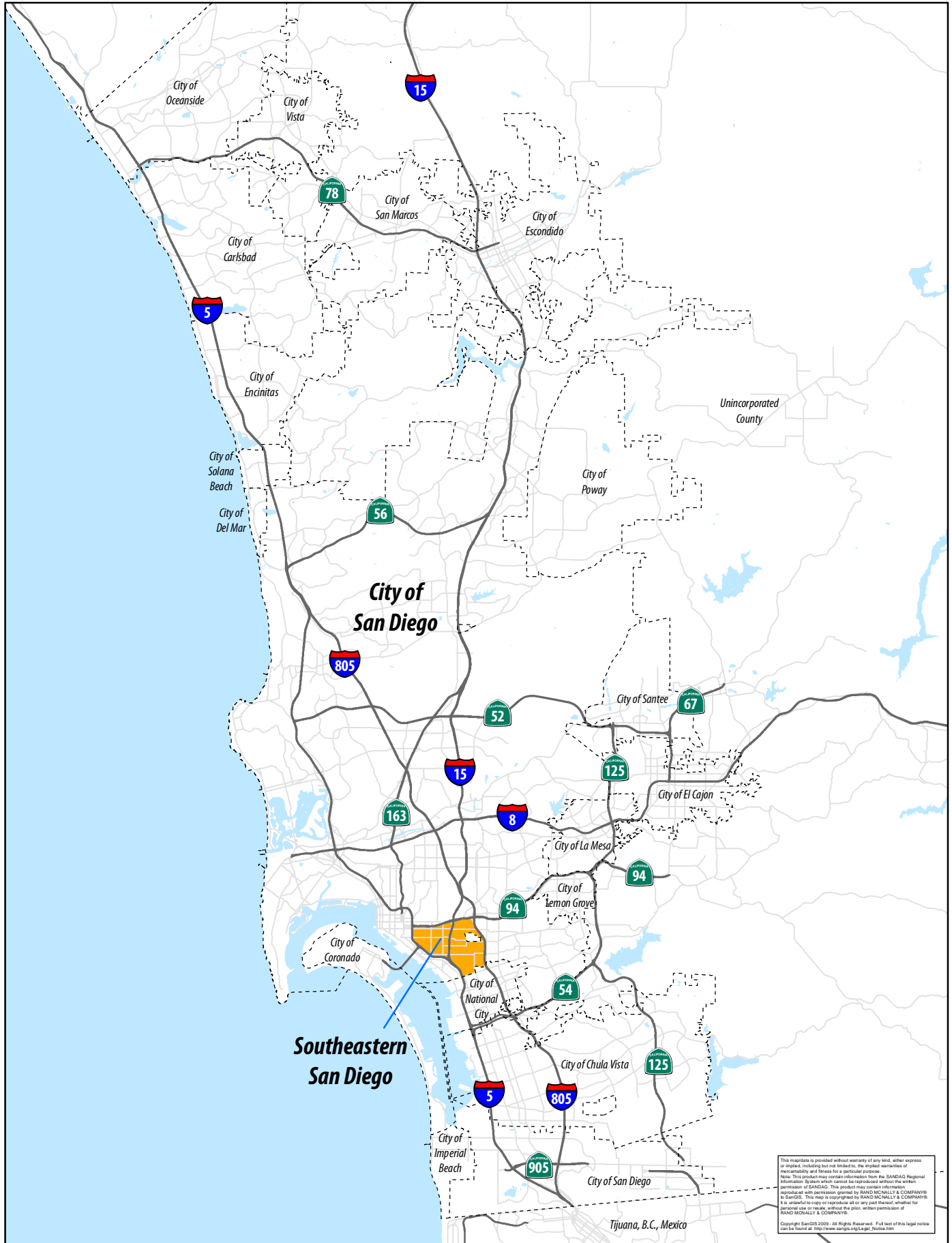
1.2 Study Location

The community of Southeastern San Diego occupies approximately 2,930 acres and is located east of downtown San Diego, north of the City of National City, west of Interstate 805, and south of State Route 94. The interstates, state routes, and two light rail lines (the Orange Line and Blue Line) provide regional accessibility between Southeastern San Diego and other locations across the County. Within the community, there is a fairly well-connected grid of arterial and local roadways that provide for a high level of pedestrian and bicycle connectivity. In addition, the community is well-served by public transit, with the Orange Line traversing the entire community, west to east, and five Metropolitan Transit System (MTS) bus routes providing for local and regional travel.

Southeastern San Diego is a largely urbanized and ethnically diverse community. Its current community plan was adopted in 1969, and updated in 1987. The current community plan identified a set of neighborhoods within Southeastern San Diego as part of an effort to call out the unique histories and identities of various sections of the community. These neighborhoods include Sherman Heights, Logan Heights, Grant Hill, Memorial, Stockton, Mount Hope, Mountain View, Southcrest, and Shelltown. **Figure 1-1** displays the Southeastern San Diego community within the region.

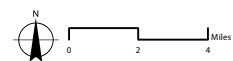


SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE



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Figure 1-1: Southeastern San Diego within the Region



Data Source:
 City of San Diego, 2012; SanGIS Regional Data Warehouse, 2012;
 Dyett & Bhatia, 2012



1.3 Supporting Information

Several previous and on-going studies are relevant to understanding existing mobility conditions within Southeastern San Diego. These studies were referenced as part of the preparation of this report, and include the following:

- Southeastern San Diego Community Plan, 1969 (updated in 1987)
- 2050 Regional Transportation Plan, October 2011
- City of San Diego Pedestrian Master Plan Framework Report, December 2006
- City of San Diego Pedestrian Master Plan Phases 2&3, and Phase 4
- City of San Diego Bicycle Master Plan, May 2002
- City of San Diego Bicycle Master Plan Update, June 2011 Draft
- SANDAG Regional Comprehensive Plan (RCP), January 2012
- Commercial/Imperial Corridor Master Plan Existing Conditions Report, August 2011
- Euclid+Market Land Use and Mobility Plan Existing Conditions Report, September 2011
- Mobility and Land Use Master Plans for Euclid Avenue and National Avenue
- Traffic Operations Study at SR-94 / Euclid Avenue Interchange, January 16, 2013
- State Route 94 Bus Rapid Transit (BRT) Project
- Interstate 805 BRT Project
- Interstate 805 / 47th Street BRT Planning Study
- 47th Street BRT Health Impact Assessment (HIA)
- SDSU Bicycle Counting Program by Active Transportation Research, 2011

1.4 Organization of the Report

After this introductory chapter, **Chapter 2** of this report describes the methodologies employed to assess the mobility systems; **Chapter 3** presents a summary of analysis results and mapping for the pedestrian and cycling environments, the transit system, roadways, and freeways. **Chapter 4** provides an overview of the Transportation Demand Model Forecasting process utilized to project transportation patterns under build out of the Preferred Plan. **Chapter 5** outlines the transportation network improvements proposed in the Preferred Plan and presents a summary of analysis results for the pedestrian and cycling environments, the transit system, roadways, and freeways.

2.0 Analysis Methodology

This chapter describes the various methodologies utilized to analyze the mobility network in Southeastern San Diego. Since the adoption of the 2008 California Complete Streets Act (AB 1358), multi-modal analysis procedures are employed to assess mobility needs for pedestrians, cyclists and transit users. Analysis of the vehicular systems – roadways, intersections and freeways – were prepared for this study in accordance with City of San Diego and SANTEC/ITE Guidelines.

2.1 Selection of the Study Area

This section summarizes the approach to defining study area roadways, intersections and “Urban Streets”, or those roadways where multi-modal LOS analyses were conducted.

Freeways and other natural barriers are considered as general study area boundaries. The primary study area encompasses the community planning area and up to one segment and key intersection beyond in order to be consistent with the impact study area desired for California Environmental Quality Act (CEQA) analysis.

Figure 2-1 displays roadway, intersection and Urban Street facilities that comprise the combined study areas for both the Southeastern San Diego and Encanto community plan updates. Although this report only addresses the Southeastern San Diego community, Figure 2-1 is intended to assist the reader understand the relationship between the two communities’ study areas. Also note that the intersection identification numbers displayed in this figure will remain unchanged in the individual Mobility Element analyses.

Figure 2-2 displays roadways, intersections and Urban Street facilities only for Southeastern San Diego as these are the specific focus of this report.

2.1.1 Roadway Segments

Study area roadway segments were defined as all currently adopted mobility element roads and one segment beyond community planning area boundaries, where not separated by freeways and natural barriers.

2.1.2 Urban Street Segments

A number of roadways within the Southeastern San Diego community were identified as Urban Streets requiring multi-modal LOS analysis for pedestrians, bicyclists, transit riders and drivers. These roadways are considered significant corridors traversing the community and complementing the SANDAG Smart Growth Concept Map updated in January 2012. The Smart Growth Concept Map was a key implementation action of the 2004 Regional Comprehensive Plan (RCP) and initially established in 2006.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

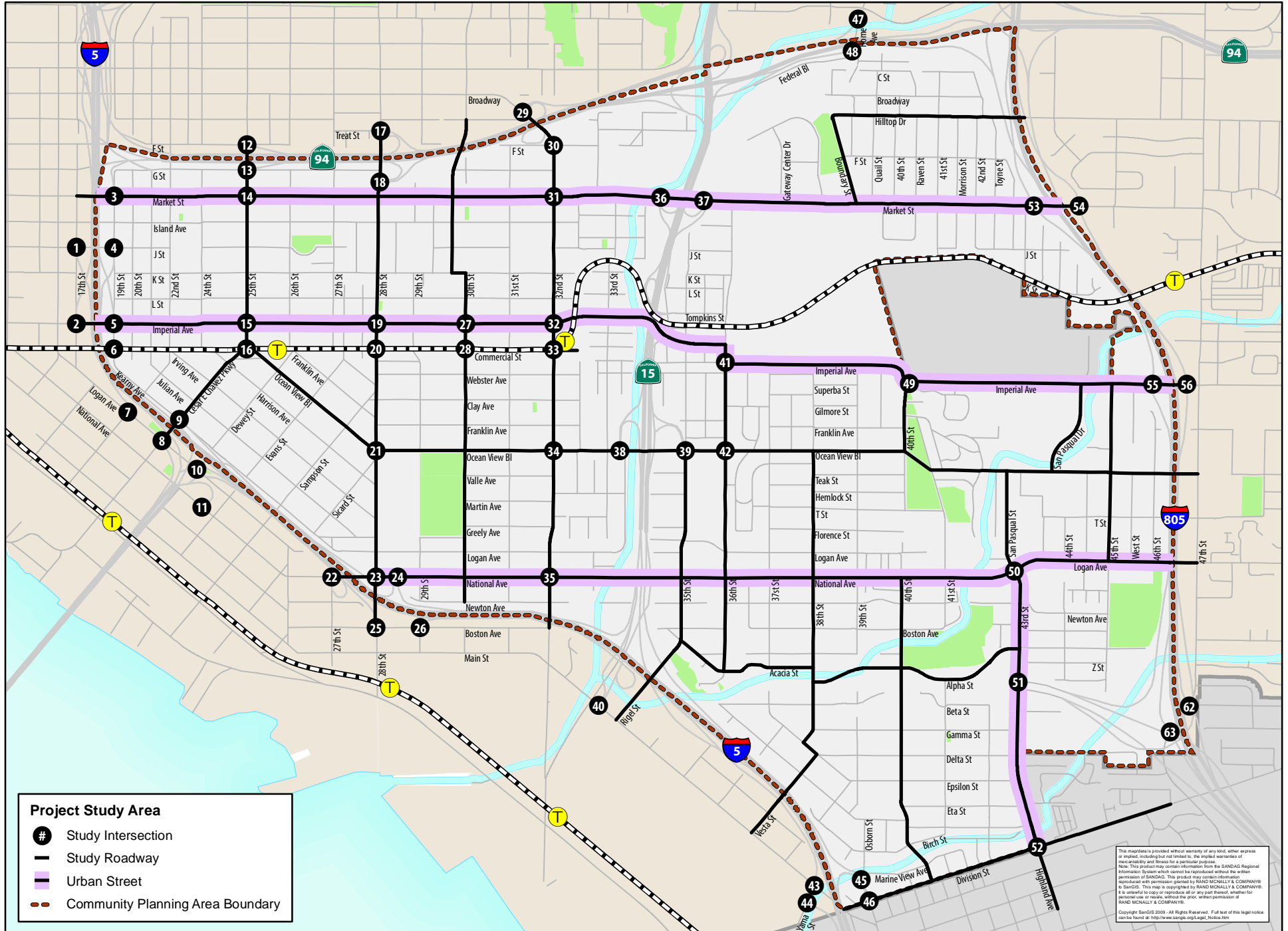


Figure 2-2: Southeastern San Diego Project Study Area

The following roadway segments were defined as Urban Streets, where multi-modal analyses were performed:

- Market Street, between I-5 and I-805
- Imperial Avenue, between I-5 and I-805
- National Avenue/Logan Avenue, between 28th Street and I-805
- 43rd Street, between Logan Avenue and Division Street

2.1.3 Intersections

Study intersections within Southeastern San Diego include those where both intersecting streets meet one of the following criteria:

- 4-lanes or wider
- 3-lanes and carries over 15,000 average daily traffic
- 2-lanes and carries over 10,000 average daily traffic

Intersections providing freeway access, as well as a number of critical study intersections from other on-going City studies in the community were also included in the study area. These studies are *Commercial/Imperial Corridor Master Plan* and *Mobility and Land Use Master Plan for National Avenue*.

Based on these criteria, 58 study intersections were selected, as displayed in Figure 2-2. This includes 19 intersections located outside the boundaries of Southeastern San Diego.

2.2 Multi-Modal Analysis

In general, street and freeway system LOS (LOS) is based on facility operations, while multi-modal LOS (MMLOS) for pedestrian, transit, auto, and bicycle facilities are evaluated based on the user's perception of the quality of the environment or systems while using these modes. The MMLOS analysis method used herein for pedestrian, transit, auto and bicycle was developed under the National Cooperative Highway Research Program (NCHRP) Project 3-70, *Multimodal LOS for Urban Streets*. The method evaluates, by mode, the feel, comfort, accessibility and safety of an urban street based upon the design, control and operations of the roadway.

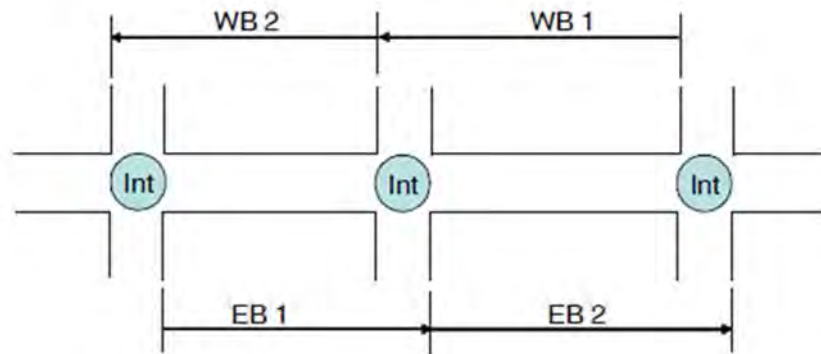
Complete Streets LOS (CSLOS), A Multimodal LOS Toolkit, by Kittelson & Associates (formerly Dowling Associates, Inc.) was used for MMLOS evaluation. The CSLOS software outputs numerical ratings of the various modes of travel, and these rating are then converted into A - F letter grades to represent the travelers' perception of the resulting quality of service provided by the subject facility. LOS A represents the best conditions from the traveler's perspective, while LOS F represents the worst. **Table 2.1** displays the LOS letter grade numerical equivalents for pedestrian, transit, auto and bicycle facilities.

**TABLE 2.1
LOS LETTER GRADE NUMERICAL EQUIVALENTS**

LOS Letter Grade	Pedestrian	Transit	Auto	Bicycle
	Score	Score	Travel Speed as a percentage of Base Free-Flow Speed (%)	Score
A	≤ 2.00	≤ 2.00	$> 85\%$	≤ 2.00
B	$2.00 < \text{and } \leq 2.75$	$2.00 < \text{and } \leq 2.75$	$> 67\% - 85\%$	$2.00 < \text{and } \leq 2.75$
C	$2.75 < \text{and } \leq 3.50$	$2.75 < \text{and } \leq 3.50$	$> 50\% - 67\%$	$2.75 < \text{and } \leq 3.50$
D	$3.50 < \text{and } \leq 4.25$	$3.50 < \text{and } \leq 4.25$	$> 40\% - 50\%$	$3.50 < \text{and } \leq 4.25$
E	$4.25 < \text{and } \leq 5.00$	$4.25 < \text{and } \leq 5.00$	$> 30\% - 40\%$	$4.25 < \text{and } \leq 5.00$
F	> 5.00	> 5.00	$\leq 30\%$	> 5.00

Source: Transportation Research Board NCHRP Project 3-70, Highway Capacity Manual 2010.

Study roadways were divided into analysis segments, with each **segment** consisting of a portion of street (link) plus the downstream intersection at the end of the link. An **intersection** is any point on the street where through-traffic is subject to signalized control, stop-sign control, or yield-sign control. In the case of transit analysis, a segment includes one or two transit stops.



2.2.1 Pedestrian LOS

Pedestrian LOS is a measure of the pedestrian’s experience at intersections and on street links between the intersections. Pedestrian LOS is a function of the following number of variables:

- Lateral separation between pedestrians and vehicular traffic
- Width of sidewalk
- Speed and makeup of the vehicular traffic
- Difficulty of crossing arterial
- Directional vehicular traffic volumes
- Permitted right-turn on red
- Left-turn during “Walk” phase
- Delay waiting to cross at signal

-
- Intersection crossing distance
 - Cross-street vehicular traffic volume and speed
 - Pedestrian density

2.2.2 Transit LOS

Transit LOS is based on a combination of the user's experience while accessing the transit system, while waiting for transit service, and while riding on transit. The access experience is represented by the pedestrian LOS score (discussed Section 2.2.1) while the pedestrian is accessing bus stops. This score is specific to the direction of travel along a street. The waiting and riding experiences are combined into a transit wait/ride score. The transit wait/ride score is a function of the average headway between transit vehicles and the perceived travel time.

The following six variables are used to determine the transit LOS:

- Frequency of service
- Mean speed
- Reliability of service
- Load factors
- Quality of pedestrian access to transit stops
- Transit stop amenities

2.2.3 Auto LOS

Auto LOS is a function of the average travel speed over the length of the street and the average number of stops per mile. The following variables are used to calculate the auto LOS:

- Number of stops per mile
- Speed and makeup of the vehicular traffic
- Delay at intersection for through traffic
- Length of the segment
- Cross traffic per segment

2.2.4 Bicycle LOS

Bicycle LOS is a weighted combination of the bicyclist's experience at intersections and on street links between the intersections. Bicycle LOS is a function of the following five variables:

- Lateral separation between bicycles and vehicular traffic
- Speed and makeup of the vehicular traffic
- Pavement conditions
- Directional vehicular traffic volumes
- Intersection crossing distance

2.3 Vehicular Analysis

Vehicular LOS is a quantitative measure that represents quality of service for the driver. Quality of service describes how well a transportation facility of service operates from a driver’s perspective. These conditions are generally described in terms of such factors as speed, travel time, freedom to maneuver, comfort, convenience, and safety. LOS A represents the best operating conditions from a driver’s perspective, while LOS F represents the worst. **Table 2.2** describes generalized definitions of auto LOS A through F.

**TABLE 2.2
VEHICULAR LOS DEFINITIONS**

LOS	Characteristics
A	Primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Controlled delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
C	Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse signal progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections have a volume-to-capacity ratio greater than 1.0.

Source: 2000 Highway Capacity Manual.

2.3.1 Roadway Segment LOS Standards and Thresholds

Roadway segment LOS standards and thresholds provided the basis for analysis of arterial roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. **Table 2.3** presents the roadway segment capacity and LOS standards utilized to analyze roadways evaluated in this report.

**TABLE 2.3
CITY OF SAN DIEGO
ROADWAY SEGMENT DAILY CAPACITY AND LOS STANDARDS**

Roadway Functional Classification	LOS				
	A	B	C	D	E
Expressway (6-lane)	< 30,000	< 42,000	< 60,000	< 70,000	< 80,000
Prime Arterial (6-lane)	< 25,000	< 35,000	< 50,000	< 55,000	< 60,000
Major Arterial (6-lane, divided)	< 20,000	< 28,000	< 40,000	< 45,000	< 50,000
Major Arterial (4-lane, divided)	< 15,000	< 21,000	< 30,000	< 35,000	< 40,000
Secondary Arterial* / Collector (4-lane w/ center left-turn lane)	< 10,000	< 14,000	< 20,000	< 25,000	< 30,000
Collector (3-lane w/ center left-turn lane)	< 7,500	< 10,500	< 15,000	< 19,000	< 22,500
Collector (4-lane w/o center lane)	< 5,000	< 7,000	< 10,000	< 13,000	< 15,000
Collector (2-lane w/ center left-turn lane)					
Collector (2-lane no fronting property)	< 4,000	< 5,500	< 7,500	< 9,000	< 10,000
Collector (2-lane w/ commercial fronting)	< 2,500	< 3,500	< 5,000	< 6,500	< 8,000
Collector (2-lane multi-family)					
Sub-Collector (2-lane single-family)	-	-	< 2,200	-	-

Source: City of San Diego Traffic Impact Study Manual (1998).

Notes:

Bold numbers indicate the ADT thresholds for acceptable LOS.

*Secondary Arterial is a classification only applies to roadways in the City of National City. It utilizes identical LOS thresholds as a 4-Ln Collector w/center left-turn lane in the City of San Diego.

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. The actual capacity of a roadway facility varies according to its physical and operational attributes. LOS D is considered acceptable for Mobility Element roadway segments in the City of San Diego. Often, a roadway segment that is analyzed to be LOS E or F based on theoretical capacity is found to operate acceptably in practice. In such cases, HCM arterial analysis may be conducted and utilized (or intersection analysis, if arterial analysis is not applicable) to provide a more accurate indication of LOS.

2.3.2 Peak Hour Intersection LOS Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analysis, for both signalized and unsignalized intersections. The following assumptions were utilized in conducting all intersection LOS analyses:

- Pedestrian Calls per Hour: Based on existing pedestrian counts.
- Heavy Vehicle Factor: A 2% heavy vehicle factor was assumed for the majority of the intersections within the study area. Specific % of heavy vehicle factors from the Commercial Imperial Corridor Master Plan were utilized on applicable intersections and these factors range between 4% and over 30%.

- Peak Hour Factor: Based on existing peak hour counts.
- Signal Timing: Based on existing signal timing plans (as of November 2012).

Signalized Intersection Analysis

The signalized intersection analysis utilized in this study conforms to the operational analysis methodology outlined in *2000 Highway Capacity Manual (HCM), Transportation Research Board Special Report 209*. This method defines LOS in terms of delay, or more specifically, average control delay per vehicle (sec/veh).

The *2000 HCM* methodology sets 1,900 passenger-cars per hour per lane (pcphpl) as the ideal saturation flow rate at signalized intersections based upon the minimum headway that can be sustained between departing vehicles at a signalized intersection. The service saturation flow rate, which reflects the saturation flow rate specific to the study facility, is determined by adjusting the ideal saturation flow rate for lane width, on-street parking, bus stops, pedestrian volume, traffic composition (or percentage of heavy vehicles), and shared lane movements (e.g. through and right-turn movements sharing the same lane). The LOS criteria used for this technique are described in **Table 2.4**. The computerized analysis of intersection operations was performed utilizing the *Synchro 8.0 (2000 HCM methodology)* traffic analysis software (by Trafficware, 2011).

TABLE 2.4
SIGNALIZED INTERSECTION LOS
HIGHWAY CAPACITY MANUAL OPERATIONAL ANALYSIS METHOD

Average Control Delay Per Vehicle (seconds)	LOS (LOS) Characteristics
≤10.0	<i>LOS A</i> occurs when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
10.1 – 20.0	<i>LOS B</i> occurs when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with <i>LOS A</i> .
20.1 – 35.0	<i>LOS C</i> occurs when progression is favorable or the cycle length is moderate. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
35.1 – 55.0	<i>LOS D</i> occurs when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
55.1 – 80.0	<i>LOS E</i> occurs when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
>80.0	<i>LOS F</i> occurs when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: 2000 Highway Capacity Manual, Transportation Research Board Special Report 209.

Unsignalized Intersection Analysis

Unsignalized intersections, including two-way and all-way stop controlled intersections were analyzed using the 2000 HCM unsignalized intersection analysis methodology. The Synchro 8.0 software supports this methodology and was utilized to produce LOS results. The LOS for a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. The LOS for an all-way stop controlled (AWSC) intersection is determined by the computed or measured average control delay of all movements. **Table 2.5** summarizes the LOS criteria for unsignalized intersections.

**TABLE 2.5
LOS CRITERIA FOR
STOP CONTROLLED UNSIGNALIZED INTERSECTIONS**

Average Control Delay (sec/veh)	LOS (LOS)
≤10.0	A
10.1 – 15.0	B
15.1 – 25.0	C
25.1 – 35.0	D
35.1 – 50.0	E
>50.0	F

Source: 2000 Highway Capacity Manual.

The City of San Diego considers LOS D or better during the AM and PM peak hours to be acceptable intersection LOS.

2.3.3 Freeway/State Highway LOS Standards and Thresholds

Freeway LOS analysis is based upon procedures developed by Caltrans District 11. The procedure for calculating freeway LOS involves estimating a peak hour volume to capacity (V/C) ratio. Peak hour volumes are estimated from the application of design hour (“K”), directional (“D”) and truck (“T”) factors to Average Daily Traffic (ADT) volumes. The base capacities were assumed to be 2,350 passenger-car per hour per main lane (pc/h/ln) and 1,410 pc/h/ln for auxiliary lane, respectively. A 0.95 peak-hour factor (PHF) is utilized for this analysis.

The resulting V/C ratio is then compared to acceptable ranges of V/C values corresponding to the various levels of service for each facility classification, as shown in **Table 2.6**. The corresponding LOS represents an approximation of existing or anticipated future freeway operating conditions in the peak direction of travel during the peak hour.

LOS D or better is used in this study as the threshold for acceptable freeway operations based upon Caltrans and the SANDAG Regional Growth Management Strategy (RGMS) requirements.

**TABLE 2.6
CALTRANS DISTRICT 11
FREEWAY SEGMENT LOS DEFINITIONS**

LOS	V/C	Congestion/Delay	Traffic Description
<i>Used for freeways, expressways and conventional highways</i>			
"A"	<0.41	None	Free flow.
"B"	0.42-0.62	None	Free to stable flow, light to moderate volumes.
"C"	0.63-0.79	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.80-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
<i>Used for conventional highways</i>			
"F"	>1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle.
<i>Used for freeways and expressways</i>			
"F0"	1.01-1.25	Considerable (0-1 hour delay)	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
"F1"	1.26-1.35	Severe (1-2 hour delay)	Very heavy congestion, very long queues.
"F2"	1.36-1.45	Very severe (2-3 hour delay)	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
"F3"	>1.46	Extremely severe (3+ hours of delay)	Gridlock.

Source: SANTEC/ITE Guidelines for TIS in the San Diego Region.

2.3.4 Ramp Metering Analysis

Ramp metering is a means of controlling the volume of traffic entering the freeway with the goal of improving the traffic operations and flow on the freeway main lanes. Freeway ramp meter analysis estimates the peak hour queues and delays at freeway ramps by comparing existing volumes to the meter rate at the given location.

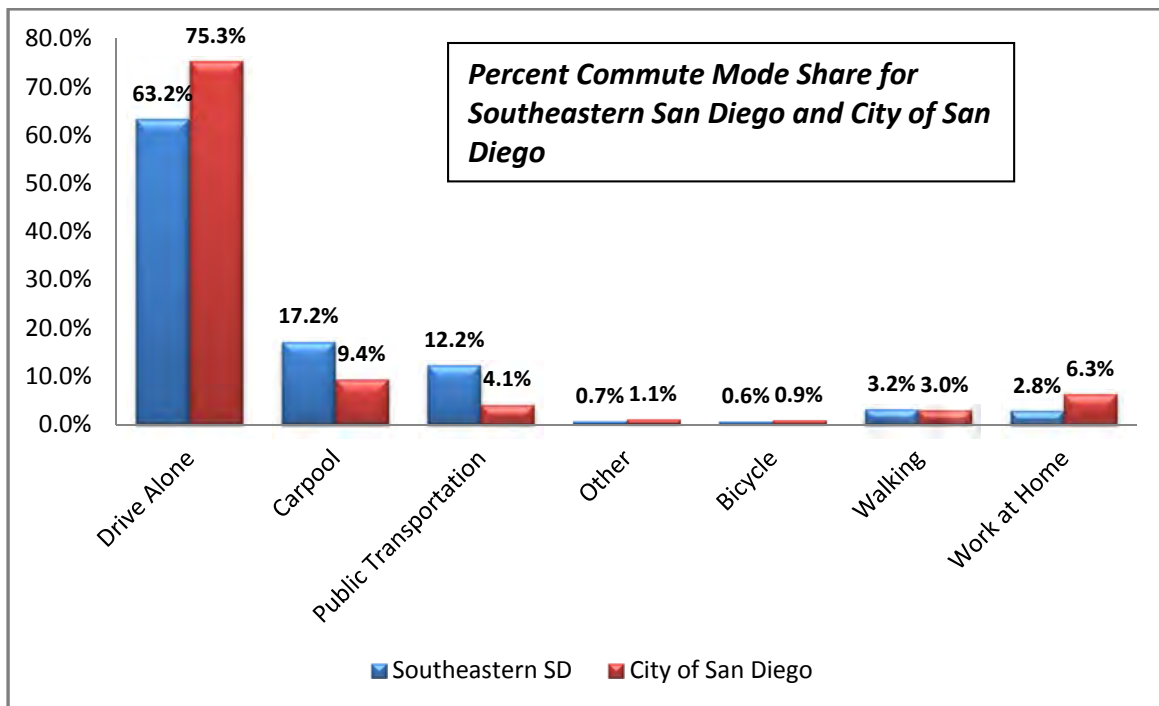
Meter rates used in the analysis were obtained from Caltrans in November 2012. Ramp metering analyses to calculate delays at the study area freeway on-ramps were conducted based upon procedures outlined in the *City of San Diego Traffic Impact Study Manual (1998)*.

3.0 Existing Conditions

This chapter describes activity patterns and LOS for all modes of travel in Southeastern San Diego including walking, cycling, riding transit, and driving. The chapter also summarizes services associated with passenger rail, airports, goods movement, intelligent transportation systems (ITS), and travel demand management (TDM).

3.1 Existing Setting

The chart below summarizes overall mode share for the journey to work for Southeastern San Diego community members, providing an overall indication of travel modes percentages.



Source: Census Bureau; 2011 American Community Survey

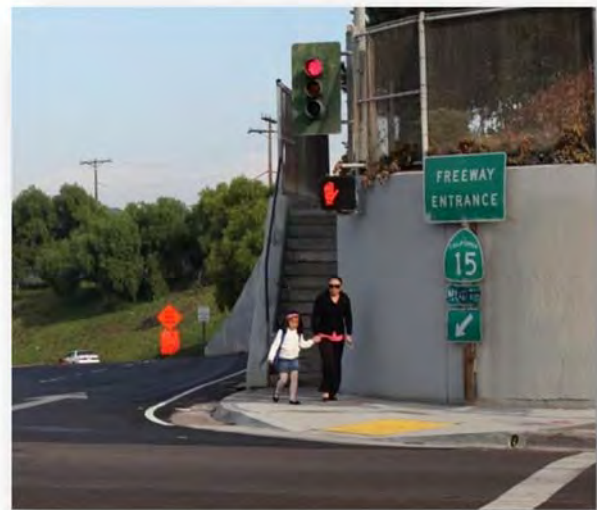
As shown, Southeastern San Diego has a relatively low rate of Drive Alone commuting compared to City of San Diego as whole (63% versus 75%). In addition, Southeastern San Diego has relatively high rates of Public Transportation usage for the work trip compared with the City as a whole (12% versus 4%), as well as high Carpool rates (17% versus 9%). Walk and bicycle rates for Southeastern San Diego are comparable to the citywide rates.

Notably, these data depict commuters traveling to work and do not reflect children and youth walking to school. A Safe Routes to School Program for elementary and middle schools in Southeastern San Diego was funded in 2006 and then expanded in 2009. This program is supporting evaluations of mode shares for the school trip, bicycle and pedestrian infrastructure deficiencies near schools, and implementing child-oriented encouragement and educational programs for walking and cycling to school.

Table 3.1 summarizes the existing physical characteristics of study roadways within Southeastern San Diego, in relation to pedestrian, bicycle, transit and automobile travel. The majority of this information was collected via field reviews and available, current GIS layers. The Planned Classification column reflects the planned roadway classification as reported in the currently adopted Southeastern San Diego Community Plan (1987).

3.2 Walkable Communities

Walkability is an important mobility and quality of life consideration for communities. The degree to which people walk for transportation and recreation is influenced by the comfort, safety and convenience of their walking experience. Comfort is influenced by traffic volumes, travel speed, and separation from through traffic, topography, the presence of sidewalks and improved paths, and climate. Safety is influenced by the speed and volume of conflicting vehicle traffic, street widths, traffic control, number of conflict points, and infrastructure design. Convenience is influenced by distance and directness of travel. As connectivity increases, travel distances and route options increase for the pedestrian.



Pedestrian travel is an important mode of travel within Southeastern San Diego. The Orange Line Trolley, Imperial Avenue and the many small commercial destinations within the community, all contribute to a vibrant pedestrian realm. There are challenges however that need to be addressed, such as high speed automobile travel, barriers imposed by freeway ramp intersections, difficult pedestrian crossings, and lack of buffer, lighting and shading. The following subsections describe existing pedestrian facilities, activity levels, pedestrian LOS analysis results, and pedestrian safety analyses within Southeastern San Diego.

The walkability goals as expressed in the City's 2008 General Plan Mobility Element include the following:

- *A city where walking is a viable travel choice, particularly for trips of less than one-half mile.*
- *A safe and comfortable pedestrian environment.*
- *A complete, functional, and interconnected pedestrian network, that is accessible to pedestrians of all abilities.*
- *Greater walkability achieved through pedestrian friendly streets, sites and building design.*

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
Hilltop Drive	Boundary Street & I-805	2-Ln	2-Ln Collector	40' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
Market Street	17th Street & 19th Street	4-Ln w/CLTL	4-Ln Major Arterial	66' / 100'	30	Parallel (Both)	Yes	None	Yes (Rt. 3, 5)	Southeastern
Market Street	19th Street & 25th Street	4-Ln w/CLTL	4-Ln Major Arterial	66'-68' / 100'	30	Parallel (Both)	Yes	None	Yes (Rt. 3, 5)	Southeastern
Market Street	25th Street & 28th Street	4-Ln w/CLTL	4-Ln Major Arterial	66'-68' / 100'	30	Parallel (Both)	Yes	None	Yes (Rt. 5)	Southeastern
Market Street	28th Street & 32nd Street	4-Ln w/CLTL	4-Ln Major Arterial	66'-68' / 100'	30	Parallel (Both)	Yes	None	Yes (Rt. 5)	Southeastern
Market Street	32nd Street & I-15 SB Ramps	4-Ln w/SM/RM	4-Ln Major Arterial	66'-80' / 88'-100'	35	Parallel (Both)	Yes	Class II	Yes (Rt. 5)	Southeastern
Market Street	I-15 SB Ramps & I-15 NB Ramps	4-Ln w/RM	4-Ln Major Arterial	80'-90' / 100'	35	None	Yes	Class II	Yes (Rt. 5)	Southeastern
Market Street	I-15 NB Ramps & I-805 SB Ramps	4-Ln w/CLTL/SM/RM	4-Ln Major Arterial	64'-70' / 80'-100'	30-35	None	Yes	Class II & III	Yes (Rt. 5)	Southeastern
Market Street	I-805 SB Ramps & I-805 NB Ramps	4-Ln w/RM	4-Ln Major Arterial	82' / 100'	35	None	Yes	Class II	Yes (Rt. 5)	Southeastern/ Encanto
Imperial Avenue	17th Street & 19th Street	4-Ln	4-Ln Major Arterial	48' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 4)	Southeastern
Imperial Avenue	19th Street & 25th Street	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 4)	Southeastern
Imperial Avenue	25th Street & 28th Street	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 4)	Southeastern
Imperial Avenue	28th Street & 30th Street	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 4)	Southeastern

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
Imperial Avenue	30th Street & 32nd Street	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 4)	Southeastern
Imperial Avenue	32nd Street & 36th Street	4-Ln	4-Ln Major Arterial	25'-65' / 80'-150'	30	Limited	No Sidewalk - section of south side	None	Yes (Rt. 4)	Southeastern
Imperial Avenue	36th Street & 40th Street	2-Ln	4-Ln Collector	35'-65' / 40'-70'	30	Parallel (south side)	No Sidewalk - section of north side	None	Yes (Rt. 4)	Southeastern
Imperial Avenue	40th Street & I-805 SB Ramps	4-Ln w/SM/RM	4-Ln Major Arterial	60'-95' / 70'-100'	40	Parallel (Both)	Yes	Class II - east of 40 th to 45 th	Yes (Rt. 4)	Southeastern
Imperial Avenue	I-805 SB Ramps & I-805 NB Ramps	4-Ln w/CLTL	4-Ln Major Arterial	86' / 100'	40	None	Yes	None	Yes (Rt. 4)	Southeastern/ Encanto
Commercial Street	17th Street & 19th Street	2-Ln	2-Ln Collector	62' / 72'	25	None	Yes	None	Yes (Orange Line)	Southeastern
Commercial Street	19th Street & 25th Street	2-Ln	2-Ln Collector	62'-70' / 80'-98'	25	Parallel (south side) & Limited (north side)	Yes	None	Yes (Orange Line)	Southeastern
Commercial Street	25th Street & 28th Street	2-Ln	2-Ln Collector	62'-78' / 80'-98'	25	Parallel (south side) & Limited (north side)	Yes	None	Yes (Orange Line, Rt. 3)	Southeastern
Commercial Street	28th Street & 30th Street	2-Ln	2-Ln Collector	66' / 80'	25	Parallel (Both)	Yes	None	Yes (Orange Line)	Southeastern

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
Commercial Street	30th Street & 32nd Street	2-Ln	2-Ln Collector	70'-84' / 98'-100'	25	Parallel (Both)	No Sidewalk – sections of north and south side	None	Yes (Orange Line)	Southeastern
Ocean View Boulevard	25th Street & 28th Street	2-Ln	2-Ln Collector	51' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	28th Street & 30th Street	2-Ln	2-Ln Collector	51'-52' / 80'	30	Parallel (Both)	Yes	Class III	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	30th Street & 32nd Street	2-Ln w/CLTL	2-Ln Collector	52' / 80'	30	Parallel (Both)	Yes	Class III	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	32nd Street & I-15 SB Ramps	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'-92'	30	Parallel (Both)	Yes	Class III	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	I-15 SB Ramps & I-15 NB Ramps	4-Ln w/SM	4-Ln Major Arterial	76' / 92'-134'	30	Parallel (Both)	Yes	Class III	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	I-15 NB Ramps & 36th Street	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'	30	Parallel (Both)	Yes	Class III	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	36th Street & 40th Street	2-Ln w/CLTL	4-Ln Major Arterial	50'-52' / 80'	30	Parallel (Both)	Yes	Class III	Yes (Rt. 3)	Southeastern
Ocean View Boulevard	40th Street & 47th Street	2-Ln	2-Ln Collector	40'-42' / 56'-70'	30	Parallel (Both)	Yes	None	Yes (Rt. 3)	Southeastern
National Avenue	Commercial Street & Beardsley Street	2-Ln w/CLTL	4-Ln Major Arterial	52'-54' / 81'	30	Parallel (Both)	Yes	None	Yes (Rt. 11)	Barrio Logan
National Avenue	Beardsley Street & SR-75 Off-Ramp	2-Ln	4-Ln Major Arterial	52' / 78'	30	Parallel (north side) & Angled (south side)	Yes	None	Yes (Rt. 11)	Barrio Logan

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
National Avenue	SR-75 Off-Ramp & 26th Street	2-Ln w/CLTL	4-Ln Major Arterial	52' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 11)	Barrio Logan
National Avenue	26th Street & 27th Street/I-5 SB Off-Ramp	2-Ln	4-Ln Major Arterial	46'-52' / 80'-82'	30	Parallel (Both)	Yes	None	Yes (Rt. 11)	Barrio Logan
National Avenue	27th Street/I-5 SB Off-Ramp & 28th Street	4-Ln	4-Ln Major Arterial	52' / 82'	30	None	Yes	None	Yes (Rt. 11)	Southeastern
National Avenue	28th Street & I-5 NB Ramps	2-Ln w/RM	4-Ln Major Arterial	50' / 84'	30	None	Yes	None	Yes (Rt. 11)	Southeastern
National Avenue	I-5 NB Ramps & 32nd Street	2-Ln w/CLTL	4-Ln Major Arterial	48'-52' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 11)	Southeastern
National Avenue	32nd Street & 43rd Street	2-Ln w/CLTL	4-Ln Major Arterial	51'-62' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 11)	Southeastern
Logan Avenue	43rd Street & 45th Street	2-Ln w/CLTL	4-Ln Major Arterial	63'-65' / 84'-86'	30	Parallel (Both)	No Sidewalk – section of north side	None	Yes (Rt. 11, 955)	Southeastern
Logan Avenue	45 th Street & 47 th Street	4-Ln	4-Ln Major Arterial	59'-62' / 78'-80'	35	Parallel (Both)	Yes	None	Yes (Rt. 11, 955)	Southeastern/ Encanto
Acacia Street	36th Street & 38th Street	2-Ln	2-Ln Collector	50' / 82'	25	Parallel (Both)	Yes	None	No	Southeastern
Alpha Street	38th Street & 43rd Street	2-Ln	2-Ln Collector	38' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
Division Street	Main Street & Osborn Street	2-Ln w/CLTL	4-Ln Collector	54' / 80'	30	Parallel (Both)	Yes	None	No	Southeastern
Division Street	Osborn Street & Highland Avenue	2-Ln w/CLTL/RM	4-Ln Collector	48' / 80'	30	Parallel (Both)	Yes	None	No	Southeastern

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
Division Street	Highland Avenue & Palm Avenue	4-Ln	4-Ln Secondary Arterial	64' / 82'	35	Parallel (Both)	Yes	None	Yes (Rt. 967)	National City
Cesar Chavez Parkway	Commercial Street & I-5 NB Ramps	2-Ln	4-Ln Collector	42' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
Cesar Chavez Parkway	I-5 NB Ramps & SR-75 On-Ramp/Logan Avenue	4-Ln	4-Ln Major Arterial	62' / 92'	25	Parallel (Both)	Yes	None	No	Barrio Logan
25th Street	SR-94 WB Off-Ramp & SR-94 EB On-Ramp	4-Ln	4-Ln Major Arterial	58' / 100'	30	None	Yes	None	No	Southeastern
25th Street	SR-94 EB On-Ramp & Market Street	4-Ln	4-Ln Major Arterial	60' / 100'	30	Parallel (Both)	Yes	None	No	Southeastern
25th Street	Market Street & Imperial Avenue	4-Ln	4-Ln Major Arterial	60' / 100'	30	Parallel (Both)	Yes	None	Yes (Rt. 3)	Southeastern
25th Street	Imperial Avenue & Commercial Street	3-Ln	4-Ln Major Arterial	58'-66' / 100'	30	Angled / Parallel (West Side)	Yes	None	Yes (Rt. 3)	Southeastern
28th Street	SR-94 WB Ramps & SR-94 EB Ramps	2-Ln	2-Ln Collector	40' / 70'	30	Parallel (Both)	Yes	Class III	No	Southeastern
28th Street	SR-94 EB Ramps & Market Street	2-Ln	2-Ln Collector	40'-50' / 68'	30	Parallel (Both)	No Sidewalk – section of east side	Class III	No	Southeastern
28th Street	Market Street & Imperial Avenue	2-Ln	2-Ln Collector	40' / 58'-70'	30	Parallel (Both)	Yes	Class III	No	Southeastern
28th Street	Imperial Avenue & Commercial Street	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	Class III	No	Southeastern
28th Street	Commercial Street & Ocean View Boulevard	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	Class III	No	Southeastern

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
28th Street	Ocean View Boulevard & National Avenue	2-Ln	2-Ln Collector	40'-48' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern
28th Street	National Avenue & Boston Avenue	3-Ln	4-Ln Major Arterial	66' / 92'	30	Parallel (Both)	Yes	None	No	Barrio Logan
30th Street	E Street & Imperial Avenue	2-Ln	2-Ln Collector	40'-52' / 80'	25	Parallel (Both)	Yes	None	No	Southeastern
30th Street	Imperial Avenue & Commercial Street	2-Ln	2-Ln Collector	38' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
30th Street	Commercial Street & National Avenue	2-Ln	2-Ln Collector	40' / 58'-60'	25	Parallel (Both) & Angled (west side Ocean View Blvd to 31 st St)	Yes	None	No	Southeastern
Broadway/32nd Street	SR-94 WB Ramps & SR-94 EB On-Ramp/F Street	4-Ln	4-Ln Major Arterial	52' / 140'	30	Parallel (Both)	No Sidewalk – sections of east and west side	None	No	Southeastern
32nd Street	SR-94 EB On-Ramp/F Street & Market Street	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern
32nd Street	Market Street & Imperial Avenue	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern
32nd Street	Imperial Avenue & Commercial Street	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern
32nd Street	Commercial Street & Ocean View Boulevard	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
32nd Street	Ocean View Boulevard & National Avenue	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern
32nd Street	National Avenue & Boston Avenue	2-Ln	2-Ln Collector	40' / 60'	30	Parallel (Both)	Yes	None	No	Southeastern
35th Street/Rigel Street	Ocean View Boulevard & Main Street	2-Ln	2-Ln Collector	38' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
36th Street	Imperial Avenue & Ocean View Boulevard	2-Ln	2-Ln Collector	38' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
36th Street	Ocean View Boulevard & Acacia Street	2-Ln	2-Ln Collector	38' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
38th Street	Ocean View Boulevard & Acacia Street	2-Ln	2-Ln Collector	42' / 60'	25	Parallel (Both)	Yes	Class III – Alpha to Acacia	No	Southeastern
Vesta Street	Acacia Street & Main Street	2-Ln	2-Ln Collector	40' / 60'	25	Parallel (Both)	Yes	Class III	No	Southeastern
40th Street	Imperial Avenue & Ocean View Boulevard	4-Ln	4-Ln Major Arterial	60' / 60'	25	Parallel (Both)	Yes	None	No	Southeastern
40th Street	National Avenue & Division Street	2-Ln	2-Ln Collector	34'-40' / 50'	25	Parallel (Both)	Yes	None	No	Southeastern
Boundary Street	Hilltop Drive & Market Street	2-Ln	2-Ln Collector	40' / 70'	25	Parallel (Both)	Yes	None	No	Southeastern
San Pasqual Drive	Imperial Avenue & Ocean View Boulevard	2-Ln	2-Ln Collector	34' / 52'	25	None	Yes	None	No	Southeastern
San Pasqual Drive	Ocean View Boulevard & Logan Avenue	2-Ln	2-Ln Collector	38' / 52'-60'	25	Parallel (Both)	Yes	None	No	Southeastern

**TABLE 3.1
EXISTING ROADWAY CHARACTERISTICS**

Roadway	Segment	Cross-Section	Adopted Ultimate Classification	Pavement / ROW Width (ft)	Speed Limit (mph)	On-Street Parking	Sidewalks	Bicycle Facilities	Transit Services	Community / Jurisdiction
43rd Street	Logan Avenue & Newton Avenue	2-Ln w/SM/CLTL	4-Ln Major Arterial	56' / 96'	30	Parallel (Both)	Yes	None	Yes (Rt. 955)	Southeastern
43rd Street	Newton Avenue & Beta Street	3-Ln w/CLTL	4-Ln Major Arterial	60' / 80'-106'	30	Parallel (Both) & no parking on a section of west side	Yes	None	Yes (Rt. 955)	Southeastern
43rd Street	Beta Street & Delta Street	2-Ln w/CLTL	4-Ln Major Arterial	60' / 80'	30	Parallel (Both)	Yes	None	Yes (Rt. 955)	Southeastern
43rd Street/Highland Avenue	Delta Street & Division Street	3-Ln w/CLTL	4-Ln Major Arterial	58' / 80'	30	Parallel (Both) & no parking on a section of east side	Yes	None	Yes (Rt. 955)	Southeastern
Highland Avenue	Division Street & 4th Street	4-Ln	2-Ln Collector w/CLTL	64' / 80'	35	Parallel (Both)	Yes	None	No	National City
45th Street	Imperial Avenue & Logan Avenue	2-Ln	2-Ln Collector	32'-36' / 60'	30	Parallel (Both)	No Sidewalk - section of east side	None	No	Southeastern

Source: Chen Ryan Associates; February 2015

Notes:

RM = Raised Median

SM = Striped Median

CLTL = Center Left-Turn Lane

3.2.1 Pedestrian Facilities

Pedestrian facilities include sidewalks, curb ramps, and other amenities such as street trees for shading. The City of San Diego’s 1997 ADA Transition Plan seeks to help create better accessibility and connectivity throughout San Diego by making all sidewalks and pedestrian ramps ADA compliant.

Figure 3-1 illustrates study roadway segments with missing sidewalks, missing pedestrian ramps and non-ADA compliant pedestrian ramps within the community. Current inventories indicate that there are approximately 569 missing curb ramps in Southeastern San Diego, 953 non-ADA compliant curb ramps, and an estimated 87,269 lineal feet of missing sidewalk, reflecting an inventory of both sides of the roadway right-of-way.

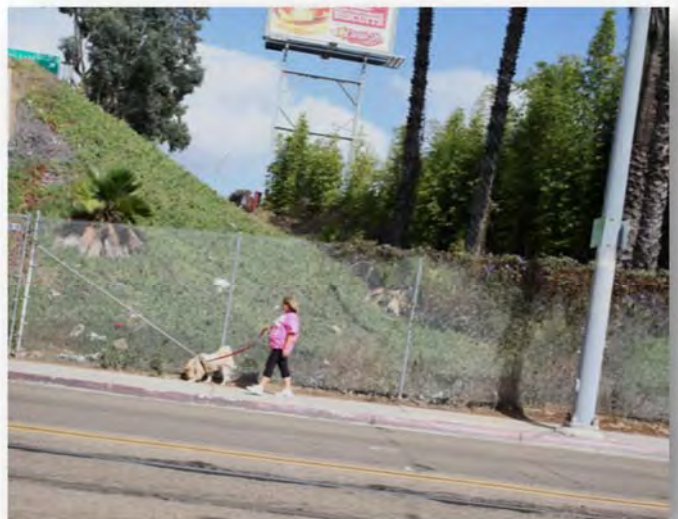
The four interstate freeways and state routes form barriers to pedestrian travel between Southeastern San Diego and its surrounding communities of Golden Hill, Barrio Logan, Encanto, and National City.



3.2.2 Pedestrian Activity Levels

This section presents several sources of pedestrian activity data, including from the PMP - Phase I priority model, the Census Bureau, and current peak period pedestrian counts.

Figure 3-2 displays the summation of pedestrian attractors and generators per the City’s pedestrian priority model as updated during Phases 2 & 3 of the City’s Pedestrian Master Plan effort. The model inputs and interpretation of outputs is well documented in the PMP-Phase 1 document. In general, higher levels of pedestrian attractors and generators signify high levels of existing and/or latent demand for walking.



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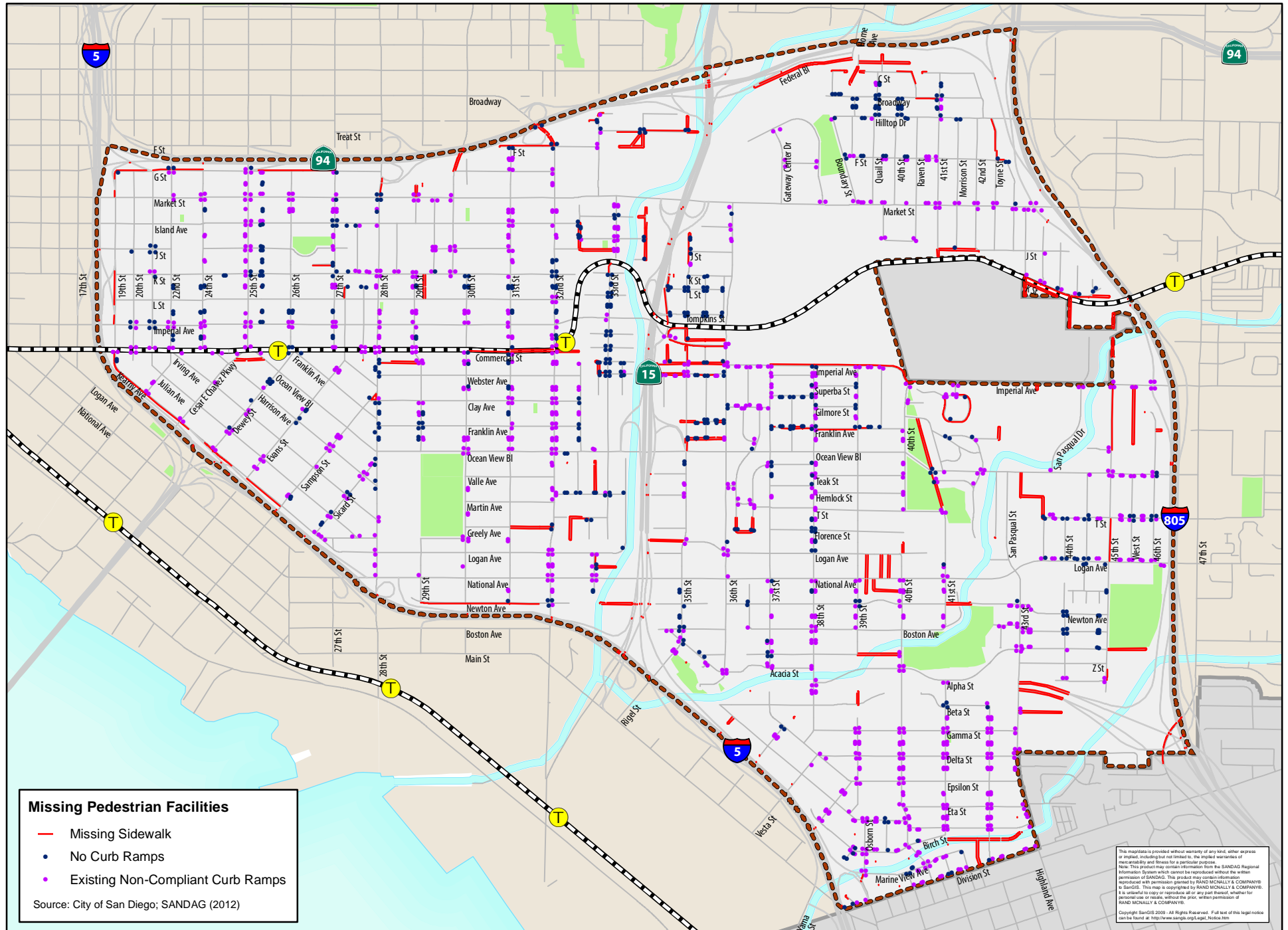


Figure 3-1: Missing Pedestrian Facilities

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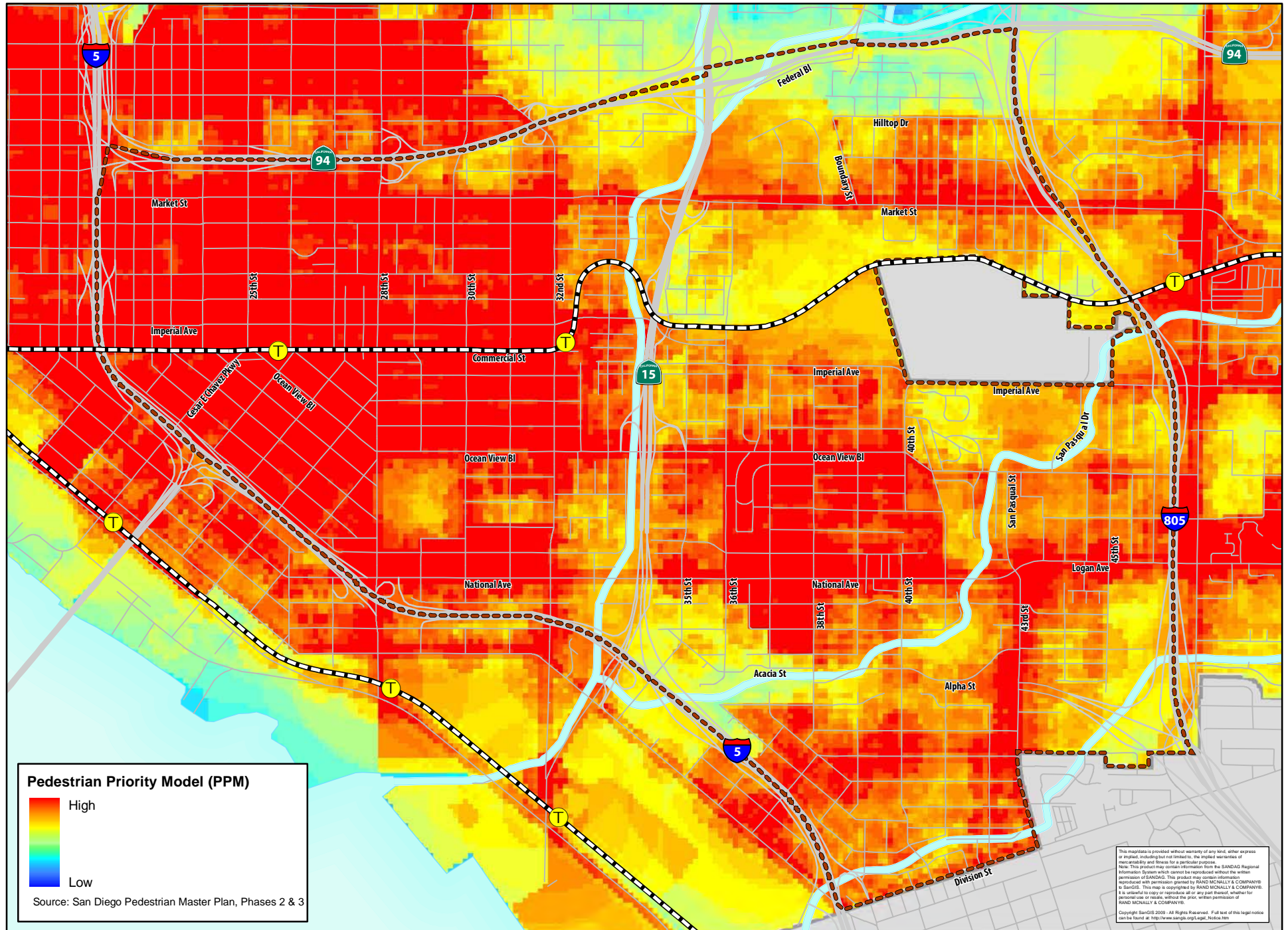


Figure 3-2: Pedestrian Priority Model (PPM)

As shown in Figure 3-2, almost the entire community of Southeastern San Diego falls within high pedestrian demand locations, relative to the City of San Diego as a whole. There are portions of the community north and south of the cemetery that reflect medium-high pedestrian demands, and portions of the community buffering I-15 and Chollas Creek that also reflect medium-high pedestrian demands. These areas generally have lower population densities and transit service which are significant drivers of pedestrian demand.

Several sources of actual walking rates and pedestrian counts are publically available or were collected as part of this planning effort. **Table 3.2** displays January 2007 - December 2011 estimated walk to work rates, as reported by the American Community Survey (ACS), for Southeastern San Diego and the City of San Diego as a whole.

TABLE 3.2
PERCENT OF WALKING COMMUTERS IN SOUTHEASTERN SAN DIEGO

	Southeastern San Diego	City of San Diego	County of San Diego
Number of Workers Walking to Work	660	19,030	39,860
Percent of Total Workers	3.2%	3.0%	2.8%

Source: US Census, American Community Survey, 2011 Estimates; Chen Ryan Associates; February 2015

As shown, approximately 659 residents are currently walking to work, which is about 3.2 percent of all workers in Southeastern San Diego. Across the City as a whole, about 3.0 percent of all workers are walking to work. The rate of walking to work in Southeastern San Diego is slightly higher than for the City as a whole, as well as for the County as a whole (2.8%).

Figure 3-3 displays walking rates for the journey to work by census tract for Southeastern San Diego. The highest commute walking rates occur in the census tract just east of I-5, between Market Street and Commercial Street (13.8%); and in the two census tracts just west of I-15 and to the south (6.7%) and north (6.5%) of Commercial Street. These three census tracts are relatively close to downtown and Orange Line Stations at 25th Street and 32nd Street.

Figure 3-4 displays the existing AM and PM peak hour pedestrian volumes at all key study area intersections. Pedestrian counts were conducted on October 9th, 10th, or 11th (2012), with the exception of six (6) counts conducted on May 18, 2011 and obtained from the *Commercial Street / Imperial Avenue Corridor Master Plan*; five (5) counts conducted on October 24, 2012 and obtained from the *Euclid National Corridor Master Plan*; eight (8) counts conducted on May 24, 2011 and obtained from the *Euclid + Market Land Use and Mobility Plan*, and one (1) count conducted by the City of San Diego on March 29, 2011.

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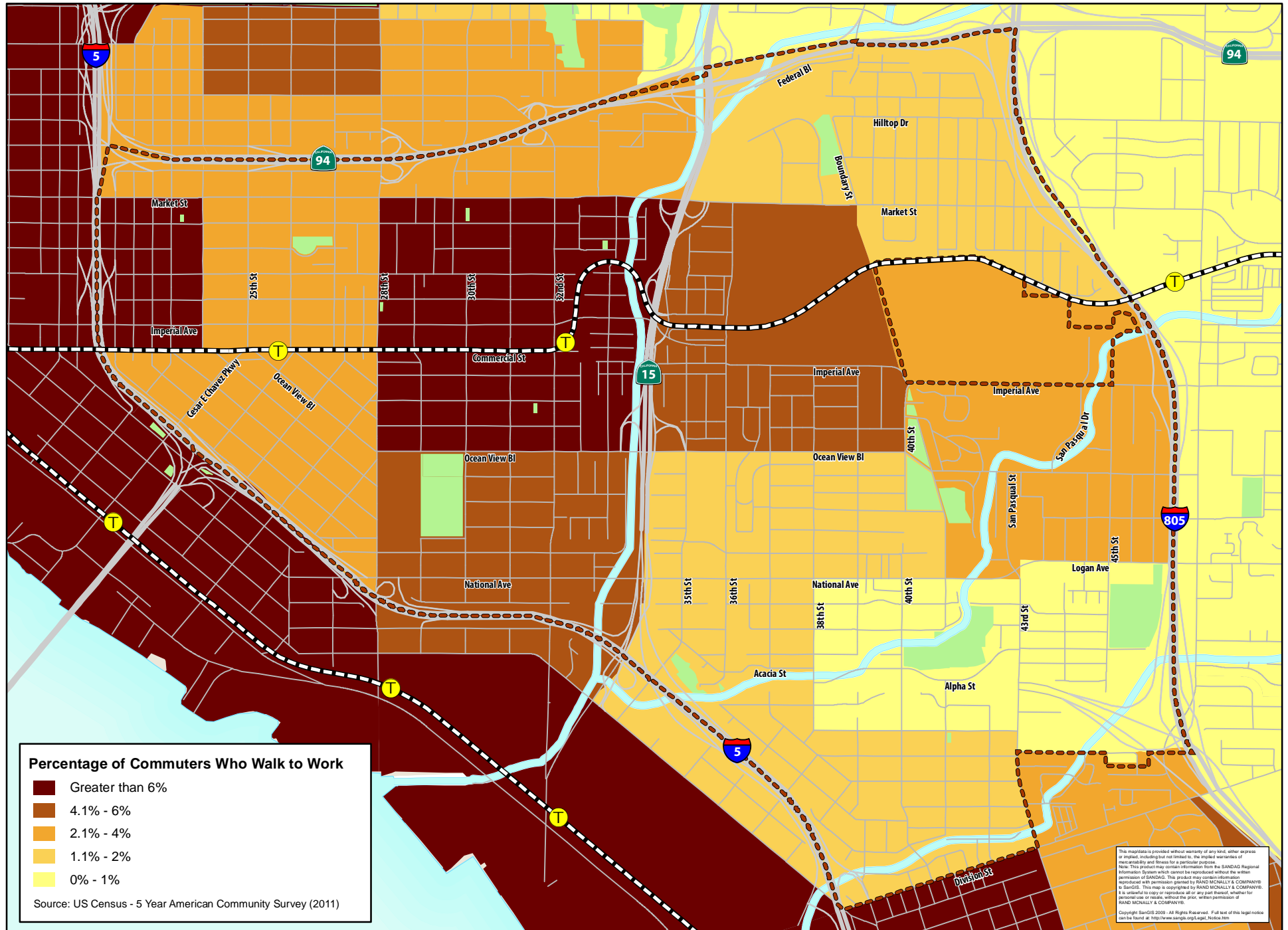


Figure 3-3: Percent Walking Commuters by Census Tract

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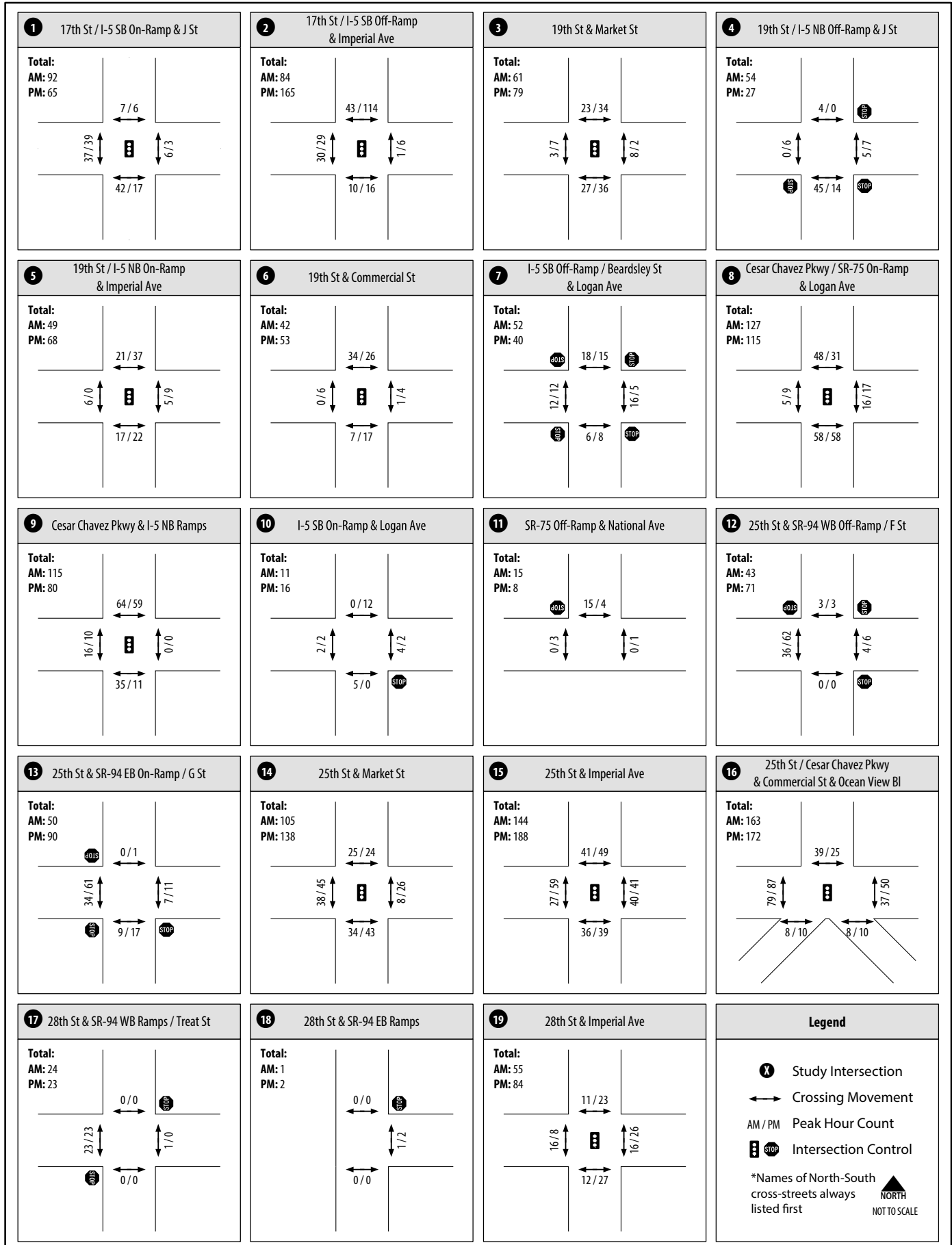


Figure 3-4: Existing AM/PM Peak Hour Pedestrian Counts
 Intersections 1-19 (Page 1 of 3)

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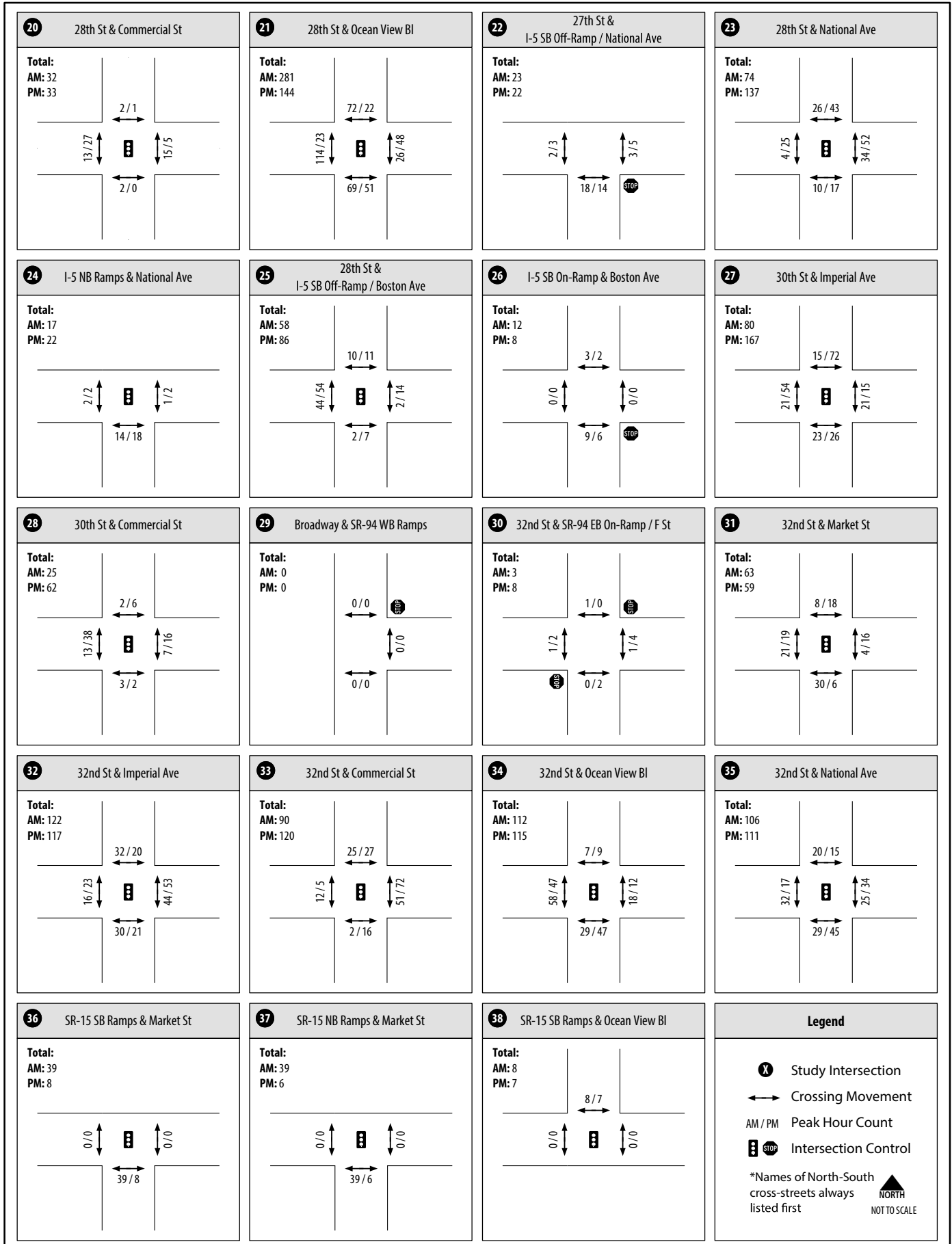


Figure 3-4: Existing AM/PM Peak Hour Pedestrian Counts
Intersections 20-38 (Page 2 of 3)

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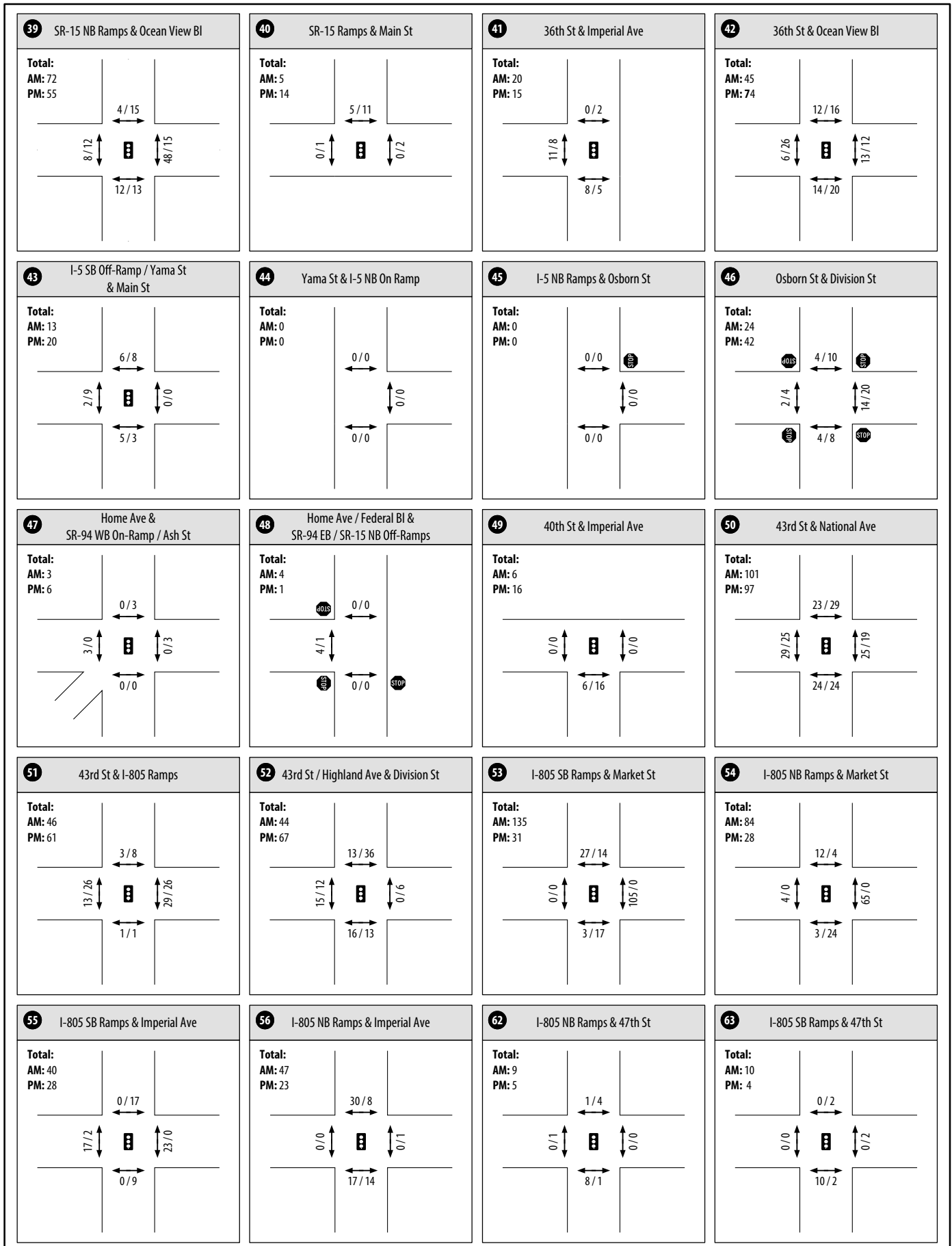


Figure 3-4: Existing AM/PM Peak Hour Pedestrian Counts
Intersections 39-56 & 62-63 (Page 3 of 3)

The highest AM peak hour pedestrian count is 281 pedestrians and occurs at the 28th Street / Ocean View Boulevard intersection, which has several traditionally high pedestrian generating land uses, such as Logan Elementary School, the Memorial Preparatory school, a public library, a senior center, recreation center and a park. The second highest AM peak hour pedestrian count (163 pedestrians) occurs at the intersection of 25th Street/Cesar Chavez Parkway/Ocean View Boulevard / Commercial Street. The two highest PM peak hour pedestrian counts were found at the 25th Street / Imperial Avenue intersection (188 PM peak hour pedestrians), and at the 25th Street/Cesar Chavez Parkway/Ocean View Boulevard / Commercial Street intersection (172 PM peak hour pedestrians). Both of these locations are near the 25th Street/Commercial Street Trolley Station, as well as bus stops serving multiple bus routes.

Appendix A displays the AM and PM peak hour pedestrian counts for Southeastern San Diego study intersections.

Figures 3.5a and **3.5b** display the distribution of peak hour pedestrian volumes for the AM and PM peak hour, respectively, across the community of Southeastern San Diego. As shown in the figures, high pedestrian count locations are currently found near the 25th Street/Commercial Street Trolley Station, along Imperial Avenue, and at 28th Street / Ocean View Boulevard.



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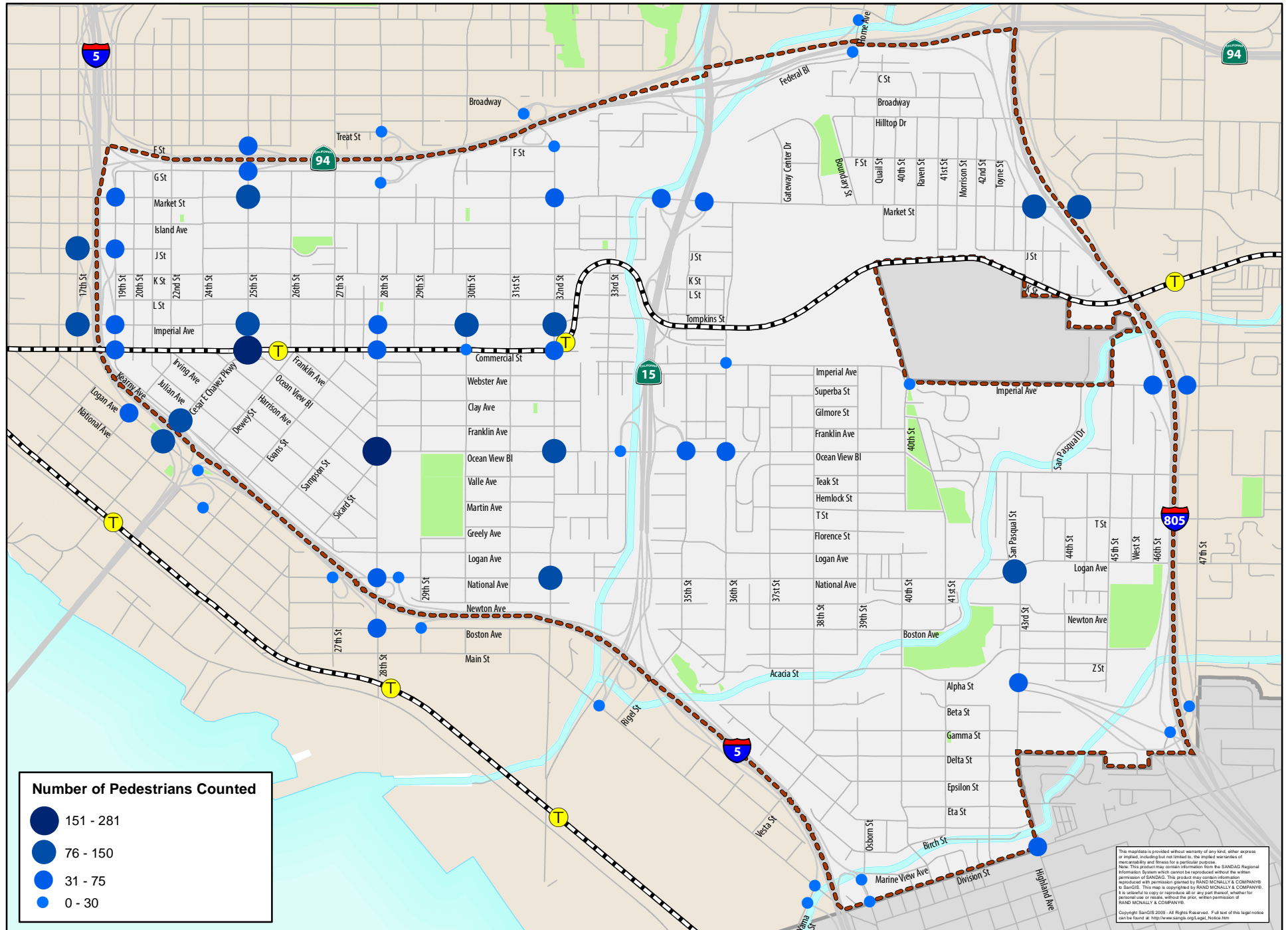


Figure 3-5a: Pedestrians Crossing at Study Intersections (AM Peak Hour)

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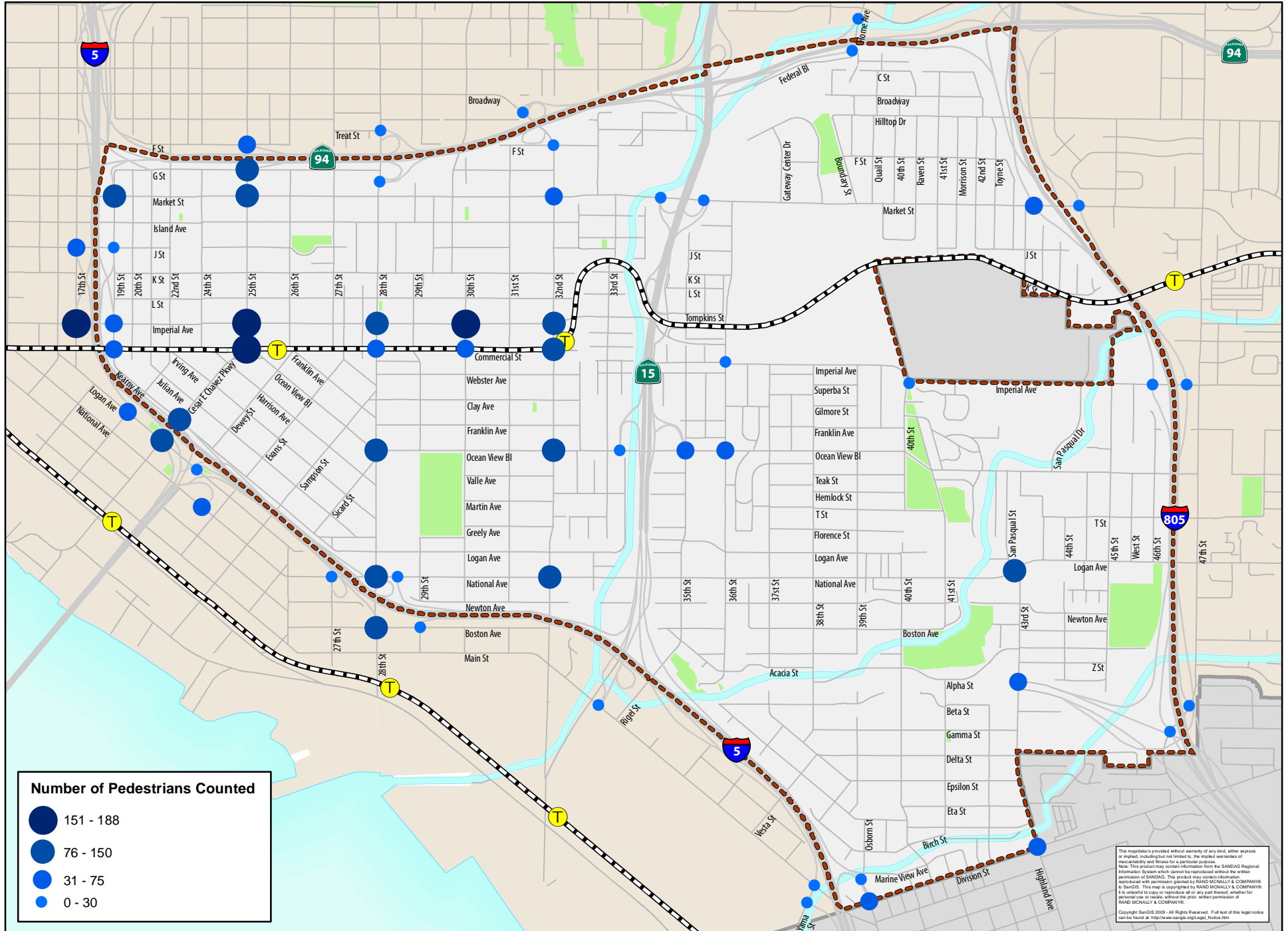


Figure 3-5b: Pedestrians Crossing at Study Intersections (PM Peak Hour)

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3.2.3 Pedestrian LOS Analysis and Results

Pedestrian LOS was evaluated along the Urban Streets using the multi-modal LOS methodology, as described in Chapter 2.

Tables 3.3A and 3.3B display existing pedestrian LOS along study roadways during the AM and PM peak hours, respectively. Peak hour pedestrian CSLOS analysis output is provided in Appendix B.

**TABLE 3.3A
EXISTING MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.71	B	3.06	C
	19th Street & 25th Street		2.84	C		
	25th Street & 32nd Street		2.89	C		
	32nd Street & I-15 SB Ramps		3.22	C		
	I-15 SB Ramps & I-15 NB Ramps		3.10	C		
	I-15 NB Ramps & I-805 SB Ramps		3.31	C		
	I-805 SB Ramps & I-805 NB Ramps		2.89	C		
	17th Street & 19th Street	Westbound	2.65	B	2.93	C
	19th Street & 25th Street		2.69	B		
	25th Street & 32nd Street		2.88	C		
	32nd Street & I-15 SB Ramps		2.87	C		
	I-15 SB Ramps & I-15 NB Ramps		2.83	C		
	I-15 NB Ramps & I-805 SB Ramps		3.16	C		
	I-805 SB Ramps & I-805 NB Ramps		2.75	B		
Imperial Avenue	17th Street & 19th Street	Eastbound	2.61	B	2.72	B
	19th Street & 25th Street		2.74	B		
	25th Street & 28th Street		2.68	B		
	28th Street & 30th Street		2.62	B		
	30th Street & 32nd Street		2.66	B		
	32nd Street & 36th Street		2.65	B		
	36th Street & 40th Street		2.76	C		
	40th Street & I-805 SB Ramps		2.82	C		
	I-805 SB Ramps & I-805 NB Ramps		2.80	C		

**TABLE 3.3A
EXISTING MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Imperial Avenue	17th Street & 19th Street	Westbound	2.39	B	2.83	C
	19th Street & 25th Street		2.86	C		
	25th Street & 28th Street		2.77	C		
	28th Street & 30th Street		2.70	B		
	30th Street & 32nd Street		2.74	B		
	32nd Street & 36th Street		2.66	B		
	36th Street & 40th Street		3.36	C		
	40th Street & I-805 SB Ramps		2.68	B		
	I-805 SB Ramps & I-805 NB Ramps		2.90	C		
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	2.82	C	2.82	C
	32nd Street & 43rd Street		2.80	C		
	43rd Street & 47th Street		2.88	C		
	28th Street & 32nd Street	Westbound	2.74	B	2.80	C
	32nd Street & 43rd Street		2.87	C		
	43rd Street & 47th Street		2.66	B		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	3.03	C	3.01	C
	I-805 Ramps & Division Street		2.99	C		
	Logan Avenue & I-805 Ramps	Southbound	2.84	C	2.95	C
	I-805 Ramps & Division Street		3.04	C		

Source: Chen Ryan Associates; February 2015

Notes:

The pedestrian LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

**TABLE 3.3B
EXISTING MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.77	C	3.10	C
	19th Street & 25th Street		2.82	C		
	25th Street & 32nd Street		2.83	C		
	32nd Street & I-15 SB Ramps		3.23	C		
	I-15 SB Ramps & I-15 NB Ramps		3.14	C		
	I-15 NB Ramps & I-805 SB Ramps		3.50	C		
	I-805 SB Ramps & I-805 NB Ramps		2.82	C		
	17th Street & 19th Street	Westbound	2.65	B	2.97	C
	19th Street & 25th Street		2.78	C		
	25th Street & 32nd Street		2.95	C		
	32nd Street & I-15 SB Ramps		2.89	C		
	I-15 SB Ramps & I-15 NB Ramps		2.83	C		
	I-15 NB Ramps & I-805 SB Ramps		3.16	C		
	I-805 SB Ramps & I-805 NB Ramps		2.79	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	2.66	B	2.78	C
	19th Street & 25th Street		2.76	C		
	25th Street & 28th Street		2.75	B		
	28th Street & 30th Street		2.68	B		
	30th Street & 32nd Street		2.68	B		
	32nd Street & 36th Street		2.71	B		
	36th Street & 40th Street		2.82	C		
	40th Street & I-805 SB Ramps		2.90	C		
	I-805 SB Ramps & I-805 NB Ramps		2.88	C		
	17th Street & 19th Street	Westbound	2.69	B	2.88	C
	19th Street & 25th Street		2.83	C		
	25th Street & 28th Street		2.80	C		
	28th Street & 30th Street		2.79	C		
	30th Street & 32nd Street		2.74	B		
	32nd Street & 36th Street		2.68	B		
	36th Street & 40th Street		3.47	C		
	40th Street & I-805 SB Ramps		2.71	B		
	I-805 SB Ramps & I-805 NB Ramps		2.98	C		

**TABLE 3.3B
EXISTING MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	2.89	C	2.91	C
	32nd Street & 43rd Street		2.91	C		
	43rd Street & 47th Street		2.92	C		
	28th Street & 32nd Street	Westbound	2.96	C	3.04	C
	32nd Street & 43rd Street		3.10	C		
	43rd Street & 47th Street		2.95	C		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	3.08	C	3.05	C
	I-805 Ramps & Division Street		3.03	C		
	Logan Avenue & I-805 Ramps	Southbound	2.92	C	3.00	C
	I-805 Ramps & Division Street		3.06	C		

Source: Chen Ryan Associates; February 2015

Notes:

The pedestrian LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

As shown in Tables 3.3A and 3.3B, pedestrian LOS, along the Urban Streets within Southeastern San Diego, is at LOS C or better during both the AM and PM peak hours. The LOS reported here is an indication of the pedestrian’s experience while traveling along these study corridors. Major variables affecting the walking environment include sidewalk width, lateral separation from traffic, speed and makeup of the vehicular traffic, intersection crossing distance, and the delay waiting to cross at signals. **Figures 3-6a** and **3-6b** show pedestrian levels of service for the AM and PM peak hours, respectively.

3.2.4 Pedestrian Collisions

Pedestrian collision data was obtained from the City of San Diego for the period from 2007 to 2012. During this period there were a reported 155 pedestrian-involved collisions in the community of Southeastern San Diego.

Table 3.4 summarizes the reported pedestrian-involved collisions by location, while **Figure 3-7** displays the distribution of the 155 collisions across the community of Southeastern San Diego.

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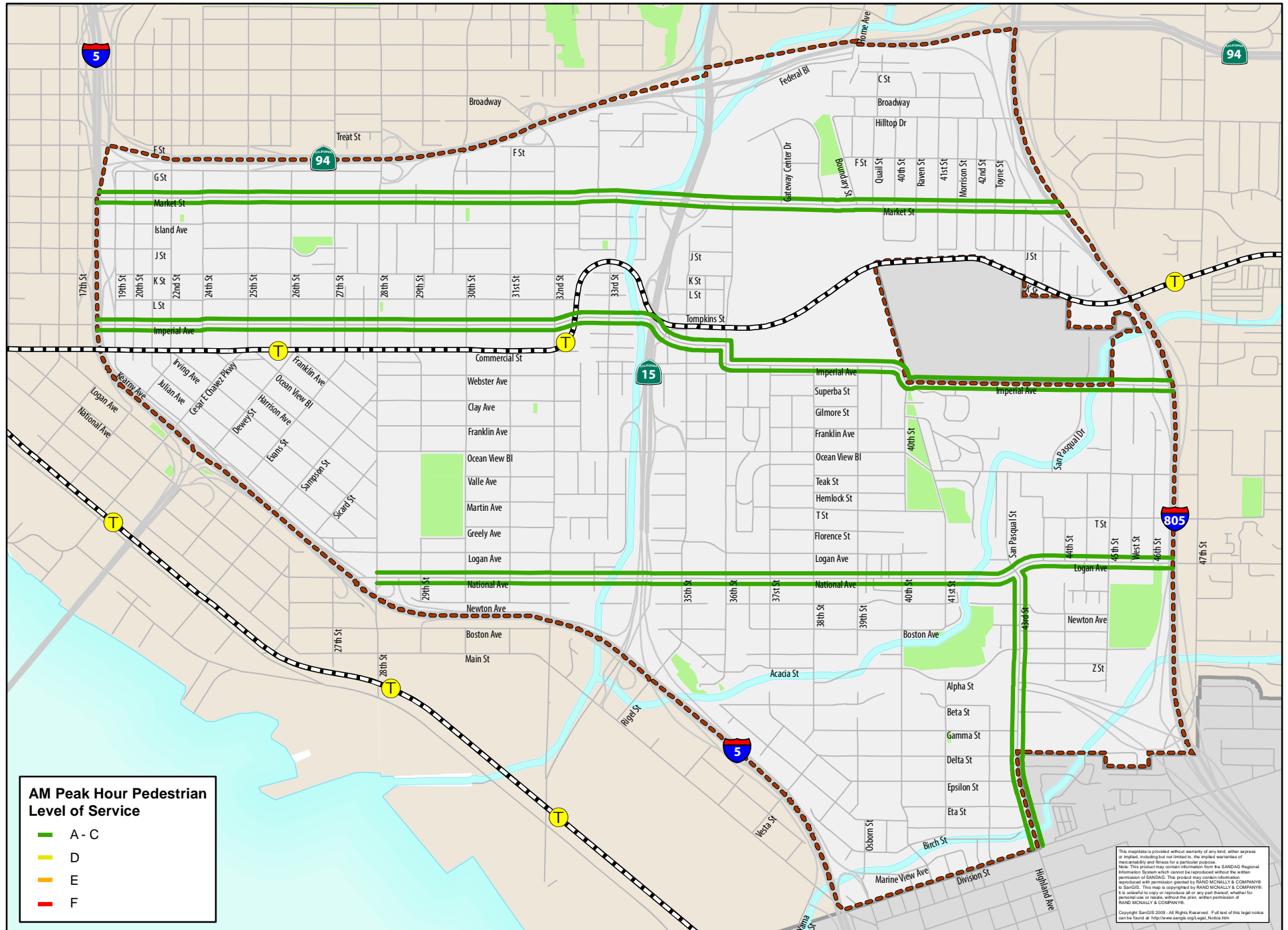


Figure 3-6a: Existing AM Peak Hour Pedestrian Level of Service

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SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

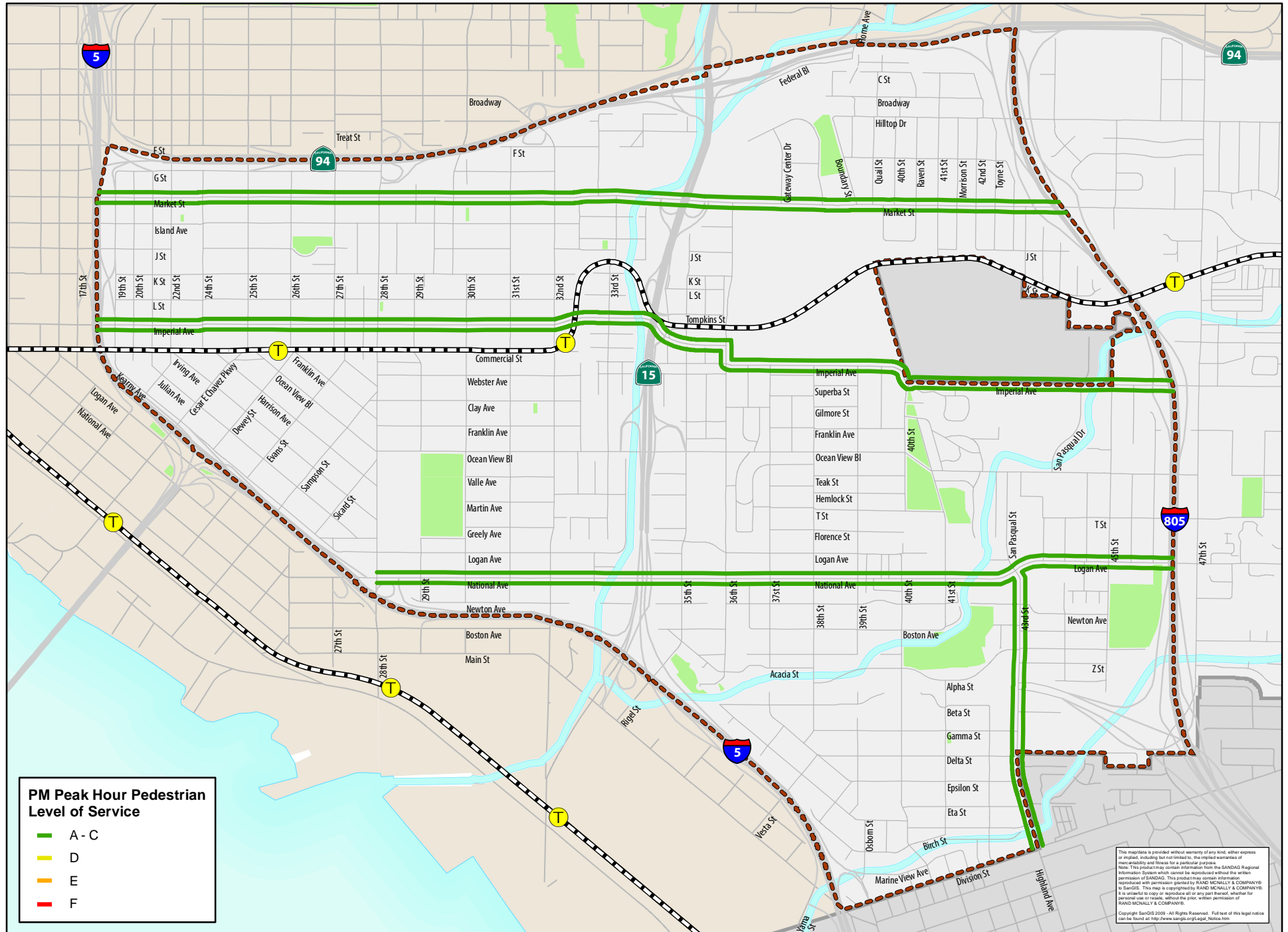


Figure 3-6b: Existing PM Peak Hour Pedestrian Level of Service

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SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

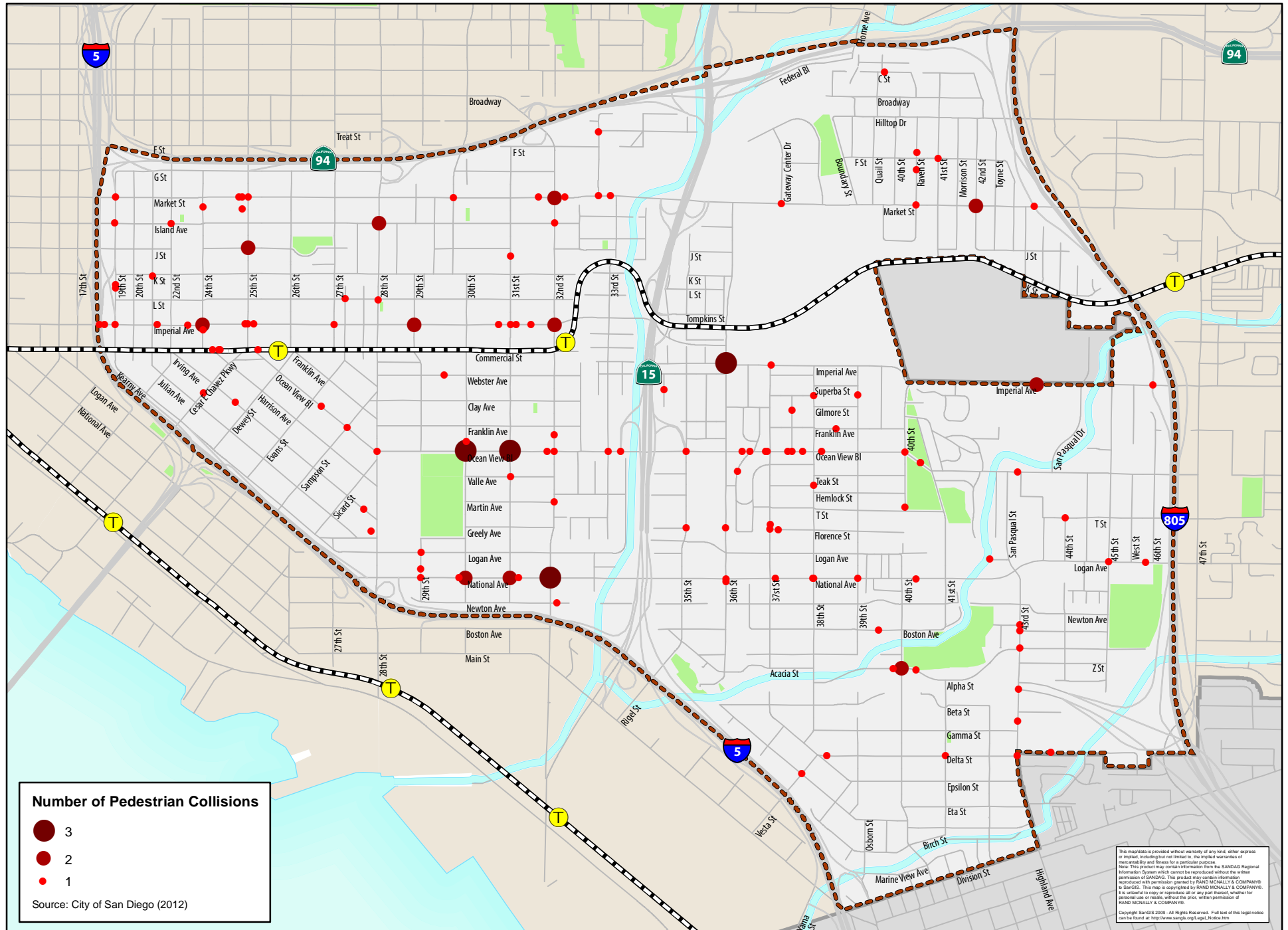


Figure 3-7: Pedestrian Collisions (2007 - 2012)

**TABLE 3.4
PEDESTRIAN COLLISION SUMMARY**

URBAN STREETS	Total	Location Type		Lighting		Severity			Primary Cause						
		Midblock	Intersection	Daylight	Dusk/Night/Dawn	Fatality	Injured	None	Pedestrian at Fault	Ran Red Light or Stop Sign	Speeding	Unsafe Movement	Left Turn Failed to Yield	Violated Pedestrian R/W	Visibility
Market Street, between I-5 and I-805	16	1	15	9	7	1	17	0	1	1	0	8	4	2	0
Imperial Avenue, between I-5 and I-805	34	17	17	5	29	0	33	1	13	2	1	13	3	1	1
National Avenue/Logan Avenue, between 28th Street and I-805	20	12	8	7	13	0	21	0	6	0	3	4	7	0	0
43rd Street, between Logan Avenue and Division Street	6	2	4	6	0	1	2	3	2	0	0	3	0	1	0
Urban Streets Total	76	32	44	27	49	2	73	4	22	3	4	28	14	4	1
Community-wide Total	155	80	75	111	44	5	141	14	52	7	12	54	16	11	3

Source: City of San Diego, Chen Ryan Associates; February 2015

Notes:

The above information was provided by the City of San Diego for July 2007 through September 2012.

¹ "Unsafe Movement" includes improper lane changes/starts/passing/turns, failure to yield, unsafe backing, and other general unsafe maneuvers.

As shown in Table 3.4, 76 of 155 (or just under 50%) community-wide pedestrian-involved collisions occur along the Urban Streets.

About 30% of the pedestrian-involved collisions are a result of pedestrian inattention, while the remainder are a result of unsafe movements by drivers. There have been 5 pedestrian fatalities in Southeastern San Diego over the past 5 years, averaging one fatality per year.

3.3 Transit First

Transit opportunities in Southeastern San Diego are provided by the Metropolitan Transit System (MTS) with both bus and Light Rail Trolley services. The currently adopted citywide General Plan Mobility Element identifies the following goals for transit service and travel:

- *An attractive and convenient transit system that is the first choice of travel for many of the trips made in the City.*
- *Increased transit ridership.*

The following sections describe the various transit facilities, modes, and services within Southeastern San Diego.

3.3.1 Existing Transit Service and Facilities

Figure 3-8 displays existing transit service and facilities within Southeastern San Diego, including bus transit stops and routes, as well as the light rail trolley line and stations. Nearly all of Southeastern San Diego is within ¼ mile of a transit stop except for the area south of the Chollas Creek South Branch (Acacia Street / Alpha Street) and the single family residential area in the northeast corner of the community, although some of this area is covered by a transit stop outside of the community planning boundary. Each of these is described as follows.



SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

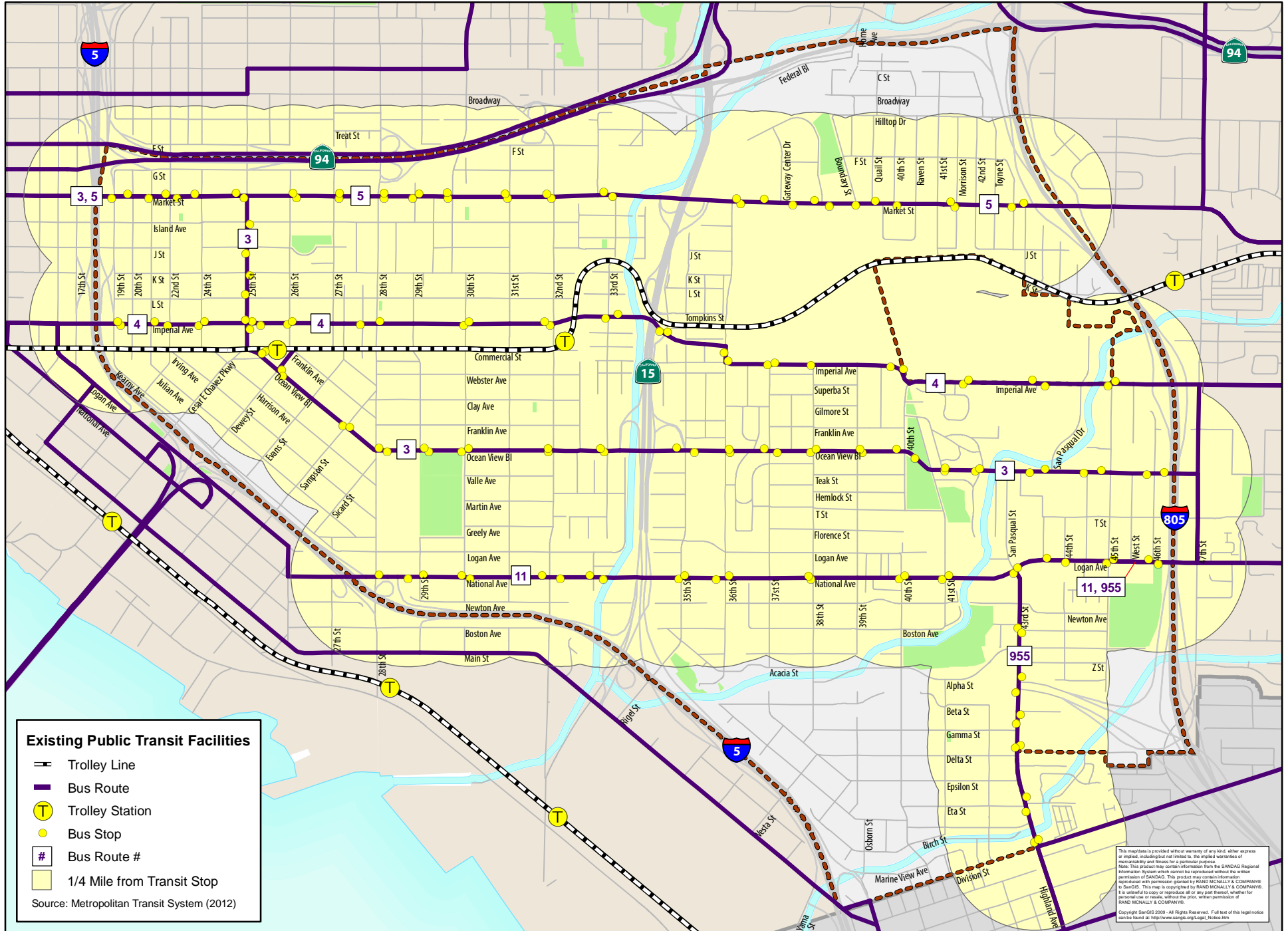
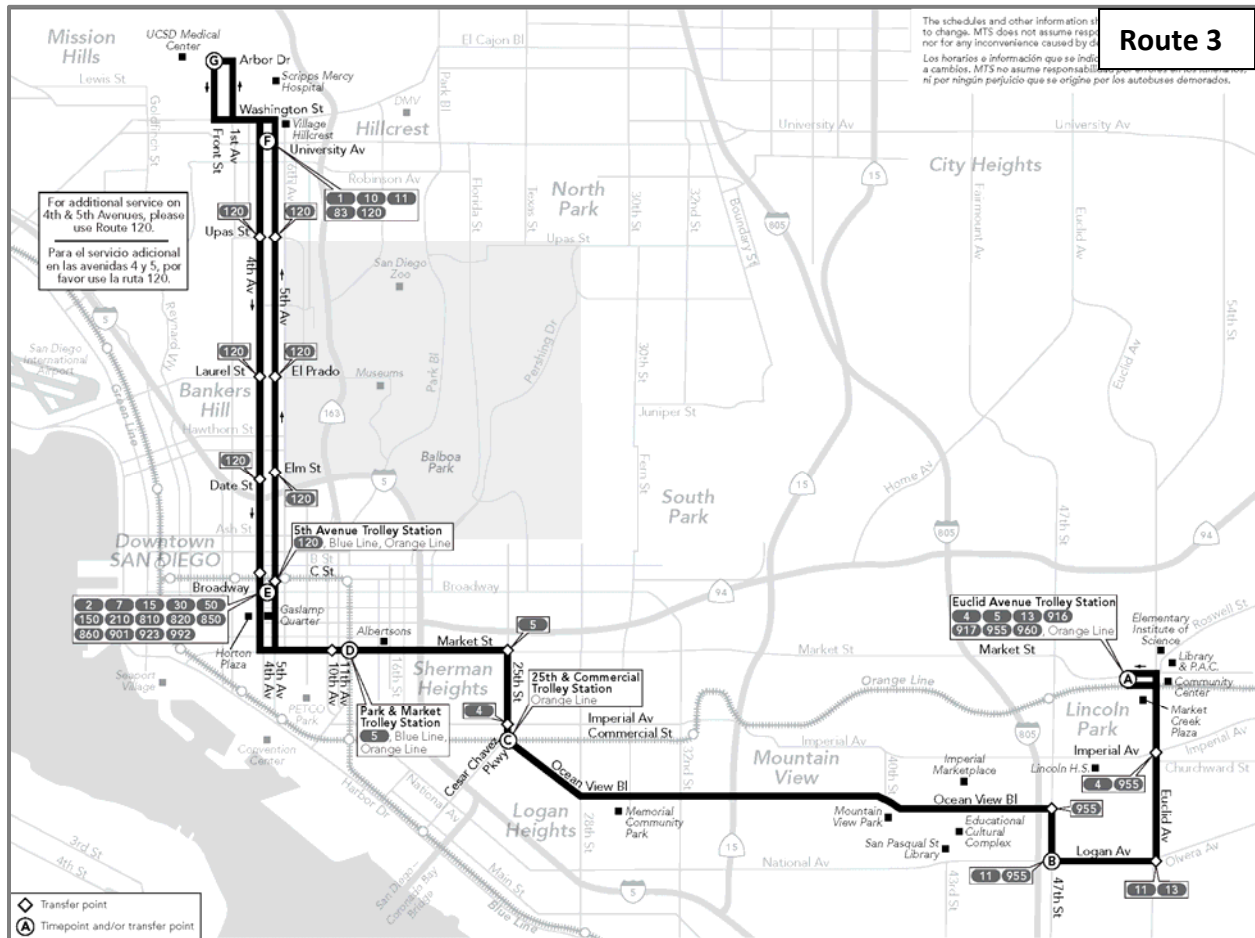


Figure 3-8: Existing Public Transit Facilities

Bus Transit

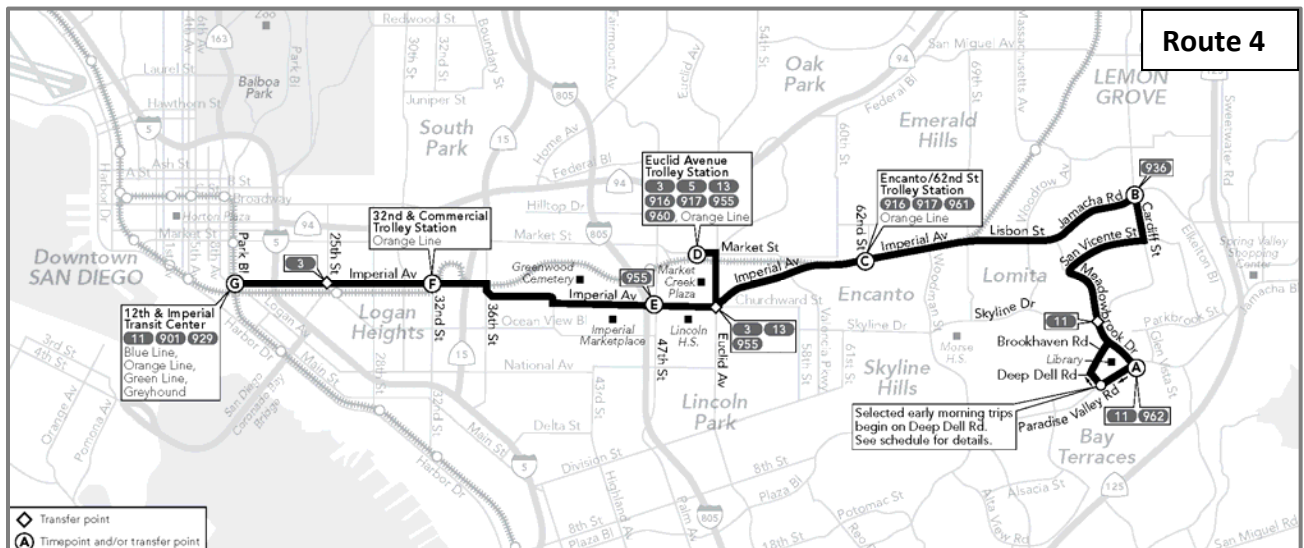
There are currently 5 bus routes with a total of 162 bus transit stops serving Southeastern San Diego.

Route 3 – Runs from the UCSD Medical Center in Hillcrest, southerly to Downtown San Diego, then easterly Sherman Heights, Logan Heights, Mountain View, then terminates at the Euclid Avenue Trolley Station in the community of Encanto. Route 3 currently runs between 4:49 AM and 12:10 AM on weekdays; 5:26 AM and 12:10 AM on Saturdays; and 5:36 AM and 8:06 PM on Sundays. Route 3 runs at 15-minute headways during its peak and midday period, and 30-minute or 1 hour headways during off-peak periods, including all day on Sundays and holidays.



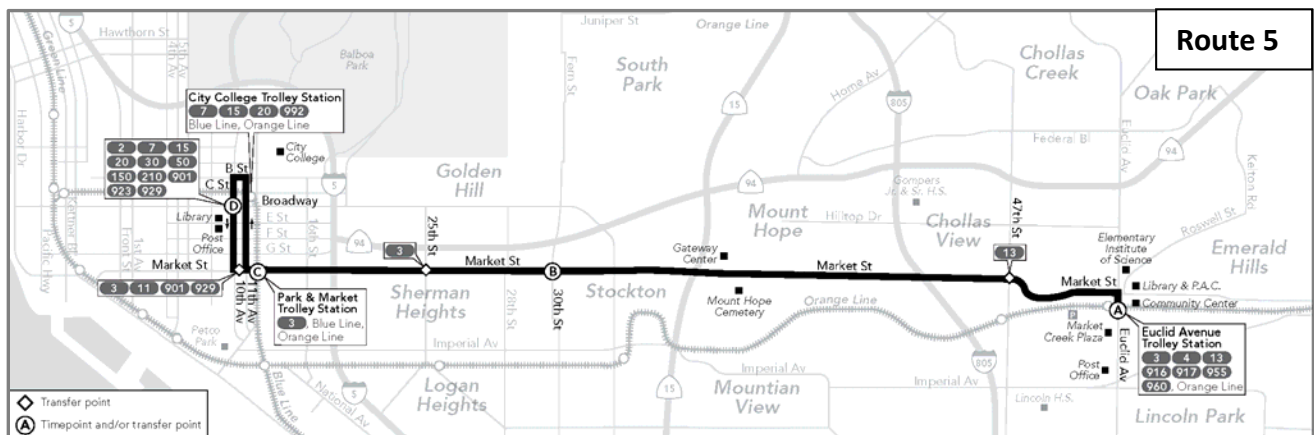
Source: MTS; February 2015

Route 4 – Runs from the 12th and Imperial Transit Center in downtown San Diego to Paradise Valley Road in the community of Paradise Hills. This route runs along Imperial Avenue over the entire length of Southeastern San Diego and Encanto, serving the 32nd & Commercial Trolley Station, the Euclid Avenue Trolley Station and the Encanto/62nd Trolley Station. Route 4 currently runs between 4:46 AM and 11:47 PM on weekdays; 5:46 AM and 11:15 PM on Saturdays; and 5:46 AM and 8:50 PM on Sundays. Route 4 runs at 30-minute headways during the weekdays and on Saturdays, and most of Sundays.



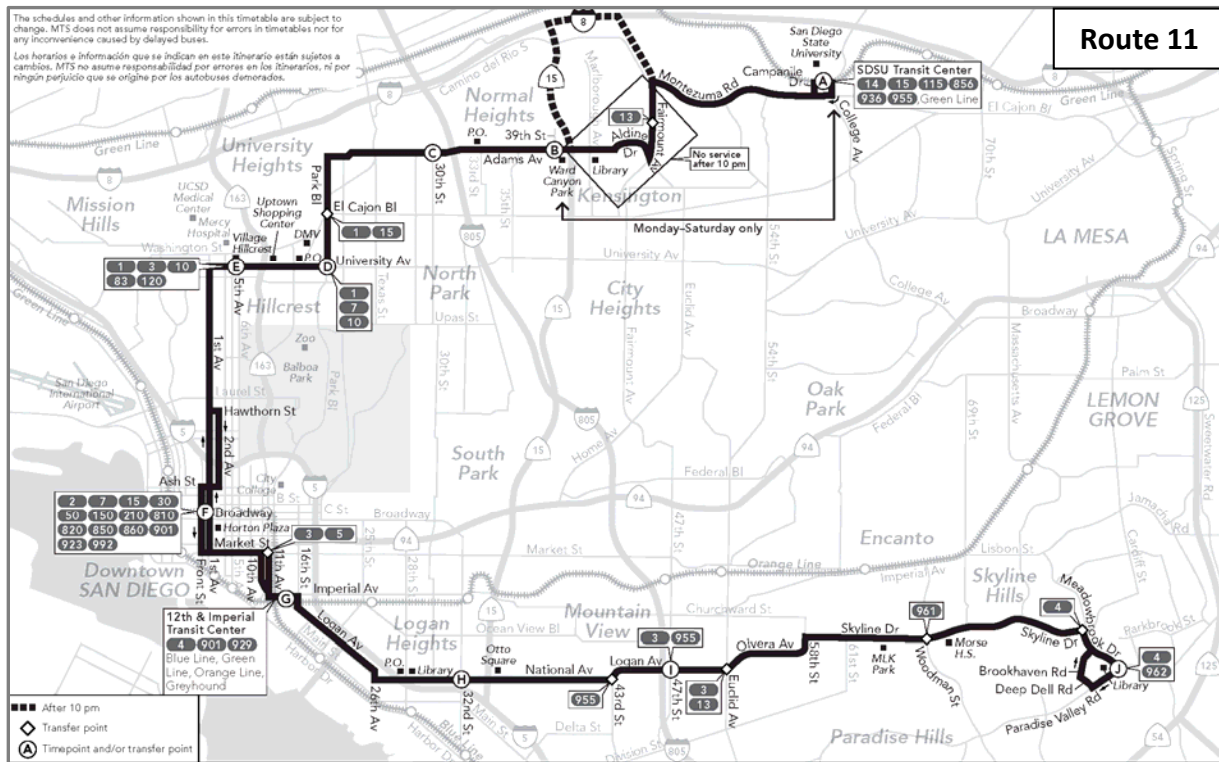
Source: MTS; February 2015

Route 5 – Runs from 10th and Broadway in downtown San Diego to the Euclid Avenue Trolley Station in Encanto. The Route 5 runs along Market Street between downtown San Diego and Encanto through the Southeastern San Diego neighborhoods of Sherman Heights, Stockton, Mount Hope and Chollas View. Route 5 currently runs between 4:49 AM and 11:24 PM on weekdays; 5:20 AM and 9:39 PM on Saturdays; and 5:50 AM and 8:40 PM on Sundays. Route 5 runs at 15-minute headways during its weekday peak and midday period, and 30-minute headways during the remaining hours of service.



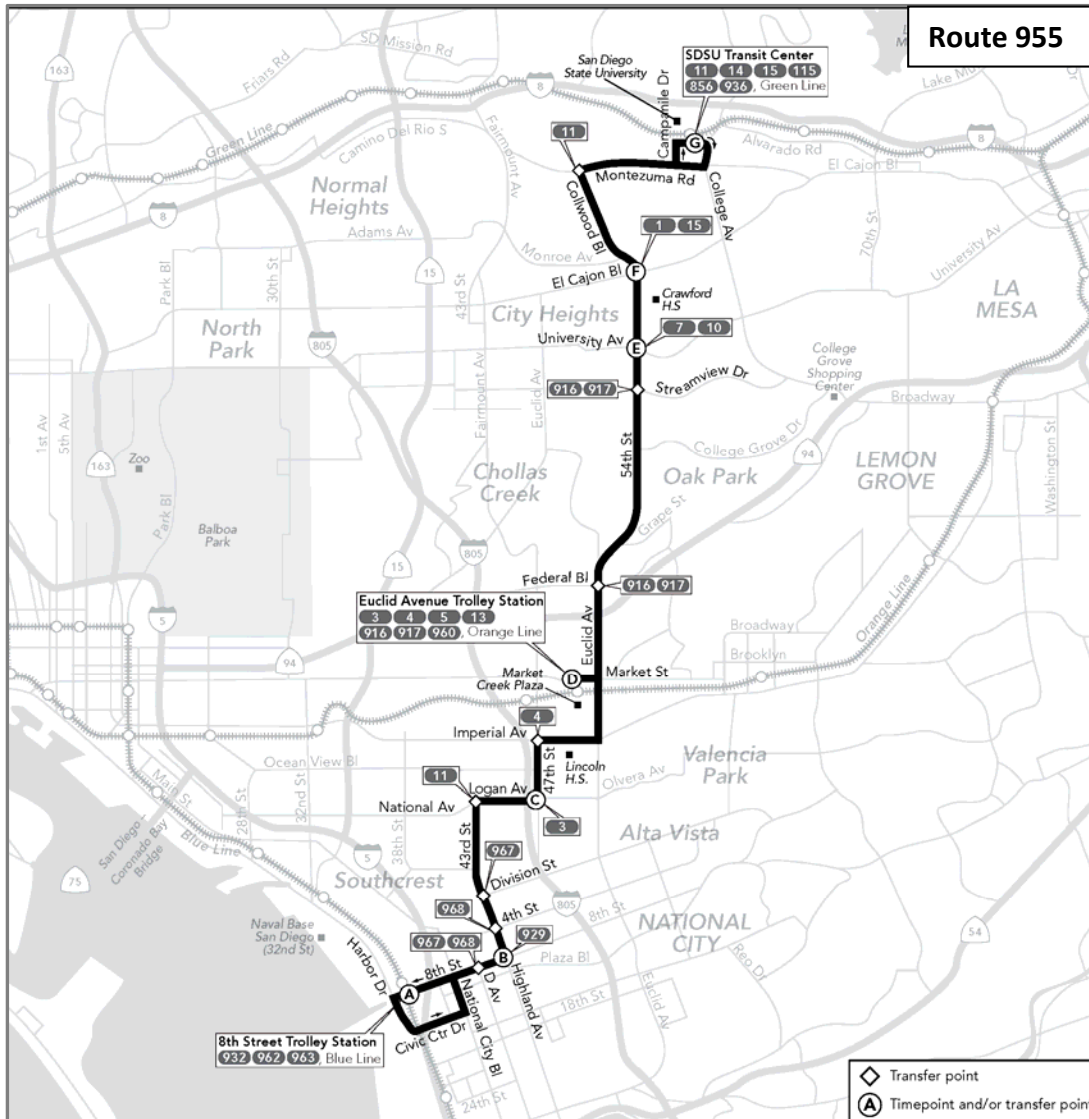
Source: MTS; February 2015

Route 11 – Runs from San Diego State University in the College Community to downtown San Diego, then to Paradise Valley Road in the community of Paradise Hills. Within the community of Southeastern San Diego, Route 11 runs along National Avenue and Logan Avenue through the neighborhoods of Logan Heights and Mountain View. Route 11 currently runs between 4:29 AM and 11:38 PM on weekdays; 4:40 AM and 11:38 PM on Saturdays; and 5:21 AM and 9:42 PM on Sundays. Route 11 runs at 15-minute headways during its weekday peak period, and 30-minute headways during the remaining hours of service.



Source: MTS; February 2015

Route 955 – Runs from San Diego State University in the College Community to the 8th Street Trolley Station in National City. Within the community of Southeastern San Diego, Route 955 runs along Logan Avenue and 43rd Avenue, providing service to the Euclid Avenue Trolley Station. Route 955 currently runs between 4:55 AM and 11:40 PM on weekdays; 5:34 AM and 11:40 PM on Saturdays; and 5:58 AM and 9:41 PM on Sundays. Route 955 runs at 15-minute headways during its weekday peak and midday period, 20-minute headway on Saturday, and 30-minute headways during the remaining hours of service.



Source: MTS; February 2015

Light Rail Trolley

Southeastern San Diego is served by the San Diego Trolley (LRT) Orange Line, with two stations located at 25th Street / Commercial Street and 32nd Street / Commercial Street.

Orange Line – The Orange Line is the second trolley line to be built in the San Diego Trolley system with service beginning in 1986. It initially operated between downtown San Diego and Euclid Avenue, and underwent two major extensions, to Spring Street in La Mesa, then to the Santee Town Center. The Orange Line covers 20.7 miles with 15-minute service Mondays to Saturdays and most of the day on Sundays, and 30-minute service during the late-evenings, and weekend mornings. It serves a total of 23 stations.

Transit Stops

Table 3.5 lists the Southeastern San Diego transit stops and amenities found at each location. As shown in the table, very few transit stops in Southeastern San Diego have shelters, and roughly half of the bus stops have benches and trash cans. Given the high transit ridership in Southeastern San Diego, more transit stop amenities would help improve the quality of experience for transit riders in this community.

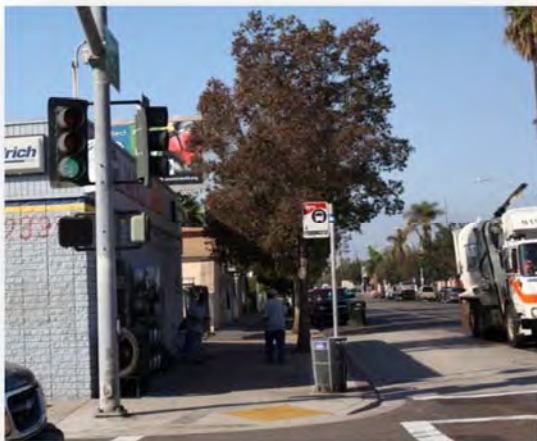


TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
10118	Market Street / 19th Street	EB	N				3 & 5	10	39	49
10120	Market Street / 21st Street	EB	N			✓	3 & 5	21	61	82
10122	Logan Avenue / Cesar E Chavez Parkway	WB	N	✓	✓		11 & 5	79	48	127
10123	Imperial Avenue / 22nd Street	EB	N			✓	4	5	19	24
10127	Imperial Avenue / 24th Street	EB	N			✓	4	5	12	17
10133	Market Street / 25th Street	EB	N		✓	✓	3	126	115	241
10137	Imperial Avenue / 26th Street	EB	N		✓	✓	4	11	16	27
10145	Ocean View Boulevard / Sampson Street	EB	N		✓		3	31	56	87
10147	Imperial Avenue / Hensley Street	EB	N			✓	4	23	56	79
10154	National Avenue / 29th Street	WB	N		✓	✓	11	88	72	160
10158	Market Street / 30th Street	WB	N		✓		5	47	85	132
10163	Ocean View Boulevard / 30th Street	EB	N		✓		3	34	74	108
10164	Imperial Avenue / 30th Street	EB	N			✓	4	24	59	83
10171	Market Street / 31st Street	WB	N		✓		5	27	35	62
10177	Ocean View Boulevard / 32nd Street	EB	N	✓	✓	✓	3	62	65	127
10178	Imperial Avenue / 32nd Street	EB	N		✓	✓	4	18	15	33
10179	Market Street / 32nd Street	WB	N		✓	✓	5	33	50	83
10184	Market Street / 33rd Street	WB	N				5	28	55	83
10186	Ocean View Boulevard / 33rd Street	EB	N		✓		3	31	36	67
10187	Imperial Avenue / 33rd Street	EB	N				4	13	18	31
10195	National Avenue / 35th Street	WB	N			✓	11	26	125	151

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
10197	National Avenue / 36th Street	WB	N				11	56	108	164
10203	Imperial Avenue / 37th Street	EB	N				4	8	17	25
10205	National Avenue / 38th Street	WB	N				11	60	199	259
10206	Ocean View Boulevard / 38th Street	EB	N		✓	✓	3	40	47	87
10207	Imperial Avenue / 38th Street	EB	N				4	6	13	19
10214	National Avenue / 40th Street	WB	N			✓	11	16	62	78
10216	Imperial Avenue / 40th Street	EB	F				4	5	12	17
10220	National Avenue / 41st Street	WB	N				11	16	43	59
10221	Market Street / Morrison Street	WB	N		✓	✓	5	55	81	136
10223	Ocean View Boulevard / San Miguel Avenue	EB	N				3	24	33	57
10225	Market Street / Denby Street	WB	N	✓	✓		5	29	30	59
10231	Ocean View Boulevard / Elizabeth Street	EB	N				3	15	33	48
10232	Imperial Avenue / 45th Street	EB	N		✓		4	51	22	73
10236	Ocean View Boulevard / 47th Street	EB	N				3	5	23	28
10499	Imperial Avenue / 19th Street	EB	F				4	5	7	12
10501	Logan Avenue / Beardsley Street	WB	F		✓		11	25	50	75
10503	Market Street / 22nd Street	EB	F		✓	✓	3 & 5	59	73	132
10510	Logan Avenue / Cesar E Chavez Parkway	WB	F		✓		11	23	21	44
10515	Imperial Avenue / 25th Street	EB	F		✓	✓	4	25	20	45
10516	Commercial Street / Ocean View Boulevard	EB	F		✓	✓	3	77	46	123
10519	Logan Avenue / Sampson Street	WB	F		✓	✓	11	36	87	123

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
10529	National Avenue / 27th Street	WB	F		✓		11	11	21	32
10530	Market Street / 27th Street	WB	F				5	9	37	46
10535	Ocean View Boulevard / 28th Street	EB	F				3	31	34	65
10537	Market Street / 28th Street	WB	F				5	11	35	46
10541	Ocean View Boulevard / 29th Street	EB	F				3	27	27	54
10544	National Avenue / 30th Street	WB	F				11	36	103	139
10552	National Avenue / 32nd Street	WB	F		✓	✓	11	44	78	122
10555	National Avenue / 33rd Street	WB	F				11	5	11	16
10563	36th Street / Imperial Avenue	EB	F				4	11	28	39
10568	Ocean View Boulevard / 35th Street	EB	F		✓	✓	3	40	70	110
10570	Ocean View Boulevard / 36th Street	EB	F			✓	3	15	41	56
10571	Market Street / 36th Street	WB	F				5	44	115	159
10575	Ocean View Boulevard / 37th Street	EB	F		✓		3	36	49	85
10576	Market Street / Gateway Center Drive	WB	F				5	12	13	25
10578	Market Street / Gateway Center Way	WB	F				5	4	14	18
10582	Ocean View Boulevard / 39th Street	EB	F				3	23	35	58
10587	Market Street / 40th Street	WB	F		✓		5	28	51	79
10598	Imperial Avenue / Messina Way	EB	F		✓		4	15	17	32
10603	Ocean View Boulevard / San Pasqual Drive	EB	F	✓	✓		3	32	68	100
10613	Logan Avenue / 44th Street	WB	F				11 & 955	35	32	67
10618	Imperial Avenue / Greenwood Cemetery	EB	F		✓		4	43	78	121

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
10619	Market Street / 45th Street	WB	F		✓		5	39	78	117
10622	Logan Avenue / 46th Street	WB	F		✓		11 & 955	41	28	69
10871	Imperial Avenue / 19th Street	WB	N			✓	4	3	6	9
10874	Imperial Avenue / 21st Street	WB	N		✓	✓	4	8	6	14
10876	Logan Avenue / Cesar Chavez Parkway	EB	F	✓	✓	✓	11	53	73	126
10882	Imperial Avenue / 24th Street	WB	N			✓	4	5	5	10
10884	Logan Avenue / I-5 Ramp	EB	N			✓	11	11	21	32
10889	Imperial Avenue / 25th Street	WB	N		✓	✓	4	13	15	28
10890	Ocean View Boulevard / Commercial Street	WB	N				3	17	106	123
10893	Ocean View Boulevard / Dewey Street	WB	N				3	8	21	29
10895	National Avenue / 26th Street	EB	N				11	17	14	31
10896	Imperial Avenue / 26th Street	WB	N		✓	✓	4	18	12	30
10903	Market Street / 27th Street	EB	N			✓	5	37	13	50
10907	Ocean View Boulevard / Sampson Street	WB	N			✓	3	46	13	59
10910	National Avenue / 28th Street	EB	N			✓	11	45	79	124
10911	Imperial Avenue / 28th Street	WB	N		✓	✓	4	49	24	73
10912	Ocean View Boulevard / 28th Street	WB	N				3	26	39	65
10914	Market Street / 28th Street	EB	N				5	23	12	35
10918	Ocean View Boulevard / 29th Street	WB	N				3	39	10	49
10919	National Avenue / 29th Street	EB	N			✓	11	26	53	79
10923	Market Street / 30th Street	EB	N		✓		5	67	47	114

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
10925	Ocean View Boulevard / 30th Street	WB	N		✓		3	71	30	101
10926	Imperial Avenue / 30th Street	WB	N			✓	4	34	26	60
10935	Market Street / 32nd Street	EB	F		✓	✓	5	37	35	72
10938	Imperial Avenue / 33rd Street	WB	N				4	11	10	21
10946	National Avenue / 35th Street	EB	N	✓	✓		11	153	36	189
10948	National Avenue / 36th Street	EB	N		✓		11	109	45	154
10949	Ocean View Boulevard / 36th Street	WB	N				3	40	26	66
10950	Imperial Avenue / 36th Street	WB	N				4	21	15	36
10951	Market Street / 36th Street	EB	N	✓	✓	✓	5	114	44	158
10953	Imperial Avenue / 37th Street	WB	N				4	18	13	31
10955	Market Street / Gateway Center Drive	EB	F				5	22	28	50
10956	Ocean View Boulevard / 38th Street	WB	N				3	83	27	110
10962	Ocean View Boulevard / 39th Street	WB	N			✓	3	27	21	48
10963	Market Street / Quail Street	EB	N		✓		5	58	37	95
10967	National Avenue / 40th Street	EB	N			✓	11	67	18	85
10975	National Avenue / 41st Street	EB	N				11	45	16	61
10976	Imperial Avenue / Messina Way	WB	N		✓		4	12	14	26
10977	Market Street / Morrison Street	EB	F		✓		5	91	67	158
10982	Ocean View Boulevard / Marketplace	WB	F		✓		3	81	55	136
10983	Market Street / Denby Street	EB	N	✓	✓	✓	5	33	26	59
10987	Logan Avenue / Dominion Street	EB	N				11 & 955	35	53	88

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
10993	Imperial Avenue / 45th Street	WB	N				4	21	31	52
11262	Logan Avenue / Beardsley Street	EB	F		✓		11	32	36	68
11263	Market Street / 20th Street	WB	F			✓	3 & 5	52	11	63
11264	Market Street / 22nd Street	WB	F		✓	✓	3 & 5	72	29	101
11275	Market Street / 25th Street	WB	F		✓	✓	3 & 5	98	134	232
11277	Logan Avenue / Sampson Street	EB	F		✓		11	84	35	119
11284	National Avenue / 27th Street	EB	F		✓		11	10	4	14
11299	National Avenue / 30th Street	EB	F	✓	✓	✓	11	97	39	136
11304	Market Street / 31st Street	EB	F			✓	5	53	29	82
11309	National Avenue / 32nd Street	EB	F				11	78	39	117
11310	Ocean View Boulevard / 32nd Street	WB	F				3	58	44	102
11311	Imperial Avenue / 32nd Street	WB	F			✓	4	11	16	27
11316	National Avenue / 33rd Street	EB	F				11	17	8	25
11317	Market Street / 33rd Street	EB	N		✓		5	54	27	81
11319	Ocean View Boulevard / 33rd Street	WB	F				3	64	19	83
11323	Imperial Avenue / Francis Street	WB	N		✓		4	11	4	15
11324	Ocean View Boulevard / 35th Street	WB	F	✓	✓	✓	3	89	22	111
11332	Ocean View Boulevard / 37th Street	WB	F			✓	3	81	24	105
11337	National Avenue / 38th Street	EB	F	✓	✓	✓	11	197	61	258
11338	Market Street / Gateway Center Way	EB	F	✓	✓	✓	5	19	9	28
11346	Ocean View Boulevard / 40th Street	WB	F			✓	3	41	15	56

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
11353	Ocean View Boulevard / San Miguel Avenue	WB	F				3	18	8	26
11365	Ocean View Boulevard / 45th Street	WB	F				3	9	9	18
11367	Imperial Avenue / Greenwood Cemetery	WB	F		✓	✓	4	65	61	126
11368	Market Street / 45th Street	EB	N				5	71	48	119
11370	Logan Avenue / 46th Street	EB	F		✓		11 & 955	33	28	61
11682	25th Street / Imperial Avenue	EB	N		✓	✓	3	40	48	88
11683	25th Street / L Street	EB	N		✓		3	11	21	32
11723	43rd Street / Gamma Street	SB	N				955	18	32	50
11724	43rd Street / National Avenue	EB	N	✓	✓	✓	11 & 955	347	106	453
12076	25th Street / J Street	EB	F				3	8	42	50
12131	43rd Street / Keeler Avenue	SB	F				955	23	30	53
12464	25th Street / Imperial Avenue	WB	N		✓	✓	3	73	25	98
12465	25th Street / K Street	WB	N		✓	✓	3	51	9	60
12466	25th Street / Island Avenue	WB	N				3	23	7	30
12508	40th Street / Imperial Avenue	WB	F				4	8	7	15
12512	43rd Street / Beta Street	NB	N				955	35	52	87
12513	43rd Street / Hwy 805	NB	F		✓	✓	955	70	44	114
12514	43rd Street / Keeler Avenue	NB	N				955	57	20	77
12860	43rd Street / Delta Street	NB	F				955	125	56	181
12861	43rd Street / National Avenue	WB	F	✓	✓	✓	11 & 955	158	370	528
13013	Ocean View Boulevard / 46th Street	EB	N				3	4	14	18

**TABLE 3.5
TRANSIT STATION/STOP LOCATIONS, AMENITIES AND 2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY STOP**

Stop ID	Intersection	Direction of Travel	Far Side / Near Side	Amenities			Route	Boardings	Alightings	Total
				Shelter	Bench	Trash Cans				
13432	43rd Street / Hwy 805	SB	F		✓		955	65	105	170
13440	Logan Avenue / 45th Street	EB	N				11 & 955	68	58	126
13441	Logan Avenue / 45th Street	WB	N				11 & 955	51	80	131
13460	Ocean View Boulevard / 40th Street	EB	F				3	15	36	51
50114	Highland Avenue / Division Street	SB	F			✓	955	50	22	72
50167	Highland Avenue / Eta Street	NB	F				955	67	43	110
50198	Highland Avenue / Eta Street	SB	F		✓		955	82	40	122
60220	26th Street / Sicard Street	WB	N		✓		11	10	23	33
91103	Imperial Avenue / Francis Street	EB	N				4	2	11	13
91106	Ocean View Boulevard / 46th Street	WB	N				3	29	18	47
99148	43rd Street / Delta Street	SB	N				955	74	82	156
99339	Highland Avenue / Division Street	NB	F				955	55	39	94
99345	Ocean View Boulevard / Dewey Street	EB	F				3	7	11	18
75072	32nd Street/Commercial Street Station	WB	-	✓	✓	✓	Orange Line	655	308	963
75073	32nd Street/Commercial Street Station	EB	-	✓	✓	✓	Orange Line	289	669	958
75074	25th Street / Commercial Street Station	EB	-	✓	✓	✓	Orange Line	426	879	1,305
75075	25th Street / Commercial Street Station	WB	-	✓	✓	✓	Orange Line	838	352	1,190
Total								8,931	8,867	17,798

Source: 2010 SANDAG Passenger Counting Program, Chen Ryan Associates; February 2015

3.3.2 Transit Ridership

Table 3.5 also displays the average daily boardings and alightings for the year 2010 at each of the 162 transit stops within Southeastern San Diego. There are approximately 8,931 boardings and 8,867 alightings on a daily basis – for a total 17,798 daily transit trip ends within the community.

Table 3.6 illustrates the average daily (year 2010) boardings and alightings by route at each of the transit stops.

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
Route 3 - Euclid Trolley Station to UCSD Medical Center in Hillcrest via Ocean View Boulevard and Downtown				
Market Street / 20th Street	11263	22	5	27
Market Street / 22nd Street	11264	40	9	49
Market Street / 25th Street	11275	50	65	115
25th Street / Island Avenue	12466	23	7	30
25th Street / K Street	12465	51	9	60
25th Street / Imperial Avenue	12464	73	25	98
Ocean View Boulevard / Commercial Street	10890	17	106	123
Ocean View Boulevard / Dewey Street	10893	8	21	29
Ocean View Boulevard / Sampson Street	10907	46	13	59
Ocean View Boulevard / 28th Street	10912	26	39	65
Ocean View Boulevard / 29th Street	10918	39	10	49
Ocean View Boulevard / 30th Street	10925	71	30	101
Ocean View Boulevard / 32nd Street	11310	58	44	102
Ocean View Boulevard / 33rd Street	11319	64	19	83
Ocean View Boulevard / 35th Street	11324	89	22	111
Ocean View Boulevard / 36th Street	10949	40	26	66
Ocean View Boulevard / 37th Street	11332	81	24	105
Ocean View Boulevard / 38th Street	10956	83	27	110
Ocean View Boulevard / 39th Street	10962	27	21	48
Ocean View Boulevard / 40th Street	11346	41	15	56
Ocean View Boulevard / San Miguel Avenue	11353	18	8	26
Ocean View Boulevard / Marketplace	10982	81	55	136
Ocean View Boulevard / 45th Street	11365	9	9	18
Ocean View Boulevard / 46th Street	91106	29	18	47

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
Route 3 - UCSD Medical Center in Hillcrest to Euclid Trolley Station via Ocean View Boulevard and Downtown				
Ocean View Boulevard / 46th Street	10236	24	29	53
Ocean View Boulevard / 46th Street	13013	4	14	18
Ocean View Boulevard / Elizabeth Street	10231	15	33	48
Ocean View Boulevard / San Pasqual Drive	10603	32	68	100
Ocean View Boulevard / San Miguel Avenue	10223	24	33	57
Ocean View Boulevard / 40th Street	13460	15	36	51
Ocean View Boulevard / 39th Street	10582	23	35	58
Ocean View Boulevard / 38th Street	10206	40	47	87
Ocean View Boulevard / 37th Street	10575	36	49	85
Ocean View Boulevard / 36th Street	10570	15	41	56
Ocean View Boulevard / 35th Street	10568	40	70	110
Ocean View Boulevard / 33rd Street	10186	31	36	67
Ocean View Boulevard / 32nd Street	10177	62	65	127
Ocean View Boulevard / 30th Street	10163	34	74	108
Ocean View Boulevard / 29th Street	10541	27	27	54
Ocean View Boulevard / 28th Street	10535	31	34	65
Ocean View Boulevard / Sampson Street	10145	31	56	87
Ocean View Boulevard / Dewey Street	99345	7	11	18
Commercial Street / Ocean View Boulevard	10516	77	46	123
25th Street / Imperial Avenue	11682	40	48	88
25th Street / L Street	11683	11	21	32
25th Street / J Street	12076	8	42	50
Market Street / 25th Street	10133	58	66	124
Market Street / 22nd Street	10503	31	33	64
Market Street / 21st Street	10120	16	35	51
Market Street / 19th Street	10118	6	19	25
Route 4 - 12th Street/Imperial Avenue to Lomita Village via Imperial Avenue				
Imperial Avenue / 19th Street	10499	5	7	12
Imperial Avenue / 22nd Street	10123	5	19	24
Imperial Avenue / 24th Street	10127	5	12	17
Imperial Avenue / 25th Street	10515	25	20	45

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
Imperial Avenue / 26th Street	10137	11	16	27
Imperial Avenue / Hensley Street	10147	23	56	79
Imperial Avenue / 30th Street	10164	24	59	83
Imperial Avenue / 32nd Street	10178	18	15	33
Imperial Avenue / 33rd Street	10187	13	18	31
Imperial Avenue / Francis Street	91103	2	11	13
36th Street / Imperial Avenue	10563	11	28	39
Imperial Avenue / 37th Street	10203	8	17	25
Imperial Avenue / 38th Street	10207	6	13	19
Imperial Avenue / 40th Street	10216	5	12	17
Imperial Avenue / Messina Way	10598	15	17	32
Imperial Avenue / Greenwood Cemetery	10618	43	78	121
Imperial Avenue / 45th Street	10232	51	22	73
Route 4 - Lomita Village to 12th Street / Imperial Avenue via Imperial Avenue				
Imperial Avenue / 45th Street	10993	21	31	52
Imperial Avenue / Greenwood Cemetery	11367	65	61	126
Imperial Avenue / Messina Way	10976	12	14	26
40th Street / Imperial Avenue	12508	8	7	15
Imperial Avenue / 37th Street	10953	18	13	31
Imperial Avenue / 36th Street	10950	21	15	36
Imperial Avenue / Francis Street	11323	11	4	15
Imperial Avenue / 33rd Street	10938	11	10	21
Imperial Avenue / 32nd Street	11311	11	16	27
Imperial Avenue / 30th Street	10926	34	26	60
Imperial Avenue / 28th Street	10911	49	24	73
Imperial Avenue / 26th Street	10896	18	12	30
Imperial Avenue / 25th Street	10889	13	15	28
Imperial Avenue / 24th Street	10882	5	5	10
Imperial Avenue / 21st Street	10874	8	6	14
Imperial Avenue / 19th Street	10871	3	6	9

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
Route 5 - Euclid Trolley Station to Downtown via Market Street				
Market Street / 19th Street	10118	4	20	24
Market Street / 21st Street	10120	5	26	31
Market Street / 22nd Street	10503	28	40	68
Market Street / 25th Street	10133	68	49	117
Market Street / 27th Street	10530	9	37	46
Market Street / 28th Street	10537	11	35	46
Market Street / 30th Street	10158	47	85	132
Market Street / 31st Street	10171	27	35	62
Market Street / 32nd Street	10179	33	50	83
Market Street / 33rd Street	10184	28	55	83
Market Street / 36th Street	10571	44	115	159
Market Street / Gateway Center Drive	10576	12	13	25
Market Street / Gateway Center Way	10578	4	14	18
Market Street / 40th Street	10587	28	51	79
Market Street / Morrison Street	10221	55	81	136
Market Street / Denby Street	10225	29	30	59
Market Street / 45th Street	10619	39	78	117
Route 5 - Downtown to Euclid Trolley Station via Market Street				
Market Street / 45th Street	11368	71	48	119
Market Street / Denby Street	10983	33	26	59
Market Street / Morrison Street	10977	91	67	158
Market Street / Quail Street	10963	58	37	95
Market Street / Gateway Center Way	11338	19	9	28
Market Street / Gateway Center Drive	10955	22	28	50
Market Street / 36th Street	10951	114	44	158
Market Street / 33rd Street	11317	54	27	81
Market Street / 32nd Street	10935	37	35	72
Market Street / 31st Street	11304	53	29	82
Market Street / 30th Street	10923	67	47	114
Market Street / 28th Street	10914	23	12	35
Market Street / 27th Street	10903	37	13	50

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
Market Street / 25th Street	11275	48	69	117
Market Street / 22nd Street	11264	32	20	52
Market Street / 20th Street	11263	30	6	36
Route 11 - Skyline Hills to SDSU via Adams Avenue, Downtown and National Avenue				
Logan Avenue / 46th Street	11370	12	5	17
Logan Avenue / 45th Street	13440	42	13	55
Logan Avenue / Dominion Street	10987	14	31	45
43rd Street / National Avenue	11724	222	37	259
National Avenue / 41st Street	10975	45	16	61
National Avenue / 40th Street	10967	67	18	85
National Avenue / 38th Street	11337	197	61	258
National Avenue / 36th Street	10948	109	45	154
National Avenue / 35th Street	10946	153	36	189
National Avenue / 33rd Street	11316	17	8	25
National Avenue / 32nd Street	11309	78	39	117
National Avenue / 30th Street	11299	97	39	136
National Avenue / 29th Street	10919	26	53	79
National Avenue / 28th Street	10910	45	79	124
National Avenue / 27th Street	11284	10	4	14
National Avenue / 26th Street	10895	17	14	31
Logan Avenue / Sampson Street	11277	84	35	119
Logan Avenue / I-5 Ramp	10884	11	21	32
Logan Avenue / Cesar E Chavez Parkway	10876	53	73	126
Logan Avenue / Beardsley Street	11262	32	36	68
Route 11 - SDSU to Skyline Hills via Adams Avenue, Downtown and National Avenue				
Logan Avenue / Beardsley Street	10501	25	50	75
Logan Avenue / Cesar E Chavez Parkway	10122	79	48	127
Logan Avenue / Cesar E Chavez Parkway	10510	23	21	44
Logan Avenue / Sampson Street	10519	36	87	123
26th Street / Sicard Street	60220	10	23	33
National Avenue / 27th Street	10529	11	21	32
National Avenue / 29th Street	10154	88	72	160

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
National Avenue / 30th Street	10544	36	103	139
National Avenue / 32nd Street	10552	44	78	122
National Avenue / 33rd Street	10555	5	11	16
National Avenue / 35th Street	10195	26	125	151
National Avenue / 36th Street	10197	56	108	164
National Avenue / 38th Street	10205	60	199	259
National Avenue / 40th Street	10214	16	62	78
National Avenue / 41st Street	10220	16	43	59
43rd Street / National Avenue	12861	64	206	270
Logan Avenue / 44th Street	10613	3	11	14
Logan Avenue / 45th Street	13441	16	45	61
Logan Avenue / 46th Street	10622	11	14	25
Route 955 - 8th Street Trolley Station to SDSU via 43rd Street, Euclid Trolley Station and 54th Street				
Highland Avenue / Division Street	99339	55	39	94
Highland Avenue / Eta Street	50167	67	43	110
43rd Street / Delta Street	12860	125	56	181
43rd Street / Beta Street	12512	35	52	87
43rd Street / Hwy 805	12513	70	44	114
43rd Street / Keeler Avenue	12514	57	20	77
43rd Street / National Avenue	12861	94	164	258
Logan Avenue / 44th Street	10613	32	21	53
Logan Avenue / 45th Street	13441	35	35	70
Logan Avenue / 46th Street	10622	30	14	44
Route 955 - SDSU to 8th Street Trolley Station via 43rd Street, Euclid Trolley Station and 54th Street				
Logan Avenue / 46th Street	11370	21	23	44
Logan Avenue / 45th Street	13440	26	45	71
Logan Avenue / Dominion Street	10987	21	22	43
43rd Street / National Avenue	11724	125	69	194
43rd Street / Keeler Avenue	12131	23	30	53
43rd Street / Hwy 805	13432	65	105	170
43rd Street / Gamma Street	11723	18	32	50
43rd Street / Delta Street	99148	74	82	156

**TABLE 3.6
2010 AVERAGE DAILY BOARDINGS AND ALIGHTINGS BY ROUTE**

Route and Location	Stop ID	Boardings	Alightings	Total
Highland Avenue / Eta Street	50198	82	40	122
Highland Avenue / Division Street	50114	50	22	72
Orange Line - Santa Fe Depot to El Cajon Transit Center				
25th Street / Commercial Street Station	75074	426	879	1,305
32nd Street / Commercial Street Station	75073	289	669	958
Orange Line - El Cajon Transit Center to Santa Fe Depot				
32nd Street / Commercial Street Station	75072	655	308	963
25th Street / Commercial Street Station	75075	838	352	1,190

Source: 2010 SANDAG Passenger Counting Program, Chen Ryan Associates; February 2015

Figure 3-9 shows the average daily boardings and alightings across the Southeastern San Diego community.

The four transit stops with the highest daily boardings/alightings for the year 2010 were as follows:

- 25th Street & Commercial Street Station (2,495 boardings/alightings)
- 32nd Street & Commercial Street Station (1,921 boardings/alightings)
- 43rd Street & National Avenue (981 boardings/alightings)
- 38th Street & National Avenue (517 boardings/alightings)

Table 3.7 summarizes Southeastern San Diego residents who are currently using transit for the work trip. As shown, the rate of transit usage for the work trip among Southeastern San Diego workers is almost triple the citywide rate (12.2% versus 4.1%).

**TABLE 3.7
PERCENT OF TRANSIT COMMUTERS IN SOUTHEASTERN SAN DIEGO**

	Southeastern San Diego	City of San Diego	County of San Diego
Number of Workers Taking Transit to Work	2,500	25,699	46,166
Percent of Total Workers	12.2%	4.1%	3.2%

Source: US Census, American Community Survey, 2011 Estimates; Chen Ryan Associates; February 2015

Figure 3-10 shows the percent of Southeastern San Diego workers who regularly use transit to commute to work. The highest rates of transit commuting occur in the western portion of the community in the census tract to the west of I-5 and north of Commercial Street (25.2%), and in the census tract west of I-5 and south of Commercial Street (20.5%). These tracts have more than five times the citywide transit commuting rate.



To better understand the dynamics of choosing the mode of travel, a comparison was made between transit cost and time to those using automobiles. **Table 3-8** compares automobile and transit travel from Southeastern San Diego to nine popular destinations within the region. Travel time was obtained from using Google Maps directions. Transit costs are based on standard fare of a one-way ticket and at \$5.00 maximum per day (transit daily pass). Auto costs are based on standard business travel reimbursement rates for year 2012, which reflect cost of gas, insurance, and vehicle wear and tear, and are calculated for a round trip to and from the destination. Travel estimates were calculated from the 32nd Street Trolley Station.

As shown in the table, on average, roundtrip auto travel time is estimated to be approximately one-third that of transit time and the cost of auto travel is 60% higher than the cost of using transit.



3.3.3 Transit LOS Analysis and Results

Tables 3.9A and **3.9B** show the transit LOS for roadway segments, for the AM and PM peak hour respectively, where transit service is currently provided within Southeastern San Diego. **Figures 3-11a** and **3-11b** display the transit LOS results for the AM and PM peak hours, respectively. Peak hour transit CSLOS analysis output is provided in **Appendix C**.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

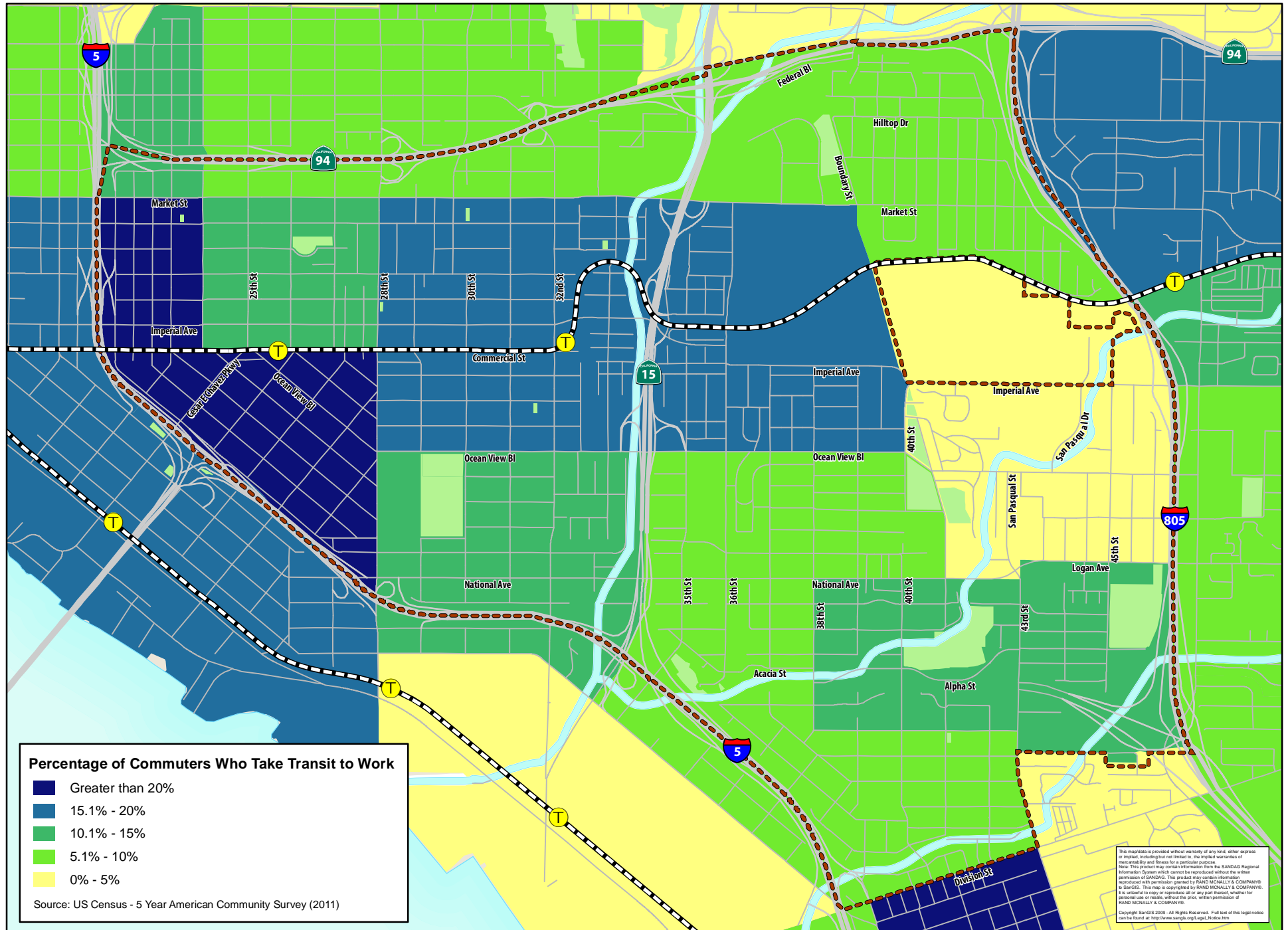


Figure 3-10: Percent Transit Commuters by Census Tract

**TABLE 3.8
TRANSIT-AUTO COST COMPARISON**

Destination	Actual Location	Distance (Miles)	By Auto			By Transit		
			Time (min)	One-Way Cost (\$)	Roundtrip Cost (\$)	Time (min)	One-Way Cost (\$)	Roundtrip Cost (\$)
San Diego International Airport	San Diego International Airport	7.0	13	3.89	7.77	36	4.75	5.00
San Diego State University	San Diego State University	9.4	13	5.22	10.43	55	2.50	5.00
University of California San Diego	Price Center at UCSD	16.5	23	9.16	18.32	61	4.75	5.00
San Diego City Hall	San Diego City Hall	3.1	10	1.72	3.44	17	2.50	5.00
San Diego Spectrum Center (Kearny Mesa)	National University at Spectrum Center	10.7	14	5.94	11.88	50	5.00	5.00
General Dynamics NASSCO	General Dynamics NASSCO	2.2	9	1.22	2.44	15	2.50	5.00
Fashion Valley Shopping Center	Fashion Valley Transit Center	7.1	13	3.94	7.88	39	2.50	5.00
Petco Park	Petco Park	1.9	7	1.05	2.11	12	2.50	5.00
Old Town	Old Town Transit Station	6.7	13	3.72	7.44	34	2.50	5.00
Average		7.2	12.8	3.98	7.97	35.4	3.28	5.00

Source: Chen Ryan Associates; February 2015

Notes:

All travel estimates were originated at the 32nd Street Trolley Station.

“Distance” represents one-way travel distance between the start and end location.

“Time” for the auto trip is estimated based on the free flow speed and delay due to congestion was not included in the estimate.

The auto trip cost was estimated based on the distance between the start and end locations, multiplied by the standard cost per mile that tax regulations allow business to deduct (\$0.555/mile in 2012). This cost does not account for tolls, parking fees or variation in gas mileage for different vehicle types.

The transit trip cost is based on actual per trip cost.

Travel time was evaluated using Google Maps direction finding website. For the transit information, departure time was 7:00 a.m.

**TABLE 3.9A
EXISTING MULTI-MODAL ANALYSIS – TRANSIT LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.06	B	1.50	A
	19th Street & 25th Street		0.42	A		
	25th Street & 32nd Street		1.47	A		
	32nd Street & I-15 SB Ramps		2.03	B		
	I-15 SB Ramps & I-15 NB Ramps		2.94	C		
	I-15 NB Ramps & I-805 SB Ramps		1.46	A		
	I-805 SB Ramps & I-805 NB Ramps		2.17	B		
	17th Street & 19th Street	Westbound	1.42	A	1.42	A
	19th Street & 25th Street		0.83	A		
	25th Street & 32nd Street		1.47	A		
	32nd Street & I-15 SB Ramps		1.71	A		
	I-15 SB Ramps & I-15 NB Ramps		2.18	B		
	I-15 NB Ramps & I-805 SB Ramps		1.31	A		
	I-805 SB Ramps & I-805 NB Ramps		2.17	B		
Imperial Avenue	17th Street & 19th Street	Eastbound	3.16	C	3.68	D
	19th Street & 25th Street		3.84	D		
	25th Street & 28th Street		3.81	D		
	28th Street & 30th Street		3.50	C		
	30th Street & 32nd Street		3.50	C		
	32nd Street & 36th Street		3.70	D		
	36th Street & 40th Street		3.83	D		
	40th Street & I-805 SB Ramps		3.63	D		
	I-805 SB Ramps & I-805 NB Ramps		3.38	C		
	17th Street & 19th Street	Westbound	3.25	C	3.58	D
	19th Street & 25th Street		3.25	C		
	25th Street & 28th Street		3.22	C		
	28th Street & 30th Street		3.23	C		
	30th Street & 32nd Street		3.60	D		
	32nd Street & 36th Street		3.73	D		
	36th Street & 40th Street		4.02	D		
	40th Street & I-805 SB Ramps		3.69	D		
	I-805 SB Ramps & I-805 NB Ramps		3.40	C		

**TABLE 3.9A
EXISTING MULTI-MODAL ANALYSIS – TRANSIT LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	1.10	A	1.32	A
	32nd Street & 43rd Street		1.46	A		
	43rd Street & 47th Street		1.17	A		
	28th Street & 32nd Street	Westbound	1.30	A	1.24	A
	32nd Street & 43rd Street		1.16	A		
	43rd Street & 47th Street		1.39	A		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	2.93	C	2.78	C
	I-805 Ramps & Division Street		2.66	B		
	Logan Avenue & I-805 Ramps	Southbound	2.91	C	2.63	B
	I-805 Ramps & Division Street		2.42	B		

Source: Chen Ryan Associates; February 2015

Notes:

The transit LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

**TABLE 3.9B
EXISTING MULTI-MODAL ANALYSIS – TRANSIT LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.18	B	2.47	B
	19th Street & 25th Street		1.55	A		
	25th Street & 32nd Street		2.34	B		
	32nd Street & I-15 SB Ramps		2.62	B		
	I-15 SB Ramps & I-15 NB Ramps		2.44	B		
	I-15 NB Ramps & I-805 SB Ramps		2.96	C		
	I-805 SB Ramps & I-805 NB Ramps		2.37	B		
	17th Street & 19th Street	Westbound	1.45	A	2.61	B
	19th Street & 25th Street		1.03	A		
	25th Street & 32nd Street		2.92	C		
	32nd Street & I-15 SB Ramps		3.00	C		
	I-15 SB Ramps & I-15 NB Ramps		3.14	C		
	I-15 NB Ramps & I-805 SB Ramps		2.84	C		
	I-805 SB Ramps & I-805 NB Ramps		3.14	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	4.23	D	3.88	D
	19th Street & 25th Street		3.83	D		
	25th Street & 28th Street		3.81	D		
	28th Street & 30th Street		3.89	D		
	30th Street & 32nd Street		3.87	D		
	32nd Street & 36th Street		3.90	D		
	36th Street & 40th Street		3.88	D		
	40th Street & I-805 SB Ramps		3.86	D		
	I-805 SB Ramps & I-805 NB Ramps		4.07	D		
	17th Street & 19th Street	Westbound	3.46	C	3.73	D
	19th Street & 25th Street		3.42	C		
	25th Street & 28th Street		3.40	C		
	28th Street & 30th Street		3.43	C		
	30th Street & 32nd Street		3.72	D		
	32nd Street & 36th Street		3.83	D		
	36th Street & 40th Street		4.15	D		
	40th Street & I-805 SB Ramps		3.84	D		
	I-805 SB Ramps & I-805 NB Ramps		3.59	D		

**TABLE 3.9B
EXISTING MULTI-MODAL ANALYSIS – TRANSIT LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	1.84	A	1.82	A
	32nd Street & 43rd Street		2.07	B		
	43rd Street & 47th Street		1.13	A		
	28th Street & 32nd Street	Westbound	2.07	B	1.77	A
	32nd Street & 43rd Street		1.43	A		
	43rd Street & 47th Street		2.40	B		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	3.69	D	2.52	B
	I-805 Ramps & Division Street		1.62	A		
	Logan Avenue & I-805 Ramps	Southbound	2.03	B	1.78	A
	I-805 Ramps & Division Street		1.58	A		

Source: Chen Ryan Associates; February 2015

Notes:

The transit LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

As shown in Table 3.9A, AM peak hour transit LOS within the Southeastern San Diego community is currently at LOS C or better, with the exception of Imperial Avenue, which has five (5) segments in the eastbound direction and four (4) segments in the westbound direction providing transit LOS D.

Likewise, as shown in Table 3.9B, all of the segments along Imperial Avenue in the eastbound direction and five (5) segments in the westbound direction, as well as the northbound 43rd Street between Logan Avenue and I-805 Ramps are currently providing transit LOS D in the PM peak hour. Transit LOS along other segments within the Southeastern San Diego community is currently LOS C or better during the PM peak hour.

The LOS reported here is an indication of the transit rider’s experience while using transit facilities along these study corridors. Major variables affecting the transit environment include frequency of service, reliability of service, mean speed, load factors, quality of pedestrian access to transit stops, and transit stop amenities. It is important to note that while Imperial Avenue has the lowest frequency transit service, with only 30-minute headways being provided by the Route 4, the Orange Line Trolley locating 1 block south of Imperial is currently running at 15 minute headway from Mondays to Saturdays, and 30-minute service during the late-evenings, weekend mornings, and Sundays.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

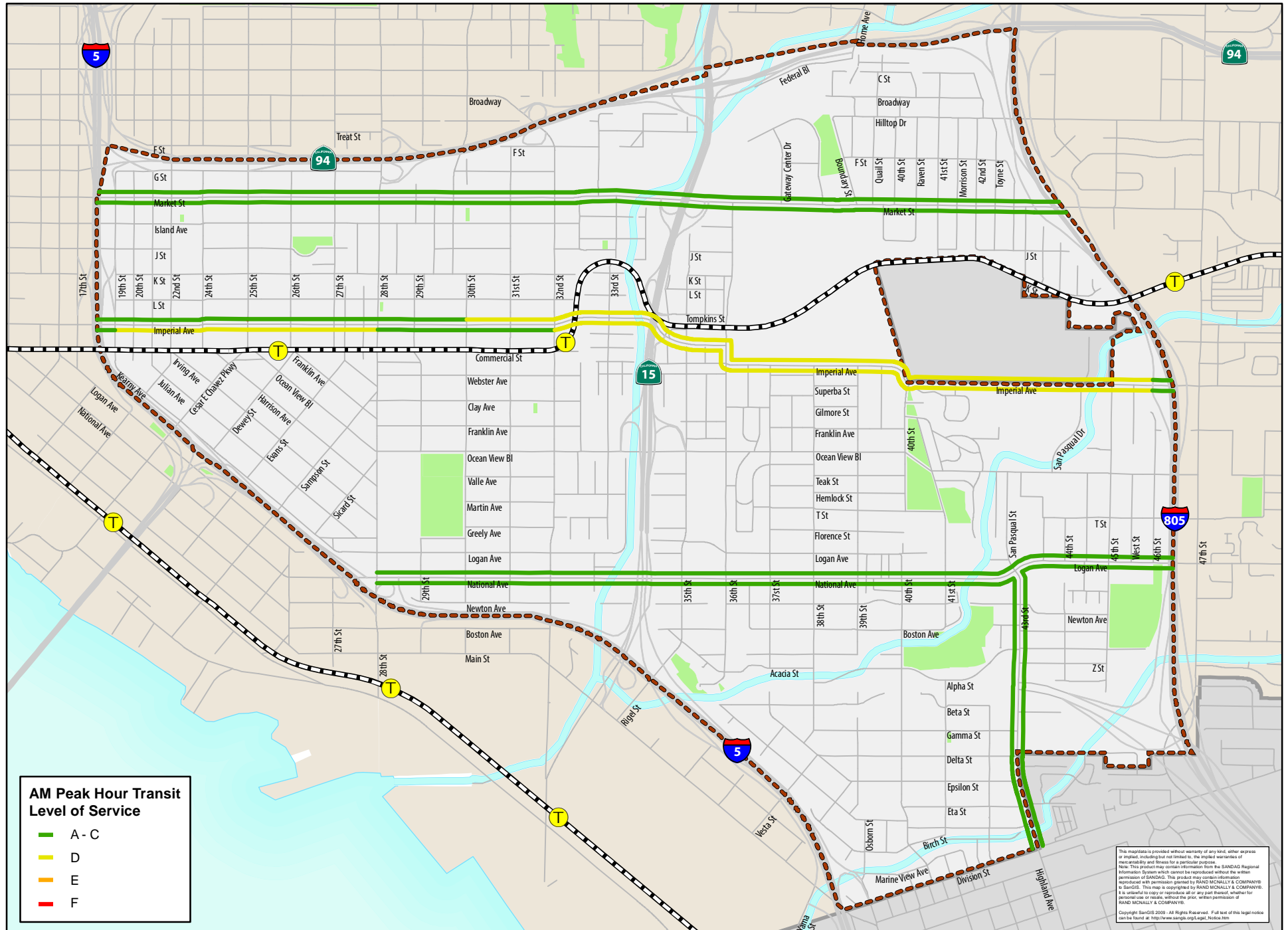


Figure 3-11a: Existing AM Peak Hour Transit Level of Service

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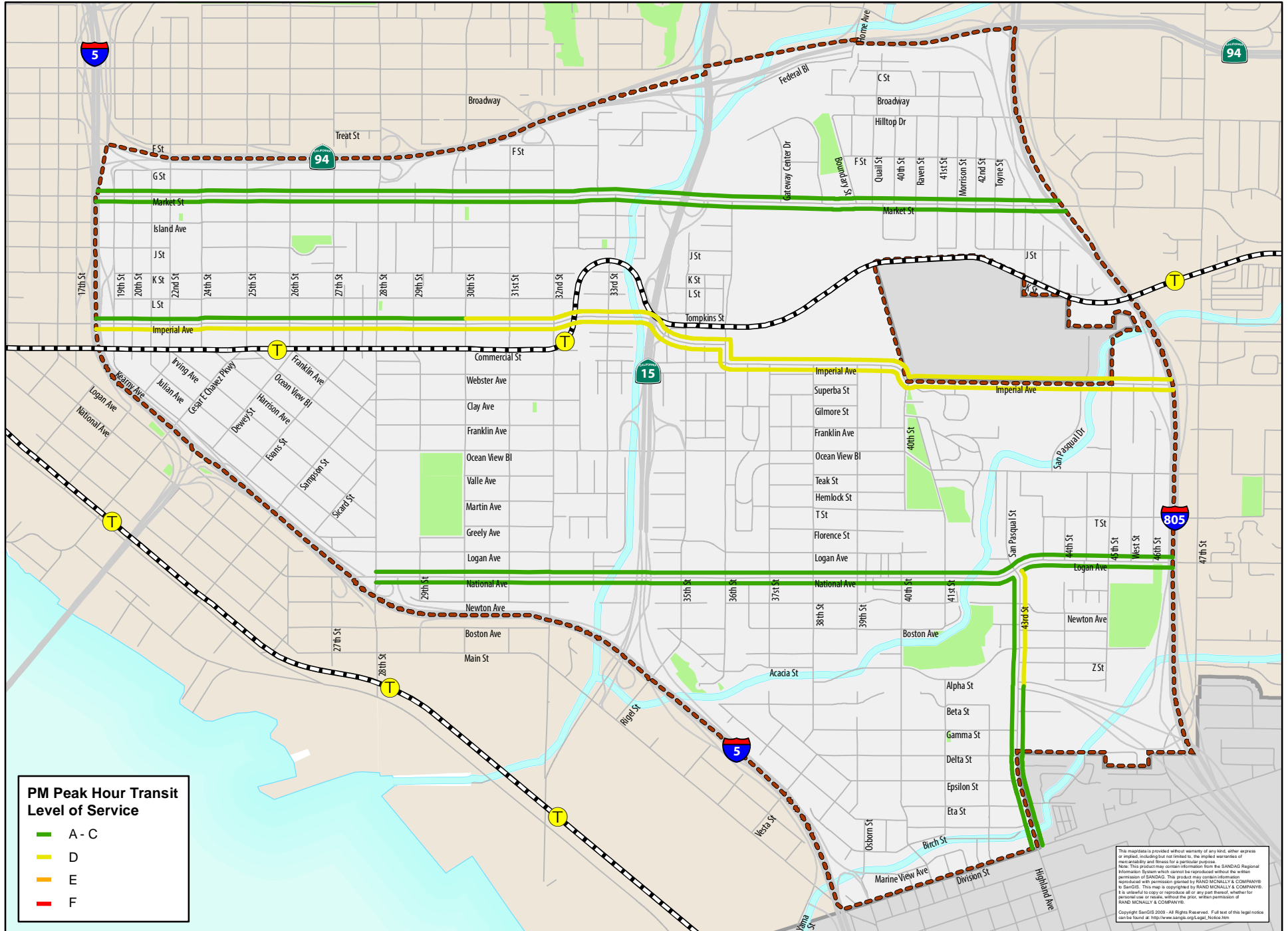


Figure 3-11b: Existing PM Peak Hour Transit Level of Service

3.3.4 Bicycle and Pedestrian Collisions Near Transit

The General Plan’s City of Villages Growth Strategy relies upon a land-use transportation strategy whereby land use densification and transit system improvements occur in a manner that will enable residents to function without owning a vehicle. The need to own a vehicle is greatly diminished if residents can walk or bicycle to nearby high quality transit. This section documents the density of pedestrian and cyclist involved collisions near transit, as safety in these locations will be particularly important for bringing about travel changes that support the City of Villages concept.

Figure 3-12 displays pedestrian and bicycle-involved collisions within 500 feet of transit stops. Approximately 161 out of a total 235 pedestrian and bicycle-involved collisions – or almost 70% of all pedestrian and bicycle-involved collisions within Southeastern San Diego – occurred within 500 feet of a transit stop.

Transit stop locations with relatively higher numbers of pedestrian and bicycle collisions (7 – 11 collision over a five year period) include the following:

- Market Street at 32nd Street
- Island Avenue at 25th Street
- L Street at 25th Street
- Imperial Avenue, at 24th Street and at 25th Street
- Ocean View Boulevard at 37th Street
- National Avenue at 32nd Street

These locations should be investigated further for safe-routes-to-transit improvement recommendations.



SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

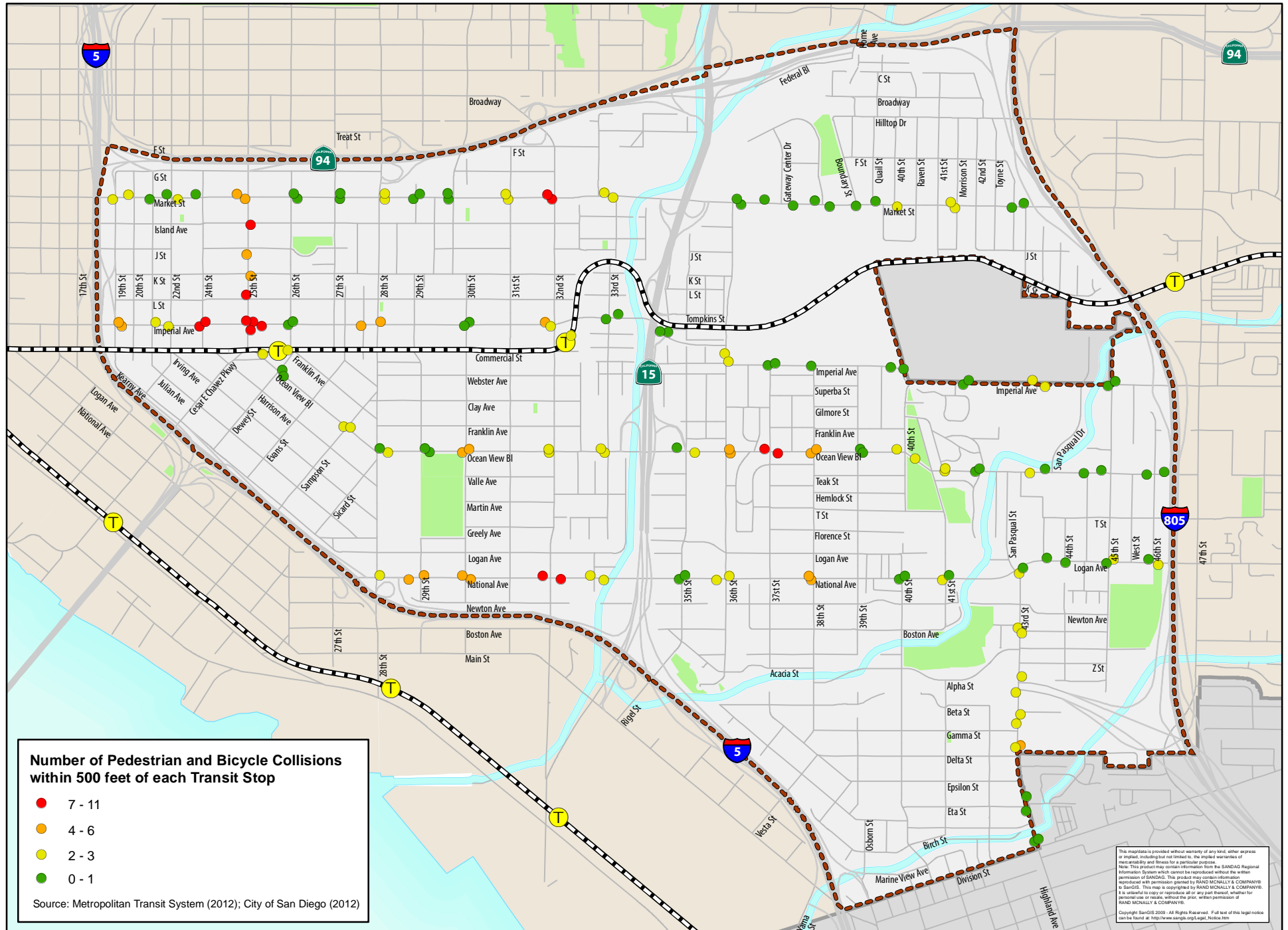


Figure 3-12: Pedestrian and Bicycle Collisions Near Public Transit

3.4 Street and Freeway System

This section identifies key study roadways, intersections, and freeways in Southeastern San Diego, and presents existing LOS conditions associated with these facilities. The currently adopted citywide General Plan Mobility Element identifies the following goals for street and freeway system:

- *A street and freeway system that balances the needs of multiple users of the public right-of-way.*
- *An interconnected street system that provides multiple linkages within and between communities.*
- *Vehicle congestion relief.*
- *Safe and efficient street design that minimizes environmental and neighborhood impacts.*
- *Well maintained streets.*

3.4.1 Roadway Segments and LOS Analysis

Chapter 2 documents the selection of study area roadway segments and study intersections. The roadway network is comprised of regional facilities such as I-5, I-805, I-15, and SR-94, as well as numerous arterials and local streets. Several roadways outside the boundary of Southeastern San Diego were included in this assessment since they fall within the sphere of influence and will be required for the environmental studies.

Figure 3-13 displays the existing functional classifications for study area roadways. Each of these study area roadways is also described below. For detailed physical roadway characteristics, please refer back to Table 3-1.

North-South Roadways

Cesar Chavez Parkway provides a direct connection between Barrio Logan and the 25th Street & Commercial Street Trolley Station in Southeastern San Diego. It runs diagonally from Barrio Logan to Southeastern San Diego, terminating in the east at a 5-legged intersection with 25th Street, Commercial Street, and Ocean View Boulevard. Cesar Chavez Parkway is 2-lane roadway between Commercial Street and the I-5 NB Ramps, and a 4-lane roadway between the I-5 NB Ramps and SR-75 On-Ramps/Logan Avenue. Both segments have a posted speed limit of 25 mph with parallel on-street parking, sidewalks and no bicycle facility or bus routes along these segments.

25th Street runs from Golden Hill in the north to Commercial Street in the south. This roadway is 4-lanes from SR-94 to Imperial Avenue, and 3-lanes from Imperial Avenue to Commercial Street. It currently has a posted speed limit of 30 mph, sidewalks and the Route 3 bus service that runs from Market Street to Commercial Street. Most of 25th Street has on-street parallel parking.

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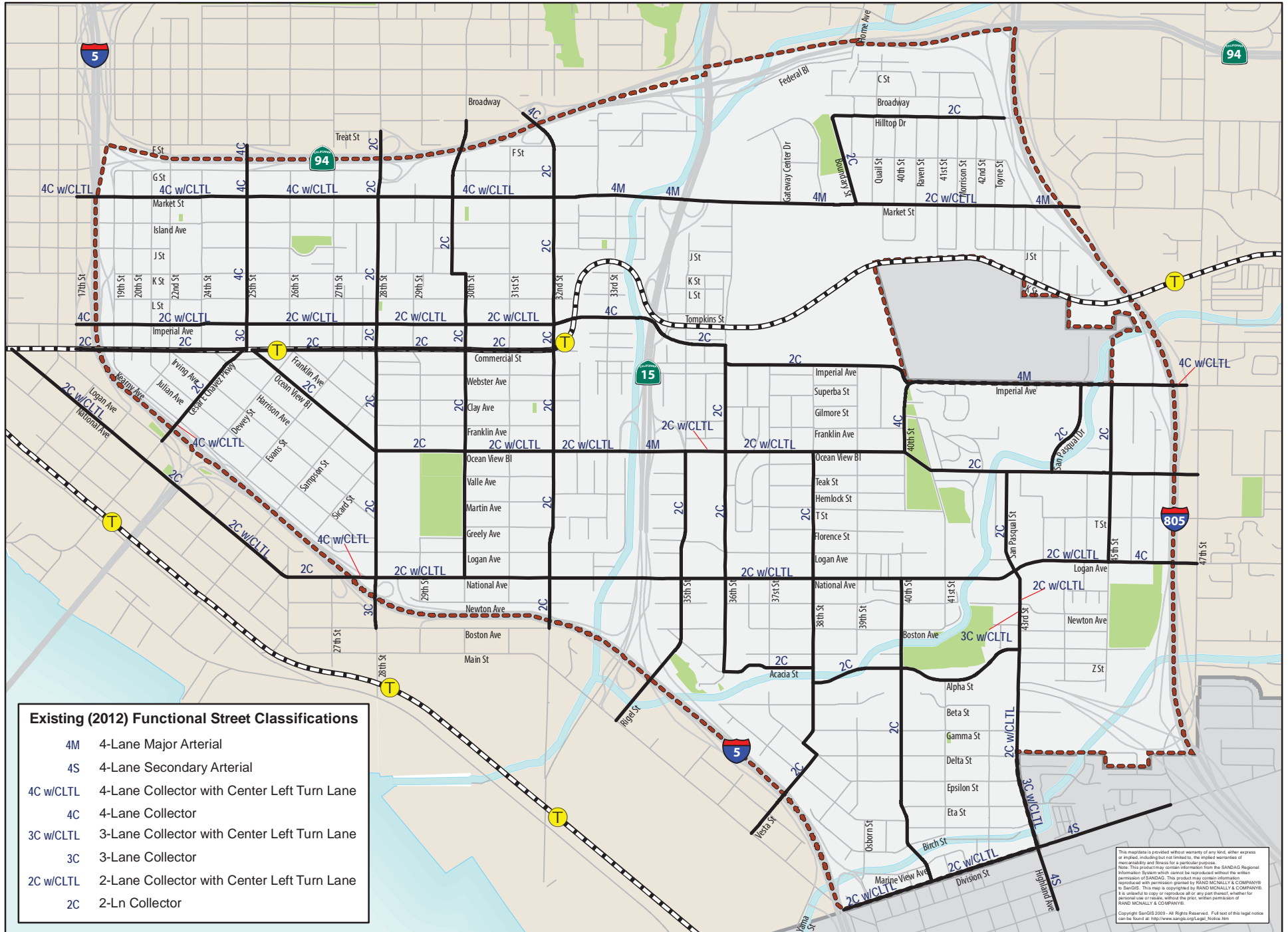


Figure 3-13: Existing Roadway Network

28th Street runs from Golden Hill in the north to Barrio Logan in the south. This roadway has 2-lanes from SR-94 to National Avenue, and 3-lanes (2 NB & 1 SB) along the segment south of National Avenue. It currently has a posted speed limit of 30 mph, sidewalks, and a Class III Bike Route from SR-94 to Ocean View Boulevard. There is no transit service along 28th Street. This roadway segment has on-street parallel parking on both sides of the street.

30th Street runs from Golden Hill in the north to Barrio Logan in the south. This roadway has 2-lanes and a current posted speed limit of 25 mph. There are sidewalks along this roadway segment, and no bicycle facilities or transit service. 30th Street has parallel on-street parallel parking on both sides of the street.

Broadway/32nd Street runs from SR-94 WB Ramps to the EB Ramps. This segment is 4-lanes with parallel parking on both sides of the street and no sidewalks, bicycle facility or transit service. The posted speed limit is 30 mph.

32nd Street runs from Golden Hill to Barrio Logan through Southeastern San Diego. It has 2-lanes and a posted speed limit of 30 mph. There is parallel on-street parking, sidewalks, and no bicycle facility or transit service.

35th Street/Rigel Street runs from Ocean View Boulevard to I-5 in the south, where it becomes Rigel Street in Barrio Logan. This roadway is 2-lanes with parallel parking on both sides, sidewalks and no bicycle facilities or transit service. Its posted speed limit is 25 mph.

36th Street runs from Imperial Avenue south to Acacia Street near the Chollas Creek and I-5. It is a 2-lane roadway with a posted speed limit of 25 mph and parallel parking on both sides of the street. 36th Street has sidewalks, but no bicycle facility or transit service.

38th Street runs from Ocean View Boulevard south to Acacia Street. It provides a north-south connection across the Chollas Creek. This roadway has 2-lanes and a posted speed limit of 25 mph. There is parallel parking on both sides of the street, as well as sidewalk. There is no bicycle facility or transit service along this roadway.

Vesta Street runs from Acacia Street to Main Street in Barrio Logan with an underpass at I-5. It is a 2-lane roadway with a posted speed limit of 25 mph. There is currently parallel parking on both sides of the street and sidewalks. There is also a Class III Bike Route along this segment, but no transit service.

40th Street runs from Imperial Avenue to Division Street at the Southeastern San Diego border with National City, with a gap between T Street and Logan Avenue. The segment from Imperial Avenue to Ocean View Boulevard is 4-lanes with parking and sidewalks on both sides of the street. The segment from Ocean View Boulevard to National Avenue to Division Street is a 2-lane roadway with parking and sidewalks. Both study segments have a posted speed limit of 25 mph. There are no bicycle facilities or transit services along this roadway.

Boundary Street is a 2-lane roadway that runs from Hilltop Drive to Market Street to the east of the Costco shopping center. The posted speed limit is 25 mph and parallel parking is provided along with sidewalks. There are no bicycle facilities or transit services along this roadway segment.

San Pasqual Drive is a 2-lane roadway that runs from Ocean View Boulevard to Logan Avenue along the Chollas Creek. The roadway has a posted speed limit of 25 mph. This roadway has parking on both sides of the street as well as sidewalks, but no bicycle facility or transit service. There is however a recently built soft-surface trail along this roadway that provides for recreation and leisure, and access to Chollas Creek.

43rd Street runs from Logan Avenue south to Division Street at the Southeastern San Diego border with National City. The roadway varies from 2-lanes with a center-left-turn lane, to 3-lanes with a center-left-turn-lane. This study roadway has a posted speed limit of 30 mph. A relatively short portion of this study roadway does not allow parking. There are sidewalks along the roadway, as well as transit service provided by Route 955. There are no bicycle facilities along this study roadway.

Highland Avenue is located in National City and provides the continuation of 43rd Street from Southeastern San Diego. It is a 4-lane roadway with a center-left-turn-lane and on-street parallel parking. This study segment has sidewalks, but no bicycle facility or transit service. The posted speed limit is 35 mph.

45th Street is a 2-lane roadway with a 30 mph posted speed limit. There are missing sidewalks along the eastside (northbound) of this roadway between Imperial Avenue and Benfield Court. Bicycle facilities and transit service are not provided. The portion of this roadway that is part of the Circulation Element runs between Imperial Avenue and Logan Avenue.

East-West Roadways

Hilltop Drive is a 2-lane roadway with a 25 mph posted speed limit. There is parallel parking along this study roadway, as well as sidewalks. There are no bicycle facilities or transit services on Hilltop Drive. The roadway runs between Boundary Street and I-805.

Market Street runs the entire length of Southeastern San Diego, from 17th Street to I-805. This roadway is 4 lanes with a center-left-turn-lane, with the exception of a short segment (less than half of a mile) between Boundary Street and Denby Street which generally has 2 travel lanes with a center-left-turn-lane. Market Street has a posted speed limit of 30 mph. There are sidewalks along the entire length of this roadway and bicycle facilities along a portion, between 32nd Street and I-805. There is also transit service provided by the Route 3 and Route 5.

Imperial Avenue runs the entire length of Southeastern San Diego, from 17th Street to I-805. This roadway varies from 4-lanes with and without a median, to 2-lanes with and without a median. Posted speeds range from 30 to 40 mph. There is on-street parking and sidewalks along a majority of this study roadway, although not all. Bus transit service is provided by the Route 4.

A portion of Imperial Avenue, between 40th Street and 45th Street, generally has bicycle lanes, and while sharrows are marked between the I-805 NB Ramps and San Jacinto Drive.

Commercial Street runs from 17th Street to 32nd Street. This roadway is a 2-lane roadway with a 25 mph posted speed limit. The Orange Line and bus Route 3 run along Commercial Street. There is parking along the entire study segment with sidewalks, but no bicycle facility.

Ocean View Boulevard runs from 25th Street to 47th Street. This roadway varies from 2-lanes to 4-lanes, and has a posted speed limit of 30 mph. There is on-street parking and sidewalks along the entire length of this study roadway, as well as Class III Bike Route along a majority of the study segment. The Route 3 runs along this segment of Ocean View Boulevard.

National Avenue runs north-south through Barrio Logan, from Commercial Street to the I-5 SB Off-ramp at 27th Street, then runs east-west through Southeastern San Diego from I-5 to 43rd Street. This roadway varies from 2-lanes with center-left-turn-lane to 4-lanes, and has a posted speed limit of 30 mph. There is on-street parking and sidewalks along the majority of this study roadway, as well as transit service provided by Route 11. There is no bicycle facility along this study segment.

Logan Avenue within in SESD runs from 43rd Street to 47th Street. This roadway varies from 2-lanes to 4-lanes, and has a posted speed limit of 30 to 35 mph. There is on-street parking along the entire length of this study roadway, as well as sidewalks, with the exception of a section between 43rd Street and 47th Street. The Route 11 runs along this segment of Logan Avenue. There is no bicycle facility along this roadway.

Acacia Street runs from 36th Street to 38th Street as a 2-lane roadway with on-street parking and sidewalks. There are no bicycle facilities or transit service along this roadway. The posted speed limit is 25 mph.

Alpha Street runs from 38th Street to 43rd Street as a 2-lane roadway with on-street parking and sidewalks. There are no bicycle facilities or transit service along this roadway. The posted speed limit is 25 mph.

Division Street runs from Main Street to Osborn Street within the City of National City. The roadway varies from 2-lanes to 4-lanes with a posted speed limit of 30 mph. There is on-street parking and sidewalks on both sides of the street, but there is no bicycle facility or transit service.

It is common practice to consider existing and projected average weekday traffic volumes when planning for a community's mobility element. **Figure 3-14** displays existing average daily traffic volumes for study roadway segments, along with the current LOS.

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Figure 3-14: Existing Roadway Traffic Volumes and Level of Service

Table 3.10 displays existing roadway segment LOS for Southeastern San Diego. The source and date for each count used to calculate existing LOS is also provided in this table. **Appendix D** contains the average daily traffic counts utilized in this report.

As shown in the tables, there are currently thirteen (13) roadway segments within Southeastern San Diego that are operating at LOS E or F, as follows:

- Market Street, between Boundary Street and I-805 SB Ramps (LOS E);
- Imperial Avenue, between I-805 SB Ramps and I-805 NB Ramps (LOS E);
- Ocean View Boulevard, between 32nd Street and I-15 SB Ramps (LOS E);
- Ocean View Boulevard, between I-15 NB Ramps and 36th Street (LOS E);
- National Avenue, between 28th Street and I-5 NB Ramps (LOS F);
- Division Street, between Main Street and Osborn Street (LOS F);
- 28th Street, between SR-94 WB Ramps and SR-94 EB Ramps (LOS F);
- 28th Street, between SR-94 EB Ramps and Market Street (LOS F);
- 28th Street, between Market Street and Imperial Avenue (LOS E);
- 28th Street, between Ocean View Boulevard and National Avenue (LOS F);
- 35th Street/Rigel Street, between Ocean View Boulevard and Main Street (LOS E);
- 43rd Street, between Logan Avenue and Newton Avenue (LOS E); and
- 43rd Street, between Beta Street and Delta Street (LOS F).

In addition, there are two (2) segments within the Southeastern San Diego sphere of influence (both in Barrio Logan) that are currently operating at poor Levels of Service E or F, as follows:

- National Avenue, between 26th Street and 27th Street/I-5 SB Off-Ramps (LOS F); and
- 28th Street, between National Avenue and Boston Avenue (LOS E).

In addition to the roadway segment daily LOS analysis presented above, arterial speed analysis was conducted along the Urban Streets using the HCM 2000 arterial analysis techniques. **Appendix E** displays the peak hour automobile arterial analysis outputs. **Table 3.11** displays the analysis results during the AM and PM peak hours, respectively, under Existing conditions.

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
1	Hilltop Drive	Boundary Street & I-805	3/29/2011	City of SD (MC0207-1)	2-Ln Collector	8,000	2,885	0.36	B	Southeastern
2	Market Street	17th Street & 19th Street	10/9 & 10/10/2012	NDS	4-Ln Collector w/ CLTL	30,000	7,895	0.26	A	Southeastern
3	Market Street	19th Street & 25th Street	10/9 & 10/10/2012	NDS	4-Ln Collector w/ CLTL	30,000	7,835	0.26	A	Southeastern
4	Market Street	25th Street & 28th Street	10/9 & 10/10/2012	NDS	4-Ln Collector w/ CLTL	30,000	9,604	0.32	A	Southeastern
5	Market Street	28th Street & 32nd Street	11/9/2011	City of SD (MC1150-1)	4-Ln Collector w/ CLTL	30,000	10,745	0.36	B	Southeastern
6	Market Street	32nd Street & I-15 SB Ramps	11/9/2011	City of SD (MC1151-1)	4-Ln Major Arterial	40,000	17,180	0.43	B	Southeastern
7	Market Street	I-15 SB Ramps & I-15 NB Ramps	10/9 & 10/10/2012	NDS	4-Ln Major Arterial	40,000	22,320	0.56	C	Southeastern
8	Market Street	I-15 NB Ramps & Boundary Street	1/31/2012	City of SD (MC0036-1)	4-Ln Major Arterial	40,000	22,310	0.56	C	Southeastern
9	Market Street	Boundary Street & I-805 SB Ramps	7/26/2010	City of SD (MC0620-10)	2-Ln Collector w/ CLTL	15,000	14,460	0.96	E	Southeastern
10	Market Street	I-805 SB Ramps & I-805 NB Ramps	10/9 & 10/10/2012	NDS	4-Ln Major Arterial	40,000	17,543	0.44	B	Southeastern/ Encanto
11	Imperial Avenue	17th Street & 19th Street	5/25/2011	Commercial Imperial Corridor	4-Ln Collector	15,000	6,582	0.44	B	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
12	Imperial Avenue	19th Street & 25th Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector w/ CLTL	15,000	5,196	0.35	B	Southeastern
13	Imperial Avenue	25th Street & 28th Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector w/ CLTL	15,000	5,257	0.35	B	Southeastern
14	Imperial Avenue	28th Street & 30th Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector w/ CLTL	15,000	5,027	0.34	B	Southeastern
15	Imperial Avenue	30th Street & 32nd Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector w/ CLTL	15,000	4,152	0.28	A	Southeastern
16	Imperial Avenue	32nd Street & 36th Street	5/4/2011	City of SD (MC0262-1)	4-Ln Collector	15,000	6,555	0.44	B	Southeastern
17	Imperial Avenue	36th Street & 40th Street	10/9 & 10/10/2012	NDS	2-Ln Collector	10,000	7,909	0.79	D	Southeastern
18	Imperial Avenue	40th Street & I-805 SB Ramps	10/9 & 10/10/2012	NDS	4-Ln Major Arterial	40,000	10,301	0.26	A	Southeastern
19	Imperial Avenue	I-805 SB Ramps & I-805 NB Ramps	10/9 & 10/10/2012	NDS	4-Ln Collector w/ CLTL	30,000	25,741	0.86	E	Southeastern/ Encanto
20	Commercial Street	17th Street & 19th Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	1,192	0.15	A	Southeastern
21	Commercial Street	19th Street & 25th Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	1,208	0.15	A	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
22	Commercial Street	25th Street & 28th Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector	8,000	1,065	0.13	A	Southeastern
23	Commercial Street	28th Street & 30th Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector	8,000	929	0.12	A	Southeastern
24	Commercial Street	30th Street & 32nd Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector	8,000	567	0.07	A	Southeastern
25	Ocean View Boulevard	25th Street & 28th Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	2,207	0.28	A	Southeastern
26	Ocean View Boulevard	28th Street & 30th Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	5,524	0.69	D	Southeastern
27	Ocean View Boulevard	30th Street & 32nd Street	11/9/2011	City of SD (MC1162-1)	2-Ln Collector w/ CLTL	15,000	7,985	0.53	C	Southeastern
28	Ocean View Boulevard	32nd Street & I-15 SB Ramps	2/8/2012	City of SD (MC0070-1)	2-Ln Collector w/ CLTL	15,000	13,905	0.93	E	Southeastern
29	Ocean View Boulevard	I-15 SB Ramps & I-15 NB Ramps	10/9 & 10/10/2012	NDS	4-Ln Major Arterial	40,000	17,094	0.43	B	Southeastern
30	Ocean View Boulevard	I-15 NB Ramps & 36th Street	5/26/2011	City of SD (MC0301-1)	2-Ln Collector w/ CLTL	15,000	13,730	0.92	E	Southeastern
31	Ocean View Boulevard	36th Street & 40th Street	10/9 & 10/10/2012	NDS	2-Ln Collector w/ CLTL	15,000	12,009	0.80	D	Southeastern
32	Ocean View Boulevard	40th Street & 47th Street	7/28/2011	City of SD (MC0638-1)	2-Ln Collector	8,000	4,965	0.62	C	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
33	National Avenue	Commercial Street & Beardsley Street	10/9 & 10/10/2012	NDS	2-Ln Collector w/ CLTL	15,000	2,561	0.17	A	Barrio Logan
34	National Avenue	Beardsley Street & SR-75 Off-Ramp	11/9/2011	City of SD (MC1159-1)	2-Ln Collector	8,000	3,725	0.47	C	Barrio Logan
35	National Avenue	SR-75 Off-Ramp & 26th Street	11/9/2011	City of SD (MC1160-1)	2-Ln Collector w/ CLTL	15,000	3,395	0.23	A	Barrio Logan
36	National Avenue	26th Street & 27th Street/I-5 SB Off-Ramp	10/10 & 10/11/2012	NDS	2-Ln Collector	8,000	11,450	1.43	F	Barrio Logan
37	National Avenue	27th Street/I-5 SB Off-Ramp & 28th Street	10/9 & 10/10/2012	NDS	4-Ln Collector w/ CLTL	30,000	15,927	0.53	C	Southeastern
38	National Avenue	28th Street & I-5 NB Ramps	10/25/2012	Euclid/National	2-Ln Collector w/ CLTL	15,000	18,431	1.23	F	Southeastern
39	National Avenue	I-5 NB Ramps & 32nd Street	10/25/2012	Euclid/National	2-Ln Collector w/ CLTL	15,000	10,020	0.67	D	Southeastern
40	National Avenue	32nd Street & 43rd Street	10/25/2012	Euclid/National	2-Ln Collector w/ CLTL	15,000	10,572	0.70	D	Southeastern
41	Logan Avenue	43rd Street & 45th Street	10/9 & 10/10/2012	NDS	2-Ln Collector w/ CLTL	15,000	7,691	0.51	C	Southeastern
42	Logan Avenue	45th Street & 47th Street	7/28/2011	City of SD (MC0604-1)	4-Ln Collector	15,000	8,190	0.55	C	Southeastern/Encanto
43	Acacia Street	36th Street & 38th Street	10/10 & 10/11/2012	NDS	2-Ln Collector	8,000	1,451	0.18	A	Southeastern
44	Alpha Street	38th Street & 43rd Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	5,554	0.69	D	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
45	Division Street	Main Street & Osborn Street	6/21/2011	City of SD (MC0500-1)	2-Ln Collector w/ CLTL	15,000	15,920	1.06	F	Southeastern
46	Division Street	Osborn Street & Highland Avenue	2/24/2011	City of SD (MC0118-1)	2-Ln Collector w/ CLTL	15,000	10,265	0.68	D	Southeastern
47	Division Street	Highland Avenue & Palm Avenue	3/15 & 3/16/2011	National City	4-Ln Secondary Arterial	30,000	10,466	0.35	B	National City
48	Cesar Chavez Parkway	Commercial Street & I-5 NB Ramps	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	5,692	0.71	D	Southeastern
49	Cesar Chavez Parkway	I-5 NB Ramps & SR-75 On-Ramp/Logan Avenue	10/9 & 10/10/2012	NDS	4-Ln Collector w/ CLTL	30,000	13,771	0.46	B	Barrio Logan
50	25th Street	SR-94 WB Off-Ramp & SR-94 EB On-Ramp	10/9 & 10/10/2012	NDS	4-Ln Collector	15,000	12,970	0.86	D	Southeastern
51	25th Street	SR-94 EB On-Ramp & Market Street	10/9 & 10/10/2012	NDS	4-Ln Collector	15,000	10,914	0.73	D	Southeastern
52	25th Street	Market Street & Imperial Avenue	11/8/2011	City of SD (MC1095-1)	4-Ln Collector	15,000	9,150	0.61	C	Southeastern
53	25th Street	Imperial Avenue & Commercial Street	5/25/2011	Commercial Imperial Corridor	3-Ln Collector	15,000	5,703	0.38	B	Southeastern
54	28th Street	SR-94 WB Ramps & SR-94 EB Ramps	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	10,183	1.27	F	Southeastern
55	28th Street	SR-94 EB Ramps & Market Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	10,041	1.26	F	Southeastern
56	28th Street	Market Street & Imperial Avenue	10/10 & 10/11/2012	NDS	2-Ln Collector	8,000	7,494	0.94	E	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
57	28th Street	Imperial Avenue & Commercial Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector	8,000	5,300	0.66	D	Southeastern
58	28th Street	Commercial Street & Ocean View Boulevard	8/9/2011	City of SD (MC0718-1)	2-Ln Collector	8,000	4,965	0.62	C	Southeastern
59	28th Street	Ocean View Boulevard & National Avenue	10/25/2012	Euclid/National	2-Ln Collector	8,000	8,195	1.02	F	Southeastern
60	28th Street	National Avenue & Boston Avenue	1/17/2011	City of SD (MC1098-1)	3-Ln Collector	15,000	14,165	0.94	E	Barrio Logan
61	30th Street	E Street & Imperial Avenue	8/9/2011	City of SD (MC0719-1)	2-Ln Collector	8,000	4,945	0.62	C	Southeastern
62	30th Street	Imperial Avenue & Commercial Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector	8,000	2,993	0.37	B	Southeastern
63	30th Street	Commercial Street & National Avenue	10/31/2012	Euclid/National	2-Ln Collector	8,000	4,826	0.60	C	Southeastern
64	Broadway/32nd Street	SR-94 WB Ramps & SR-94 EB On-Ramp/F Street	10/9 & 10/10/2012	NDS	4-Ln Collector	15,000	11,468	0.76	D	Southeastern
65	32nd Street	SR-94 EB On-Ramp/F Street & Market Street	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	6,076	0.76	D	Southeastern
66	32nd Street	Market Street & Imperial Avenue	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	5,116	0.64	D	Southeastern
67	32nd Street	Imperial Avenue & Commercial Street	5/25/2011	Commercial Imperial Corridor	2-Ln Collector	8,000	3,134	0.39	B	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
68	32nd Street	Commercial Street & Ocean View Boulevard	11/9/2011	City of SD (MC1104-1)	2-Ln Collector	8,000	3,975	0.50	C	Southeastern
69	32nd Street	Ocean View Boulevard & National Avenue	10/25/2012	Euclid/National	2-Ln Collector	8,000	4,442	0.56	C	Southeastern
70	32nd Street	National Avenue & Boston Avenue	12/9/2011	City of SD (MC1103-1)	2-Ln Collector	8,000	5,420	0.68	D	Southeastern
71	35th Street/Rigel Street	Ocean View Boulevard & Main Street	3/8/2011	City of SD (MC097-11)	2-Ln Collector	8,000	7,520	0.94	E	Southeastern
72	36th Street	Imperial Avenue & Ocean View Boulevard	10/9 & 10/10/2012	NDS	2-Ln Collector	8,000	3,447	0.43	B	Southeastern
73	36th Street	Ocean View Boulevard & Acacia Street	1/28/2010	City of SD (MC0021-1)	2-Ln Collector	8,000	3,410	0.43	B	Southeastern
74	38th Street	Ocean View Boulevard & Acacia Street	8/9/2011	City of SD (MC0727-1)	2-Ln Collector	8,000	3,585	0.45	C	Southeastern
75	Vesta Street	Acacia Street & Main Street	1/31/2012	City of SD (MC0060-1)	2-Ln Collector	8,000	3,970	0.50	C	Southeastern
76	40th Street	Imperial Avenue & Ocean View Boulevard	3/10/2011	City of SD (MC0203-1)	4-Ln Collector	15,000	4,425	0.30	A	Southeastern
77	40th Street	National Avenue & Division Street	10/24/2012	Euclid/National	2-Ln Collector	8,000	1,966	0.25	A	Southeastern
78	Boundary Street	Hilltop Drive & Market Street	3/10/2011	City of SD (MC0188-1)	2-Ln Collector	8,000	2,060	0.26	A	Southeastern
79	San Pasqual Drive	Imperial Avenue & Ocean View Boulevard	10/9 & 10/10/2012	NDS	2-Ln Collector	10,000	5,479	0.55	B	Southeastern

**TABLE 3.10
EXISTING ROADWAY SEGMENT LOS RESULTS**

No.	Roadway	Segment	Count Date	Data Source	Existing Functional Classification	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume to Capacity Ratio (V/C)	LOS (LOS)	Community / Jurisdiction
80	San Pasqual Drive	Ocean View Boulevard & Logan Avenue	10/9 & 10/10/2012	NDS	2-Ln Collector	10,000	5,535	0.55	C	Southeastern
81	43rd Street	Logan Avenue & Newton Avenue	10/24/2012	Euclid/ National	2-Ln Collector w/CLTL	15,000	13,301	0.89	E	Southeastern
82	43rd Street	Newton Avenue & Beta Street	8/9/2011	City of SD (MC0730-1)	3-Ln Collector w/CLTL	22,500	12,835	0.57	C	Southeastern
83	43rd Street	Beta Street & Delta Street	10/10 & 10/11/2012	NDS	2-Ln Collector w/CLTL	15,000	17,249	1.15	F	Southeastern
84	43rd Street/Highland Avenue	Delta Street & Division Street	8/9/2011	City of SD (MC0731-1)	3-Ln Collector w/CLTL	22,500	15,360	0.68	D	Southeastern
85	Highland Avenue	Division Street & 4th Street	4/6 & 4/7/2011	National City	4-Ln Secondary Arterial	30,000	12,990	0.43	B	National City
86	45th Street	Imperial Avenue & Logan Avenue	8/11/2011	City of SD (MC0732-1)	2-Ln Collector	8,000	1,955	0.24	A	Southeastern

Source: NDS, City of San Diego, City of National City, Chen Ryan Associates; February 2015

Notes:

Bold letter indicates unacceptable LOS E or F.

CLTL = Center Left-Turn Lane.

**TABLE 3.11
EXISTING ARTERIAL ANALYSIS ALONG URBAN STREETS**

Roadway	Segment	AM Peak Hour				PM Peak Hour			
		EB		WB		EB		WB	
		Speed (mph)	LOS	Speed (mph)	LOS	Speed (mph)	LOS	Speed (mph)	LOS
Market Street	19th Street & 25th Street	23.0	C	24.7	B	21.0	C	23.0	C
	25th Street & 28th Street	31.9	A	29.4	B	29.2	B	30.5	A
	28th Street & 32nd Street	21.2	C	21.8	C	15.5	D	21.1	C
	32nd Street & I-15 SB Ramps	13.0	E	18.4	C	8.5	F	23.6	C
	I-15 SB Ramps & I-15 NB Ramps	31.0	A	32.6	A	26.7	B	33.2	A
	I-15 NB Ramps & I-805 SB Ramps	17.8	D	16.6	D	17.1	D	13.4	E
	I-805 SB Ramps & I-805 NB Ramps	21.7	C	17.8	D	18.5	C	19.9	C
Imperial Avenue	17th Street & 19th Street	25.8	B	26.1	B	24.0	B	24.2	B
	19th Street & 25th Street	22.1	C	23.7	C	21.6	C	21.6	C
	25th Street & 28th Street	26.3	B	20.8	C	24.9	B	20.1	C
	28th Street & 30th Street	21.4	C	23.1	C	22.5	C	24.5	B
	30th Street & 32nd Street	22.0	C	23.4	C	21.5	C	23.4	C
	32nd Street & 36th Street	23.6	C	19.4	C	21.4	C	19.3	C
	36th Street & 40th Street	26.8	B	29.9	B	25.8	B	26.5	B
	40th Street & I-805 SB Ramps	23.4	C	13.5	E	21.7	C	16.5	D
	I-805 SB Ramps & I-805 NB Ramps	4.0	F	5.1	F	4.5	F	7.0	F
National Avenue	27th Street/I-5 SB Off-Ramp & 28th Street	25.3	B	17.9	D	24.1	B	15.6	D
	28th Street & I-5 NB Ramps	25.6	B	28.3	B	26.0	B	28.7	B
	I-5 NB Ramps & 32nd Street	23.9	C	19.9	C	23.2	C	21.3	C
	32nd Street & 43rd Street	23.9	C	19.9	C	23.2	C	22.5	C
Logan Avenue	43rd Street & 45th Street	23.9	C	21.8	C	20.6	C	20.7	C
	45th Street & 47th Street	23.9	C	21.8	C	20.6	C	20.7	C

Source: Chen Ryan Associates; February 2015

Note:

Bold letter indicates unacceptable LOS E or F.

As shown in the table, the following four (4) segments are operating at LOS E or F under Existing conditions:

- Eastbound Market Street, between 32nd Street and I-15 SB Ramps - LOS E during the AM peak hour and LOS F during the PM peak hour;
- Westbound Market Street, between I-15 NB Ramps and I-15 SB Ramps – LOS E during the PM peak hour;
- Westbound Imperial Avenue, between 40th Street and I-805 SB Ramps – LOS E during the AM peak hour; and
- Eastbound and westbound Imperial Avenue, between I-805 SB Ramps and I-805 NB Ramps – LOS F during both the AM and PM peak hours.

Figures 3-15a and **3-15b** display AM and PM peak hour automobile arterial analysis, respectively.

3.4.2 Intersection Geometry and LOS Analysis

As described in Chapter 2, a total of fifty-eight (58) study intersections are analyzed as part of this existing conditions assessment. Nineteen (19) of these intersections are located outside Southeastern San Diego in adjacent communities.

Figure 3-16 displays current intersection geometry, while **Figure 3-17** shows existing peak period turning movements for both the AM and PM peak periods. The study area intersection traffic counts are provided in **Appendix F**.

Table 3.12 displays the LOS analysis results for the key study area intersections located within Southeastern San Diego under existing conditions. LOS analyses were conducted using the methodologies described in Chapter 2.0. The traffic control type, and date and source for all existing intersection counts are provided in Table 3.10. Intersection LOS calculation worksheets for existing conditions are provided in **Appendix G**.

As shown in Table 3.12, eight (8) study area intersections are currently operating at LOS E or F during the AM and/PM peak hour, as follows:

- On-Ramp / Logan Avenue - LOS E during the PM peak hour;
- 28th Street / SR-94 WB Ramps/Treat Street - LOS F during the PM peak hour;
- 28th Street / SR-94 EB Ramps - LOS E and F during the AM and PM peak hours, respectively;
- I-5 SB On-Ramp / Boston Avenue - LOS F during the PM peak hour;
- Broadway / SR-94 WB Ramps - LOS E and F during the AM and PM peak hours, respectively;
- I-15 NB Ramps / Ocean View Boulevard - LOS E during the AM peak hour;
- I-5 NB Ramps / Osborn Street - LOS F during both the AM and PM peak hours; and
- Osborn Street / Division Street - LOS F during the AM peak hour.

Figure 3-18 shows the existing intersection LOS analysis results.

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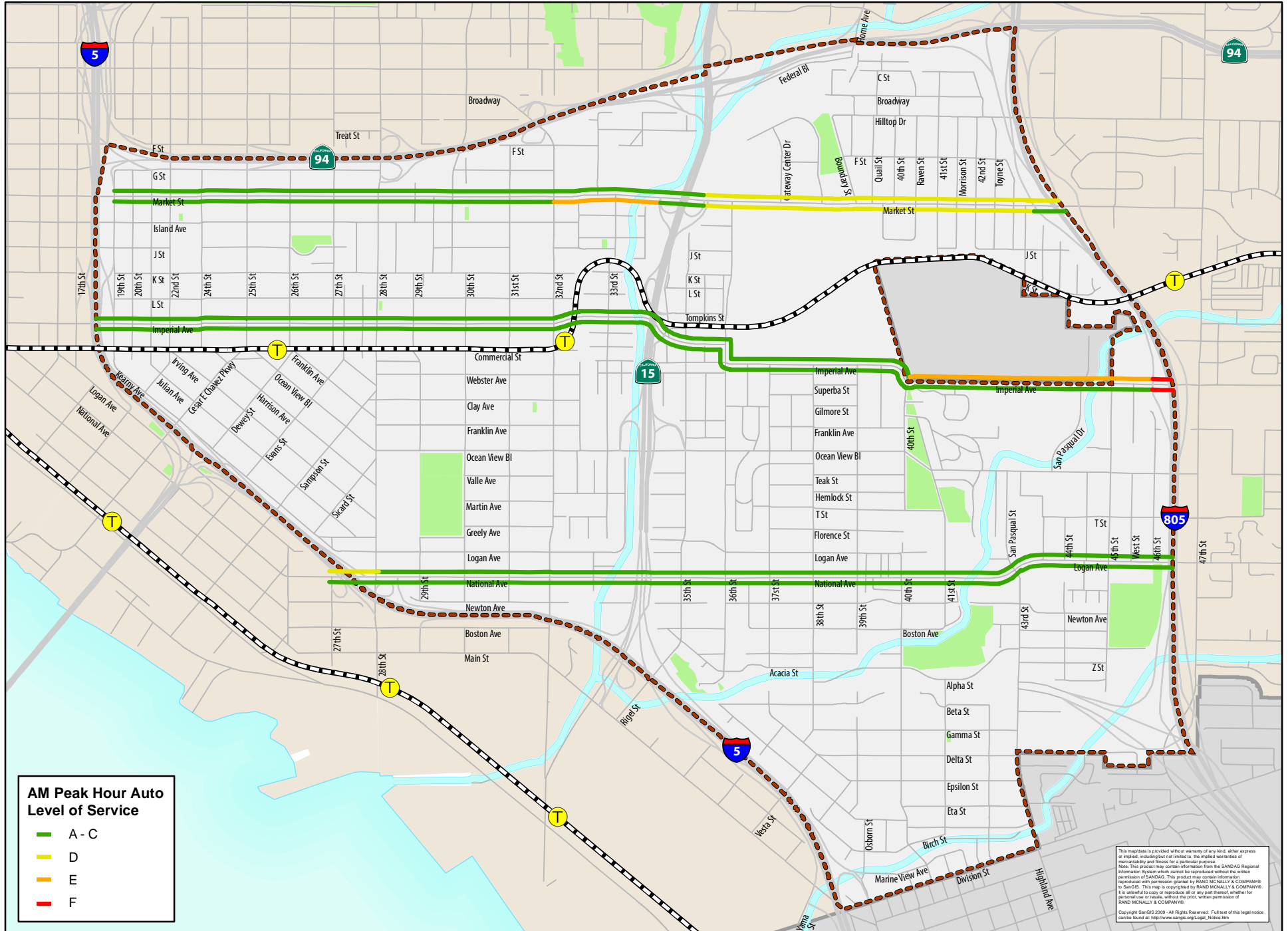


Figure 3-15a: Existing AM Peak Hour Auto Arterial Analysis Level of Service

Chen + Ryan



Data Source:
City of San Diego, 2012; SanGIS Regional
Data Warehouse, 2012;
Dyett & Bhatia, 2012



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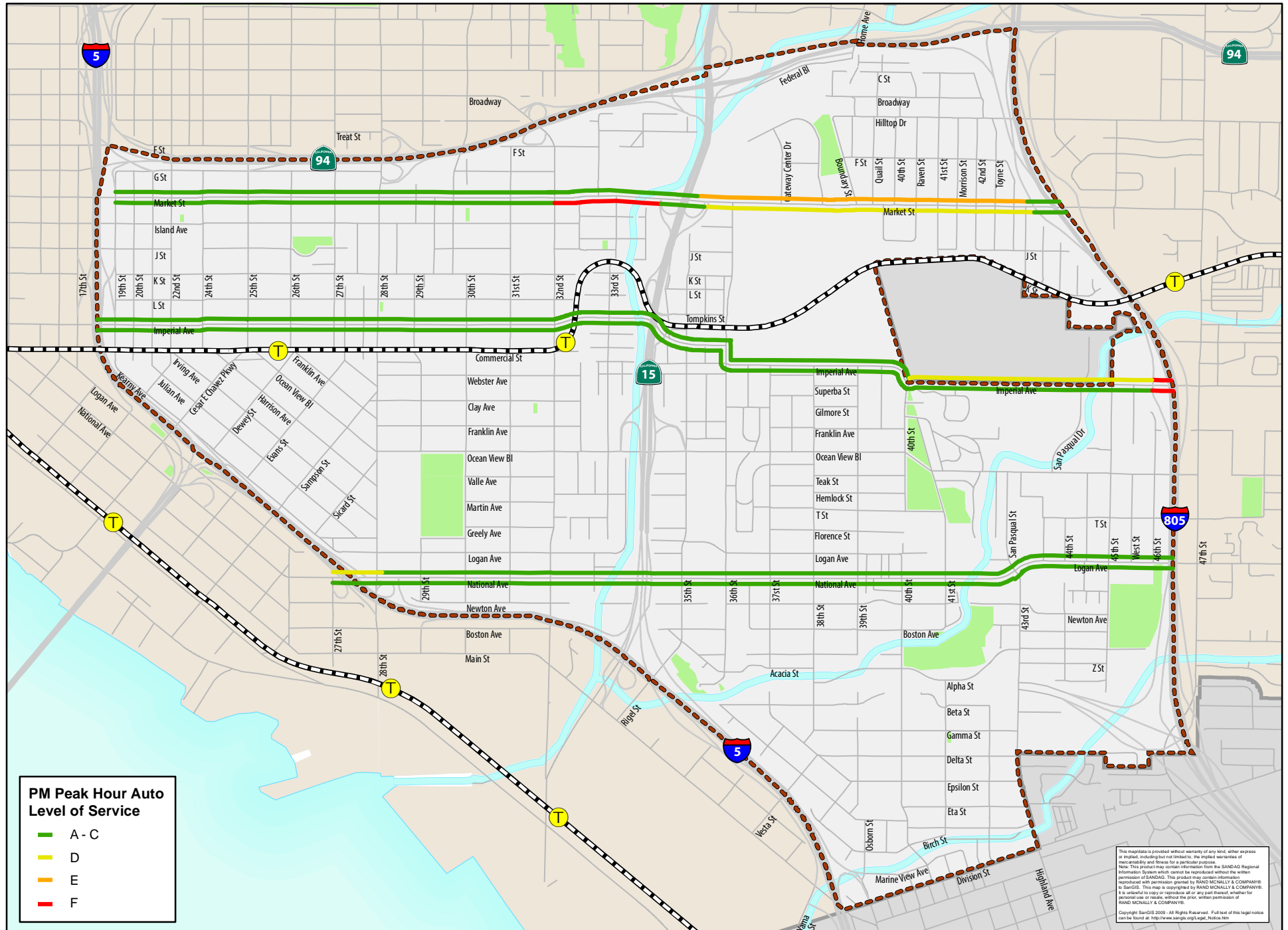


Figure 3-15b: Existing PM Peak Hour Auto Arterial Analysis Level of Service Chen + Ryan

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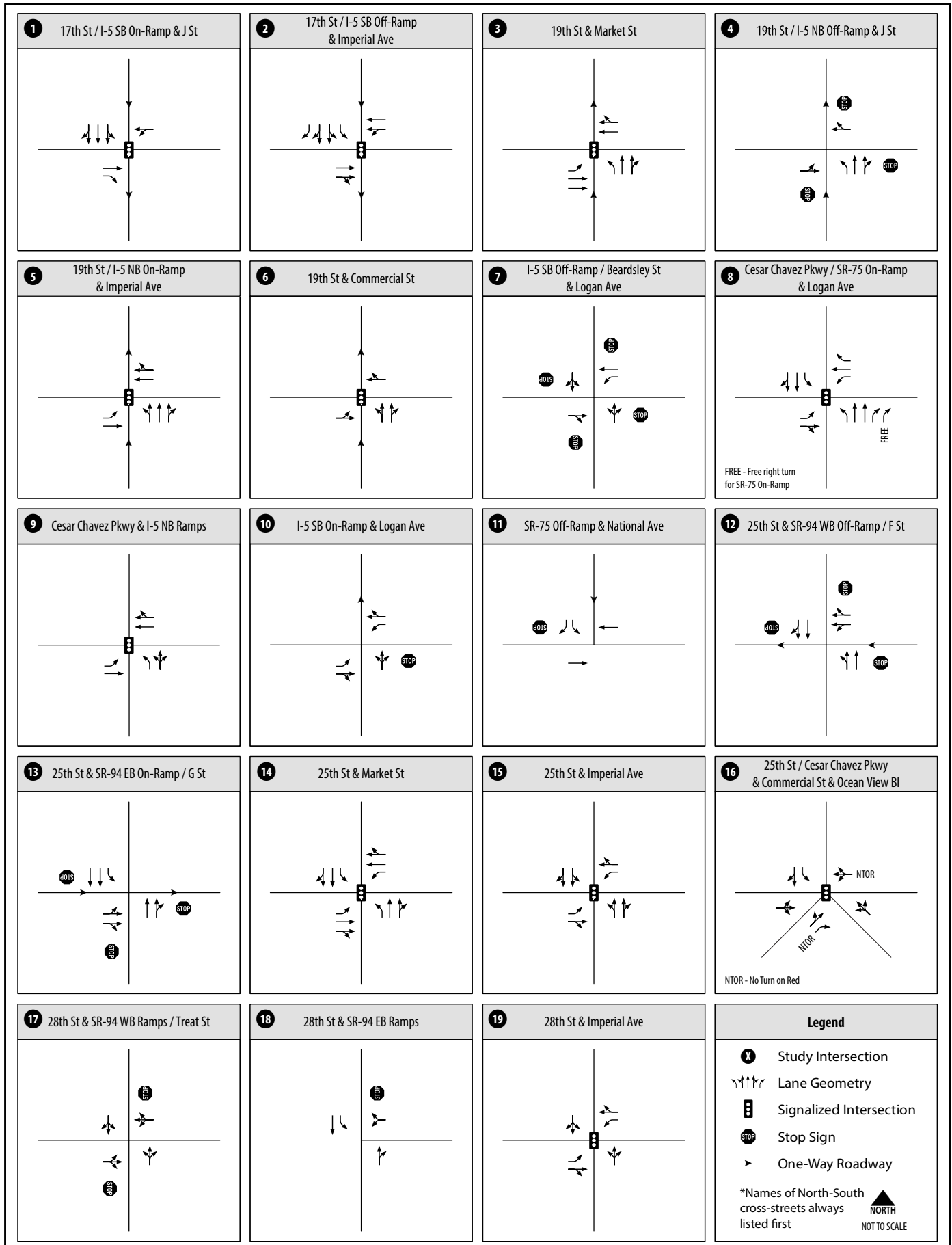


Figure 3-16: Existing Intersection Geometrics
 Intersections 1-19 (Page 1 of 3)

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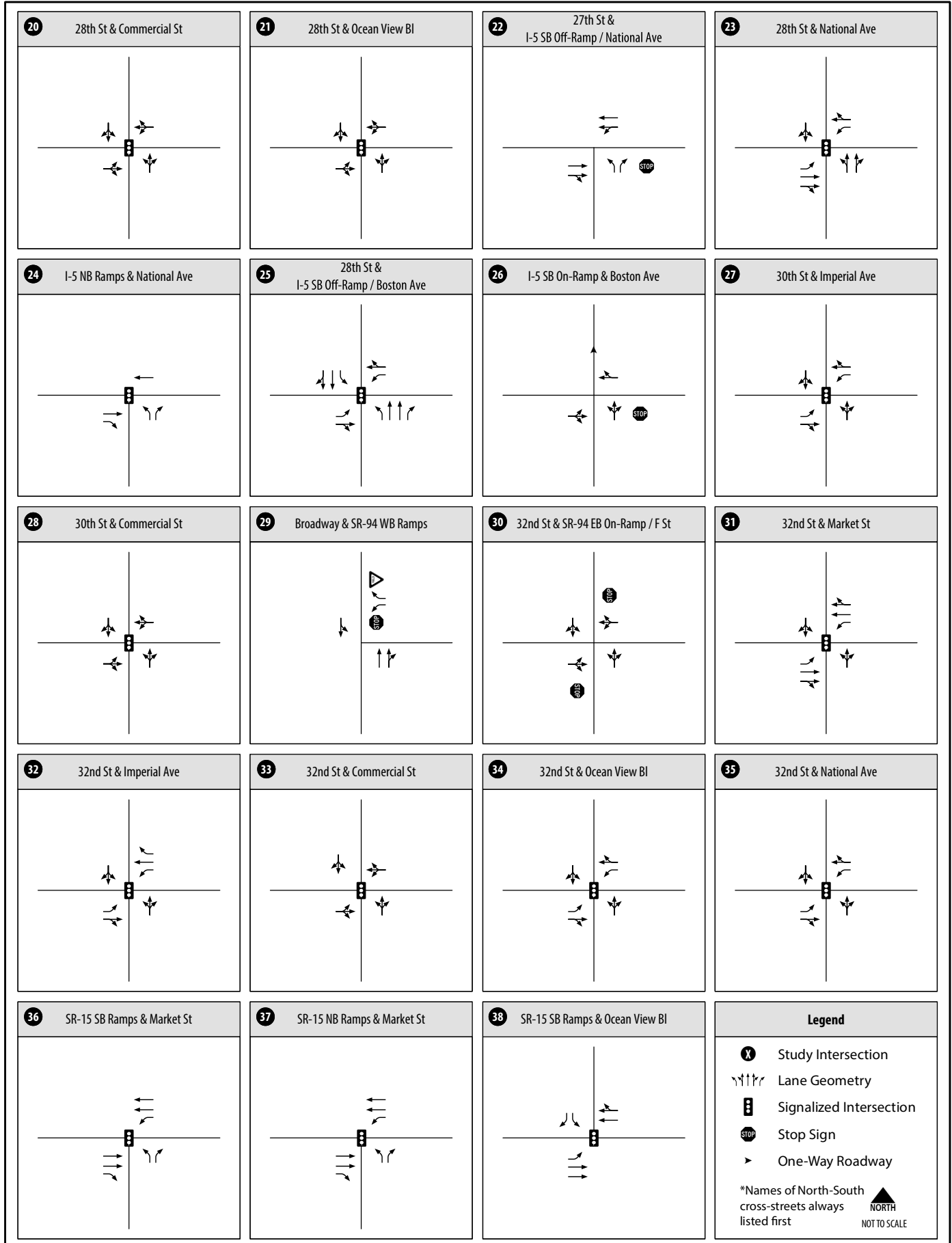


Figure 3-16: Existing Intersection Geometrics
Intersections 20-38 (Page 2 of 3)

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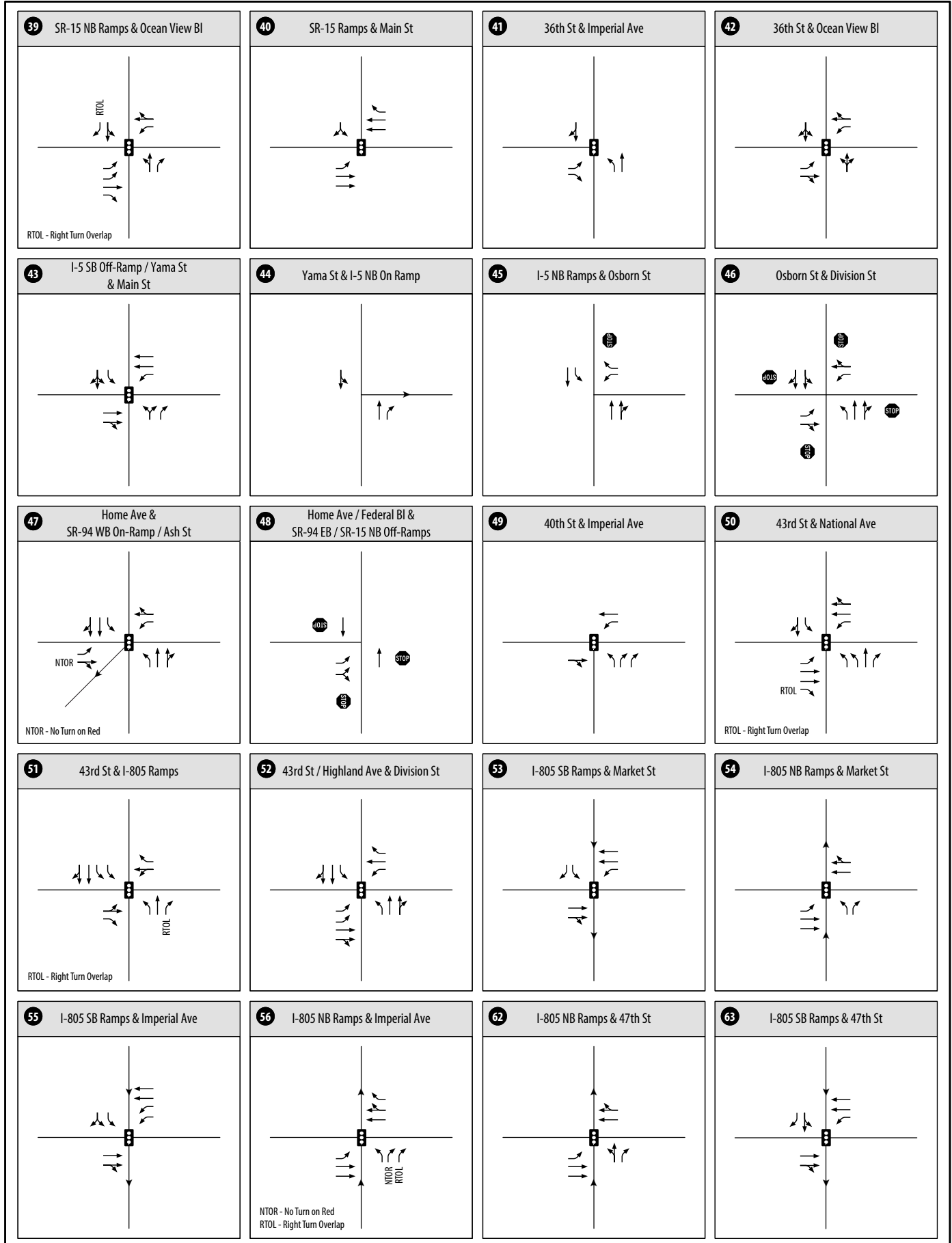


Figure 3-16: Existing Intersection Geometrics
 Intersections 39-56 & 62-63 (Page 3 of 3)

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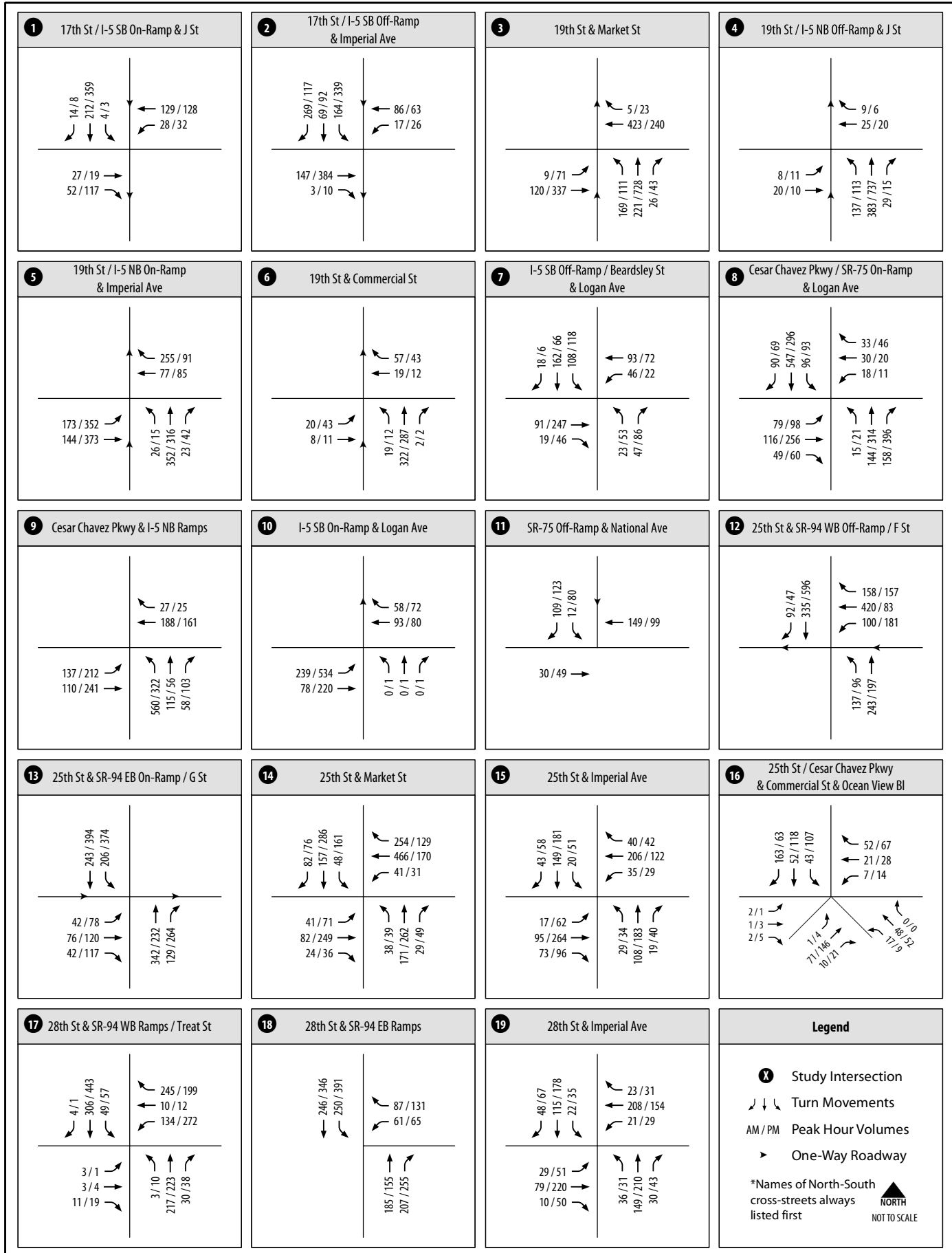


Figure 3-17: Existing AM/PM Peak Hour Intersection Turning Movements
Intersections 1-19 (Page 1 of 3)

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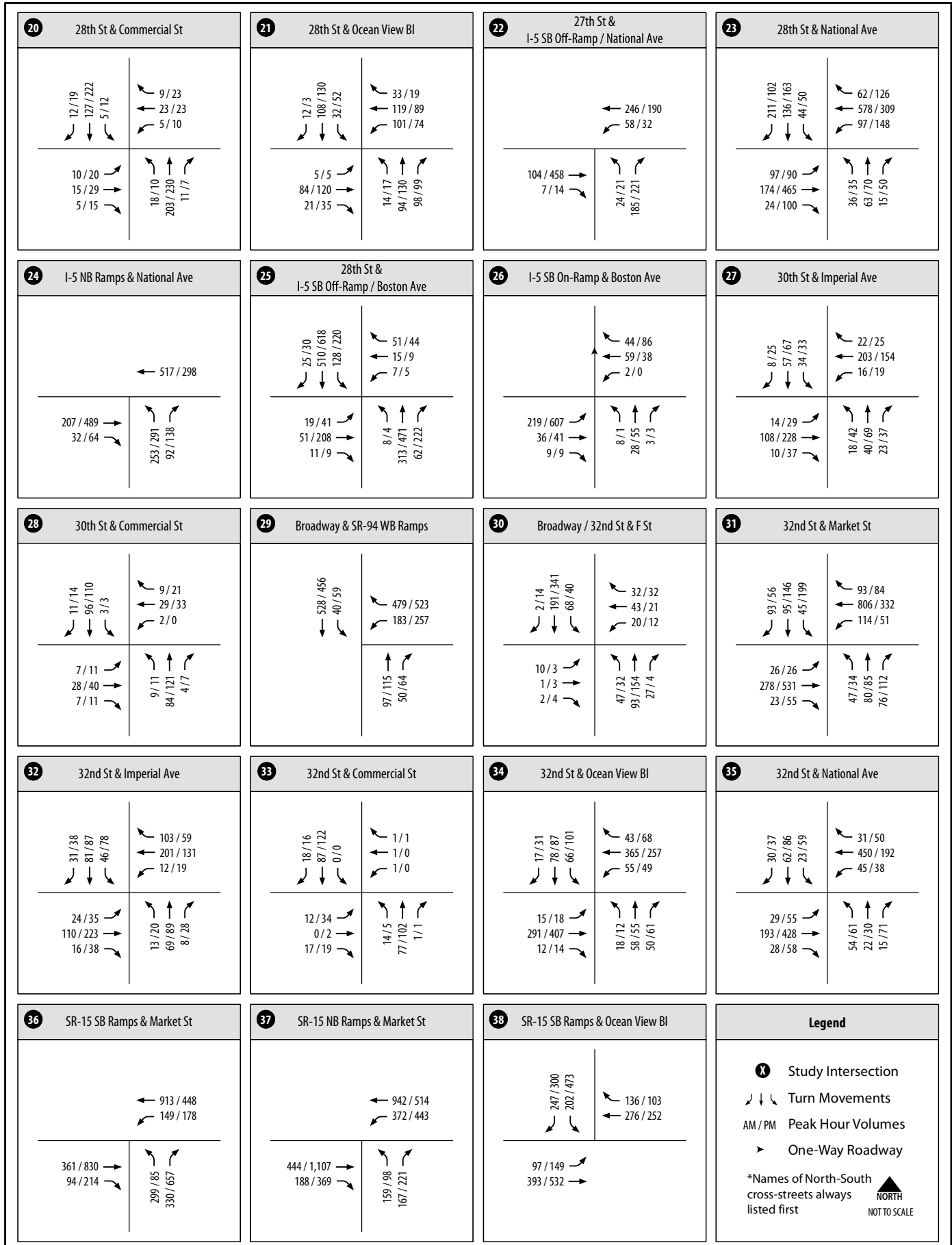


Figure 3-17: Existing AM/PM Peak hour Intersection Turning Movements
 Intersections 20-38 (Page 2 of 3)

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

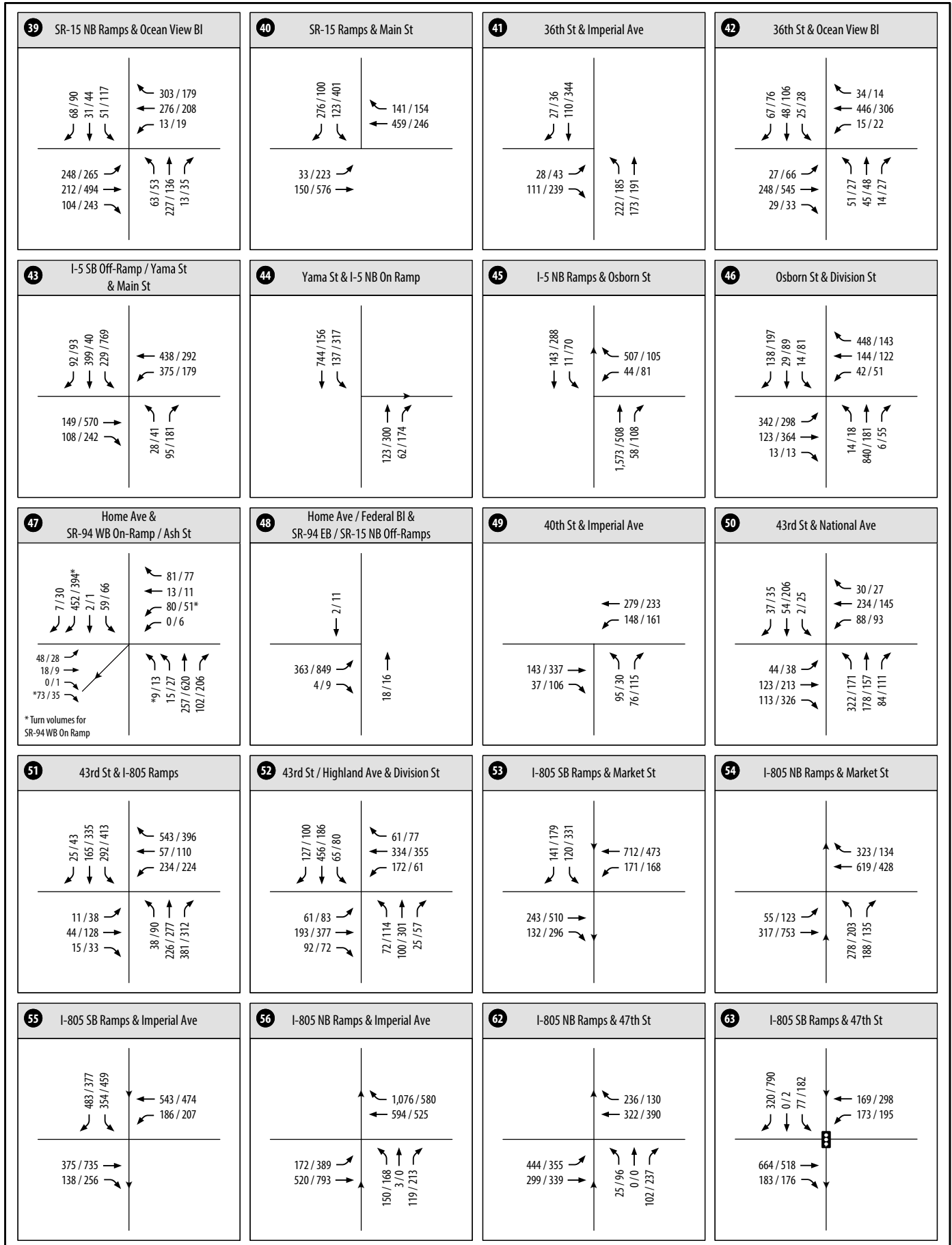


Figure 3-17: Existing AM/PM Peak Hour Intersection Turning Movements
 Intersections 39-56 & 62-63 (Page 3 of 3)

**TABLE 3.12
EXISTING PEAK HOUR INTERSECTION LOS RESULTS**

ID	Intersection	Traffic Control	Count Date	Data Source	AM Peak Hour		PM Peak Hour	
					Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	17th Street/I-5 SB On-Ramp / J Street	Signalized	10/11/12	NDS	7.5	A	7.2	A
2	17th Street/I-5 SB Off-Ramp / Imperial Avenue	Signalized	10/11/12	NDS	16.5	B	14.0	B
3	19th Street / Market Street	Signalized	10/11/12	NDS	8.3	A	19.9	B
4	19th Street/I-5 NB Off-Ramp / J Street	AWSC	10/11/12	NDS	8.4	A	13.4	B
5	19th Street/I-5 NB On-Ramp / Imperial Avenue	Signalized	10/11/12	NDS	13.1	B	12.2	B
6	19th Street / Commercial Street	Signalized	10/11/12	NDS	5.0	A	24.3	C
7	I-5 SB Off-Ramp/Beardsley Street / Logan Avenue	AWSC	10/9/12	NDS	10.3	B	12.9	B
8	Cesar Chavez Parkway/SR-75 On-Ramp / Logan Avenue	Signalized	10/11/12	NDS	20.9	C	32.4	C
9	Cesar Chavez Parkway / I-5 NB Ramps	Signalized	10/11/12	NDS	22.6	C	19.9	B
10	I-5 SB On-Ramp / Logan Avenue	OWSC	10/11/12	NDS	8.3	A	49.4	E
11	SR-75 Off-Ramp / National Avenue	OWSC	10/11/12	NDS	10.1	B	10.2	B
12	25th Street / SR-94 WB Off-Ramp/F Street	AWSC	10/9/12	NDS	22.4	C	20.7	C
13	25th Street / SR-94 EB On-Ramp/G Street	AWSC	10/9/12	NDS	11.0	B	19.3	C
14	25th Street / Market Street	Signalized	10/9/12	NDS	21.4	C	28.4	C
15	25th Street / Imperial Avenue	Signalized	10/9/12	NDS	12.7	B	12.8	B
16	25th Street/Cesar Chavez Parkway/Ocean View Boulevard / Commercial Street	Signalized	10/9/12	NDS	24.4	C	26.1	C
17	28th Street / SR-94 WB Ramps/Treat Street	TWSC	10/9/12	NDS	16.7	C	423.1	F
18	28th Street / SR-94 EB Ramps	OWSC	10/9/12	NDS	38.5	E	123.3	F
19	28th Street / Imperial Avenue	Signalized	5/18/11	Commercial Imperial Corridor	16.4	B	18.5	B
20	28th Street / Commercial Street	Signalized	5/18/11	Commercial Imperial Corridor	5.9	A	7.3	A

**TABLE 3.12
EXISTING PEAK HOUR INTERSECTION LOS RESULTS**

ID	Intersection	Traffic Control	Count Date	Data Source	AM Peak Hour		PM Peak Hour	
					Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
21	28th Street / Ocean View Boulevard	Signalized	10/9/12	NDS	14.0	B	13.7	B
22	27th Street/I-5 SB Off-Ramp / National Avenue	OWSC	10/24/12	Euclid National	12.0	B	16.1	C
23	28th Street / National Avenue	Signalized	10/24/12	Euclid National	34.9	C	19.6	B
24	I-5 NB Ramps / National Avenue	Signalized	10/24/12	Euclid National	29.1	C	30.7	C
25	28th Street/I-5 SB Off-Ramp / Boston Avenue	Signalized	10/9/12	NDS	10.1	B	15.7	B
26	I-5 SB On-Ramp / Boston Avenue	OWSC	10/9/12	NDS	18.5	C	192.8	F
27	30th Street / Imperial Avenue	Signalized	5/18/11	Commercial Imperial Corridor	12.1	B	10.0	A
28	30th Street / Commercial Street	Signalized	5/18/11	Commercial Imperial Corridor	9.6	A	9.4	A
29	Broadway / SR-94 WB Ramps	OWSC	10/11/12	NDS	43.6	E	78.9	F
30	Broadway/32nd Street / F Street	TWSC	10/11/12	NDS	15.7	C	15.6	C
31	32nd Street / Market Street	Signalized	10/11/12	NDS	11.0	B	15.2	B
32	32nd Street / Imperial Avenue	Signalized	5/18/11	Commercial Imperial Corridor	15.6	B	16.9	B
33	32nd Street / Commercial Street	Signalized	5/18/11	Commercial Imperial Corridor	5.8	A	7.8	A
34	32nd Street / Ocean View Boulevard	Signalized	10/9/12	NDS	17.2	B	17.2	B
35	32nd Street / National Boulevard	Signalized	10/25/12	Euclid National	6.7	A	7.8	A
36	I-15 SB Ramps / Market Street	Signalized	10/9/12	NDS	14.2	B	25.1	C
37	I-15 NB Ramps / Market Street	Signalized	10/9/12	NDS	21.2	C	39.0	D
38	I-15 SB Ramps / Ocean View Boulevard	Signalized	10/9/12	NDS	11.7	B	16.6	B
39	I-15 NB Ramps / Ocean View Boulevard	Signalized	10/9/12	NDS	60.2	E	31.7	C
40	I-15 Ramps / Main Street	Signalized	10/9/12	NDS	21.0	C	36.9	D

**TABLE 3.12
EXISTING PEAK HOUR INTERSECTION LOS RESULTS**

ID	Intersection	Traffic Control	Count Date	Data Source	AM Peak Hour		PM Peak Hour	
					Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
41	36th Street / Imperial Avenue	Signalized	3/29/11	City of SD (IC049-11)	13.0	B	13.3	B
42	36th Street / Ocean View Boulevard	Signalized	10/9/12	NDS	12.7	B	14.6	B
43	I-5 SB Off-Ramp/Yama Street / Main Street	Signalized	10/9/12	NDS	22.8	C	39.6	D
44	Yama Street / I-5 SB On-Ramp	OWSC	10/9/12	NDS	3.0	A	10.7	B
45	I-5 NB Ramps / Osborn Street	OWSC	10/9/12	NDS	630.9	F	51.1	F
46	Osborn Street / Division Street	AWSC	10/9/12	NDS	94.0	F	25.6	D
47	Home Avenue / SR-94 WB On-Ramp / Ash Street/Federal Boulevard	Signalized	10/9/12	NDS	21.1	C	20.8	C
48	Home Avenue/Federal Boulevard / SR-94 EB Off-Ramp/I-15 NB Off-Ramp	AWSC	10/9/12	NDS	9.3	A	23.9	C
49	40th Street / Imperial Avenue	Signalized	10/9/12	NDS	16.3	B	21.8	C
50	43rd Street / National Avenue	Signalized	10/24/12	Euclid National	21.4	C	20.3	C
51	43rd Street / I-805 Ramps	Signalized	10/9/12	NDS	27.0	C	36.1	D
52	43rd Street/Highland Avenue / Division Street	Signalized	10/9/12	NDS	28.7	C	21.8	C
53	Market Street / I-805 SB Ramps	Signalized	5/24/11	Euclid+Market	17.2	B	26.1	C
54	Market Street / I-805 NB Ramps	Signalized	5/24/11	Euclid+Market	14.4	B	10.4	B
55	Imperial Avenue / I-805 SB Ramps	Signalized	10/9/12	NDS	20.4	C	24.0	C
56	Imperial Avenue / I-805 NB Ramps	Signalized	10/9/12	NDS	12.8	B	16.8	B
62	47th Street / I-805 NB Ramps	Signalized	10/9/12	NDS	12.8	B	8.1	A
63	47th Street / I-805 SB Ramps	Signalized	10/9/12	NDS	14.3	B	26.0	C

Source: NDS, City of San Diego, Chen Ryan Associates; February 2015

Notes:

Bold letter indicates unacceptable LOS E or F.

OWSC = One-way stop controlled.

TWSC = Two-way stop controlled.

AWSC = All-way stop controlled.

For one or two-way stop controlled intersections, the delay shown is the worst delay experienced by any of the approaches.

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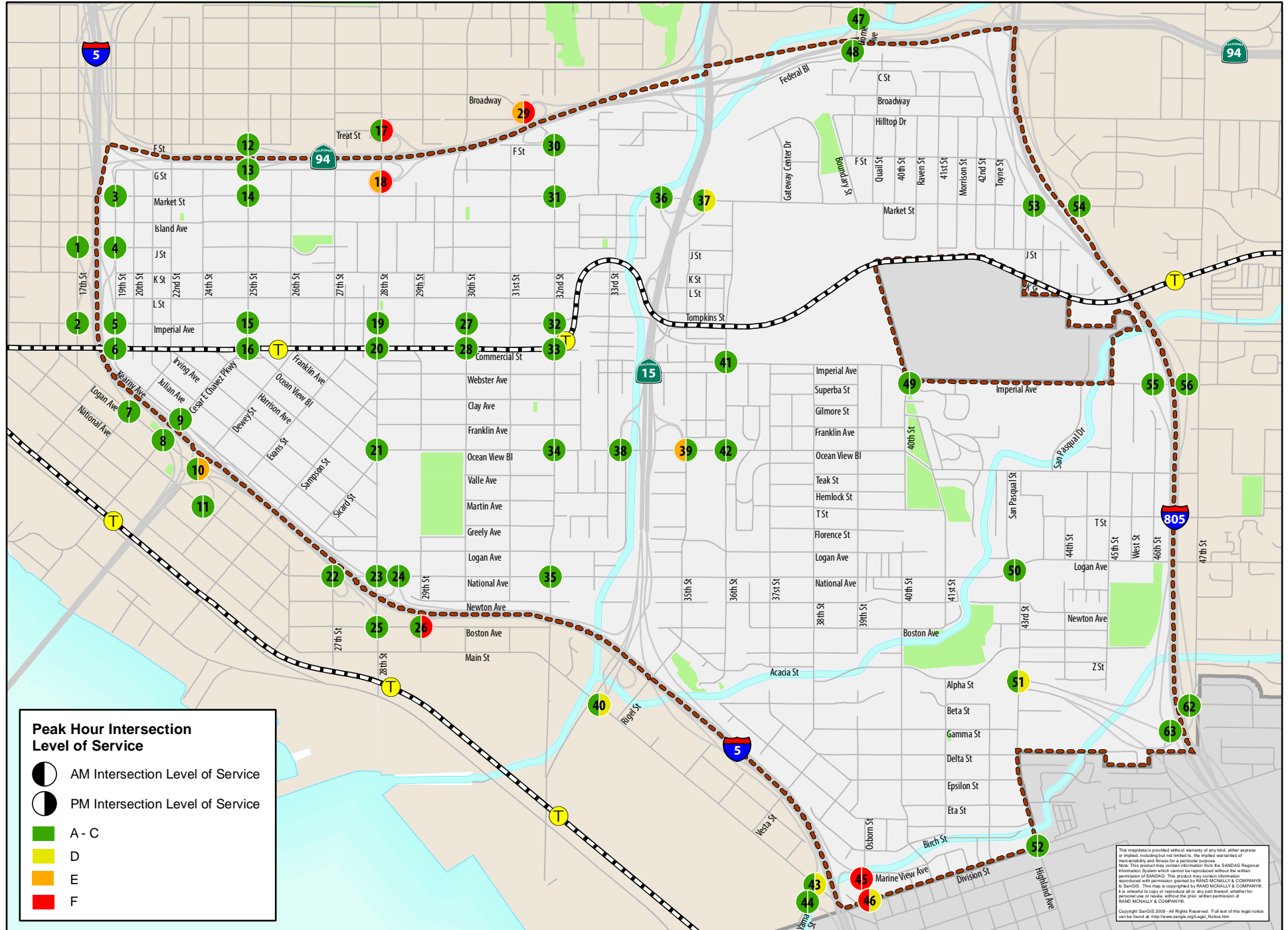


Figure 3-18: Existing AM/PM Peak Hour Intersection Levels of Service

3.4.3 Intersection Queuing Analysis

A queuing analysis was conducted at each of the study intersections to assess potential overflowing issues at exclusive turn lanes and closely spaced intersections. Closely spaced intersections include all ramp intersections and intersections within close proximity (less than 500 feet) to one another. The limitations in turn-lane storage capacity could result in turning vehicles overflow into adjacent lanes, while excessive queuing (queue length exceeds distance to upstream intersection) at closely spaced intersection could negatively affect the operations of the upstream intersection. When either situation occurs, traffic operations could deteriorate, resulting in additional levels of congestion.

Table 3.13 displays potential intersection queuing issues during the AM and/or PM peak hour.

TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
1	17th Street/I-5 SB On-Ramp / J Street	Signalized	EBR	AM / PM	75	9 / 19	0 / 0
			WBTL	AM / PM	485	60 / 61	0 / 0
2	17th Street/I-5 SB Off-Ramp / Imperial Avenue	Signalized	SBL	AM / PM	140	91 / 114	0 / 0
			WBTL	AM / PM	460	20 / 9	0 / 0
3	19th Street / Market Street	Signalized	EBL	AM / PM	110	8 / 53	0 / 0
4	19th Street/I-5 NB Off-Ramp / J Street	AWSC	EBTL	AM / PM	485	5 / 5	0 / 0
			WBTR	AM / PM	200	5 / 3	0 / 0
			NBL	AM / PM	100	20 / 20	0 / 0
			NBTR	AM / PM	180	30 / 125	0 / 0
5	19th Street/I-5 NB On-Ramp / Imperial Avenue	Signalized	NBLTR	AM / PM	300	72 / 64	0 / 0
			EBL	AM / PM	460	28 / 125	0 / 0
			EBT	AM / PM	460	24 / 129	0 / 0
6	19th Street / Commercial Street	Signalized	EBTL	AM / PM	500	15 / 26	0 / 0
7	I-5 SB Off-Ramp/Beardsley Street / Logan Avenue	AWSC	NBLR	AM / PM	300	10 / 28	0 / 0
			SBLTR	AM / PM	525	55 / 35	0 / 0
			EBTR	AM / PM	600	18 / 98	0 / 0
			WBL	AM / PM	60	8 / 5	0 / 0
			WBT	AM / PM	590	18 / 13	0 / 0
8	Cesar Chavez Parkway/SR-75 On-Ramp / Logan Avenue	Signalized	NBL	AM / PM	90	23 / 33	0 / 0
			NBT	AM / PM	300	41 / 92	0 / 0
			NBR	AM / PM	300	36 / 203	0 / 0

**TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
8	Cesar Chavez Parkway/SR-75 On-Ramp / Logan Avenue	Signalized	SBL	AM / PM	110	118 / 156	8 / 46
			SBT	AM / PM	320	155 / 105	0 / 0
			EBL	AM / PM	90	52 / 70	0 / 0
			EBT	AM / PM	590	80 / 199	0 / 0
			WBL	AM / PM	100	16 / 14	0 / 0
			WBT	AM / PM	600	22 / 20	0 / 0
			WBR	AM / PM	60	0 / 0	0 / 0
9	Cesar Chavez Parkway / I-5 NB Ramps	Signalized	NBL	AM / PM	775	324 / 191	0 / 0
			NBTR	AM / PM	570	263 / 150	0 / 0
			EBL	AM / PM	180	119 / 166	0 / 0
			EBT	AM / PM	320	47 / 86	0 / 0
10	I-5 SB On-Ramp / Logan Avenue	OWSC	EBL	AM / PM	100	21 / 55	0 / 0
			NBLTR	AM / PM	80	0 / 7	0 / 0
11	SR-75 Off-Ramp / National Avenue	OWSC	SBL	AM / PM	115	2 / 11	0 / 0
			SBR	AM / PM	115	14 / 15	0 / 0
12	25th Street / SR-94 WB Off-Ramp/F Street	AWSC	NBTL	AM / PM	290	78 / 40	0 / 0
			SBTR	AM / PM	300	95 / 220	0 / 0
			WBLTR	AM / PM	680	185 / 78	0 / 0
13	25th Street / SR-94 EB On-Ramp/G Street	AWSC	NBTR	AM / PM	300	50 / 33	0 / 0
			SBL	AM / PM	290	50 / 198	0 / 0
			SBT	AM / PM	290	23 / 48	0 / 0
			EBLTR	AM / PM	600	20 / 43	0 / 0
14	25th Street / Market Street	Signalized	NBL	AM / PM	55	50 / 52	0 / 0
			SBL	AM / PM	55	79 / 181	24 / 126
			SBTR	AM / PM	300	63 / 128	0 / 0
			EBL	AM / PM	110	52 / 86	0 / 0
			WBL	AM / PM	85	51 / 47	0 / 0
15	25th Street / Imperial Avenue	Signalized	NBLTR	AM / PM	300	46 / 70	0 / 0
			EBL	AM / PM	80	11 / 27	0 / 0
			WBL	AM / PM	75	15 / 10	0 / 0

**TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
16	25th Street/Cesar Chavez Parkway/Ocean View Boulevard / Commercial Street	Signalized	SBLTR	AM / PM	300	109 / 267	0 / 0
			SBR	AM / PM	160	76 / 0	0 / 0
			NEL	AM / PM	55	77 / 147	19 / 91
17	28th Street / SR-94 WB Ramps/Treat Street	TWSC	EBT	AM / PM	140	5 / 7	0 / 0
			WBTL	AM / PM	20	224 / 935	204 / 915
18	28th Street / SR-94 EB Ramps	OWSC	WBLR	AM / PM	700	94 / 235	0 / 0
19	28th Street / Imperial Avenue	Signalized	NBLTR	AM / PM	300	130 / 157	0 / 0
			EBL	AM / PM	150	9 / 20	0 / 0
			WBL	AM / PM	105	5 / 15	0 / 0
20	28th Street / Commercial Street	Signalized	SBLTR	AM / PM	300	26 / 57	0 / 0
21	28th Street / Ocean View Boulevard	Signalized	NBLTR	AM / PM	75	68 / 107	0 / 32
			SBLTR	AM / PM	310	75 / 101	0 / 0
			EBLTR	AM / PM	515	39 / 59	0 / 0
			WBLTR	AM / PM	595	112 / 77	0 / 0
22	27th Street/I-5 SB Off-Ramp / National Avenue	OWSC	NBL	AM / PM	310	4 / 5	0 / 0
			NBR	AM / PM	150	22 / 39	0 / 0
23	28th Street / National Avenue	Signalized	NBLTR	AM / PM	690	38 / 35	0 / 0
			EBL	AM / PM	60	85 / 94	25 / 34
			EBTR	AM / PM	600	49 / 126	0 / 0
			WBL	AM / PM	80	85 / 144	5 / 64
			WBTR	AM / PM	230	524 / 228	294 / 0
24	I-5 NB Ramps / National Avenue	Signalized	NBL	AM / PM	680	266 / 248	0 / 0
			NBR	AM / PM	680	39 / 41	0 / 0
			EBT	AM / PM	230	178 / 362	0 / 132
			EBR	AM / PM	170	23 / 24	0 / 0
25	28th Street/I-5 SB Off-Ramp / Boston Avenue	Signalized	NBL	AM / PM	65	17 / 11	0 / 0
			SBL	AM / PM	110	138 / 221	28 / 111
			SBTR	AM / PM	680	131 / 164	0 / 0
			EBL	AM / PM	75	18 / 34	0 / 0
			WBL	AM / PM	75	9 / 8	0 / 0

**TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
26	I-5 SB On-Ramp / Boston Avenue	OWSC	NBT	AM / PM	310	13 / 116	0 / 0
			EBL	AM / PM	600	16 / 59	0 / 0
27	30th Street / Imperial Avenue	Signalized	NBLTR	AM / PM	300	46 / 86	0 / 0
			EBL	AM / PM	90	10 / 8	0 / 0
			WBL	AM / PM	80	17 / 8	0 / 0
28	30th Street / Commercial Street	Signalized	SBLTR	AM / PM	300	22 / 27	0 / 0
29	Broadway / SR-94 WB Ramps	OWSC	WBL	AM / PM	350	147 / 233	0 / 0
			WBR	AM / PM	350	135 / 109	0 / 0
30	Broadway/32nd Street / F Street	TWSC	EBT	AM / PM	600	4 / 4	0 / 0
			WBT	AM / PM	600	19 / 15	0 / 0
31	32nd Street / Market Street	Signalized	EBL	AM / PM	120	22 / 25	0 / 0
			WBL	AM / PM	60	60 / 46	0 / 0
32	32nd Street / Imperial Avenue	Signalized	NBLTR	AM / PM	300	54 / 74	0 / 0
			EBL	AM / PM	100	35 / 36	0 / 0
			WBL	AM / PM	95	19 / 26	0 / 0
33	32nd Street / Commercial Street	Signalized	SBLTR	AM / PM	300	16 / 33	0 / 0
34	32nd Street / Ocean View Boulevard	Signalized	WBL	AM / PM	70	68 / 60	0 / 0
35	32nd Street / National Boulevard	Signalized	EBL	AM / PM	105	17 / 27	0 / 0
			WBL	AM / PM	110	24 / 22	0 / 0
36	I-15 SB Ramps / Market Street	Signalized	NBL	AM / PM	180	263 / 92	83 / 0
			NBR	AM / PM	180	56 / 488	0 / 308
			EBR	AM / PM	125	33 / 121	0 / 0
			WBL	AM / PM	170	151 / 148	0 / 0
			WBT	AM / PM	620	141 / 56	0 / 0
37	I-15 NB Ramps / Market Street	Signalized	NBL	AM / PM	220	135 / 106	0 / 0
			NBR	AM / PM	220	33 / 54	0 / 0
			EBT	AM / PM	620	122 / 493	0 / 0
			EBR	AM / PM	90	51 / 363	0 / 273
			WBL	AM / PM	200	388 / 502	188 / 302
38	I-15 SB Ramps / Ocean View Boulevard	Signalized	SBL	AM / PM	220	124 / 344	0 / 124
			SBR	AM / PM	220	54 / 92	0 / 0

**TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
38	I-15 SB Ramps / Ocean View Boulevard	Signalized	EBL	AM / PM	60	78 / 153	18 / 93
			WBT	AM / PM	860	66 / 74	0 / 0
39	I-15 NB Ramps / Ocean View Boulevard	Signalized	SBT	AM / PM	1,360	116 / 164	0 / 0
			SBR	AM / PM	1,360	36 / 50	0 / 0
			EBL	AM / PM	250	175 / 177	0 / 0
			EBT	AM / PM	860	224 / 576	0 / 0
			EBR	AM / PM	860	39 / 82	0 / 0
			WBL	AM / PM	85	38 / 42	0 / 0
			WBT	AM / PM	530	888 / 475	358 / 0
40	I-15 Ramps / Main Street	Signalized	EBL	AM / PM	140	41 / 271	0 / 131
			WBR	AM / PM	260	35 / 45	0 / 0
41	36th Street / Imperial Avenue	Signalized	NBL	AM / PM	80	150 / 131	70 / 51
			EBL	AM / PM	190	26 / 36	0 / 0
42	36th Street / Ocean View Boulevard	Signalized	EBL	AM / PM	85	14 / 26	0 / 0
			EBT	AM / PM	530	139 / 386	0 / 0
			WBL	AM / PM	70	10 / 12	0 / 0
43	I-5 SB Off-Ramp/Yama Street / Main Street	Signalized	NBT	AM / PM	200	22 / 40	0 / 0
			NBR	AM / PM	200	20 / 18	0 / 0
			WBL	AM / PM	110	413 / 223	303 / 113
44	Yama Street / I-5 SB On-Ramp	OWSC	SBL	AM / PM	200	10 / 0	0 / 0
45	I-5 NB Ramps / Osborn Street	OWSC	WBL	AM / PM	50	121 / 78	71 / 28
			WBR	AM / PM	50	1,188 / 20	1,138 / 0
46	Osborn Street / Division Street	AWSC	NBL	AM / PM	40	3 / 5	0 / 0
			NBTR	AM / PM	240	313 / 55	73 / 0
			SBLTR	AM / PM	150	50 / 98	0 / 0
			EBL	AM / PM	60	278 / 170	218 / 110
			EBTR	AM / PM	310	40 / 268	0 / 0
			WBL	AM / PM	70	10 / 13	0 / 0
			WBTR	AM / PM	420	323 / 108	0 / 0
47	Home Avenue / SR-94 WB On-Ramp / Ash Street/Federal Boulevard	Signalized	NBL	AM / PM	140	38 / 58	0 / 0
			NBT	AM / PM	600	116 / 318	0 / 0

**TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
47	Home Avenue / SR-94 WB On-Ramp / Ash Street/Federal Boulevard	Signalized	SBL	AM / PM	110	72 / 108	0 / 0
			EBL	AM / PM	80	59 / 42	0 / 0
			WBL	AM / PM	110	90 / 59	0 / 0
48	Home Avenue/Federal Boulevard / SR-94 EB Off-Ramp/I-15 NB Off-Ramp	AWSC	NBT	AM / PM	90	3 / 3	0 / 0
			SBT	AM / PM	600	0 / 3	0 / 0
			EBL	AM / PM	730	45 / 255	0 / 0
			EBLR	AM / PM	730	18 / 58	0 / 0
49	40th Street / Imperial Avenue	Signalized	NBL	AM / PM	110	99 / 30	0 / 0
50	43rd Street / National Avenue	Signalized	NBL	AM / PM	214	157 / 112	0 / 0
			NBR	AM / PM	220	26 / 111	0 / 0
			SBL	AM / PM	110	7 / 32	0 / 0
			EBL	AM / PM	175	53 / 41	0 / 0
			EBR	AM / PM	300	59 / 25	0 / 0
			WBL	AM / PM	185	106 / 105	0 / 0
51	43rd Street / I-805 Ramps	Signalized	NBL	AM / PM	150	70 / 139	0 / 0
			SBL	AM / PM	215	268 / 312	53 / 97
			EBR	AM / PM	125	0 / 0	0 / 0
52	43rd Street/Highland Avenue / Division Street	Signalized	NBL	AM / PM	60	96 / 153	36 / 93
			SBL	AM / PM	60	111 / 126	51 / 66
			EBL	AM / PM	90	35 / 42	0 / 0
			WBL	AM / PM	60	214 / 96	154 / 36
53	Market Street / I-805 SB Ramps	Signalized	SBL	AM / PM	330	122 / 326	0 / 0
			SBR	AM / PM	330	52 / 54	0 / 0
			WBL	AM / PM	290	287 / 273	0 / 0
			WBT	AM / PM	530	243 / 186	0 / 0
54	Market Street / I-805 NB Ramps	Signalized	NBL	AM / PM	550	184 / 100	0 / 0
			NBR	AM / PM	550	40 / 31	0 / 0
			EBL	AM / PM	100	86 / 168	0 / 68
			EBT	AM / PM	530	77 / 191	0 / 0
55	Imperial Avenue / I-805 SB Ramps	Signalized	SBL	AM / PM	540	161 / 310	0 / 0
			SBTR	AM / PM	540	261 / 186	0 / 0

**TABLE 3.13
EXISTING PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Traffic Control	Turning Movement	Peak Hour	Pocket Length (ft)	95% Queue Length (ft)	Excess Queue (ft)
55	Imperial Avenue / I-805 SB Ramps	Signalized	WBL	AM / PM	190	80 / 113	0 / 0
			WBT	AM / PM	410	134 / 110	0 / 0
56	Imperial Avenue / I-805 NB Ramps	Signalized	NBTL	AM / PM	260	104 / 125	0 / 0
			NBR	AM / PM	260	13 / 39	0 / 0
			EBL	AM / PM	140	155 / 310	15 / 170
			EBT	AM / PM	510	59 / 107	0
62	47th Street / I-805 NB Ramps	Signalized	NBTL	AM / PM	120	27 / 91	0 / 0
			NBR	AM / PM	95	34 / 62	0 / 0
			EBL	AM / PM	80	258 / 174	178 / 94
			EBT	AM / PM	490	22 / 32	0 / 0
			WBT	AM / PM	220	88 / 41	0 / 0
63	47th Street / I-805 SB Ramps	Signalized	SBT	AM / PM	820	48 / 117	0 / 0
			SBR	AM / PM	820	49 / 437	0 / 0
			EBT	AM / PM	430	146 / 203	0 / 0
			WBL	AM / PM	140	158 / 203	18 / 63
			WBT	AM / PM	490	18 / 59	0 / 0

Source: Chen Ryan Associates; February 2015

Notes:

OWSC = One-way stop controlled.

TWSC = Two-way stop controlled.

AWSC = All-way stop controlled.

As shown, there are currently twenty-two (22) study intersections including thirty-two (32) different movements within the Southeastern San Diego study area that are operating with potential queuing issues during either the AM or PM peak hour. The spill overs could degrade traffic operations within the intersection or the associated closely spaced upstream intersections.

3.4.4 Vehicular Collision Analysis

Automobile collision data was obtained from the City of San Diego for the period from 2007 to 2012. The data indicate that a total of 1,594 vehicular collisions occurred over this period within Southeastern San Diego. Less than 20% of those collisions occurred on the Urban Streets (or 474 collisions).

Table 3-14 shows the vehicular collisions that occurred in Southeastern San Diego during the period from 2007 to 2012. As shown, these collisions included 763 causing injuries and 2 causing fatalities. The table reports collisions for the Urban Streets, as well as community wide collisions.

The most prominent collision causes are “unsafe movements” on the part of the driver, and “unsafe speeds”.

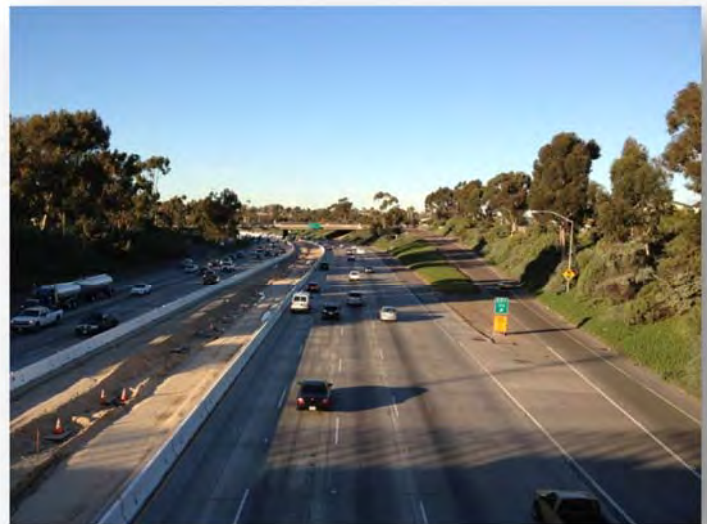
Figure 3-19 shows the distribution of vehicle collisions across the Southeastern San Diego.

3.4.5 Freeway Segments and LOS Analysis

Four regional corridors run adjacent to or traverse the community of Southeastern San Diego, carrying significant levels of traffic while providing regional access to and from the community.

Interstate 5

Interstate 5 (I-5) is a major north-south regional facility and provides access between the International Border with Mexico, cities north of San Diego, and Orange and Los Angeles counties to the north. I-5 has eight lanes mixed-flow/general purpose lanes (four in each direction), and one or two auxiliary lanes. Local access is provided via interchanges at 17th Street, Imperial Avenue, 28th Street, and Main Street.



The California Department of Transportation (Caltrans) maintains and operates I-5. In 2011, I-5 accommodated 155,000 to 208,000 average daily trips (ADT) along the segments adjacent to Southeastern San Diego. Trucks comprise about four to five percent of the total traffic on I-5.

Interstate 15

Interstate 15 (I-15) is a major north-south regional facility and provides access between the I-5 near Southeastern San Diego and locations north of San Diego, including Riverside County and beyond. I-15 has between four and eight lanes mixed-flow/general purpose lanes, and one auxiliary lane. Local access is provided via interchanges at Market Street and Ocean View Boulevard. The California Department of Transportation (Caltrans) maintains and operates I-15. In 2011, I-15 accommodated between 48,000 and 115,000 average daily trips (ADT) along the segments adjacent to Southeastern San Diego. Trucks comprise about five percent of the total traffic on I-15.

**TABLE 3.14
VEHICULAR COLLISION SUMMARY**

Multi-Modal Corridor	Total	Location Type		Lighting		Severity			Primary Cause							
		Midblock	Intersection	Daylight	Dusk/Night/Dawn	Fatality	Injured	None	Unsafe Movement ¹	Unsafe Speed	Failed to Yield	Being Chased / Avoiding Another Vehicle or Animal	DUI	Medical or Mechanical Condition / Not Paying Attention	Ped at Fault / Hit Object/ Other	Not at Fault
Market Street, between I-5 and I-805	169	73	96	110	59	0	118	81	92	43	17	6	1	5	2	3
Imperial Avenue, between I-5 and I-805	128	45	83	74	54	1	84	69	84	21	14	0	1	5	0	3
National Avenue/Logan Avenue, between 28th Street and I-805	155	82	73	105	50	0	91	99	109	26	15	3	0	1	1	0
43rd Street, between Logan Avenue and Division Street	22	1	21	15	7	0	18	10	12	5	4	0	0	0	0	1
Urban Streets Total	474	201	273	304	170	1	311	259	297	95	50	9	2	11	3	7
Community-wide Total	1,594	887	707	788	806	2	763	1,078	1,144	244	5	30	11	131	11	18

Source: City of San Diego, Chen Ryan Associates; February 2015

Notes:

The above information was provided by the City of San Diego for July 2007 through September 2012.

¹ "Unsafe Movement" includes improper lane changes/starts/passing/turns, unsafe backing, and other general unsafe maneuvers.

² "Other" includes auto theft, driverless moving vehicle, enter/exiting moving vehicle.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

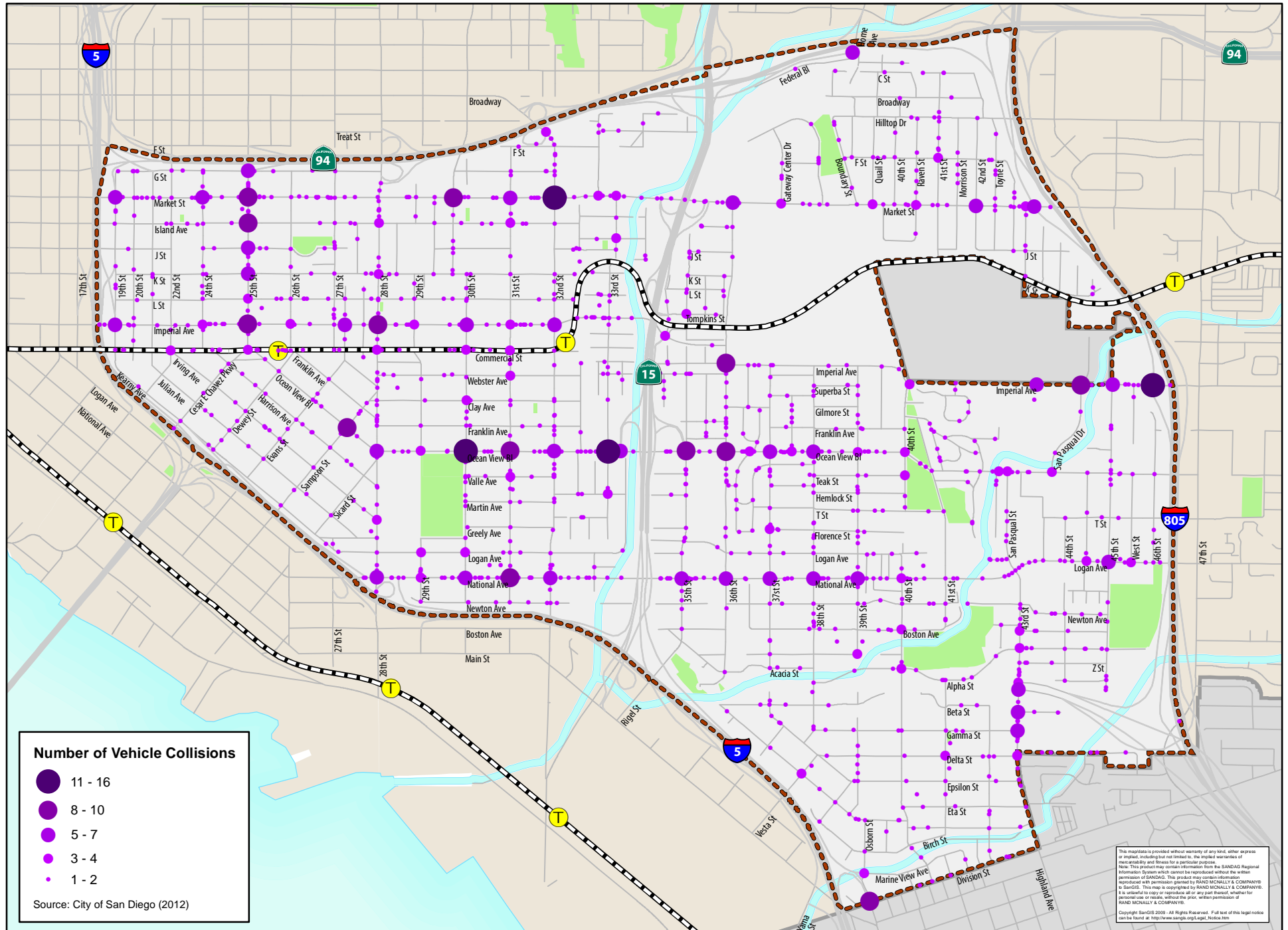


Figure 3-19: Vehicle Collisions (July 2007 - September 2012)



Interstate 805

Interstate 805 (I-805) is a major north-south regional facility and provides access between the International Border with Mexico and Sorrento Valley. I-805 has eight lanes mixed-flow/general purpose lanes, and one or two auxiliary lanes. Local access is provided via interchanges at Market Street, Imperial Avenue and 43rd Street. The California Department of Transportation (Caltrans) maintains and operates I-805. In 2011, I-805 accommodated between 196,000 and 225,000 average daily trips (ADT) along the segments adjacent to Southeastern San Diego. Trucks comprise about five to six percent of the total traffic on I-805.

State Route 94

State Route 94 (SR-94) is a major east-west regional facility and provides access between the downtown San Diego and the unincorporated community of Boulevard. SR-94 has between eight lanes mixed-flow/general purpose lanes, and one or two auxiliary lanes. Local access is provided via interchanges at 25th Street, 28th Street, Broadway, and Home Avenue. The California Department of Transportation (Caltrans) maintains and operates SR-94. In 2011, SR-94 accommodated between 124,000 and 172,000 average daily trips (ADT) along the segments adjacent to Southeastern San Diego. Trucks comprise about three to four percent of the total traffic on SR-94.

Table 3.15 displays freeway segment LOS analysis results for the key freeway segments in the vicinity of Southeastern San Diego. Year 2011 freeway traffic volumes were obtained from Caltrans and are included in **Appendix H**. As shown, all freeway segments within the study communities are currently operating at LOS D or better with the exception of the following eight (8) segments:

- I-5, between 17th Street and SR-94 (southbound) – LOS E;
- I-5, between SR-94 and Imperial Avenue (northbound) – LOS F;
- I-5, between 28th Street & I-15 (northbound) – LOS F;
- I-5, between I-15 and Main Street (northbound and southbound) – LOS E;
- I-805, between Home Avenue and SR-94 (northbound and southbound) – LOS F;
- I-805, between SR-94 and Market Street (northbound and southbound) – LOS F;
- I-805, between Imperial Avenue and 43rd Street (southbound) – LOS E; and
- SR-94, between I-805 and 47th Street (westbound) – LOS E.

**TABLE 3.15
EXISTING FREEWAY SEGMENT LOS RESULTS**

Freeway	Segment	ADT ¹	Direction	# of Lanes	Capacity ²	D ³	K ⁴	HV ⁵	Peak Hour Volume	V/C	LOS
I-5	17th Street & SR-94	201,000	NB	4M+2A	12,220	54.3%	8.4%	4.0%	9,600	0.79	C
			SB	4M	9,400	53.2%	8.3%	4.0%	9,400	1.00	E
I-5	SR-94 & Imperial Avenue	208,000	NB	4M+1A	10,810	62.2%	8.1%	4.0%	11,100	1.03	F0
			SB	4M+1A	10,810	53.2%	8.3%	4.0%	9,700	0.90	D
I-5	Imperial Avenue & SR-75	161,000	NB	4M+1A	10,810	62.2%	8.1%	3.8%	8,600	0.80	D
			SB	4M+1A	10,810	57.7%	8.2%	3.8%	8,000	0.74	C
I-5	SR-75 & 28th Street	159,000	NB	4M+2A	12,220	70.4%	8.4%	5.0%	9,900	0.81	D
			SB	4M+1A	10,810	57.7%	8.2%	5.0%	7,900	0.73	C
I-5	28th Street & I-15	155,000	NB	4M	9,400	70.4%	8.4%	5.0%	9,600	1.02	F0
			SB	4M	9,400	57.7%	8.2%	5.0%	7,700	0.82	D
I-5	I-15 & Main Street	191,000	NB	4M+2A	12,220	70.4%	8.4%	5.0%	11,900	0.97	E
			SB	5M	11,750	65.4%	8.7%	5.0%	11,400	0.97	E
I-15	I-805 & SR-94	109,000	NB	3M+1A	8,460	60.3%	8.0%	5.1%	5,500	0.65	C
			SB	2M+1A	6,110	51.0%	8.4%	5.1%	4,900	0.80	D
I-15	SR-94 & Market Street	115,000	NB	3M+1A	8,460	59.5%	8.1%	5.1%	5,800	0.69	C
			SB	3M+1A	8,460	55.2%	9.7%	5.1%	6,500	0.77	C
I-15	Market Street & Ocean View Boulevard	107,000	NB	3M	7,050	61.2%	8.1%	5.1%	5,600	0.79	C
			SB	3M	7,050	55.2%	9.6%	5.1%	6,000	0.85	D
I-15	Ocean View Boulevard & I-5	48,000	NB	3M+1A	8,460	61.2%	7.0%	5.1%	2,200	0.26	A
			SB	4M+1A	10,810	55.2%	7.8%	5.1%	2,200	0.20	A

**TABLE 3.15
EXISTING FREEWAY SEGMENT LOS RESULTS**

Freeway	Segment	ADT ¹	Direction	# of Lanes	Capacity ²	D ³	K ⁴	HV ⁵	Peak Hour Volume	V/C	LOS
I-15	I-5 & Norman Scott Road	16,500	NB	2M	4,700	61.2%	7.0%	5.1%	700	0.15	A
			SB	2M	4,700	54.4%	7.5%	5.1%	700	0.15	A
I-805	Home Avenue & SR-94	217,000	NB	4M	9,400	64.9%	7.0%	6.5%	10,400	1.11	F0
			SB	4M	9,400	58.6%	7.8%	6.5%	10,400	1.11	F0
I-805	SR-94 & Market Street	216,000	NB	4M	9,400	64.7%	7.0%	6.5%	10,200	1.09	F0
			SB	4M	9,400	58.6%	7.8%	6.5%	10,400	1.11	F0
I-805	Market Street & Imperial Avenue	227,000	NB	4M+2A	12,220	64.7%	7.0%	6.5%	10,800	0.88	D
			SB	4M+2A	12,220	58.6%	7.8%	6.5%	10,900	0.89	D
I-805	Imperial Avenue & 43rd Street	210,000	NB	5M	11,750	64.7%	7.0%	6.5%	9,900	0.84	D
			SB	4M+1A	10,810	60.7%	7.5%	6.5%	10,100	0.93	E
I-805	43rd Street & Plaza Boulevard	196,000	NB	4M+2A	12,220	72.0%	6.0%	6.5%	8,900	0.73	C
			SB	5M	11,750	59.5%	7.5%	6.5%	9,300	0.79	C
SR-94	17th Street & 25th Street	110,000	EB	4M	9,400	69.8%	9.3%	3.6%	7,500	0.80	D
			WB	3M+1A	8,460	78.0%	7.6%	3.6%	6,900	0.82	D
SR-94	25th Street & 28th Street	124,000	EB	4M	9,400	68.3%	9.3%	3.6%	8,300	0.88	D
			WB	4M	9,400	74.4%	7.6%	3.6%	7,400	0.79	C
SR-94	28th Street & 30th Street	132,000	EB	4M	9,400	67.7%	8.6%	3.6%	8,100	0.86	D
			WB	4M	9,400	74.4%	7.6%	3.6%	7,900	0.84	D
SR-94	30th Street & I-15	146,000	EB	4M+1A	10,810	67.7%	8.6%	3.6%	9,000	0.83	D
			WB	4M+1A	10,810	74.4%	7.6%	3.6%	8,700	0.80	D

**TABLE 3.15
EXISTING FREEWAY SEGMENT LOS RESULTS**

Freeway	Segment	ADT ¹	Direction	# of Lanes	Capacity ²	D ³	K ⁴	HV ⁵	Peak Hour Volume	V/C	LOS
SR-94	I-15 & Home Avenue	140,000	EB	4M+1A	10,810	67.7%	8.6%	4.2%	8,600	0.80	D
			WB	4M	9,400	74.4%	7.6%	4.2%	8,300	0.88	D
SR-94	Home Avenue & I-805	128,000	EB	4M+1A	10,810	67.7%	8.6%	4.2%	7,900	0.73	C
			WB	4M	9,400	74.4%	7.6%	4.2%	7,600	0.81	D
SR-94	I-805 & 47th Street	172,000	EB	5M	11,750	67.7%	8.6%	3.9%	10,600	0.90	D
			WB	4M+1A	10,810	74.4%	7.6%	3.9%	10,200	0.94	E

Source: Caltrans, Chen Ryan Associates; February 2015

Notes:

Bold letter indicates unacceptable LOS E or F.

M = Mainline. Aux = Auxiliary Lane.

¹Traffic volumes provided by Caltrans (2011).

²The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.

³D = Directional split.

⁴K = Peak hour %.

⁵HV = Heavy vehicle %.

3.4.6 Freeway Ramp Metering Analysis

Table 3.16 displays the ramp metering analysis conducted at the SR-94 EB On-Ramps at 25th Street, 28th Street, and 32nd Street; and at the I-805 NB On-Ramps at 47th Street and Imperial Avenue under existing conditions. Ramp meter rates were obtained from Caltrans District 11 and included in **Appendix I**.

**TABLE 3.16
EXISTING RAMP METERING ANALYSIS**

On-Ramp	# of Lanes		Peak Hour	Demand ¹ (veh/hr)	Meter Rate ² (veh/hr)	Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)
	SOV	HOV						
SR-94 EB On-Ramp @ 25th Street	2	0	PM	738	868	0	0	0
SR-94 EB On-Ramp @ 28th Street	1	0	PM	646	868	0	0	0
SR-94 EB On-Ramp @ 32nd Street	1	0	PM	405	423	0	0	0
I-805 NB On-Ramp @ 47th Street	2	0	AM	401	880	0	0	0
I-805 NB On-Ramp @ Imperial Avenue	2	0	AM	1,251	1,589	0	0	0

Source: Caltrans, Chen Ryan Associates; February 2015

Notes:

SOV = Single Occupancy Vehicle; HOV = High Occupancy Vehicle.

¹Demand is the peak hour demand expected to use the on-ramp.

²Meter Rate is the peak hour capacity expected to be processed through the ramp meter. This value was obtained from Caltrans.

³Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴Delay = (Excess Demand / Meter Rate) X 60 min/hr.

⁵Queue = (Excess Demand) X 29 ft/veh.

As shown in the table, the peak hour capacity expected to be processed through the ramp meters is greater than the peak hour demand at both the SR-94 EB On-Ramps and the I-805 NB On-Ramps within the study area. Therefore, freeway on-ramp queuing issues do not currently exist during the AM or PM peak periods at any of the five metered ramps under current conditions.

3.5 Intelligent Transportation Systems (ITS)

The currently adopted citywide Mobility Element identifies the following goals for intelligent transportation system:

- *A transportation system which operates efficiently saves energy and reduces negative environmental impacts.*
- *A safe transportation system.*
- *A transportation system that effectively uses appropriate technologies.*

Implementation of Intelligent Transportation Systems (ITS) can provide many benefits to the local roadway network, including improving roadway traffic operations, improving transit operations and relaying valuable traffic-related information and providing guidance to drivers (e.g. locations of available parking, traffic congestion points, and the location of accidents). Coordinated traffic signals and transit signal priority treatments are examples of ITS programs that can help improve both transit and roadway operations.

3.5.1 Signal Coordination

Signal coordination can improve the operations of a roadway corridor by allowing motorists to travel through the corridor with reduced delays and fewer stops at red lights. This is done by linking the signals, usually via underground copper or fiber optic wire, and coordinating signal timing to account for the time it takes for a motorist, traveling at the speed limit, to drive from one signal to the next. These benefits should be balanced with the need for pedestrian and bicycle safety.

The following roadways within Southeastern San Diego have coordinated traffic signal timing plans in place:

- Market Street
- Imperial Avenue
- Ocean View Boulevard
- Cesar Chavez Parkway

3.5.2 Transit Priority

Transit Priority treatments are designed to improve transit operations and overall schedule adherence. Traffic signals along Commercial Street are equipped with transit priority treatment for trolley operations. The transit signal priority allows an advanced trolley phase (23 seconds) providing adequate time for trolleys to safely clear the intersection prior to vehicular traffic entering.

3.5.3 Potential ITS Improvements

Additional ITS improvement concepts for future consideration include:

- Expand signal coordination;
- Regularly update the timing of traffic signals to reflect shifting travel patterns;
- Consider the use of traffic responsive or adaptive traffic control in areas with variable traffic patterns;
- Implement transit signal priority treatments at signalized intersections serving rapid bus routes; and
- Use of variable message signs to direct motorists to available parking and to alert them of street closures.

3.6 Transportation Demand Management (TDM)

The goal of the City's Transportation Demand Management (TDM) program is to improve mobility, reduce congestion and air pollution, and provide options for employees and residents to commute to and from work.

Typical TDM strategies include promoting the following:

- Teleworking
- Alternative Work Schedules
- Walking
- Bicycling
- Carpooling
- Vanpooling
- Transit
- Car-sharing
- Mixed-Use Development
- Other Transportation Options

TDM measures improve the efficiency of our transportation system by helping to reduce vehicle trips during peak periods of demand.

According to the January 2007 - December 2011 American Community Survey (ACS), 17% of Southeastern San Diego residents carpool to work, which is well above the citywide average of 9.4%.

The San Diego Association of Governments (SANDAG) has an established program (iCommute) that serves as the administrator of regional TDM programs. iCommute provides the following services:

- RideMatcher – resources for finding carpool partners or available vanpool seats;
- SchoolPool – a program that enrolls schools to encourage parents to carpool;
- Transit Information - provides a linkage to transit service provider web pages;
- Bicycle Information – provides a link to SANDAG's Regional Bikeway Master Plan, which has been updated to show bicycle paths, lanes and routes in the region; and
- Guaranteed Ride Home – a program that allows vanpool riders affordable rides home to deal with emergency meetings or illness.

In addition to the iCommute program, Caltrans owns and/or maintains several park-and-ride lots in the region that are used to promote carpool activity. However, there are no park-and-ride facilities within Southeastern San Diego.

The City of San Diego’s Municipal Code requires new development to provide sufficient bicycle parking stalls, carpool parking and motorcycle facilities to encourage the use of alternative modes of transportation. The City is early in the process of developing recommendations to amend the land development requirements for pedestrian, bicycle, carpool, and commuter information facilities. The City is also coordinating with SANDAG on the implementation of a car-sharing demonstration program. Pricing strategies are also used to reduce demand on the transportation system. Managed lanes, such as the managed or express lanes on Interstate 15, are included in the 2050 RTP.

3.7 Bicycling

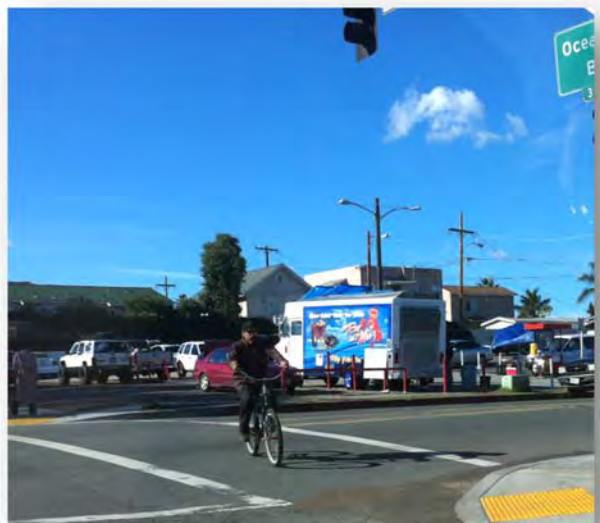
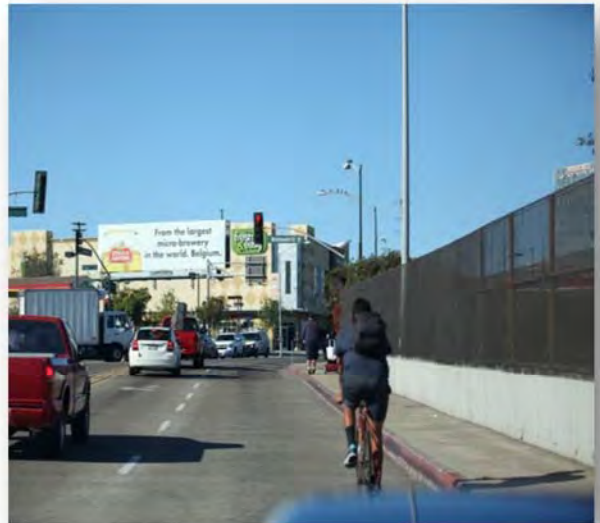
Bicycle facilities are an integral component of the Southeastern San Diego transportation system. Adequate bicycle facilities encourage active transportation, enhance recreational opportunities, and help attract visitors. Bikeways not only provide local opportunities for cyclists, but also offer regional connections. This section of the report discusses existing bicycle facilities, activity levels, LOS analysis results, and safety analyses within Southeastern San Diego.

The bicycling goals as expressed in the City’s 2008 General Plan Mobility Element include the following:

- *A city where bicycling is a viable travel choice, particularly for trips of less than five miles.*
- *A safe and comprehensive local and regional bikeway network.*
- *Environmental quality, public health, recreation and mobility benefits through increased bicycling.*

3.7.1 Existing Bicycle Facilities

Bicycle facilities are classified based on a standard typology as follows:



-
- Class I Bikeway (Bike Path) provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.



Recently Built Class I Bike Path in nearby Chula Vista along the Bayshore Bikeway.

- Class II Bikeway (Bike Lane) provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.



Class II Bike Lane along Market Street between 32nd and I-15 SB Ramps.

- Class III Bike Route provides for a right-of-way designated by signs or pavement markings for shared use with pedestrians or motor vehicles.



Class III Bike Route (with Sharrows) along Imperial Avenue, between 36th Street and 40th Street.

Figure 3-20 displays the location of existing bicycle facilities within the Southeastern San Diego community, while **Table 3.17** summarizes the mileage of existing bicycle facilities.

TABLE 3.17
MILEAGE OF EXISTING BICYCLE FACILITY WITHIN
SOUTHEASTERN SAN DIEGO

Facility Type	Mileage	Percent of Total Bicycle Facility	Percent of Total Roadway
Class I Multi-Use Path	0.6 miles	7.1%	0.7%
Class II Bicycle Lane	2.0 miles	25.9%	2.3%
Class III Bicycle Route	5.3 miles	67.0%	6.0%
TOTAL	7.9 miles	100%	9.0%

Source: SANDAG; Chen Ryan Associates; February 2015

As shown, there are currently about 7.9 miles of bicycle facilities within Southeastern San Diego, with over half being comprised of Class III Bike Route, which provides cyclists with the lowest level of separation from vehicular travel.

Only 9.0% of Southeastern San Diego roadways have bicycle facilities, indicating low levels of “complete streets” and the lack of a strong, inter-connected bicycle network in this community. Across the City of San Diego, 12.6% of roadways have bicycle facilities.

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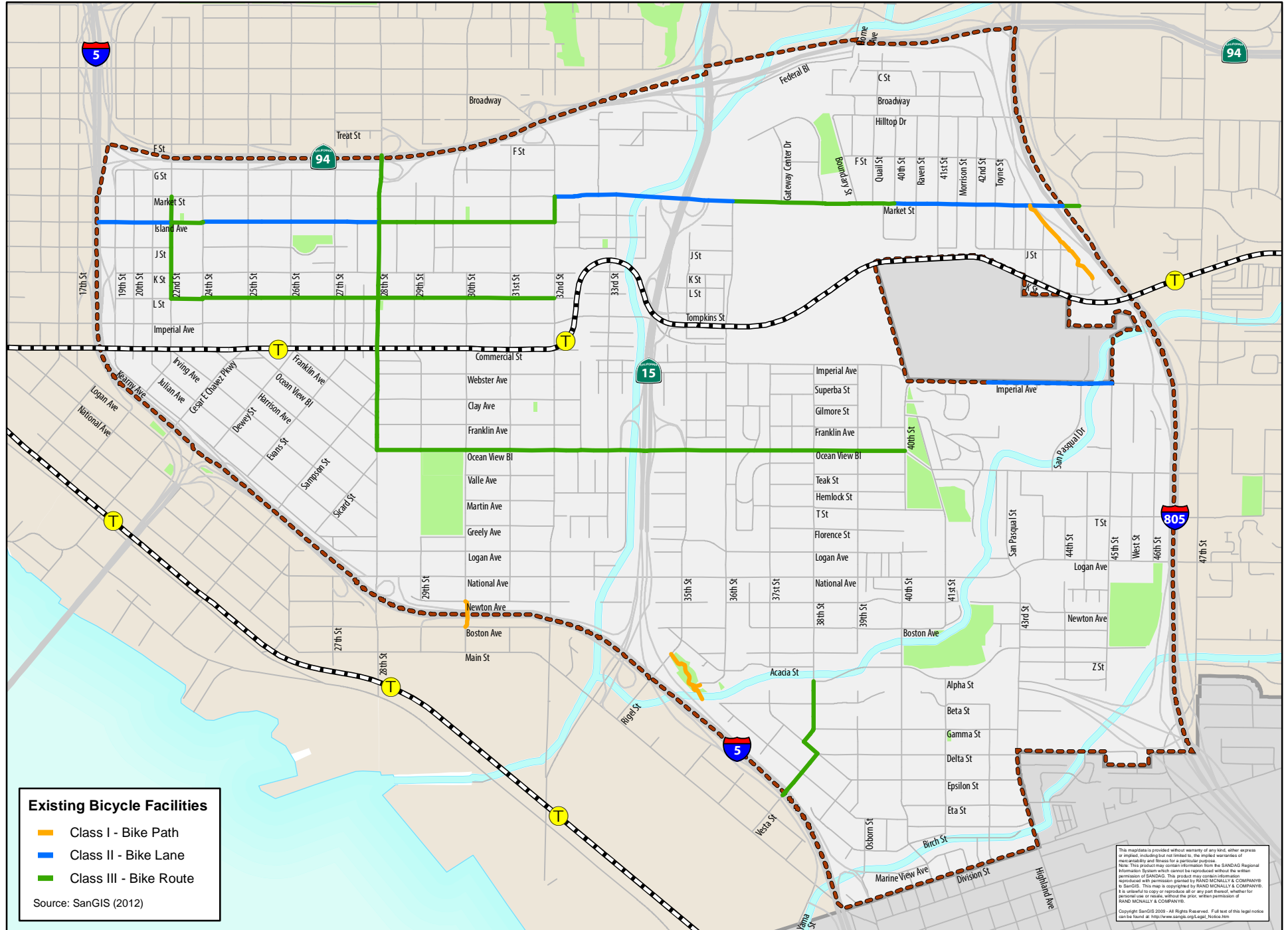


Figure 3-20: Existing Bicycle Facilities

3.7.2 Bicycling Activity Levels

Table 3.18 displays 2007-2011 estimated commuter cycling rates as reported by the American Community Survey (ACS) for Southeastern San Diego, the City and the County, as a whole. As shown, approximately 133 residents are currently cycling to work, which is 0.6 percent of all workers in Southeastern San Diego. Across the City as a whole, about 0.9 percent of all workers are cycling to work. The rate of cycling to work is slightly lower in Southeastern San Diego compared to the City and also compared to the County as a whole.

TABLE 3.18
PERCENT OF CYCLING COMMUTERS IN SOUTHEASTERN SAN DIEGO

	Southeastern San Diego	City of San Diego	County of San Diego
Number of Workers Cycling to Work	133	5,752	9,393
Percent of Total Workers	0.6%	0.9%	0.7%

Source: US Census, American Community Survey, 2011 Estimates; Chen Ryan Associates; February 2015

Figure 3-21 displays cycling rates for the journey to work by census tracts for Southeastern San Diego. The census tract located north of Commercial Street and west of 28th Street has the highest rate of bicycle commuting at 3.9% of workers, which is more than triple the citywide rate of bicycle commuting.

Figure 3-22 displays SANDAG's cycling propensity model (bicycle trip attractors + bicycle trip generators) developed as part of their *2010 Riding to the Future* regional bicycle plan. As shown, a majority of Southeastern San Diego reflects high levels of cycling propensity. The lack of bicycle facilities in the community, however, inhibits safe cycling and most likely leads to lower rates of cycling.

Figures 3-23 displays existing bicycle volumes at study area intersections. The highest AM peak hour bicycle count (17 AM peak hour cyclists) occurs at the 28th Street/Imperial Avenue intersection. Two study intersections each show 16 cyclists during the AM peak hour cyclists (19th Street/I-5NB On-Ramp/Imperial Avenue and 25th Street/Imperial Avenue). These two intersections, Imperial Avenue at 19th Street and at 25th Street, also have the highest PM peak hour bicycle count (23 PM peak hour cyclists).

Imperial Avenue serves as a major corridor connecting Southeastern San Diego and downtown San Diego, indicating that cyclists counted during the peak period are most likely commuting between Southeastern San Diego and downtown San Diego. Cycling along Imperial Avenue however can be dangerous and uncomfortable due to the absence of a facility along this roadway, and the need to negotiate high speed vehicle traffic near I-5 freeway ramps.

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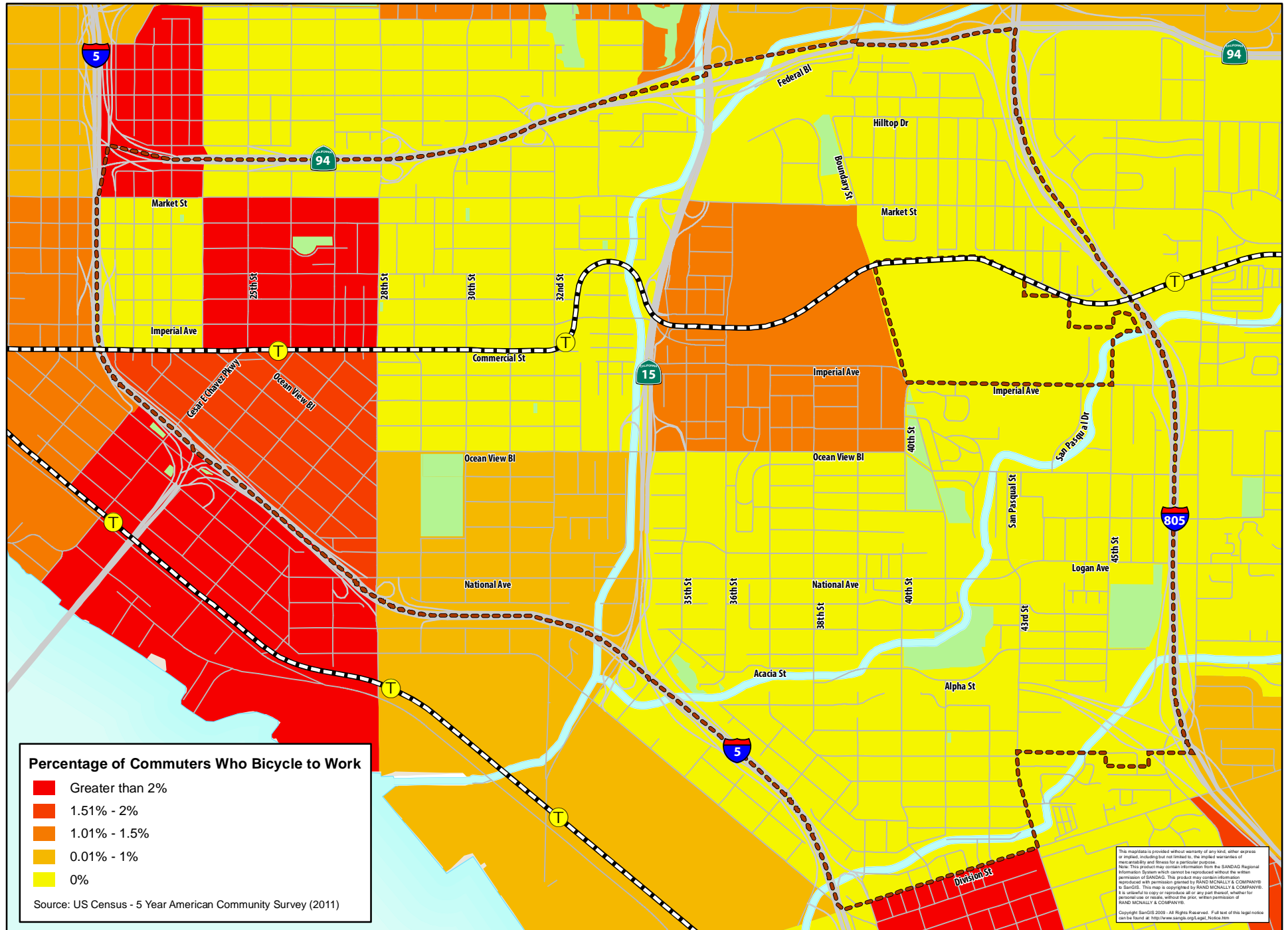


Figure 3-21: Percent of Bicycle Commuters by Census Tract

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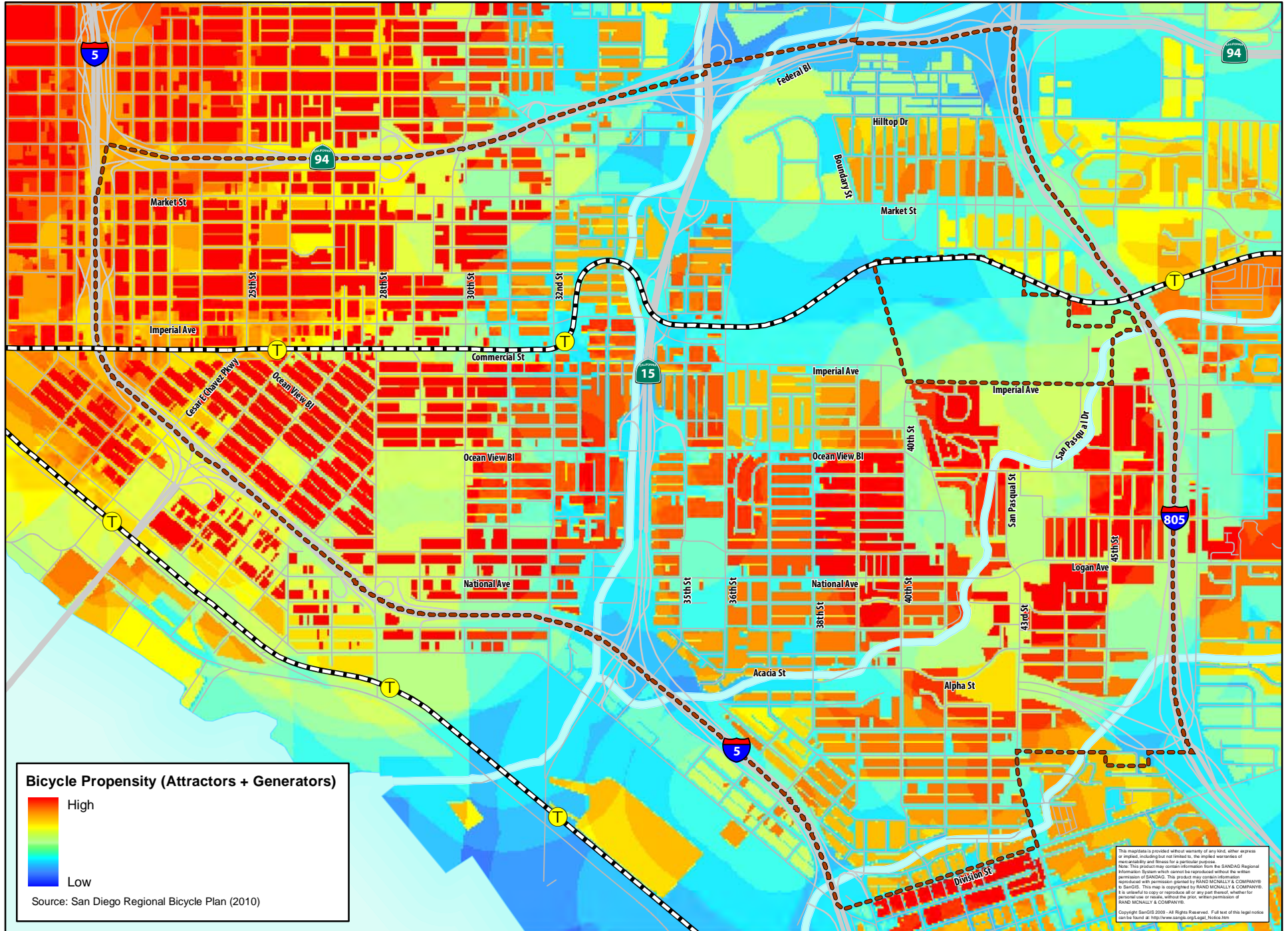


Figure 3-22: SANDAG Regional Bicycle Demand Model

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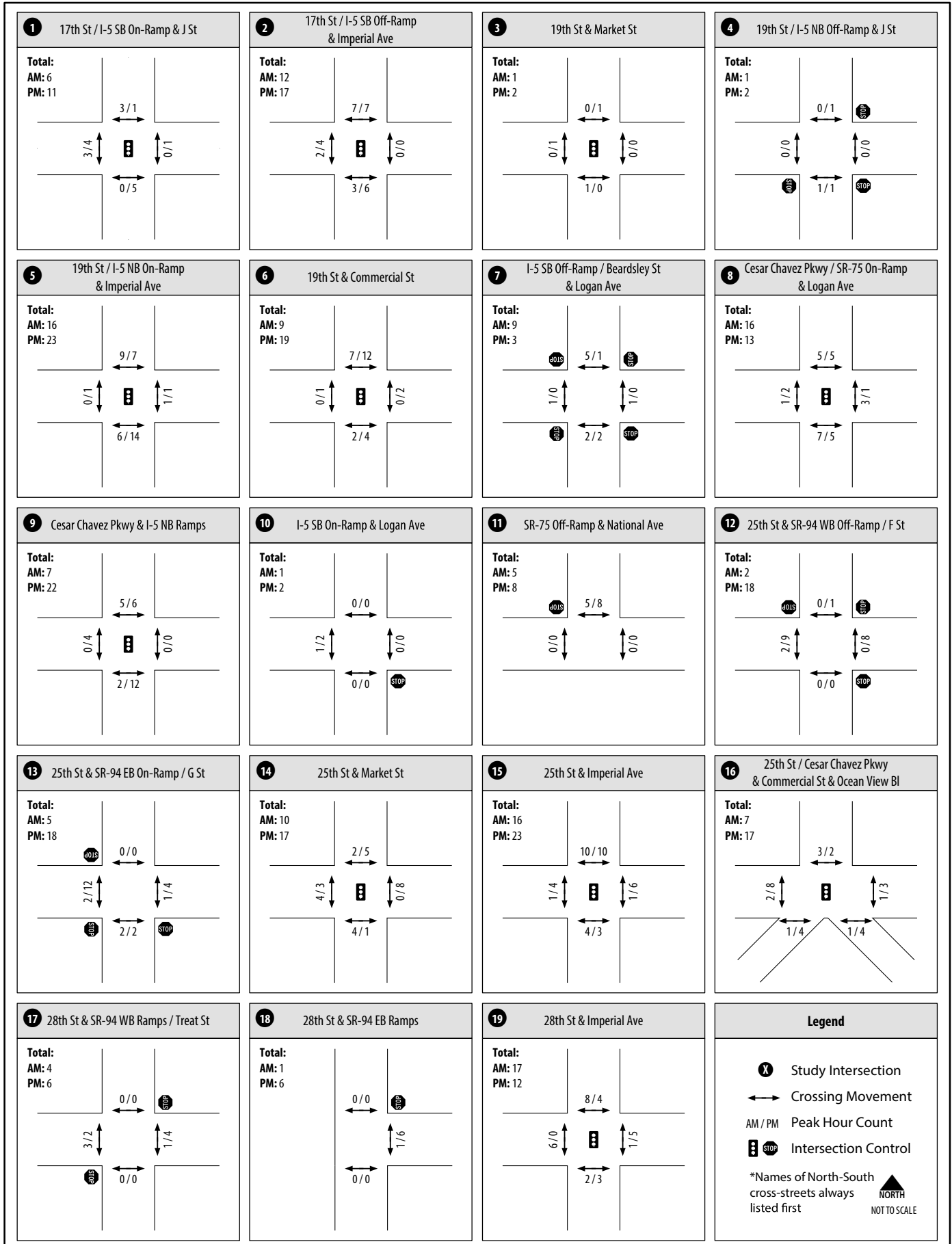


Figure 3-23: Existing AM/PM Peak Hour Bicycle Counts
Intersections 1-19 (Page 1 of 3)

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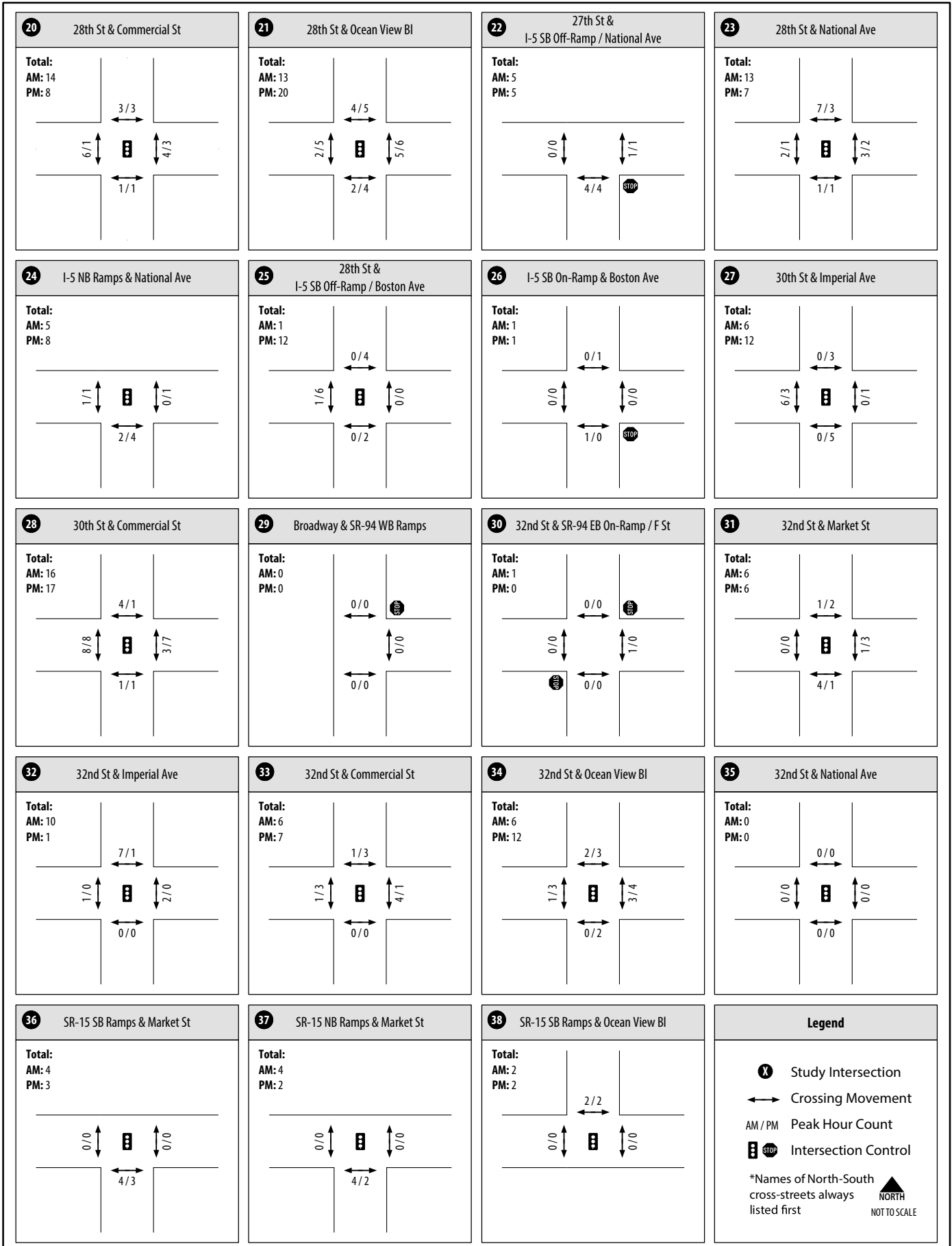


Figure 3-23: Existing AM/PM Peak Hour Bicycle Counts
Intersections 20-38 (Page 2 of 3)

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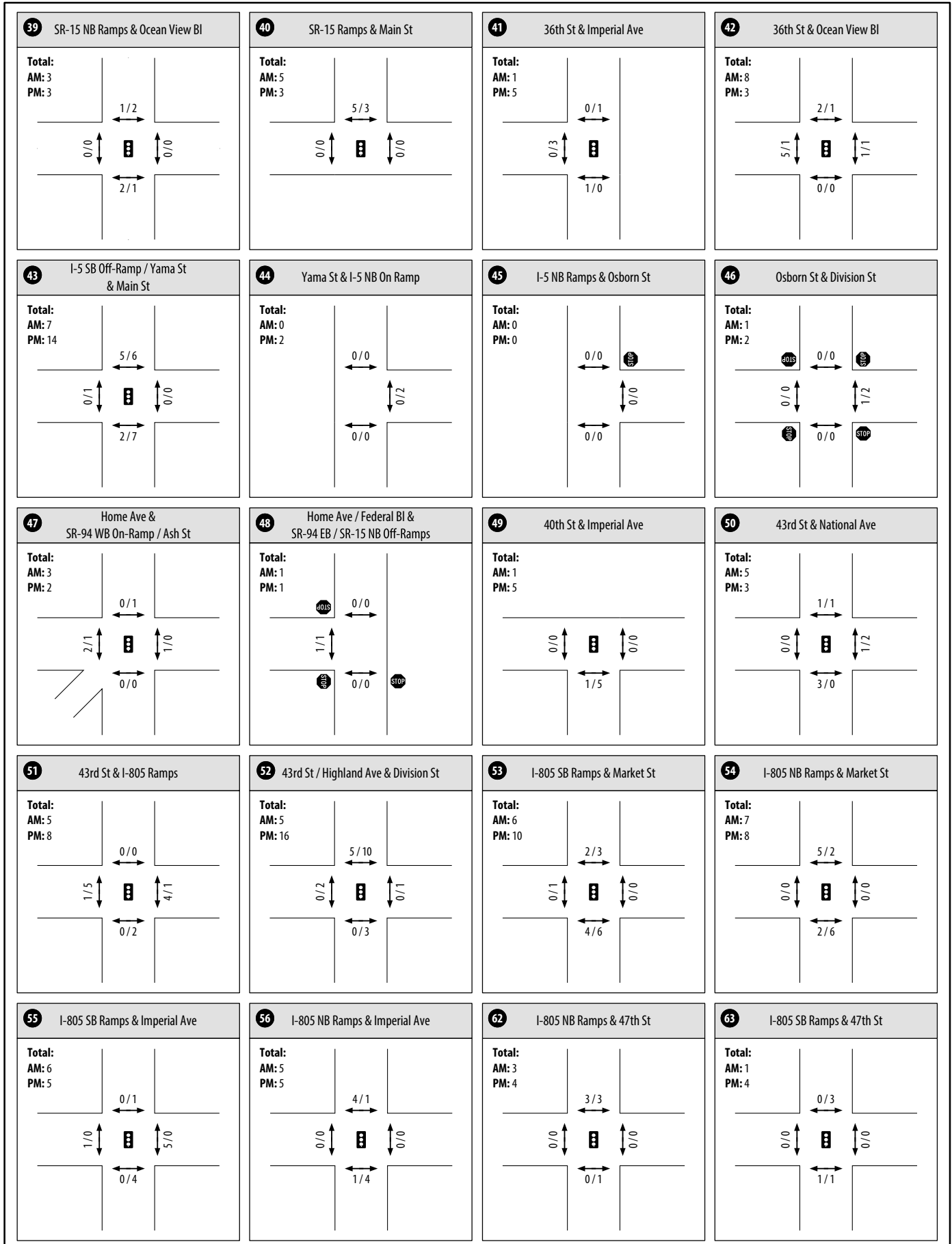
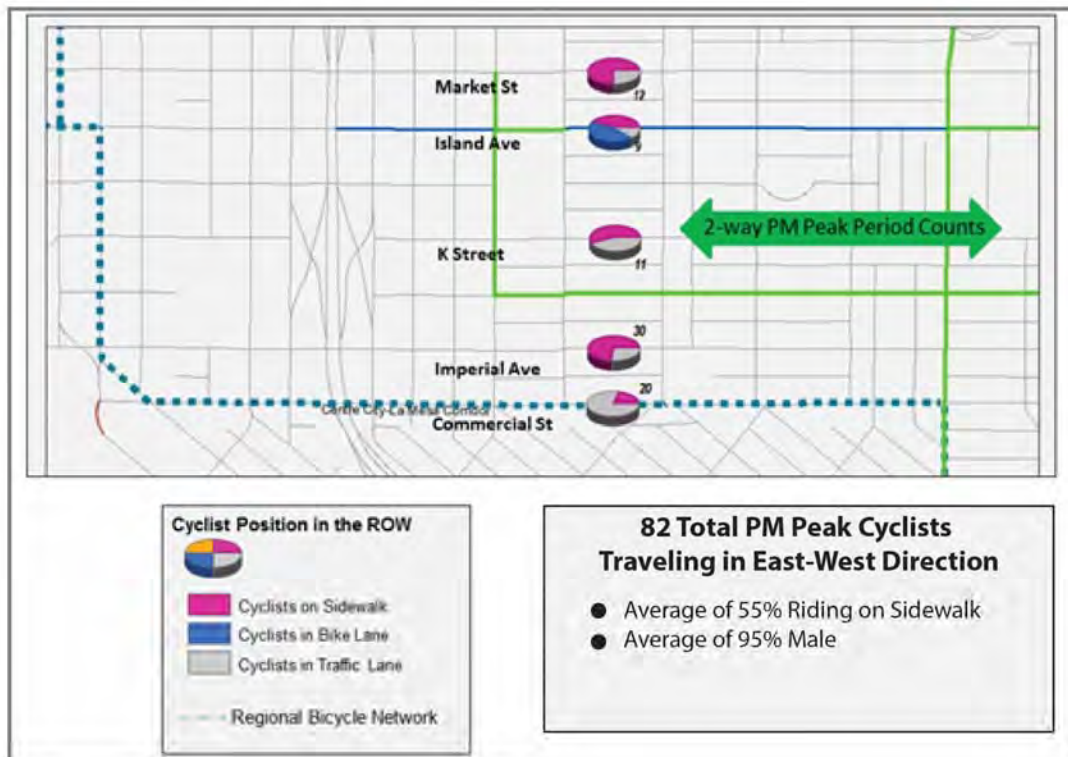


Figure 3-23: Existing AM/PM Peak Hour Bicycle Counts
Intersections 39-56 & 62-63 (Page 3 of 3)

Appendix J displays the AM and PM peak hour bicycle counts for Southeastern San Diego study intersections.

Figure 3.24a and **Figure 3.24b** display the distribution of peak hour bicycle volumes for the AM and PM peak hour, respectively, across the community of Southeastern San Diego. As shown, there are relatively higher volumes along the through-streets providing inter-community connections, such as Commercial Street, Imperial Avenue, 25th Street and 28th Street.

In fact, peak period bicycle count data collected from 4PM to 6PM by San Diego State University’s Active Transportation Research indicates that along the key corridors in Southeastern San Diego serving east-west travel (Market Street, Island Avenue, K Street, Imperial Avenue, and Commercial Avenue), an average of 55 percent of cyclists are riding on the sidewalk. Similar trends are likely to occur in other locations across Southeastern San Diego. The data reflect a significant, unmet need for separated bicycle facility, and a strong reluctance on the part of Southeastern San Diego cyclists to mix with vehicular traffic.



Source: Active Transportation Research, San Diego State University; 2011

3.7.3 Bicycle LOS Analysis and Results

Cyclist LOS was evaluated along major corridors within Southeastern San Diego using multi-modal LOS methodology, as described in Chapter 2.

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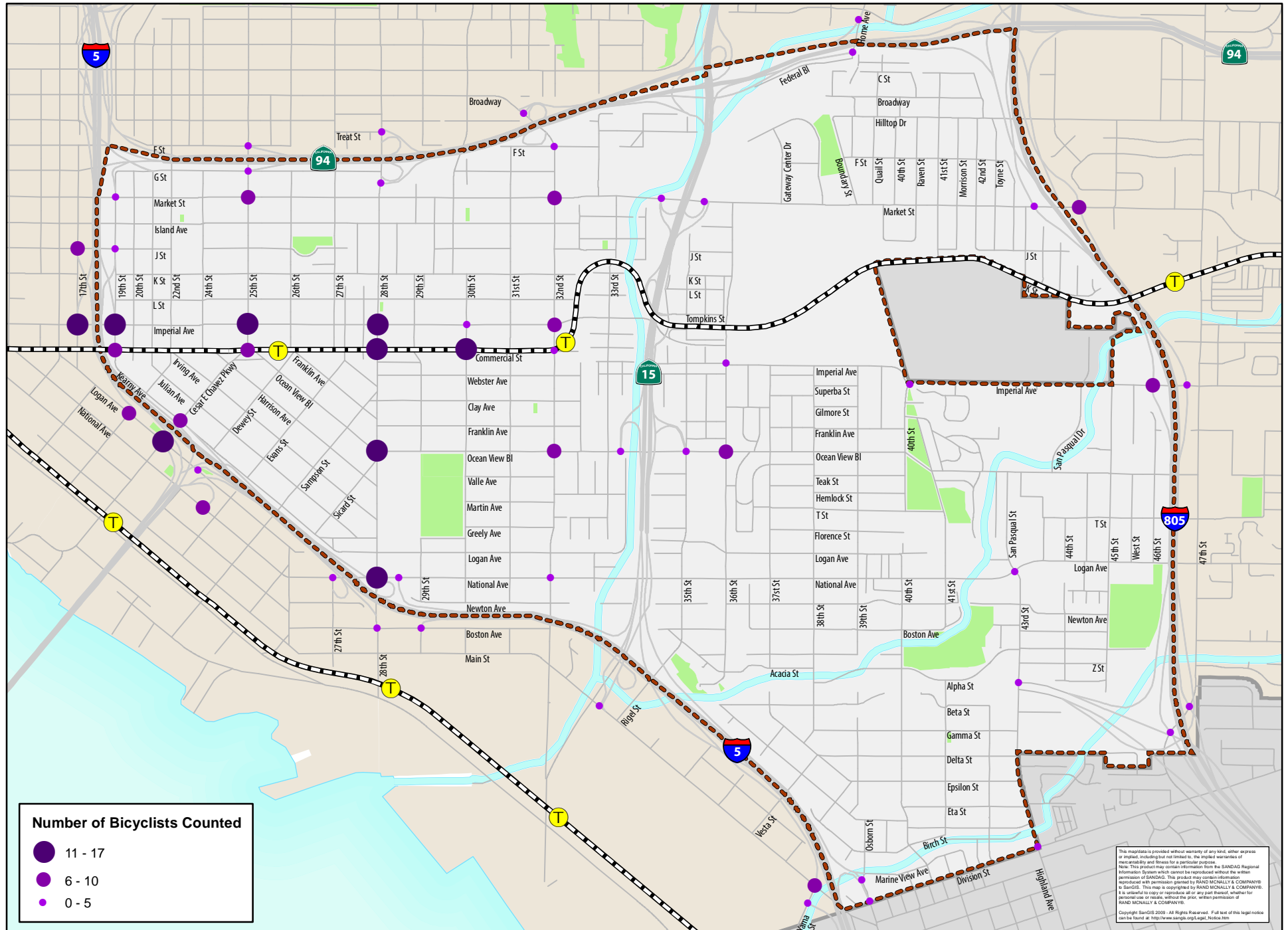


Figure 3-24a: Bicyclists Counted at Study Intersections (AM Peak Hour)

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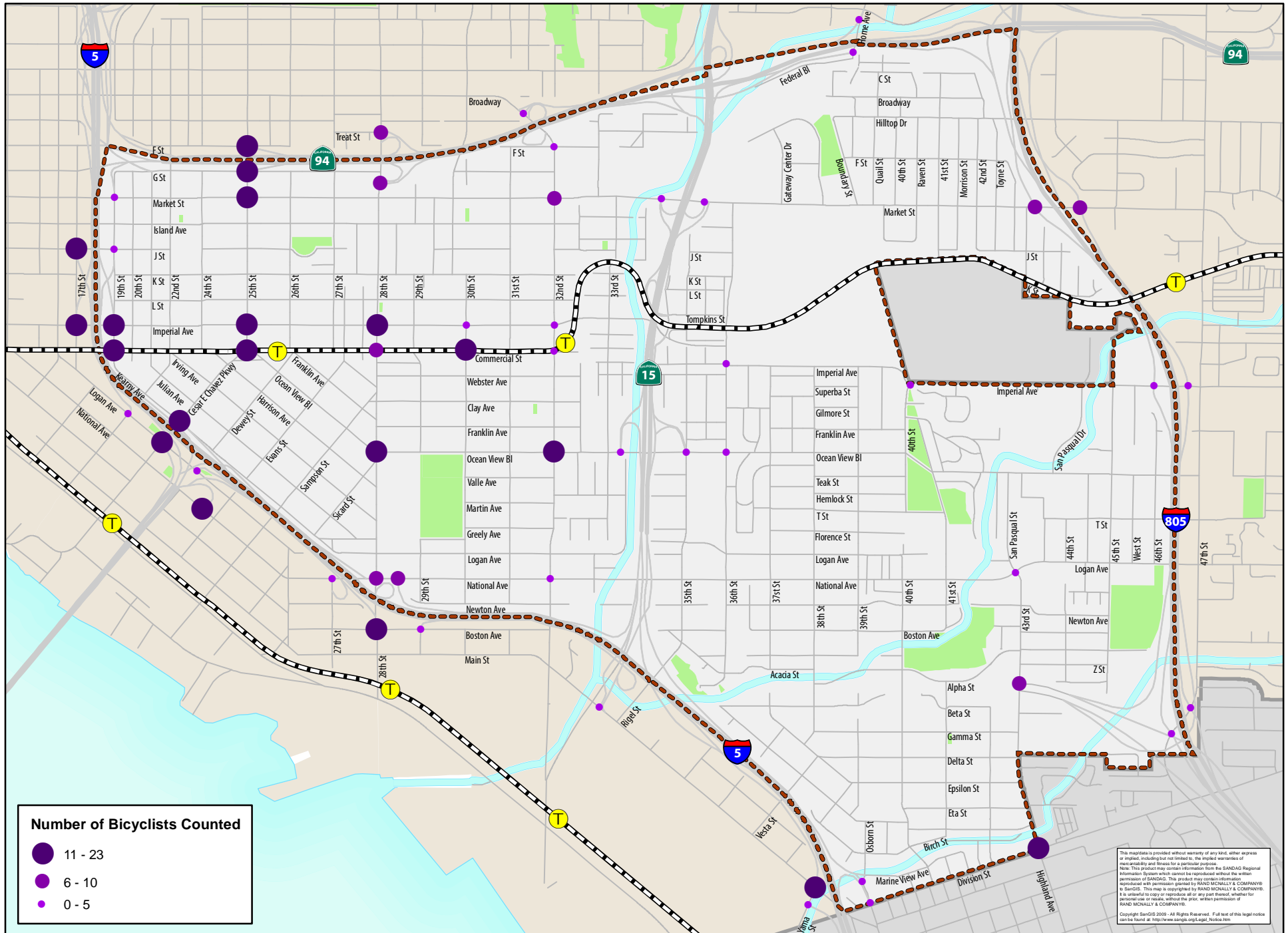


Figure 3-24b: Bicyclists Counted at Study Intersections (PM Peak Hour)

Tables 3.19A and 3.19B display the existing LOS for cyclists on study roadways during the AM and PM peak hours, respectively. Peak hour bicycle CSLOS analysis output is provided in **Appendix K**.

**TABLE 3.19A
EXISTING MULTI-MODAL ANALYSIS – BICYCLE LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	3.60	D	3.89	D
	19th Street & 25th Street		4.14	D		
	25th Street & 32nd Street		3.86	D		
	32nd Street & I-15 SB Ramps		5.57	F		
	I-15 SB Ramps & I-15 NB Ramps		3.10	C		
	I-15 NB Ramps & I-805 SB Ramps		3.51	D		
	I-805 SB Ramps & I-805 NB Ramps		3.23	C		
	17th Street & 19th Street	Westbound	3.57	D	3.31	C
	19th Street & 25th Street		3.81	D		
	25th Street & 32nd Street		3.44	C		
	32nd Street & I-15 SB Ramps		3.57	D		
	I-15 SB Ramps & I-15 NB Ramps		3.14	C		
	I-15 NB Ramps & I-805 SB Ramps		2.91	C		
	I-805 SB Ramps & I-805 NB Ramps		3.21	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	3.54	D	3.58	D
	19th Street & 25th Street		4.08	D		
	25th Street & 28th Street		3.75	D		
	28th Street & 30th Street		3.69	D		
	30th Street & 32nd Street		3.68	D		
	32nd Street & 36th Street		3.32	C		
	36th Street & 40th Street		3.40	C		
	40th Street & I-805 SB Ramps		3.52	D		
	I-805 SB Ramps & I-805 NB Ramps		3.29	C		

**TABLE 3.19A
EXISTING MULTI-MODAL ANALYSIS – BICYCLE LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Imperial Avenue	17th Street & 19th Street	Westbound	3.15	C	3.54	D
	19th Street & 25th Street		3.63	D		
	25th Street & 28th Street		3.42	C		
	28th Street & 30th Street		3.62	D		
	30th Street & 32nd Street		3.37	C		
	32nd Street & 36th Street		3.34	C		
	36th Street & 40th Street		3.77	D		
	40th Street & I-805 SB Ramps		3.63	D		
	I-805 SB Ramps & I-805 NB Ramps		3.43	C		
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	3.27	C	3.32	C
	32nd Street & 43rd Street		3.29	C		
	43rd Street & 47th Street		3.47	C		
	28th Street & 32nd Street	Westbound	3.27	C	3.29	C
	32nd Street & 43rd Street		3.30	C		
	43rd Street & 47th Street		3.28	C		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	4.06	D	3.84	D
	I-805 Ramps & Division Street		3.67	D		
	Logan Avenue & I-805 Ramps	Southbound	3.78	D	4.02	D
	I-805 Ramps & Division Street		4.20	D		

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

The bicycle LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

**TABLE 3.19B
EXISTING MULTI-MODAL ANALYSIS – BICYCLE LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	3.61	D	3.88	D
	19th Street & 25th Street		4.12	D		
	25th Street & 32nd Street		3.84	D		
	32nd Street & I-15 SB Ramps		5.48	F		
	I-15 SB Ramps & I-15 NB Ramps		3.11	C		
	I-15 NB Ramps & I-805 SB Ramps		3.53	D		
	I-805 SB Ramps & I-805 NB Ramps		3.21	C		
	17th Street & 19th Street	Westbound	3.57	D	3.31	C
	19th Street & 25th Street		3.81	D		
	25th Street & 32nd Street		3.44	C		
	32nd Street & I-15 SB Ramps		3.57	D		
	I-15 SB Ramps & I-15 NB Ramps		3.14	C		
	I-15 NB Ramps & I-805 SB Ramps		2.91	C		
	I-805 SB Ramps & I-805 NB Ramps		3.21	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	3.55	D	3.60	D
	19th Street & 25th Street		4.08	D		
	25th Street & 28th Street		3.78	D		
	28th Street & 30th Street		3.71	D		
	30th Street & 32nd Street		3.71	D		
	32nd Street & 36th Street		3.34	C		
	36th Street & 40th Street		3.43	C		
	40th Street & I-805 SB Ramps		3.55	D		
	I-805 SB Ramps & I-805 NB Ramps		3.31	C		
	17th Street & 19th Street	Westbound	3.22	C	3.54	D
	19th Street & 25th Street		3.63	D		
	25th Street & 28th Street		3.42	C		
	28th Street & 30th Street		3.65	D		
	30th Street & 32nd Street		3.36	C		
	32nd Street & 36th Street		3.35	C		
	36th Street & 40th Street		3.81	D		
	40th Street & I-805 SB Ramps		3.57	D		
	I-805 SB Ramps & I-805 NB Ramps		3.49	C		

**TABLE 3.19B
EXISTING MULTI-MODAL ANALYSIS – BICYCLE LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	3.36	C	3.40	C
	32nd Street & 43rd Street		3.39	C		
	43rd Street & 47th Street		3.48	C		
	28th Street & 32nd Street	Westbound	3.36	C	3.31	C
	32nd Street & 43rd Street		3.30	C		
	43rd Street & 47th Street		3.30	C		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	3.69	D	3.92	D
	I-805 Ramps & Division Street		4.09	D		
	Logan Avenue & I-805 Ramps	Southbound	4.20	D	3.97	D
	I-805 Ramps & Division Street		3.79	D		

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

The bicycle LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

As shown in the tables, a majority of the study segments are providing LOS D for cyclists. Although, the eastbound segment of Market Street between 32nd Street and the I-15 Ramps is operating at LOS F during both the AM and PM peak hours. The LOS reported here is an indication of the cyclist’s experience while cycling along these study corridors. Major variables affecting the cycling environment include lateral separation from vehicular traffic, speed and makeup of the vehicular traffic, pavement conditions, directional vehicular traffic volumes, and intersection crossing distance. The low levels of service for the cyclist is largely a reflection of the lack of bicycle facilities, in particularly Class I and Class II facilities, since only 7.3% of Southeastern San Diego roadways have bicycle facilities.

Figures 3-25a and 3-25b display bicycle LOS for the AM and PM peak periods, respectively, within Southeastern San Diego.

3.7.4 Bicycle Collisions

Bicycle collision data was obtained from the City of San Diego for the period from 2007 to 2012. **Table 3.20** summarizes the reported bicycle-involved collisions, while **Figure 3-26** displays the distribution and location of these collisions across Southeastern San Diego. During this period there were a reported 79 bicycle-involved collisions within Southeastern San Diego, 24 of which were along the Urban Streets. There were no bicycle fatalities during this period, but a majority of the reported collisions resulted in an injury (75 injured out of 79 total collisions). A majority of the collisions involved adult cyclists (54 adult cyclists), rather than children (25 child cyclists).

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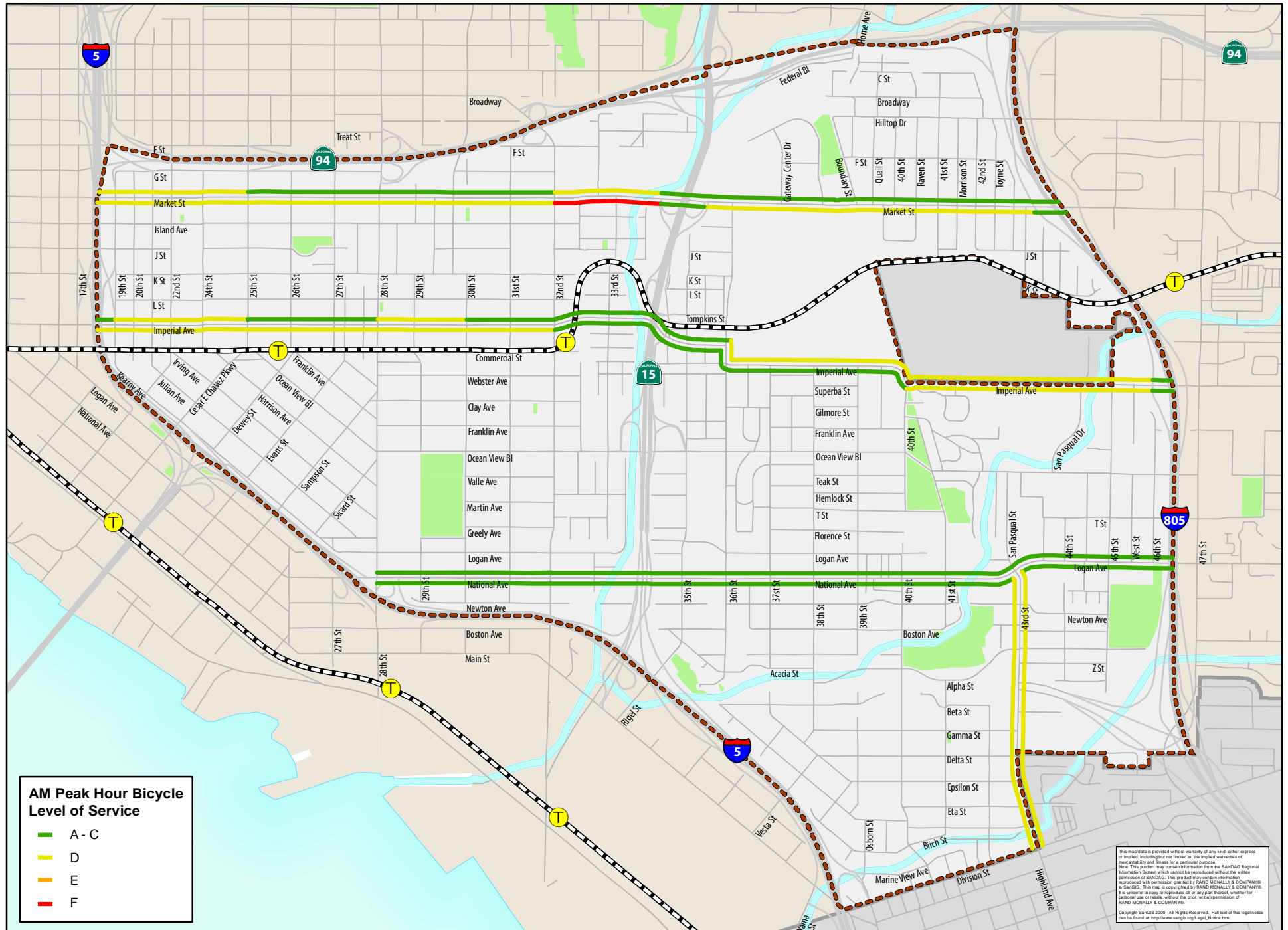


Figure 3-25a: Existing AM Peak Hour Bicycle Level of Service

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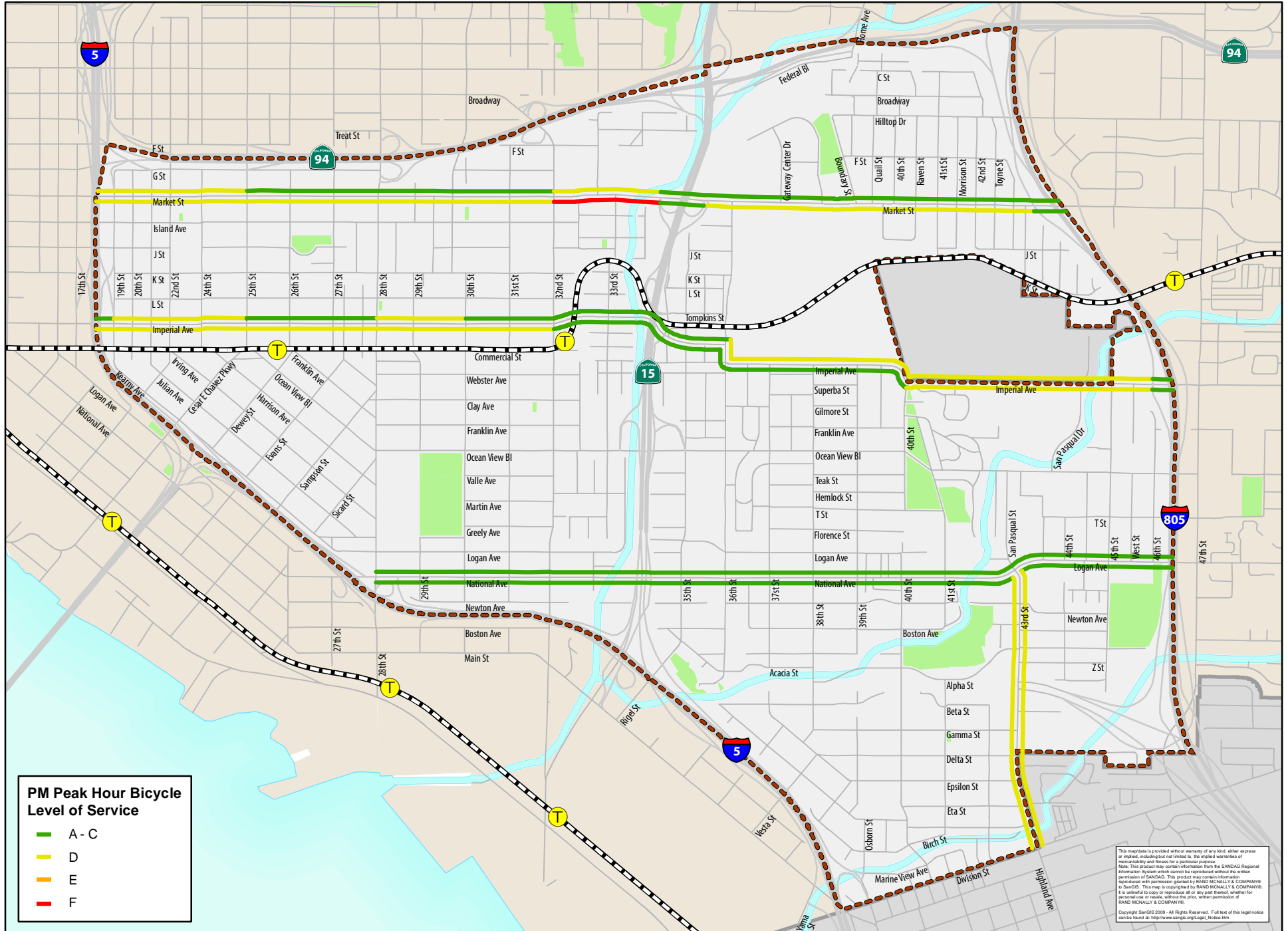


Figure 3-25b: Existing PM Peak Hour Bicycle Level of Service

**TABLE 3.20
BICYCLE COLLISION SUMMARY**

URBAN STREETS	Total	Severity			Age	
		Fatality	Injury	Uninjured	Adult	Child
Market Street, between I-5 and I-805	6	0	6	0	5	1
Imperial Avenue, between I-5 and I-805	7	0	5	2	7	0
National Avenue/Logan Avenue, between 28th Street and I-805	11	0	11	0	8	3
43rd Street, between Logan Avenue and Division Street	0	0	0	0	0	0
Multi-Modal Corridor Total	24	0	22	2	20	4
Community-wide Total	79	0	75	4	54	25

Source: City of San Diego, Chen Ryan Associates; February 2015

Note:

The above information was provided by the City of San Diego for July 2007 through September 2012.

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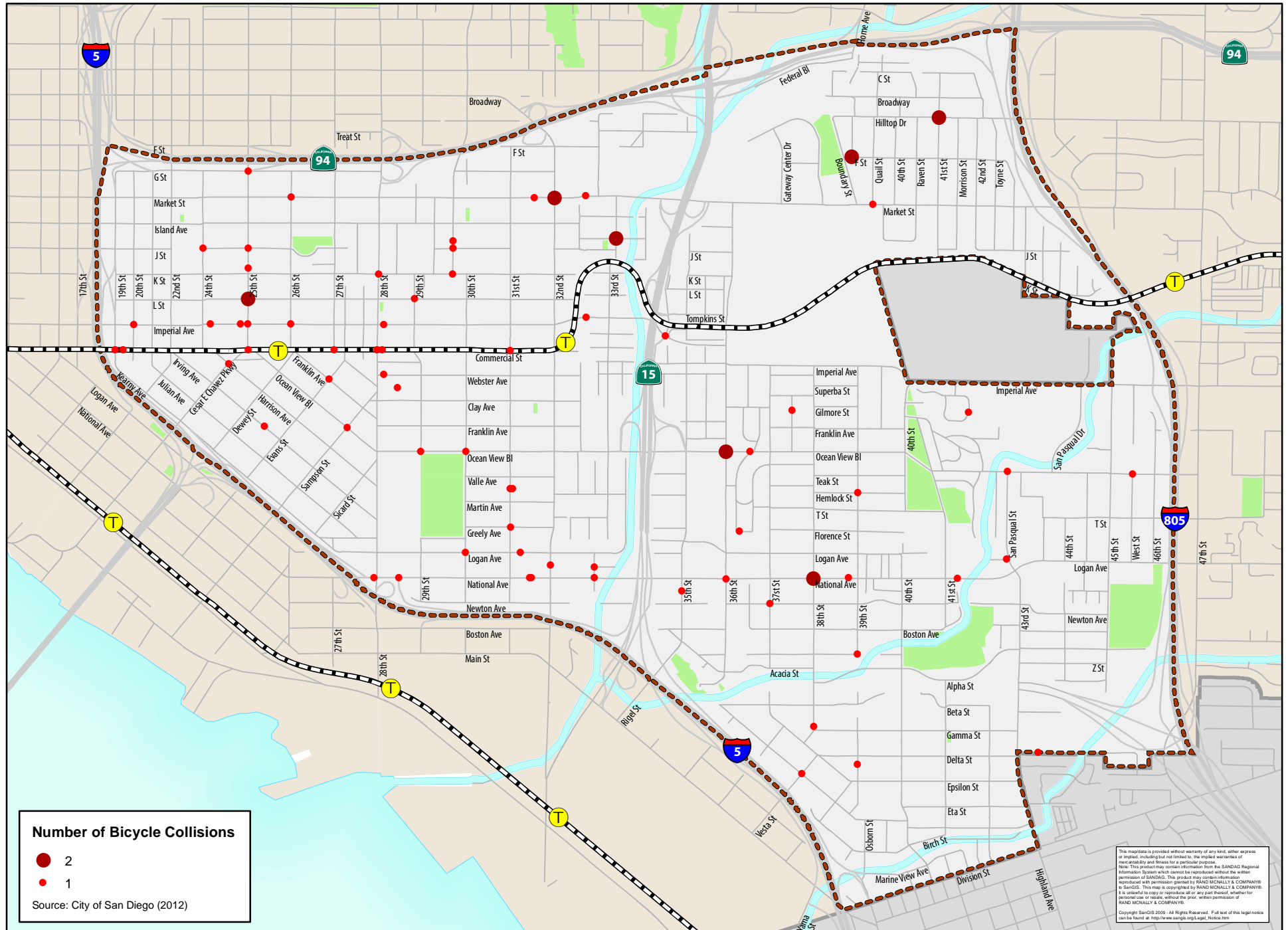


Figure 3-26: Bicycle Collisions (2007 - 2012)

3.8 Parking Management

The parking management goals as expressed in the City's 2008 General Plan Mobility Element include the following:

- *Parking that is reasonably available when and where it is needed through management.*
- *Solutions to community-specific parking issues through implementation of a broad range of parking management tools and strategies.*
- *New development with adequate parking through the application of innovative citywide parking regulations.*
- *Increased land use efficiencies in the provision of parking*

Southeastern San Diego currently has a variety of parking options, including public on-street parking (with and without time restriction), as well as private off-street parking for local businesses and residents.



On-street "drive-by" parking occupancy data was collected on Wednesday, December 5, 2012. Parking occupancy data was collected during periods in the morning (7AM - 9AM), Noon (11AM - 1PM), and evening (6:30PM to 8:30PM), in order to determine the variations in parking demand resulting from the mix of land uses in Southeastern San Diego. The observed overall peak weekday on-street parking demand period is between 11:00PM and 1:00PM (noon peak).

Figures 3-27a, b & c show the observed percent parking occupancy during all three peak periods. As shown, there is currently a high demand for on-street parking at the following locations:

During the morning peak period

- 28th Street, between Imperial Avenue and Commercial Street;
- Imperial Avenue, between 28th Street and 30th Street;
- Commercial Street, between 30th Street and 32nd Street; and
- San Pasqual Street, between Ocean View Boulevard and Logan Avenue.

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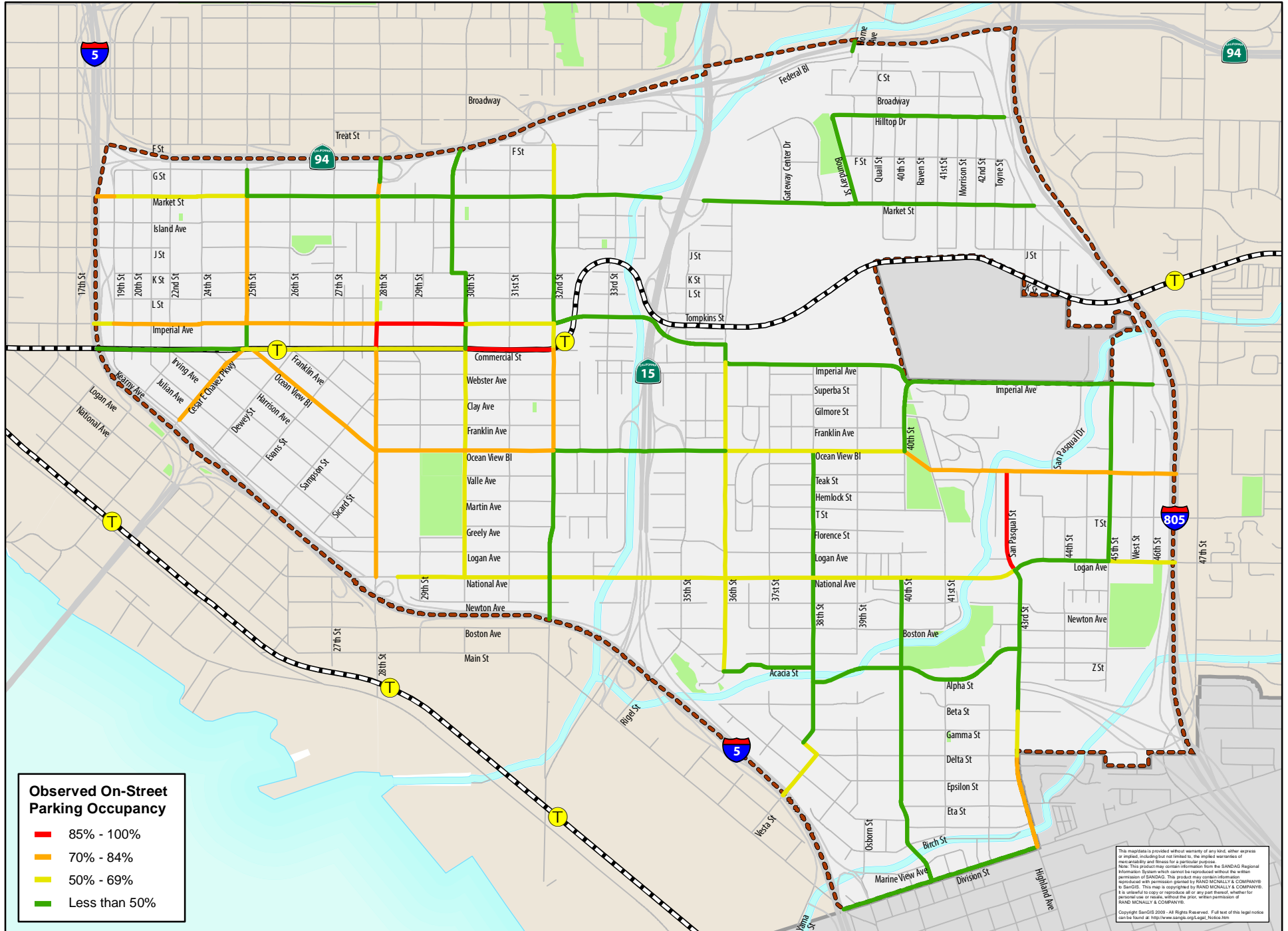


Figure 3-27a: Observed Peak On-Street Parking Occupancy (Morning Peak)

CHEN RYAN



Data Source:
City of San Diego, 2012; SanGIS Regional
Data Warehouse, 2012;
Dyett & Bhatia, 2012



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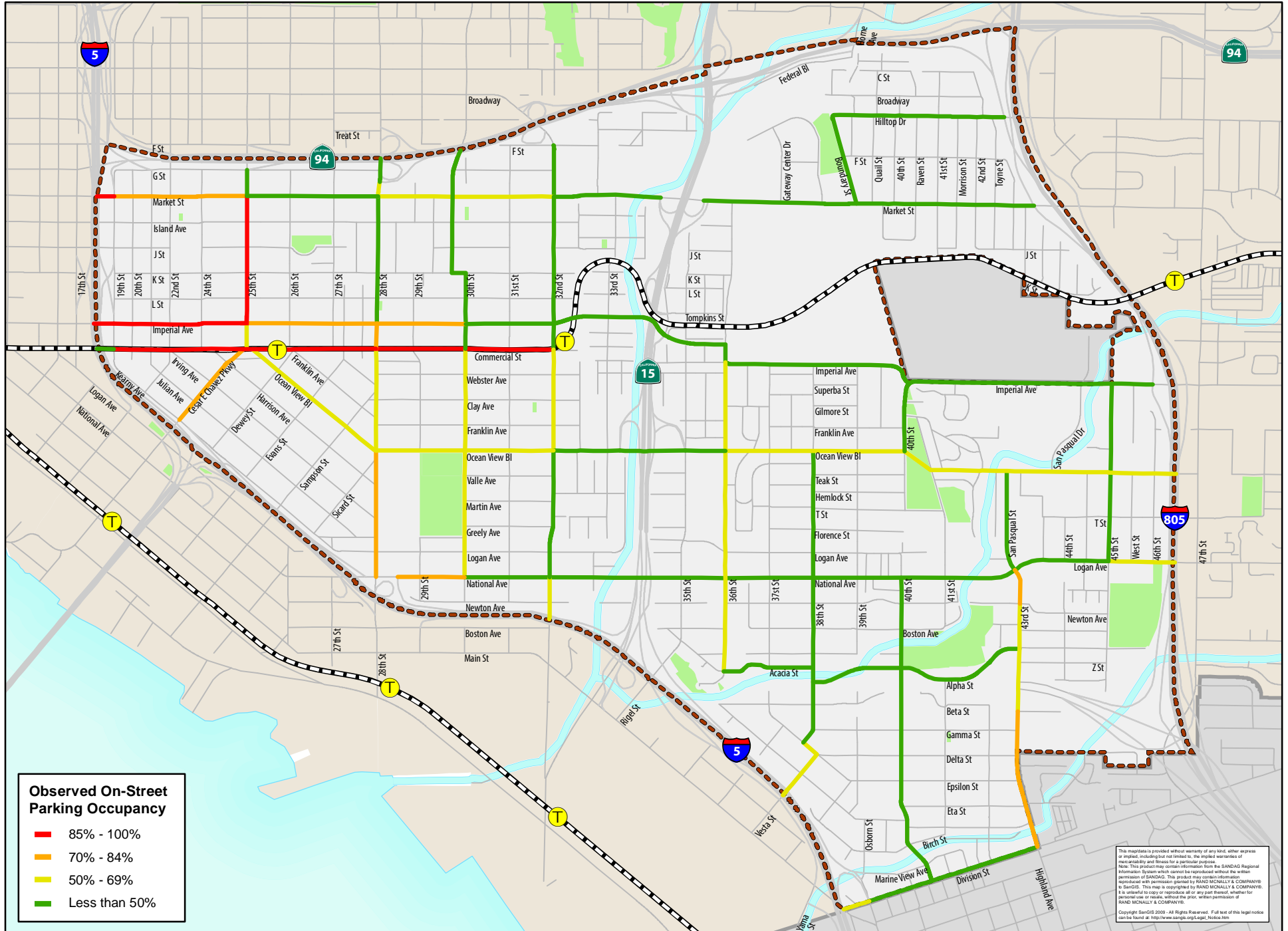


Figure 3-27b: Observed Peak On-Street Parking Occupancy (Noon Peak)

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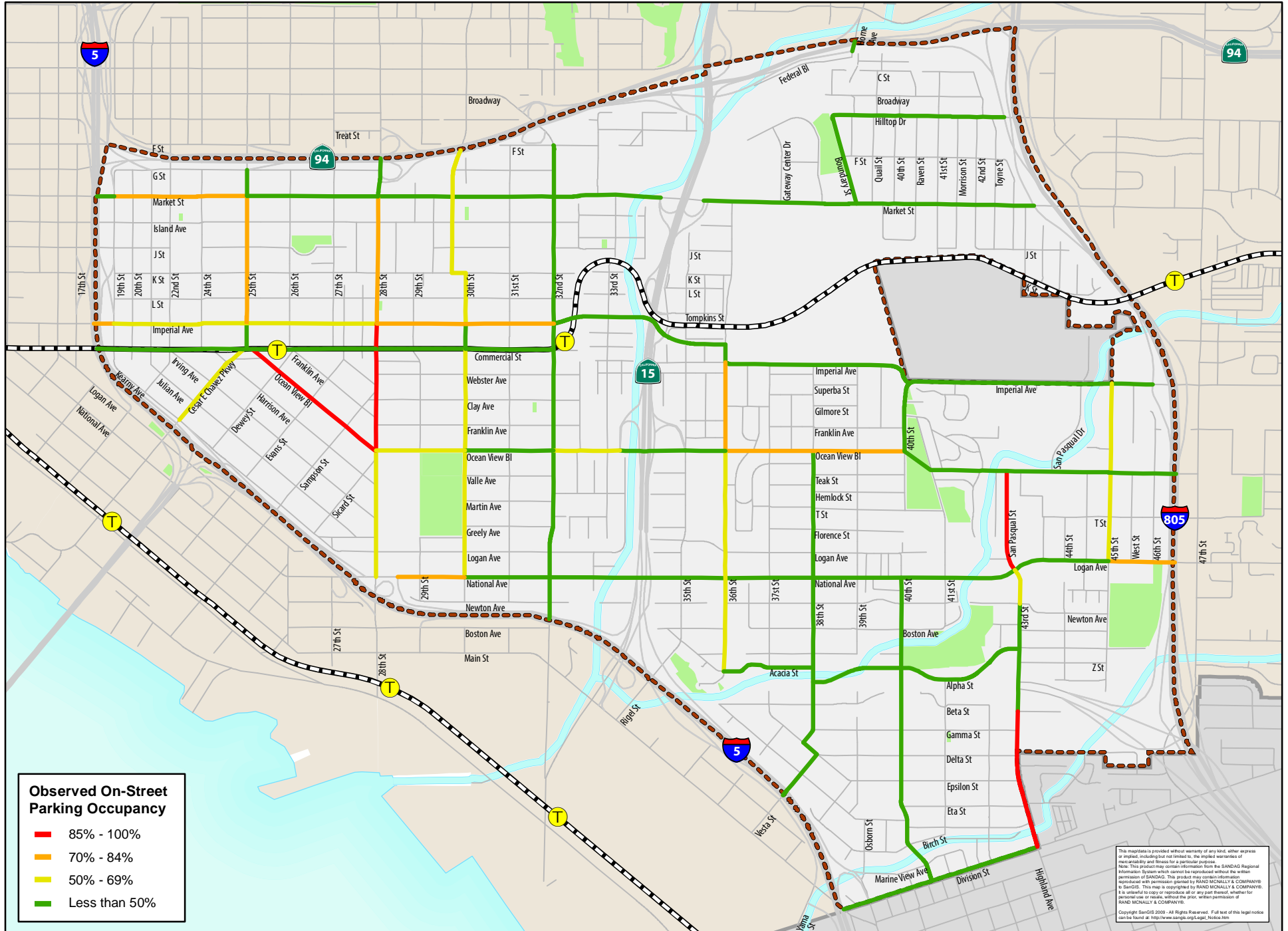


Figure 3-27c: Observed Peak On-Street Parking Occupancy (Evening Peak)

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During the noon peak period

- Commercial Street, between 19th Street and 32nd Street;
- Imperial Avenue, between 19th Street and 25th Street; and
- 25th Street, between Market Street and Imperial Street.

During the evening peak period

- Ocean View Boulevard, between 25th Street and 28th Street;
- 28th Street, between Imperial Avenue and Ocean View Boulevard;
- San Pasqual Street, between Ocean View Boulevard and Logan Avenue; and
- 43rd Street, between Beta Street and Division Street.

Appendix L displays the parking occupancy tabular data.

3.9 Airports, Passenger Rail, and Goods Movement

3.9.1 Airports

The closest airport serving Southeastern San Diego is the San Diego International Airport (Lindbergh Field). This section outlines several recent plans related to the airport.

The Destination Lindbergh Plan proposes an expanded configuration of the San Diego International Airport that attempts to minimize airport-related traffic impacts to adjacent communities, and improve intermodal access to the airport. The plan recommends improvements to the local and regional roadway network providing access to the airport, as well as a new transit route to serve the airport. The Intermodal Transit Center (ITC) is proposed as an intermodal hub to facilitate air passengers accessing the airport without driving a single-occupant vehicle.

The ITC is planned to be located at the north end of the airport, just south of I-5 between Washington Street and Sassafras Street. Plans indicate that existing trolley lines, the COASTER, Amtrak, new express bus routes, several local bus routes and the planned California High Speed Rail system, will all be served by the ITC. In addition, the ITC will provide the following connections and amenities:

- 360 new parking spaces;
- 126,000 SF of new retail uses;
- Direct access to I-5 / via the Pacific Highway on/off-ramps;
- Grade separation of the Washington Street and Sassafras at-grade rail crossings;
- New grade separated crossing at Vine Street;
- Raised bicycle lanes and cycle tracks on the street surrounding the ITC;
- Wider sidewalks around both the ITC and new retail uses; and
- Curb extensions and planting/parking strips as well as provide new opportunities to employ green street strategies on impacted/new roadways.

San Diego International Airport Consolidated Rental Car Facility (CONRAC) – The CONRAC project proposes consolidating rental car facilities currently serve the airport into a single location, located west of Pacific Highway and north of Sassafras Street. The project proposes extending Sassafras Street west of Pacific Highway and along the east end of the airport to serve as a point of access for rental vehicles.

High-Speed Rail Station – A station for the California High-Speed Rail System is proposed at the ITC. The High-Speed Rail station is also proposed to include a parking garage with 6,000 parking spaces.

San Diego International Airport (SDIA) Master Plan – The SDIA Master Plan outlines several local roadway improvement measures near the airport to expand vehicular capacity and enhance access.

3.9.2 Passenger Rail

Heavy rail commuter train service, provided by the North County Transit District (called the Coaster) and Amtrak connect downtown San Diego to locations outside the county. Although there is no heavy passenger rail service directly within Southeastern San Diego, the Coaster and Amtrak services are accessible to Southeastern San Diego residents via the Orange Line Trolley.

More than 20 Coaster trains run on weekdays, with additional service on the weekends. The Coaster provides connections to numerous other transit routes, including bus routes, the Sprinter, San Diego Trolley, Amtrak and Metro Transit (to Orange and LA Counties via the Oceanside Transit Center).

The main Amtrak route serving San Diego is the Pacific Surfliner which provides service between the major coastal cities in California. The Pacific Surfliner stops at Union Station in Los Angeles, which functions as a transfer point to rail services across the country. The main Amtrak station within the City of San Diego is Santa Fe Depot (located downtown); however, on weekends and holidays the Pacific Surfliner service also stops at the Old Town Transit Center.

3.9.3 Goods Movement

The efficient movement of goods is essential for meeting basic consumer demands and requires interaction among various modes of travel. The San Diego region is supported by intermodal goods movement infrastructure consisting of roadways, railways, maritime facilities, and airport facilities. Southeastern San Diego is located in close proximity to several regionally significant goods movement facilities, including Lindbergh Field, maritime facilities, coastal and inland freight railways, and several regional freeways.

The goods movement goal as expressed in the *City's 2008 General Plan Mobility Element* includes the following:

- *Safe and efficient movement of goods with minimum negative impacts.*

The following sections describe the various goods movement facilities within the study communities by facility type.

Trucking

Most goods in the San Diego region are transported via trucks along highways and roadways. While the City of San Diego does not have a system of designated truck routes, truck access to Southeastern San Diego is provided by major freeways, including specifically I-5, I-15, I-805 and SR-94. Within Southeastern San Diego, industrial and commercial destinations are generally concentrated along Commercial Street.

Local streets provide access to delivery destinations as well as the transition of freight to rail and ocean transport.

Air Freight

In addition to the transport of freight on roadways, cargo may also move through Southeastern San Diego via air freight transport companies such as FedEx, DHL Express and UPS. San Diego International Airport serves as the primary regional airport for freight transported via air. Major cargo airlines serving Lindbergh field include FedEx, DHL Express, and UPS. These and other movers of freight may receive and distribute cargo via maritime operations, rail, or trucks.

Rail

Two companies operate freight rail service within San Diego County. The Burlington Northern Santa Fe Railway Company (BNSF) operates freight rail service along the same right-of-way as Amtrak and the Coaster passenger services. BNSF transports freight to points north and east of San Diego County, such as Los Angeles and Arizona. According to the *LOSSAN Corridor Strategic Assessment, January 2010* freight rail frequencies within this corridor are expected to double (from 4 trains a day to 8) over the next 20 years.

The San Diego and Imperial Valley Railroad (SDIY) also operates short-haul freight service in San Diego County along the Orange Line trolley corridor through Southeastern San Diego during the early morning hours. This service provides an important connection between the Class I BNSF and freight rail service in Mexico. The railroad's main commodities are petroleum products, agricultural products, and wood pulp. The SDIY hauled around 6,500 carloads in 2008. It also suggests potential for conflict between freight trains and community members who live on or near Commercial Street. The SDIY carried almost 6,000 cars in 2010.

Maritime

There are currently no port cargo facilities located within Southeastern San Diego, although cargo is transported near the study community, via the modes summarized above, to and from the port cargo facilities located at the nearby 10th Avenue Marine Terminal and at the National City Marine Terminal.

4.0 Model Forecasting

This chapter summarizes the future year travel demand model forecasting process utilized to project the future travel patterns within the Southeastern San Diego community, under buildout conditions. Future year traffic volumes were derived from a SANDAG Series 12 Transportation Forecast model run, which was verified per the City of San Diego's *Small Study Area Traffic Modeling Process* (April 2012) and calibrated for the Southeastern San Diego and Encanto communities. Section 4.1 describes the base year model calibration process and Section 4.2 describes the process used to develop future year volumes.

4.1 Base Year Model Calibration

The base year model calibration process included verification and validation of base year model inputs (land uses and roadway network), as well as additional adjustments to the base year model (roadway speeds, centroid loadings, etc.) to calibrate the model to better represent existing travel patterns within the Southeastern San Diego community. Detailed descriptions of each validation step are provided in the following sections.

4.1.1 Base Year Land Use Verification/Validation

To ensure that the existing land uses were correctly represented in the SANDAG Series 12 Base Year model, the following existing land use data was collected throughout the entire Southeastern San Diego community and verified/adjusted in the Base Year model to correctly match field conditions:

- Descriptions (land use type and code)
- Proper unit types (square feet, units, acres)
- Quantity
- Vehicular trip generation rates

Land use types, descriptions and quantities were crosschecked with ground conditions using Google earth aerial images, as well as field verification, as necessary. Trip generation rates for individual land uses were coded based on the driveway rates provided in the *City of San Diego Land Development Code – Trip Generation Manual, May 2003*. Base year land use inputs for the project study area are provided in **Appendix M**.

4.1.2 Base Year Roadway Network Verification/Validation

The SANDAG Series 12 Base Year roadway network was compared to field conditions to ensure an accurate model network. The following variables were compared and adjusted to match existing field conditions:

- TAZ loading points
- Number of lanes for roadways
- Traffic controls
- Signalized intersection geometrics

-
- Street classification (including median type)
 - Roadway speed limits

4.1.3 Base Year Ground Count Validation & Adjustment

Historical ADT volumes over the past 11 years were compiled from the City of San Diego Traffic Count Database and other recent studies for major roadway links throughout the Southeastern San Diego community. Out of the historic counts, the most recent counts collected for this effort, followed by counts within the past three (3) years were selected to establish a base year ground count database. This database included multiple counts representing the same location on numerous segments and the counts inputted into the model were selected based upon nearby trip generators and traffic patterns along each roadway segment. Abnormally high or low traffic volumes were assumed to be outliers, and thus were not selected to be a model input.

4.1.4 Model Sensitivity Adjustment

Model calibration was performed by running a base year model estimate and comparing the results to the selected ground counts discussed above. Roadway segments that did not meet the model calibration targets established by the City of San Diego were identified for additional adjustments. These adjustments included relocation of TAZ connectors and centroids, TAZ splitting, adjustments of roadway speed (to represent congestion), and in rare cases, ground count adjustments (using historic counts older than three years).

4.1.5 Final Base Year Calibration Results

A total of 5 model runs were conducted to establish a base year model that met all calibration targets. Model calibration results as well as the final base year model roadway network are provided in Appendix M.

4.2 Future Year Traffic Forecast Results

The future year 2035 model was developed by inputting the future year 2035 land uses and roadway network into the calibrated base year model, described in the previous sections, with the following adjustment/assumptions:

- Buildout of the Preferred Plan land uses within the project study area (land use assumptions are provided in Appendix M).
- Existing roadway network within the study area with improvements from reasonable foreseeable projects including the following projects:
 - SR-94 Express Lane Project
 - I-805 South Project (Phase 1)
- Year 2035 land uses outside of the study area
- Year 2035 roadway/transit network outside of the study area
- Year 2035 transit network inside and outside of the study area

The model inputs described above were reviewed by the project team and approved by City staff prior to running the model forecasts.

Table 4.1 provides a comparison of the land use inputs for both the Base Year and Preferred Plan (Year 2035) scenarios. As shown, under buildout of the Preferred Plan, significant growth in both commercial (702.6 ksf) and residential (3,008 units) land uses are anticipated throughout the Southeastern San Diego community.

**TABLE 4.1
LAND USE COMPARISON EXISTING CONDITION VS. PREFERRED PLAN**

Land Use	Base Year	Preferred Plan	Δ
Arterial Commercial	849.0 ksf	1,472.6 ksf	623.6 ksf
Automobile Dealership	0.1 Acres	0.1 Acres	0.0 Acres
Automobile Parts Sale	5.7 ksf	5.7 ksf	0.0 ksf
Automobile Repair Shop	42.7 ksf	42.7 ksf	0.0 ksf
Automobile Tire Store	9.2 ksf	7.6 ksf	-1.6 ksf
Cemetery	123.4 Acres	123.4 Acres	0.0 Acres
Clinic (Medical Office)	188.5 ksf	188.5 ksf	0.0 ksf
Communications and Utilities	21.9 Acres	19.1 Acres	-2.9 Acres
Community Shopping Center (100,000 SF or more)	698.2 ksf	799.9 ksf	101.8 ksf
Convenience Market Chain (Open Up to 16 Hours Per Day)	40.3 ksf	40.3 ksf	0.0 ksf
Day Care Center	0 child	109 child	109 child
Elementary School	6,454 Students	6,454 Students	0 Students
Fire/Police Station	27.7 ksf	27.7 ksf	0.0 ksf
Government Office/Civic Center	52.4 ksf	52.4 ksf	0.0 ksf
Hotel (Low-Rise) (Motel)	91 Rooms	91 Rooms	0 Rooms
Industrial Park	0.0 ksf	113.5 ksf	113.5 ksf
Junior High School or Middle School	1,454 Students	1,454 Students	0 Students
Landscape Open Space (Undeveloped Park)	3.0 Acres	3.0 Acres	0.0 Acres
Library	23.3 ksf	23.3 ksf	0.0 ksf
Light Industry - General	1,808.2 ksf	2,147.1 ksf	338.9 ksf
MF Residential less or equal 20 DU/acre	3,963 DU	4,323 DU	360 DU
MF Residential over 20 DU/acre	5,434 DU	7,948 DU	2,514 DU
Neighborhood Shopping Center (30,000 SF or more)	48.1 ksf	30.9 ksf	-17.2 ksf
Office (Low-Rise)	163.6 ksf	277.4 ksf	113.8 ksf
Open Space Park or Preserve	36.2 Acres	35.2 Acres	-0.9 Acres
Other Health Care	29.8 ksf	29.8 ksf	0.0 ksf
Other Public Services	28.5 ksf	23.0 ksf	-5.5 ksf

**TABLE 4.1
LAND USE COMPARISON EXISTING CONDITION VS. PREFERRED PLAN**

Land Use	Base Year	Preferred Plan	Δ
Other Recreation - High (Developed Park)	6.0 Acres	6.0 Acres	0.0 Acres
Other Retail Trade and Strip Commercial	13.8 ksf	12.6 ksf	-1.2 ksf
Other School	36.1 ksf	36.1 ksf	0.0 ksf
Other Transportation	1.3 Acres	0.0 Acres	-1.3 Acres
Other University or College (Community College)	7,667 Students	7,667 Students	0 Students
Park - Active	72.2 Acres	87.4 Acres	15.2 Acres
Parking Lot - Surface	3.6 Acres	3.5 Acres	-0.2 Acres
Post Office	5.8 ksf	5.8 ksf	0.0 ksf
Public/Community Meeting Room Facility (Other Public Services)	9.9 ksf	9.9 ksf	0.0 ksf
Religious Facility (without day care)	628.0 ksf	636.4 ksf	8.4 ksf
Restaurant (High Turnover sit-down)	12.5 ksf	12.5 ksf	0.0 ksf
Scrap Yards/Auto Dismantling/Landfill	6.5 Acres	0.0 Acres	-6.5 Acres
Senior High School*	-	-	-
Service Station	8 Station	8 Station	0 Station
Service Station (with food mart and automated carwash)	8 station	8 station	0 station
Service Station (with food mart)	12 station	12 station	0 station
Single Family Detached	4,360 DU	4,455 DU	95 DU
Single Family Multiple-Units	1,271 DU	1,310 DU	39 DU
Vacant and Undeveloped Land	64.7 Acres	10.2 Acres	-54.5 Acres
Warehousing	103.2 ksf	76.3 ksf	-26.8 ksf
Wholesale Trade	20.1 ksf	15.7 ksf	-4.4 ksf

Source: City of San Diego, Chen Ryan Associates; February 2015

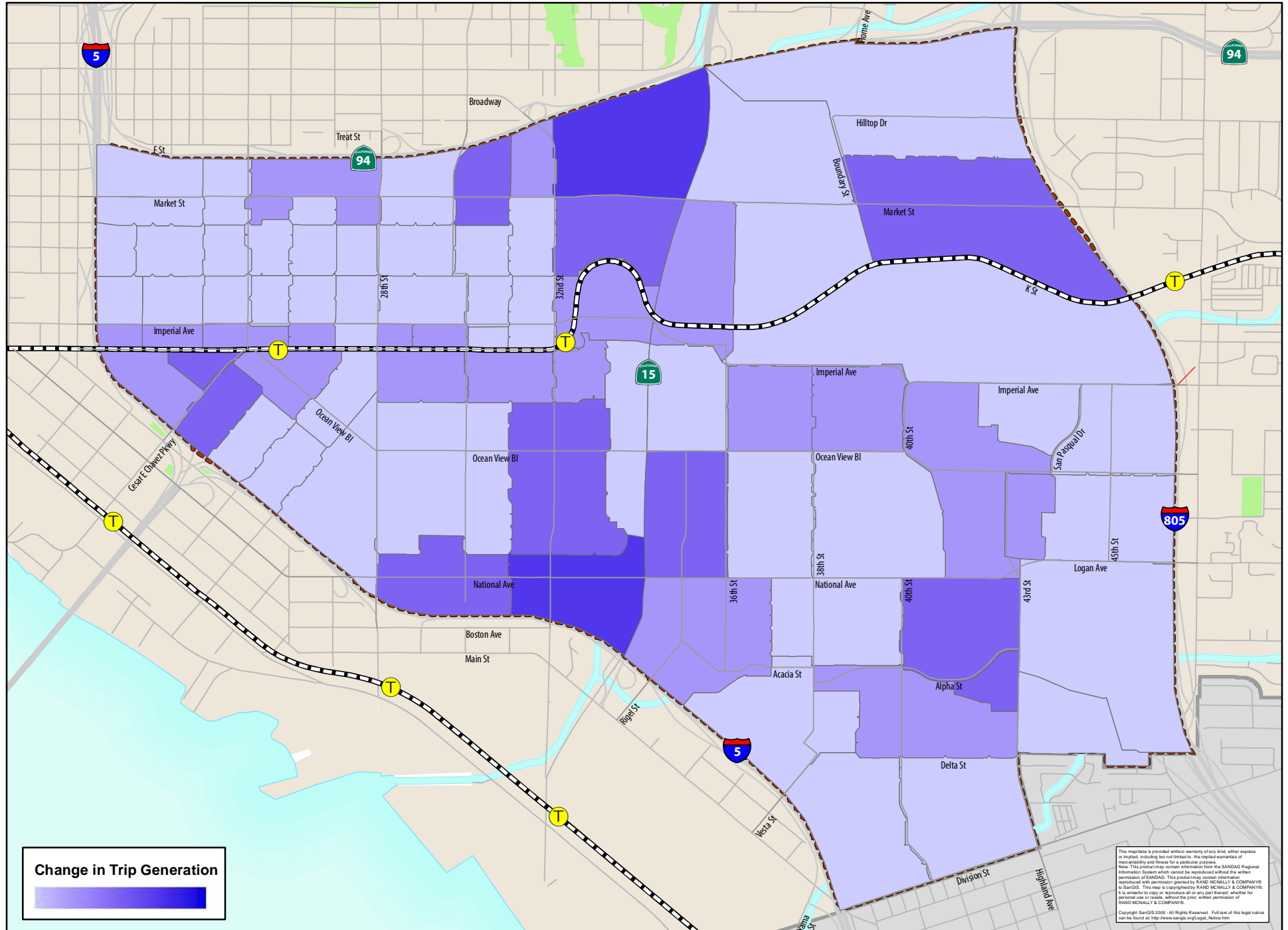
Note:

ksf = Thousand Square Feet

* = Marcy School, Day Rehabilitation Program, # of students is not available.

For comparison purposes, as well as to verify land use growth assumptions within the Southeastern San Diego community, manual trip generation calculations by traffic analysis zone (TAZ) were conducted for both the Base Year land uses and the Preferred Plan buildout land uses. The vehicular trip generation growth within the Southeastern San Diego community is displayed in **Figure 4-1**. Additionally, a by TAZ comparison of the vehicular trip generation for Base Year vs Preferred Plan conditions is provided in Appendix M.

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As shown in Figure 4-1 and Appendix M, the majority of the TAZs within the Southeastern San Diego community are not anticipated to experience much (if any) growth in vehicular trip generation under buildout of the Preferred Plan. The majority of growth within the community is anticipated to occur near the 25th and 32nd trolley stations within the proposed village district, as well as along the freeway corridors, particularly around the southwest quadrant of I-15 and SR-94 connector and the northwest quadrant of I-15 and I-5 connector.

Future year forecast volumes were reviewed and adjusted by the project team and City staff based on existing travel patterns, the anticipated growth within the study area, projected driveway loading points and overall regional growth. Final SANDAG Series 12 Future Year Forecast Model Results are provided in Appendix M.

Figure 4-2 shows the final projected average daily traffic volumes that were used to develop and analyze the Preferred Plan circulation network for Year 2035, as described in the next chapter.

4.2.1 Vehicle Miles Traveled

The Vehicle Mile Travel (VMT) generated within the community was estimated using the SANDAG Series 12 Preferred Plan Future Year 2035 and the Base Year 2008 models. VMT is the total number of miles driven by all vehicle trips generated within the Southeastern community, including trips to/from and within the community. **Table 4.2** displays the total VMT generated within the community and the average trip length under both Preferred Plan and Base Year conditions. VMT calculations are included in Appendix M.

**TABLE 4.2
VEHICLE MILE TRAVELED (VMT) COMPARISON
EXISTING VS. PREFERRED PLAN**

Measure	Community Planning Area				San Diego Region			
	Base Year	Buildout	Δ in Value	Δ in %	Base Year	Year 2035	Δ in Value	Δ in %
Total VMT (miles)	291,677	356,250	64,573	22.1%	85,331,631	108,419,301	23,087,670	27.1%
Total # of Auto Trips	210,065	248,152	38,087	18.1%	16,458,692	20,183,171	3,724,479	22.6%
Average Trip Length* (miles)	1.39	1.44	0.05	3.4%	5.18	5.37	0.19	3.6%
Population	56,847	70,020	13,173	23.2%	3,130,717	4,035,834	905,117	28.9%
Daily VMT by Population (miles)	5.10	5.10	0.00	0.0%	27.30	26.90	-0.40	-1.5%

Source: SANDAG, Chen Ryan Associates; February 2015

Note:

*Average trip length is estimated by dividing the total VMT by the total # of auto trips.

As shown, Southeastern San Diego community has shorter trip length and daily VMT by population under both the base year (Average Trip Length of 1.39 miles vs. 5.18 miles & VMT of 5.10 miles vs. 27.30 miles) and future scenarios (Average Trip Length of 1.44 miles vs. 5.37 miles & VMT of 5.10 miles vs. 26.90 miles) when comparing to the region. VMT by population in the Southeastern San Diego community would remain the same while the region would decrease slightly less by 0.40 miles (-1.5%).

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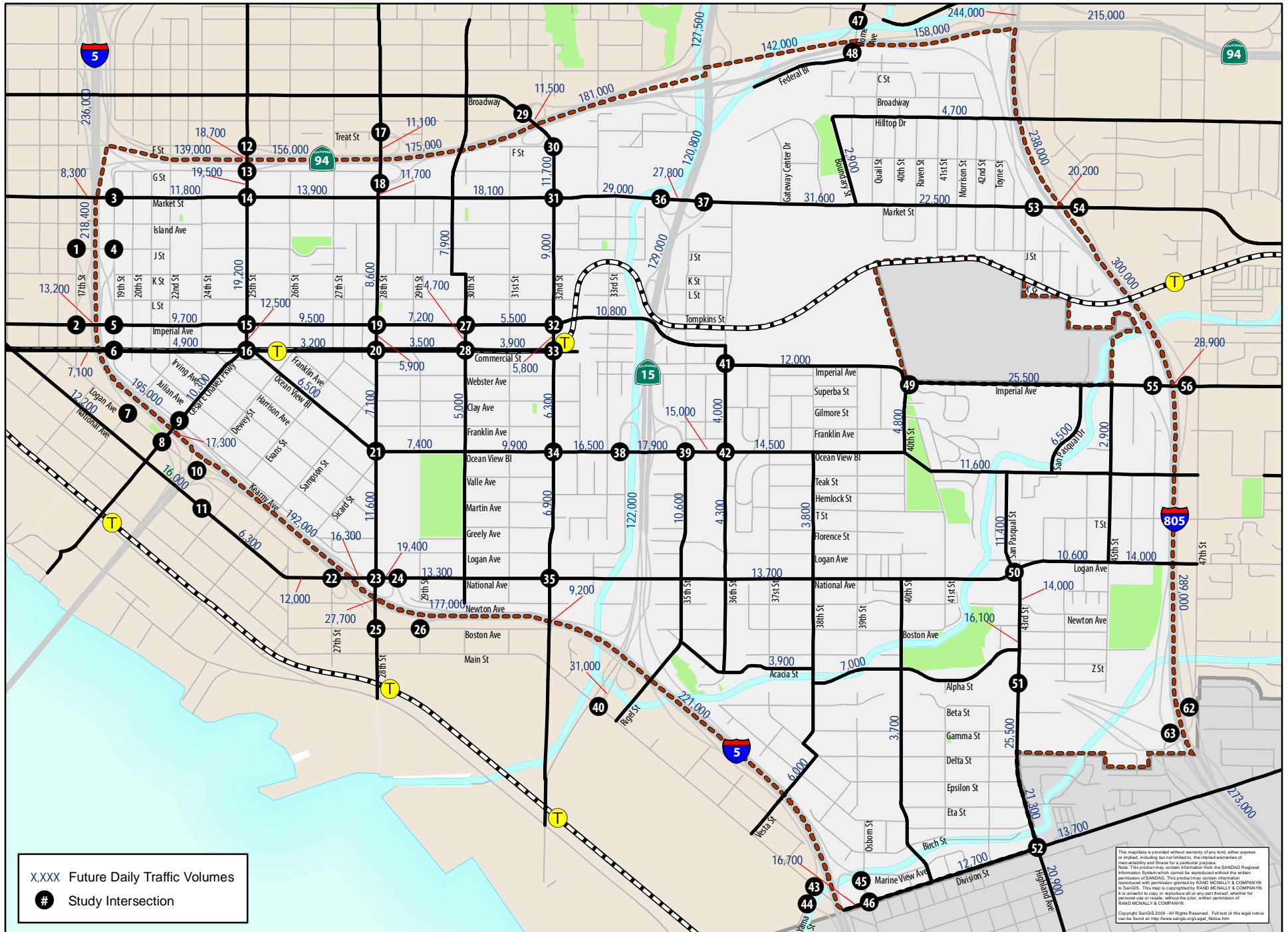


Figure 4-2: Preferred Plan Modeling Results

4.2.2 Community Mode Choice

The Mode Choice Model used in the SANDAG Series 12 Transportation Forecast is not sensitive to changes in bicycle and pedestrian facilities. In other words, the model does not accurately adjust travel behaviors in response to implementation of multi-modal facilities such as bicycle lanes or separated multi-modal paths. Due to these constraints, the SANDAG Series 12 Model was not utilized to project the demands of future year non-motorized travel.

SANDAG is currently in the process of developing an Activity Based Model (ABM) which will more accurately account for shifts in transportation modes based on the implementation of pedestrian and bicycle facilities. However, SANDAG modeling staff has indicated that this model is currently under development and will not be ready for public release until 2015.

Non-motorized (pedestrian and bicycle) volumes within the community, under preferred plan conditions, were developed by applying a growth factor to existing pedestrian and bicycle volumes at key study intersections. The growth factor was developed utilizing SANDAG's Trip Generation for Smart Growth Tool (MXD) to determine the projected internal capture rate within key redevelopment areas within the community under both existing and preferred plan conditions. The internal capture rate estimates were then compared to develop pedestrian and bicycle growth factors within the community.

SANDAG published the Trip Generation for Smart Growth: Planning Tools for the San Diego Region in 2009 to identify trip generation rates associated with smart growth urban developments. The guidelines provide a more accurate method to account for vehicle trip reductions associated with mixed-use and transit-oriented developments (TOD) in smart growth and urban environments, especially relative to current standard local and national methods of calculating trip generation.

The MXD tool is a spreadsheet-based tool that uses empirical data to quantify shifts in travel modes (auto, non-motorized, and transit) for a specific study area based on land use combinations and densities, network connectivity, available transit service, population and employment, and household travel data. The MXD tool calculates the number of person trips generated for each transportation mode type.

The development of non-motorized volumes at key study intersections within the community is discussed by specific mode type in Chapter 5.0.

5.0 Preferred Plan Analysis

This chapter describes future activity patterns and LOS for all modes of travel (pedestrian, transit, vehicular, and bicycle) in the Southeastern San Diego community planning area under buildout of the Preferred Plan. The chapter also summarizes services associated with intelligent transportation systems (ITS) and travel demand management (TDM).

5.1 Pedestrian Environment

Walkability is an important factor in providing mobility and quality of life within a community. The degree to which people walk for transportation and recreation is influenced by the comfort, safety and convenience of their walking experience. Comfort is influenced by climate, separation from through traffic, topography and the presence of sidewalks and improved paths. Safety is influenced by the speed and volume of conflicting vehicle traffic, street widths, traffic control, number of conflict points, and infrastructure design. Convenience is influenced by distance and directness of travel. As connectivity increases, travel distances decrease and route options increase for the pedestrian.

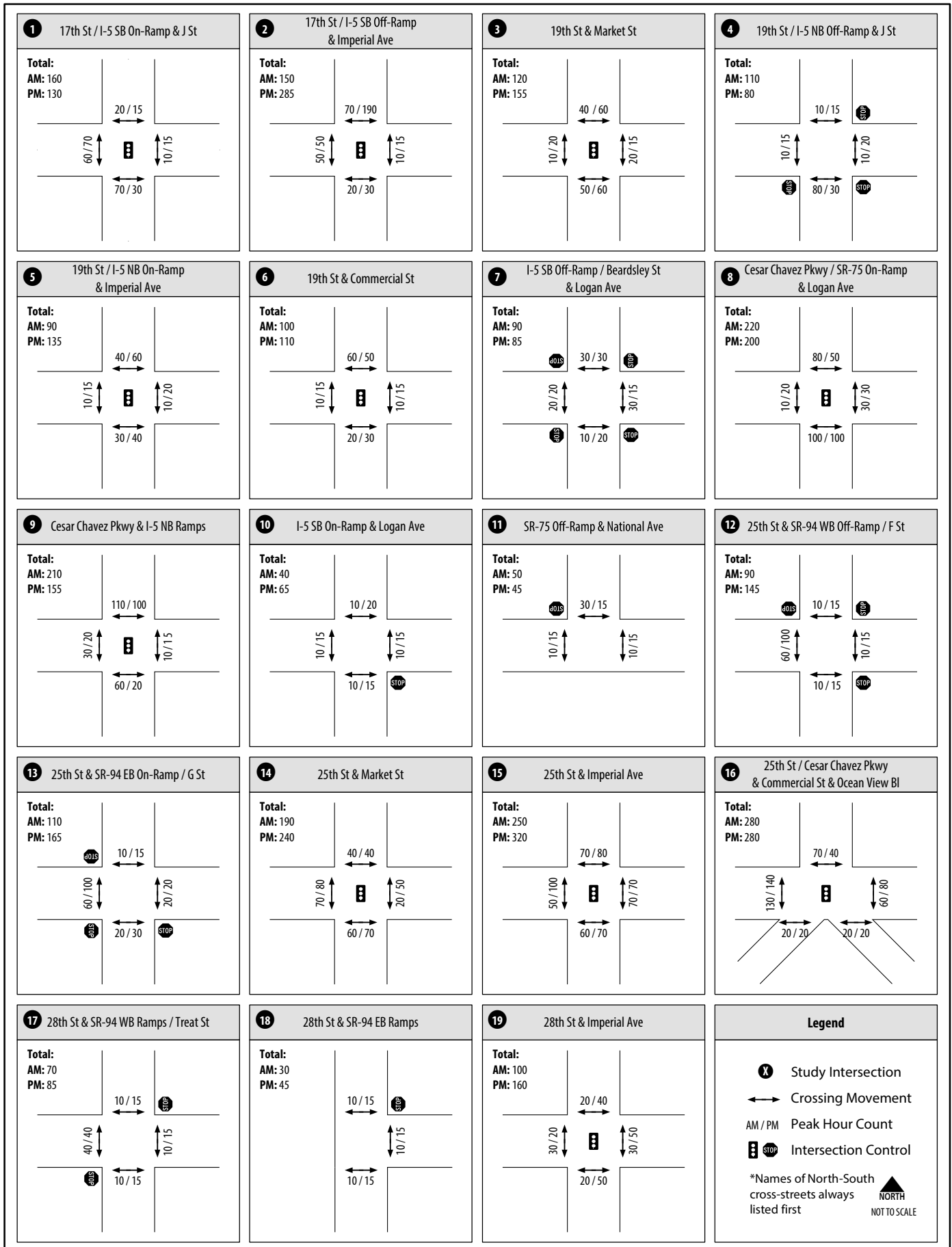
5.1.1 Pedestrian Activity Levels

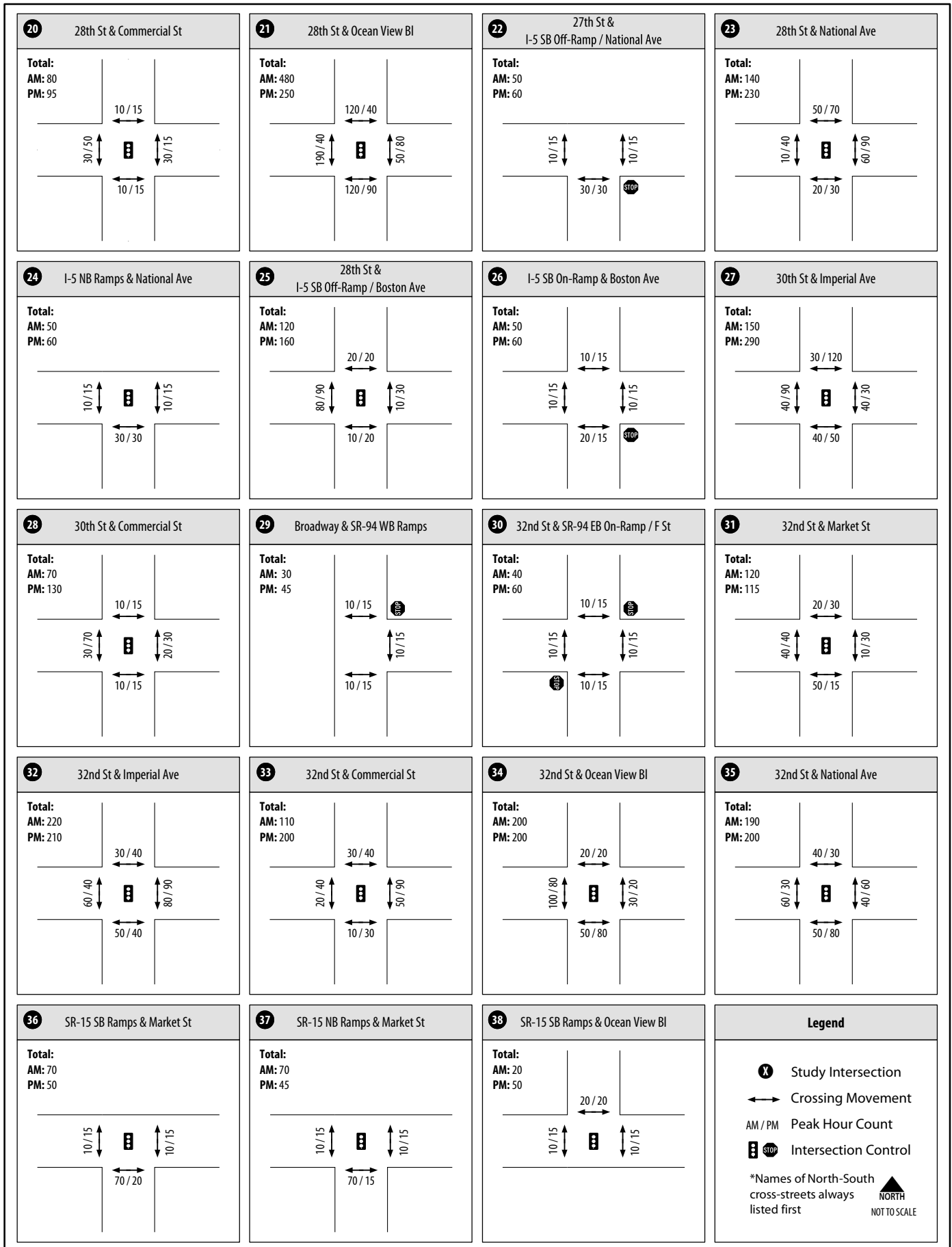
While projecting increases in multi-modal trips requires some level of judgment and is dependent on numerous factors, quantitative methods are available to assist in this process. A community-wide pedestrian activity growth factor was derived based on future growth estimates from previous master plan studies¹ conducted within the Southeastern San Diego community. These master plan studies utilized SANDAG's Trip Generation for Smart Growth Tool (MXD) to estimate the specific growth in pedestrian activities along the major corridors throughout the community (Imperial Avenue, Commercial Street and National Avenue). Relevant pages from the previous master plan technical reports are provided in **Appendix N**.

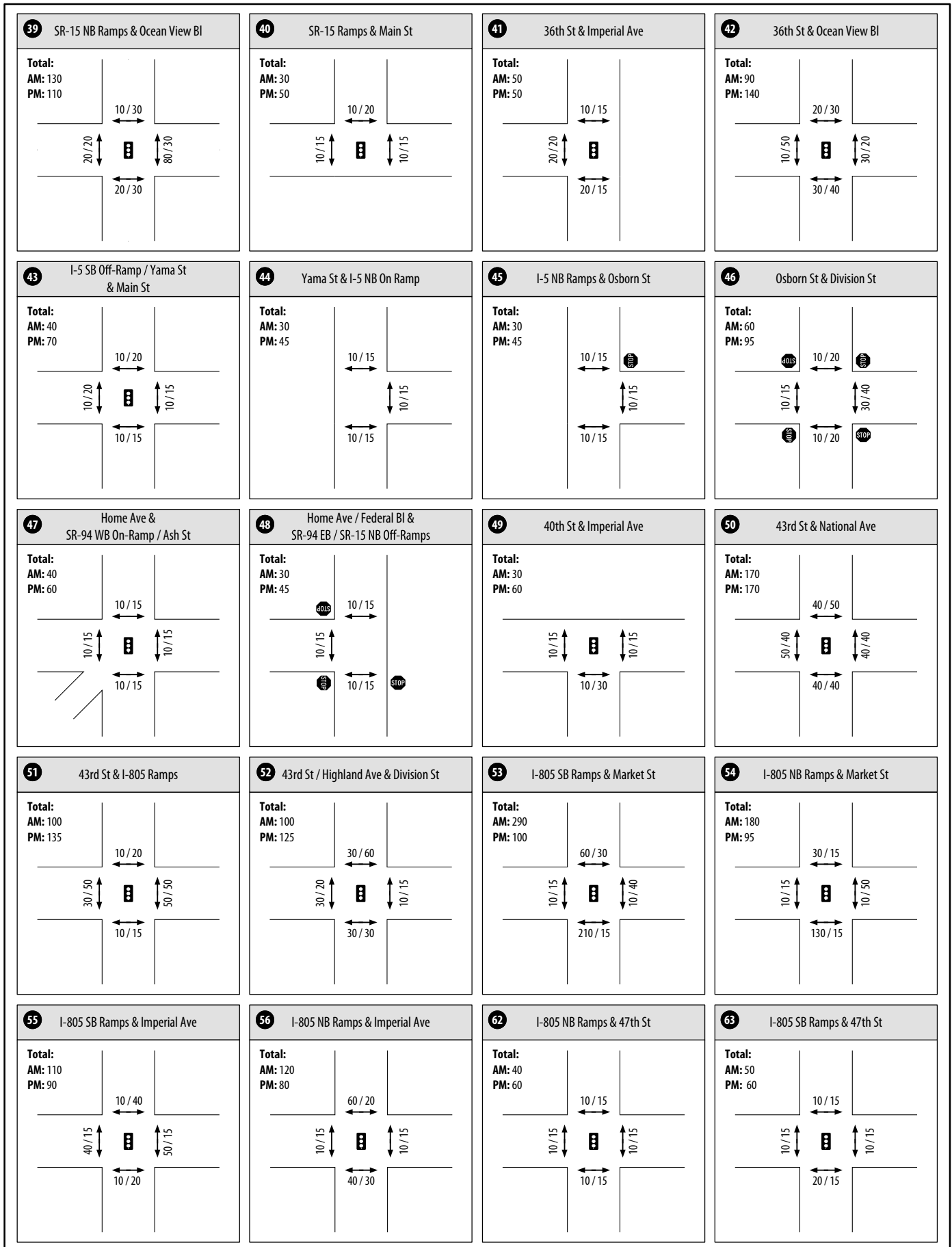
Based on the MXD results in the previous master plans, a 1.6 growth factor was applied to existing pedestrian volumes throughout the community, which accounts for external pedestrian trips and internal pedestrian activities. To be conservative, in addition to applying the 1.6 growth factor at all pedestrian crossings, a minimum of 10 additional pedestrians in the AM peak hour and 15 pedestrians in the PM peak hour were assumed at those pedestrian crossings with minimal or no pedestrian activity under existing conditions.

Figure 5.1 displays the projected pedestrian activity levels derived using the methodology described above.

¹ Commercial Imperial Corridor Master Plan - Transportation Analysis; Fehr & Peers, April 2013
National Avenue Corridor Master Plan – Future Multi-Modal Conditions Report; Fehr & Peers, April 2014







5.1.2 Planned Pedestrian Improvements

The 2006 *City of San Diego Pedestrian Master Plan Citywide Implementation Framework Report* (PMP – CIF) established a pedestrian route typology to differentiate roadways across the City by function and environment. Specifically, the pedestrian route typology is based upon the functional classification of the roadway, the planned village propensity, and adjacent land uses. The following chart displays the pedestrian route typology as defined in the 2006 PMP-CIF.

Table 26: Route Types

ROUTE TYPE:	1. District Sidewalks	2. Corridor Sidewalks	3. Connector Sidewalks	4. Neighborhood Sidewalks	5. Ancillary Pedestrian Facilities	6. Path	7. Trail (Included for Reference Only, not a Focus of this Plan)
Purpose	Sidewalks Along Roads that Support Heavy Pedestrian Levels in Mixed-use Concentrated Urban Areas	Sidewalks Along Roads that Support Moderate Density Business & Shopping Districts with Moderate Pedestrian Levels	Sidewalks Along Roads that Support Institutional, Industrial or Business Complexes with Limited Lateral Access & Low Pedestrian Levels	Sidewalks Along Roads that Support Low to Moderate Density Housing with Low to Moderate Pedestrian Levels	Facilities Away or Crossing Over Streets such as Plazas, Paseos, Promenades, Courtyards or Pedestrian Bridges & Stairways	Walkways and Paved Paths that are not Adjacent to Roads that Support Recreational and Transportation Purposes	Unpaved Walk Not Adjacent to Roads Used for Recreational Purposes
Typical Adjacent "Street Design Manual" Classifications	All types of adjacent streets are possible	Commercial, Urban Collector, Urban Major & Arterial	Commercial, Industrial, Urban Major, Rural Collector & Arterial	Rural, Low Volume Residential, Residential Local & Sub-collector	Not associated with a street	Not associated with a street	Not associated with a street
Cross Reference to Related "Strategic Framework Plan" Definitions	Existing: Regional Centers, Urban Villages & Neighborhood Villages	Existing: Sub-regional Districts and Transit Corridors	Existing: Sub-regional Districts, Transit Corridors, & Suburban Residential along Major Arterials	All other Residential Areas not Classified under the Strategic Framework Plan	Most common in Regional Centers, Urban or Neighborhood Villages but can be in any area	Can occur in any area, but most often found in Recreation, Tourist or Open Space Areas	Can occur in any area, but most often found in Recreation or Open Space Areas
Typical Adjacent Land Uses	Mixed-use Housing, Commercial, Office & Entertainment with Urban Densities	Multiple Land Uses but may be Separated. Often Strip Commercial or Office Complex.	Open Space, Industrial Uses, Institutional Uses or other Pedestrian Restricted Uses	Single-family and Moderate Density Multi-Family with Limited Supporting Neighborhood Commercial	Adjacent Land Uses Vary	Adjacent Uses Vary, Often Recreational or Open Space or Housing	Open Space, Parks and Natural Areas

Figure 5-2 displays the planned pedestrian route types for Southeastern San Diego as determined by the *City of San Diego’s Pedestrian Master Plan – Phases 2 & 3 (PMP - Phases 2 & 3)* planning process.

The *PMP - Phases 2 & 3* also developed pedestrian improvement concepts at specific locations where pedestrian and automobile conflicts are anticipated to be the highest. **Table 5.1** lists each of the identified improvement locations within the Southeastern San Diego community, as well as the planned route type, and the corresponding pedestrian improvement concepts.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

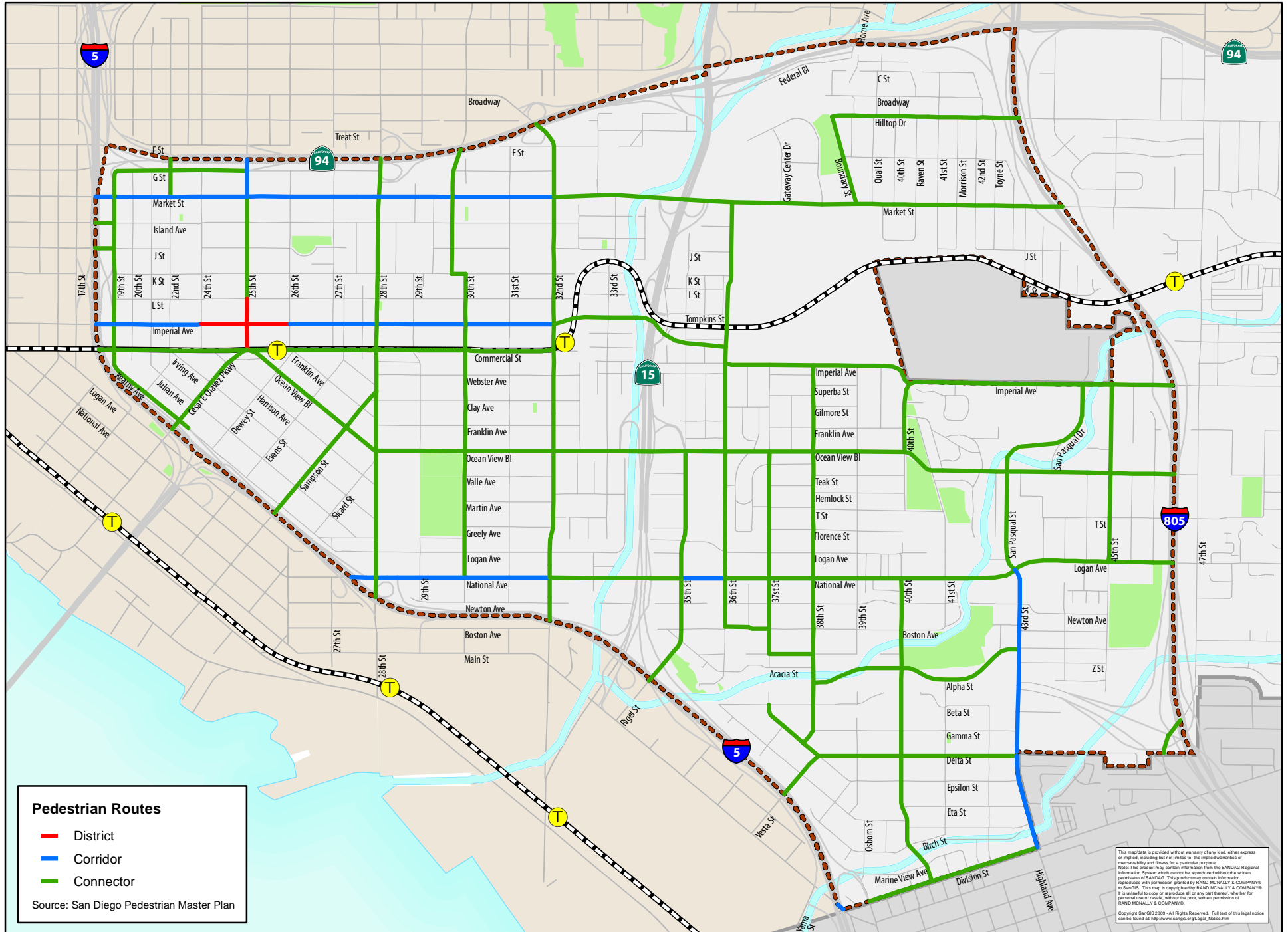


Figure 5-2: Planned Pedestrian Network

**TABLE 5.1
POTENTIAL PEDESTRIAN ENVIRONMENT IMPROVEMENT MEASURES**

ID	Roadway	Segment	Route Type	Potential Pedestrian Environment Improvement Measures
1	Market Street	I-5 NB ramps to 33rd Street	Corridor and Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Provide traffic calming • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions
2	Market Street	33rd Street to 36th Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • High visibility crossing treatments • Improved ADA/accessibility conditions • Minimize pedestrian conflict from free right turning vehicles through intersection reconfiguration and/or treatments
3	Market Street	36th Street to 40th Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions • Vehicular access management
4	Imperial Avenue	I-5 NB ramps to 32nd Street	District, Corridor and Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Provide traffic calming • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Increase crossing safety • Enhanced audible/visual crosswalk signals • High visibility crossing treatments • Improved ADA/accessibility conditions • Minimize pedestrian conflict from free right turning vehicles through intersection reconfiguration and/or treatments
5	Commercial Street	19th Street to 32nd Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions
6	National Avenue	I-5 NB Ramps to 29th Street	Corridor	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions • Minimize pedestrian conflict from free right turning vehicles through intersection reconfiguration and/or treatments

**TABLE 5.1
POTENTIAL PEDESTRIAN ENVIRONMENT IMPROVEMENT MEASURES**

ID	Roadway	Segment	Route Type	Potential Pedestrian Environment Improvement Measures
7	National Avenue	29th Street to Interstate 15	Corridor and Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Provide traffic calming • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Increase crossing safety • Improved ADA/accessibility conditions
8	National Avenue	Interstate 15 to 36th Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Provide traffic calming • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions
9	National Avenue/Logan Avenue	36th Street to 45th Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions
10	Logan Avenue	45th Street to Interstate 805	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Provide traffic calming • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions
11	Kearney Avenue	Commercial Street to Cesar E. Chavez Parkway	Connector	<ul style="list-style-type: none"> • Improved ADA/accessibility conditions
12	25th Street	G Street to Commercial Street	District, Corridor and Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Provide pedestrian refuges • Provide traffic calming • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Enhanced audible/visual crosswalk signals • High visibility crossing treatments • Improved ADA/accessibility conditions
13	32nd Street	F Street to Island Avenue	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Improved ADA/accessibility conditions
14	32nd Street	Island Avenue to K Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Improved ADA/accessibility conditions
15	32nd Street	K Street to Valle Avenue	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • High visibility crossing treatments • Improved ADA/accessibility conditions

**TABLE 5.1
POTENTIAL PEDESTRIAN ENVIRONMENT IMPROVEMENT MEASURES**

ID	Roadway	Segment	Route Type	Potential Pedestrian Environment Improvement Measures
16	43rd Street	Logan Avenue to Boston Avenue	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • High visibility crossing treatments • Improved ADA/accessibility conditions • Minimize pedestrian conflict from free right turning vehicles through intersection reconfiguration and/or treatments
17	43rd Street	Boston Avenue to Beta Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Reduce pedestrian-motorist conflicts by limiting vehicular turning movements at intersections • Improved ADA/accessibility conditions
18	43rd Street	Beta Street to Delta Street	Connector	<ul style="list-style-type: none"> • Reduced crossing distances at intersections • Improved ADA/accessibility conditions • Minimize pedestrian conflict from free right turning vehicles through intersection reconfiguration and/or treatments

Source: City of San Diego Pedestrian Master Plan – Phases 2 & 3

The *PMP - Phases 2 & 3* ranked the proposed locations of pedestrian improvement concepts to develop a list of high priority project locations. Every intersection was assigned a ranking score between 0 and 15 based on Pedestrian Demand (which is comprised of Pedestrian Attractors and Pedestrian Generators), Pedestrian Detractors, Route Type, and Proximity to Public Facilities. Those intersection and corridor improvement project locations scoring 12.5 or more points were considered to be High Priority Project locations. As displayed in **Table 5.2**, two high priority locations were identified within the Southeastern San Diego community, with three additional projects scoring 12 points.

**TABLE 5.2
HIGH PRIORITY PEDESTRIAN PROJECT INTERSECTIONS**

Project Ranking	Street	Intersecting Street	Route Type	Utility Boxes	Score
1	32nd Street	Market Street	Connector – Corridor	SW corner	12.5
2	Boundary Street	Market Street	Connector – Corridor	None	12.5
3	24th Street	Market Street	Residential – Corridor	NW corner	12
4	32nd Street	Ocean View Boulevard	Connector – Connector	SE corner	12
5	43rd Street	Logan Avenue	Connector - Connector	None	12

Source: City of San Diego Pedestrian Master Plan – Phases 2 & 3

Commercial Imperial Corridor Master Plan

The Commercial Imperial Corridor Master Plan (CICMP) developed specific multi-modal and land use recommendations to enhance the overall mobility along Imperial Avenue and Commercial Street between 19th Street and 32nd Street. The CICMP made the following recommendations for pedestrian improvements within the project study area:

- Curb bulb outs at the 31st Street / Imperial Avenue intersection;
- Curb bulb outs at all unsignalized intersections along Imperial Avenue within the Village Area (between 22nd Street to 27th Street);
- Enhanced crosswalks at signalized intersections along Imperial Avenue, within the Master Plan area (25th Street, 30th Street and 32nd Street) and the proposed signal at 22nd Street (assumed improvement of the Com 22 Master Plan);
- Pedestrian countdown signals at all signalized intersections;
- Providing consistent sidewalk widths and connectivity along Commercial Street;
- Restriction of driveway access along Imperial Avenue for new developments; and
- Additional buffer width between the pedestrian and vehicular travel lanes, within the Village area, via mid-block curb bulb outs and on-street parking.

National Avenue Corridor Master Plan

Similar to the CICMP, the National Avenue Corridor Master Plan developed specific multi-modal and land use recommendations to enhance the overall mobility along National Avenue between 28th Street and 43rd Street. The National Avenue Corridor Master Plan made the following recommendations for pedestrian improvements within the project study area:

- Connect both sides of the street by improving and/or providing highly visible enhanced crosswalks at all intersections where they do not currently exist (final installations are to be based on applicable warrants);
- Enhance landscape along sidewalks with additional street trees and groundcover plantings in order to supplement existing trees and have more continuous shade for pedestrians;
- Curb bulb-outs at intersections (where possible) to reduce the effective width of the right-of-way and pedestrian exposure;
- Enhanced crosswalks (where warranted) to improve their visibility at all study intersections and better highlight the presence of pedestrians in the corridor;
- Implementation of pedestrian countdown heads at National Avenue and 30th Street;
- Install new traffic signals at 31st Street and 41st Street to improve crossing conditions for pedestrians and to better balance delays for all;
- Ensure ADA-compliant facilities; and
- Installation of buffers between pedestrian, bicycle, and vehicular right-of-ways in order to distinguish between designated pedestrian, bicycle, and vehicular zones.

5.1.3 Other Planned Pedestrian Improvements

Several pedestrian facility projects have been identified by the City of San Diego and are included on their *Unfunded Transportation Needs List (8/5/2014)*. A list of the pedestrian improvements located in the Southeastern San Diego community are included in **Appendix O**. It should be noted this list is being updated on a regular basis and Appendix O only reflects a snap shot of the needs and planned improvements throughout the community at the time in which this report was prepared.

5.1.4 Pedestrian LOS Analysis and Results

Pedestrian LOS was evaluated along the major urban corridors throughout the community, including Market Street, Imperial Avenue, National Avenue, and 43rd Street, using the CSLOS methodology described in Chapter 2.

Tables 5.3A and **5.3B** display the Preferred Plan LOS for pedestrians along study roadways during the AM and PM peak periods (respectively). The tables also provide the Pedestrian LOS for existing conditions, for comparison purposes. Peak hour pedestrian CSLOS analysis outputs are provided in **Appendix P**.

As shown in the tables, each of the analyzed roadways is projected to provide a relatively high quality of pedestrian service at LOS D or better.

Figures 5-3a and **5-3b** show pedestrian Levels of Service for the AM and PM peak periods, respectively, by segment by direction.

**TABLE 5.3A
PREFERRED PLAN MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.71	B	3.07	C
	19th Street & 25th Street		2.83	C		
	25th Street & 32nd Street		3.15	C		
	32nd Street & I-15 SB Ramps		3.13	C		
	I-15 SB Ramps & I-15 NB Ramps		3.10	C		
	I-15 NB Ramps & I-805 SB Ramps		3.08	C		
	I-805 SB Ramps & I-805 NB Ramps		3.21	C		
	17th Street & 19th Street	Westbound	2.65	B	3.01	C
	19th Street & 25th Street		2.82	C		
	25th Street & 32nd Street		3.13	C		
	32nd Street & I-15 SB Ramps		3.01	C		
	I-15 SB Ramps & I-15 NB Ramps		2.62	B		
	I-15 NB Ramps & I-805 SB Ramps		3.08	C		
	I-805 SB Ramps & I-805 NB Ramps		2.97	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	2.71	B	2.74	B
	19th Street & 25th Street		2.65	B		
	25th Street & 28th Street		2.66	B		
	28th Street & 30th Street		2.50	B		
	30th Street & 32nd Street		2.59	B		
	32nd Street & 36th Street		2.65	B		
	36th Street & 40th Street		2.94	C		
	40th Street & I-805 SB Ramps		2.82	C		
	I-805 SB Ramps & I-805 NB Ramps		3.09	C		
	17th Street & 19th Street	Westbound	2.45	B	3.07	C
	19th Street & 25th Street		2.95	C		
	25th Street & 28th Street		2.95	C		
	28th Street & 30th Street		2.78	C		
	30th Street & 32nd Street		2.77	C		
	32nd Street & 36th Street		2.94	C		
	36th Street & 40th Street		3.66	D		
	40th Street & I-805 SB Ramps		3.10	C		
	I-805 SB Ramps & I-805 NB Ramps		2.91	C		

**TABLE 5.3A
PREFERRED PLAN MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	2.76	C	2.78	C
	32nd Street & 43rd Street		2.75	C		
	43rd Street & 47th Street		2.88	C		
	28th Street & 32nd Street	Westbound	2.78	C	2.84	C
	32nd Street & 43rd Street		2.89	C		
	43rd Street & 47th Street		2.77	C		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	2.45	B	2.70	B
	I-805 Ramps & Division Street		2.86	C		
	Logan Avenue & I-805 Ramps	Southbound	2.88	C	3.00	C
	I-805 Ramps & Division Street		3.07	C		

Source: Chen Ryan Associates; February 2015

Notes:

The pedestrian LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

**TABLE 5.3B
PREFERRED PLAN MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.74	B	3.28	C
	19th Street & 25th Street		2.80	C		
	25th Street & 32nd Street		3.08	C		
	32nd Street & I-15 SB Ramps		3.06	C		
	I-15 SB Ramps & I-15 NB Ramps		3.14	C		
	I-15 NB Ramps & I-805 SB Ramps		3.79	D		
	I-805 SB Ramps & I-805 NB Ramps		3.36	C		
	17th Street & 19th Street	Westbound	2.64	B	3.04	C
	19th Street & 25th Street		2.78	C		
	25th Street & 32nd Street		2.99	C		
	32nd Street & I-15 SB Ramps		3.03	C		
	I-15 SB Ramps & I-15 NB Ramps		2.69	B		
	I-15 NB Ramps & I-805 SB Ramps		3.30	C		
	I-805 SB Ramps & I-805 NB Ramps		3.06	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	2.80	C	2.77	C
	19th Street & 25th Street		2.68	B		
	25th Street & 28th Street		2.70	B		
	28th Street & 30th Street		2.56	B		
	30th Street & 32nd Street		2.59	B		
	32nd Street & 36th Street		2.61	B		
	36th Street & 40th Street		3.02	C		
	40th Street & I-805 SB Ramps		2.88	C		
	I-805 SB Ramps & I-805 NB Ramps		3.01	C		
	17th Street & 19th Street	Westbound	2.54	B	3.12	C
	19th Street & 25th Street		2.97	C		
	25th Street & 28th Street		3.00	C		
	28th Street & 30th Street		2.87	C		
	30th Street & 32nd Street		2.82	C		
	32nd Street & 36th Street		2.95	C		
	36th Street & 40th Street		3.75	D		
	40th Street & I-805 SB Ramps		3.14	C		
	I-805 SB Ramps & I-805 NB Ramps		2.92	C		

**TABLE 5.3B
PREFERRED PLAN MULTI-MODAL ANALYSIS – PEDESTRIAN LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	2.78	C	2.83	C
	32nd Street & 43rd Street		2.80	C		
	43rd Street & 47th Street		2.95	C		
	28th Street & 32nd Street	Westbound	2.80	C	2.90	C
	32nd Street & 43rd Street		2.95	C		
	43rd Street & 47th Street		2.85	C		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	2.86	C	2.88	C
	I-805 Ramps & Division Street		2.90	C		
	Logan Avenue & I-805 Ramps	Southbound	2.92	C	3.09	C
	I-805 Ramps & Division Street		3.19	C		

Source: Chen Ryan Associates; February 2015

Notes:

The pedestrian LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

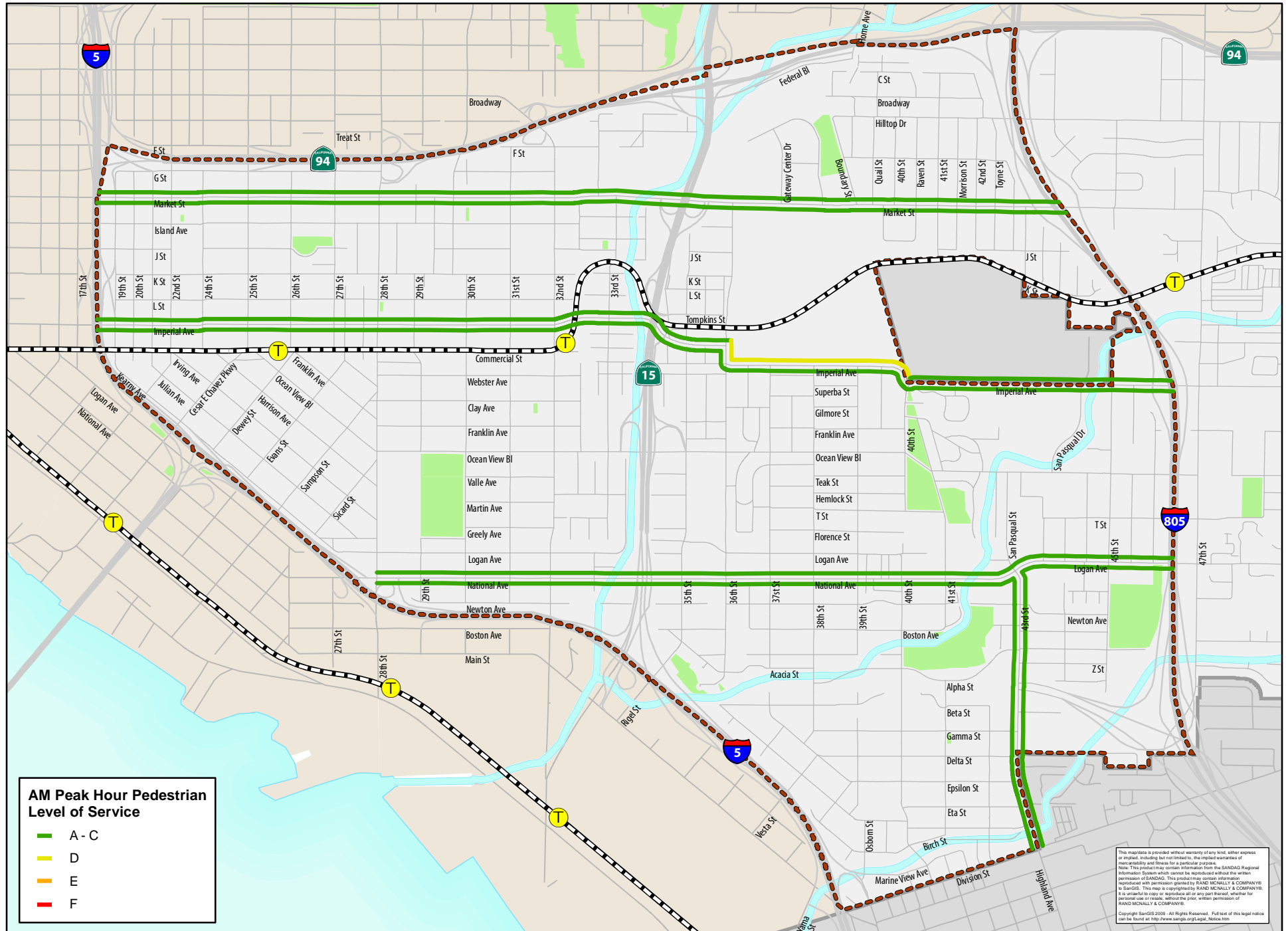


Figure 5-3a: Preferred Plan AM Peak Period Pedestrian Level of Service



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Data Source:
 City of San Diego, 2012; SanGIS Regional
 Data Warehouse, 2012;
 Dyett & Bhatia, 2012



SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

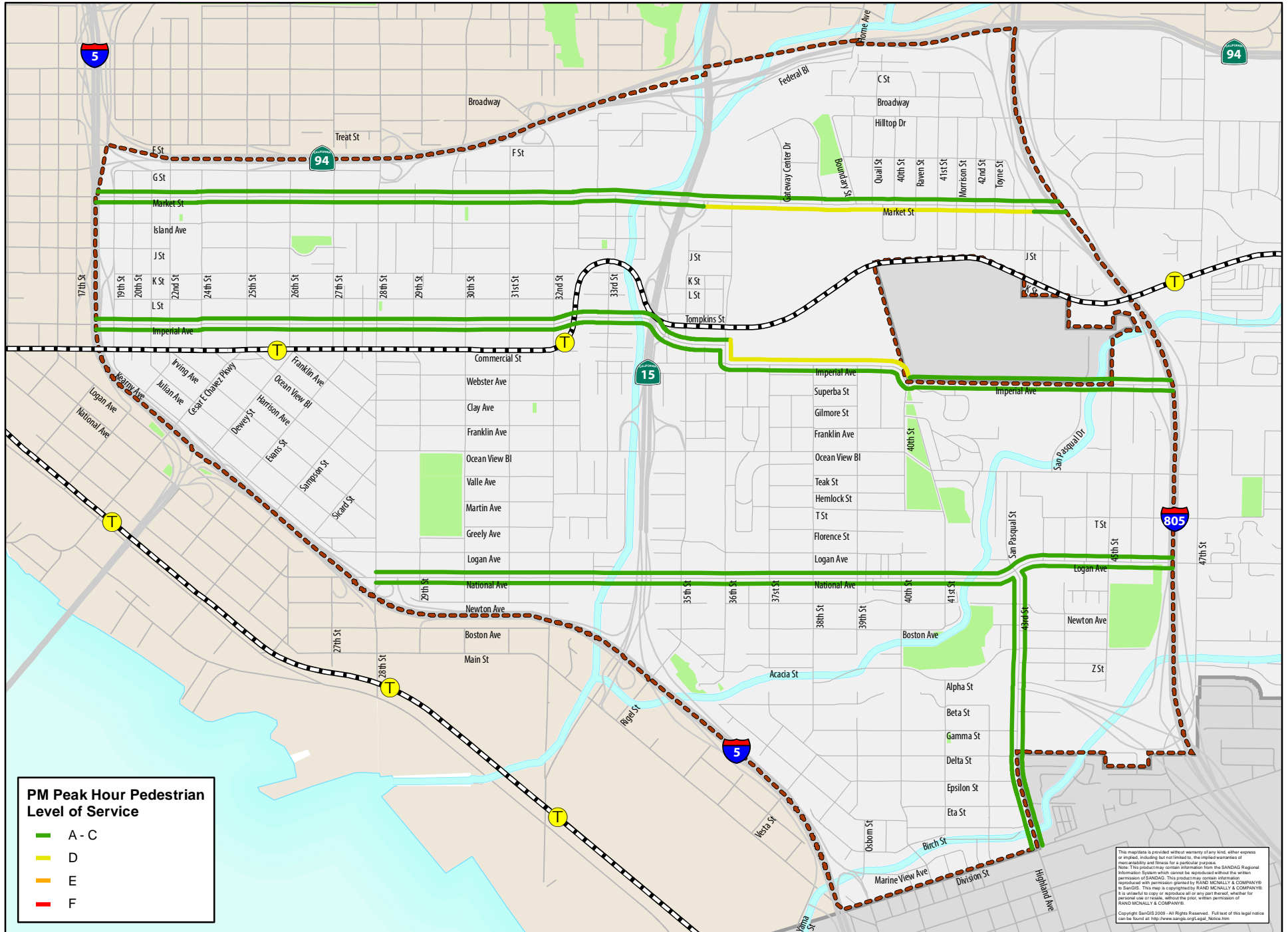


Figure 5-3b: Preferred Plan PM Peak Period Pedestrian Level of Service

5.2 Public Transit Services and Facilities

Transit opportunities in Southeastern San Diego are provided by the Metropolitan Transit System (MTS) with both bus and Light Rail Trolley services. The following sections describe the projected operations of the planned transit services within Southeastern San Diego under buildout of the preferred plan.

5.2.1 Preferred Plan Transit Routes

The Preferred Plan transit analysis assumed the completion of all transit improvements outlined in the San Diego Association of Government's *2050 Regional Transportation Plan Revenue Constrained (SANDAG RTP)* scenario which are anticipated to be constructed prior to Year 2035. The assumed improvements are listed below:

- I-805 BRT, Route 680 - Otay Mesa to Sorrento Mesa via I-805 Corridor, Otay Ranch/Millenia, National City, Southeastern San Diego, Kearny Mesa. A Bus Rapid Transit (BRT) service is planned for San Diego along the Interstate 805 corridor as part of the TransNet program. The BRT will connect the Otay Mesa Port of Entry to Kearny Mesa, Sorrento Mesa, UCSD and UTC, providing access to employment and activity centers in a rapid and reliable manner. The 2050 RTP indicates this route will be implemented by the year 2018. Members of the Southeastern San Diego community have expressed an interest in having the South Bay BRT service the 47th Street Trolley Station. This was included in the 2050 RTP unconstrained network and SANDAG is conducting a planning study to evaluate potential station design concepts; therefore, it was not included in the Preferred Plan transit analysis.
- Rapid Bus, Route 11 – between Spring Valley and SDSU via Southeastern San Diego, Downtown, Hillcrest, and Mid-City. The 2050 RTP indicates this route will be implemented by the year 2035.
- Rapid Bus, Route 637 – between North Park to 32nd Street Trolley Station via Golden Hill. The 2050 RTP indicates this route will be implemented by the year 2035.
- Light Rail Transit (LRT), Orange Line – The 2050 RTP indicates the Orange Line will have increased service frequencies by the year 2030 to 7.5-minute peak / 15-minute off-peak, and a further increase by 2040 to 7.5-minute off-peak. (The latter was not included since it is not scheduled by 2035.) An extended linkage to the Airport Intermodal Transit Center is also planned by the year 2035.
- LRT, Orange Line Express – between El Cajon and downtown San Diego. The 2050 RTP indicates this route will not be implemented until the year 2040; therefore, it was not included in the Preferred Plan transit analysis.
- LRT, New Line – between UTC and San Ysidro via Kearny Mesa, Mission Valley, Mid-City, Southeastern San Diego, National City/Chula Vista via Highland Avenue/4th Avenue. The 2050 RTP indicates this route will not be implemented until the year 2050; therefore, it was not included in the Preferred Plan transit analysis.

-
- Local Buses – The 2050 RTP also identifies that local bus service frequencies will be improved to 15-minute headways along key corridors (all urban routes) by the year 2020, with further improvements to 10-minute (all day) frequency by 2030.

In addition to the planned transit improvements identified above, a number of BRT routes throughout the region are also planned with stations in downtown San Diego. Given the close proximity of downtown San Diego and Southeastern San Diego, these improvements should be beneficial to residents of the Southeastern San Diego community.

In addition to the regional transit improvement outlined in SANDAG’s RTP, the Preferred Plan also anticipates the placement of benches at all transit stops within the community planning area.

5.2.2 Transit Activity

While projecting increases in multi-modal trips requires some level of judgment and is dependent on numerous factors, quantitative methods are available to assist in this process. A community-wide transit ridership growth factor was derived based on future growth estimates from previous master plan studies² conducted within the Southeastern San Diego community. These master plan studies utilized SANDAG’s Trip Generation for Smart Growth Tool (MXD) to estimate the specific growth in transit ridership along the major corridors throughout the community. Relevant pages from the previous master plan technical reports are provided in Appendix N. Based on the MXD results in the previous master plans a 1.5 growth factor was applied to existing transit ridership volumes.

Figure 5-4 displays the anticipated transit demand within the Southeastern San Diego community under buildout of the Preferred Plan.

Table 5.4 displays the assumed amenities, as well as the projected boardings and alightings at each transit stop/station within the Southeastern San Diego community under buildout of the Preferred Plan. It is important to note that actual placement of transit amenities such as benches depend on the availability of sidewalk spaces, supporting infrastructures, ADA compliance, and community support. Therefore the amenities documented in Table 5.4 below should only be installed where feasible.

² Commercial Imperial Corridor Master Plan - Transportation Analysis; Fehr & Peers, April 2013
National Avenue Corridor Master Plan – Future Multi-Modal Conditions Report; Fehr & Peers, April 2014

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
10118	Market Street / 19th Street	N		✓	✓	3 & 5	20	60	80
10120	Market Street / 21st Street	N		✓	✓	3 & 5	40	100	140
10122	Logan Avenue / Cesar E Chavez Parkway	N	✓	✓	✓	11 & 5	120	80	200
10123	Imperial Avenue / 22nd Street	N		✓	✓	4	10	30	40
10127	Imperial Avenue / 24th Street	N		✓	✓	4	10	20	30
10133	Market Street / 25th Street	N		✓	✓	3	190	180	370
10137	Imperial Avenue / 26th Street	N		✓	✓	4	20	30	50
10145	Ocean View Boulevard / Sampson Street	N		✓	✓	3	50	90	140
10147	Imperial Avenue / Hensley Street	N		✓	✓	4	40	90	130
10154	National Avenue / 29th Street	N		✓	✓	11	140	110	250
10158	Market Street / 30th Street	N		✓	✓	5	80	130	210
10163	Ocean View Boulevard / 30th Street	N		✓	✓	3	60	120	180
10164	Imperial Avenue / 30th Street	N		✓	✓	4	40	90	130
10171	Market Street / 31st Street	N		✓	✓	5	50	60	110
10177	Ocean View Boulevard / 32nd Street	N	✓	✓	✓	3	100	100	200
10178	Imperial Avenue / 32nd Street	N		✓	✓	4	30	30	60
10179	Market Street / 32nd Street	N		✓	✓	5	50	80	130
10184	Market Street / 33rd Street	N		✓	✓	5	50	90	140
10186	Ocean View Boulevard / 33rd Street	N		✓	✓	3	50	60	110
10187	Imperial Avenue / 33rd Street	N		✓	✓	4	20	30	50
10195	National Avenue / 35th Street	N		✓	✓	11	40	190	230
10197	National Avenue / 36th Street	N		✓	✓	11	90	170	260
10203	Imperial Avenue / 37th Street	N		✓	✓	4	20	30	50
10205	National Avenue / 38th Street	N		✓	✓	11	90	300	390
10206	Ocean View Boulevard / 38th Street	N		✓	✓	3	60	80	140

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
10207	Imperial Avenue / 38th Street	N		✓	✓	4	10	20	30
10214	National Avenue / 40th Street	N		✓	✓	11	30	100	130
10216	Imperial Avenue / 40th Street	F		✓	✓	4	10	20	30
10220	National Avenue / 41st Street	N		✓	✓	11	30	70	100
10221	Market Street / Morrison Street	N		✓	✓	5	90	130	220
10223	Ocean View Boulevard / San Miguel Avenue	N		✓	✓	3	40	50	90
10225	Market Street / Denby Street	N	✓	✓	✓	5	50	50	100
10231	Ocean View Boulevard / Elizabeth Street	N		✓	✓	3	30	50	80
10232	Imperial Avenue / 45th Street	N		✓	✓	4	80	40	120
10236	Ocean View Boulevard / 47th Street	N		✓	✓	3	10	40	50
10499	Imperial Avenue / 19th Street	F		✓	✓	4	10	20	30
10501	Logan Avenue / Beardsley Street	F		✓	✓	11	40	80	120
10503	Market Street / 22nd Street	F		✓	✓	3 & 5	90	110	200
10510	Logan Avenue / Cesar E Chavez Parkway	F		✓	✓	11	40	40	80
10515	Imperial Avenue / 25th Street	F		✓	✓	4	40	30	70
10516	Commercial Street / Ocean View Boulevard	F		✓	✓	3	120	70	190
10519	Logan Avenue / Sampson Street	F		✓	✓	11	60	140	200
10529	National Avenue / 27th Street	F		✓	✓	11	20	40	60
10530	Market Street / 27th Street	F		✓	✓	5	20	60	80
10535	Ocean View Boulevard / 28th Street	F		✓	✓	3	50	60	110
10537	Market Street / 28th Street	F		✓	✓	5	20	60	80
10541	Ocean View Boulevard / 29th Street	F		✓	✓	3	50	50	100
10544	National Avenue / 30th Street	F		✓	✓	11	60	160	220
10552	National Avenue / 32nd Street	F		✓	✓	11	70	120	190

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
10555	National Avenue / 33rd Street	F		✓	✓	11	10	20	30
10563	36th Street / Imperial Avenue	F		✓	✓	4	20	50	70
10568	Ocean View Boulevard / 35th Street	F		✓	✓	3	60	110	170
10570	Ocean View Boulevard / 36th Street	F		✓	✓	3	30	70	100
10571	Market Street / 36th Street	F		✓	✓	5	70	180	250
10575	Ocean View Boulevard / 37th Street	F		✓	✓	3	60	80	140
10576	Market Street / Gateway Center Drive	F		✓	✓	5	20	20	40
10578	Market Street / Gateway Center Way	F		✓	✓	5	10	30	40
10582	Ocean View Boulevard / 39th Street	F		✓	✓	3	40	60	100
10587	Market Street / 40th Street	F		✓	✓	5	50	80	130
10598	Imperial Avenue / Messina Way	F		✓	✓	4	30	30	60
10603	Ocean View Boulevard / San Pasqual Drive	F	✓	✓	✓	3	50	110	160
10613	Logan Avenue / 44th Street	F		✓	✓	11 & 955	60	50	110
10618	Imperial Avenue / Greenwood Cemetery	F		✓	✓	4	70	120	190
10619	Market Street / 45th Street	F		✓	✓	5	60	120	180
10622	Logan Avenue / 46th Street	F		✓	✓	11 & 955	70	50	120
10871	Imperial Avenue / 19th Street	N		✓	✓	4	10	10	20
10874	Imperial Avenue / 21st Street	N		✓	✓	4	20	10	30
10876	Logan Avenue / Cesar Chavez Parkway	F	✓	✓	✓	11	80	110	190
10882	Imperial Avenue / 24th Street	N		✓	✓	4	10	10	20
10884	Logan Avenue / I-5 Ramp	N		✓	✓	11	20	40	60
10889	Imperial Avenue / 25th Street	N		✓	✓	4	20	30	50

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
10890	Ocean View Boulevard / Commercial Street	N		✓	✓	3	30	160	190
10893	Ocean View Boulevard / Dewey Street	N		✓	✓	3	20	40	60
10895	National Avenue / 26th Street	N		✓	✓	11	30	30	60
10896	Imperial Avenue / 26th Street	N		✓	✓	4	30	20	50
10903	Market Street / 27th Street	N		✓	✓	5	60	20	80
10907	Ocean View Boulevard / Sampson Street	N		✓	✓	3	70	20	90
10910	National Avenue / 28th Street	N		✓	✓	11	70	120	190
10911	Imperial Avenue / 28th Street	N		✓	✓	4	80	40	120
10912	Ocean View Boulevard / 28th Street	N		✓	✓	3	40	60	100
10914	Market Street / 28th Street	N		✓	✓	5	40	20	60
10918	Ocean View Boulevard / 29th Street	N		✓	✓	3	60	20	80
10919	National Avenue / 29th Street	N		✓	✓	11	40	80	120
10923	Market Street / 30th Street	N		✓	✓	5	110	80	190
10925	Ocean View Boulevard / 30th Street	N		✓	✓	3	110	50	160
10926	Imperial Avenue / 30th Street	N		✓	✓	4	60	40	100
10935	Market Street / 32nd Street	F		✓	✓	5	60	60	120
10938	Imperial Avenue / 33rd Street	N		✓	✓	4	20	20	40
10946	National Avenue / 35th Street	N	✓	✓	✓	11	230	60	290
10948	National Avenue / 36th Street	N		✓	✓	11	170	70	240
10949	Ocean View Boulevard / 36th Street	N		✓	✓	3	60	40	100
10950	Imperial Avenue / 36th Street	N		✓	✓	4	40	30	70
10951	Market Street / 36th Street	N	✓	✓	✓	5	180	70	250
10953	Imperial Avenue / 37th Street	N		✓	✓	4	30	20	50
10955	Market Street / Gateway Center Drive	F		✓	✓	5	40	50	90

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
10956	Ocean View Boulevard / 38th Street	N		✓	✓	3	130	50	180
10962	Ocean View Boulevard / 39th Street	N		✓	✓	3	50	40	90
10963	Market Street / Quail Street	N		✓	✓	5	90	60	150
10967	National Avenue / 40th Street	N		✓	✓	11	110	30	140
10975	National Avenue / 41st Street	N		✓	✓	11	70	30	100
10976	Imperial Avenue / Messina Way	N		✓	✓	4	20	30	50
10977	Market Street / Morrison Street	F		✓	✓	5	140	110	250
10982	Ocean View Boulevard / Marketplace	F		✓	✓	3	130	90	220
10983	Market Street / Denby Street	N	✓	✓	✓	5	50	40	90
10987	Logan Avenue / Dominion Street	N		✓	✓	11 & 955	60	80	140
10993	Imperial Avenue / 45th Street	N		✓	✓	4	40	50	90
11262	Logan Avenue / Beardsley Street	F		✓	✓	11	50	60	110
11263	Market Street / 20th Street	F		✓	✓	3 & 5	80	20	100
11264	Market Street / 22nd Street	F		✓	✓	3 & 5	110	50	160
11275	Market Street / 25th Street	F		✓	✓	3 & 5	150	210	360
11277	Logan Avenue / Sampson Street	F		✓	✓	11	130	60	190
11284	National Avenue / 27th Street	F		✓	✓	11	20	10	30
11299	National Avenue / 30th Street	F	✓	✓	✓	11	150	60	210
11304	Market Street / 31st Street	F		✓	✓	5	80	50	130
11309	National Avenue / 32nd Street	F		✓	✓	11	120	60	180
11310	Ocean View Boulevard / 32nd Street	F		✓	✓	3	90	70	160
11311	Imperial Avenue / 32nd Street	F		✓	✓	4	20	30	50
11316	National Avenue / 33rd Street	F		✓	✓	11	30	20	50
11317	Market Street / 33rd Street	N		✓	✓	5	90	50	140
11319	Ocean View Boulevard / 33rd Street	F		✓	✓	3	100	30	130

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
11323	Imperial Avenue / Francis Street	N		✓	✓	4	20	10	30
11324	Ocean View Boulevard / 35th Street	F	✓	✓	✓	3	140	40	180
11332	Ocean View Boulevard / 37th Street	F		✓	✓	3	130	40	170
11337	National Avenue / 38th Street	F	✓	✓	✓	11	300	100	400
11338	Market Street / Gateway Center Way	F	✓	✓	✓	5	30	20	50
11346	Ocean View Boulevard / 40th Street	F		✓	✓	3	70	30	100
11353	Ocean View Boulevard / San Miguel Avenue	F		✓	✓	3	30	20	50
11365	Ocean View Boulevard / 45th Street	F		✓	✓	3	20	20	40
11367	Imperial Avenue / Greenwood Cemetery	F		✓	✓	4	100	100	200
11368	Market Street / 45th Street	N		✓	✓	5	110	80	190
11370	Logan Avenue / 46th Street	F		✓	✓	11 & 955	50	50	100
11682	25th Street / Imperial Avenue	N		✓	✓	3	60	80	140
11683	25th Street / L Street	N		✓	✓	3	20	40	60
11723	43rd Street / Gamma Street	N		✓	✓	955	30	50	80
11724	43rd Street / National Avenue	N	✓	✓	✓	11 & 955	530	160	690
12076	25th Street / J Street	F		✓	✓	3	20	70	90
12131	43rd Street / Keeler Avenue	F		✓	✓	955	40	50	90
12464	25th Street / Imperial Avenue	N		✓	✓	3	110	40	150
12465	25th Street / K Street	N		✓	✓	3	80	20	100
12466	25th Street / Island Avenue	N		✓	✓	3	40	20	60
12508	40th Street / Imperial Avenue	F		✓	✓	4	20	20	40
12512	43rd Street / Beta Street	N		✓	✓	955	60	80	140
12513	43rd Street / Hwy 805	F		✓	✓	955	110	70	180

**TABLE 5.4
PREFERRED PLAN TRANSIT STATION/STOP LOCATIONS, AMENITIES
AND AVERAGE DAILY BOARDINGS AND ALIGHTINGS**

Stop ID	Location		Amenities			Route	Boardings	Alightings	Total
	Intersection	Far Side / Near Side	Shelter	Bench	Trash Cans				
12514	43rd Street / Keeler Avenue	N		✓	✓	955	90	30	120
12860	43rd Street / Delta Street	F		✓	✓	955	190	90	280
12861	43rd Street / National Avenue	F	✓	✓	✓	11 & 955	240	560	800
13013	Ocean View Boulevard / 46th Street	N		✓	✓	3	10	30	40
13432	43rd Street / Hwy 805	F		✓	✓	955	100	160	260
13440	Logan Avenue / 45th Street	N		✓	✓	11 & 955	110	90	200
13441	Logan Avenue / 45th Street	N		✓	✓	11 & 955	80	120	200
13460	Ocean View Boulevard / 40th Street	F		✓	✓	3	30	60	90
50114	Highland Avenue / Division Street	F		✓	✓	955	80	40	120
50167	Highland Avenue / Eta Street	F		✓	✓	955	110	70	180
50198	Highland Avenue / Eta Street	F		✓	✓	955	130	60	190
60220	26th Street / Sicard Street	N		✓	✓	11	20	40	60
91103	Imperial Avenue / Francis Street	N		✓	✓	4	10	20	30
91106	Ocean View Boulevard / 46th Street	N		✓	✓	3	50	30	80
99148	43rd Street / Delta Street	N		✓	✓	955	120	130	250
99339	Highland Avenue / Division Street	F		✓	✓	955	90	60	150
99345	Ocean View Boulevard / Dewey Street	F		✓	✓	3	20	20	40
75072	32nd Street/Commercial Street Station (westbound)	-	✓	✓	✓	Orange Line	990	470	1,460
75073	32nd Street/Commercial Street Station (eastbound)	-	✓	✓	✓	Orange Line	440	1010	1,450
75074	25 th Street/Commercial Street Station (eastbound)	-	✓	✓	✓	Orange Line	640	1320	1,960
75075	25 th Street/Commercial Street Station (westbound)	-	✓	✓	✓	Orange Line	1260	530	1,790

Source: Chen Ryan Associates; February 2015

As shown, transit boardings and alightings are projected to steadily grow throughout the community. Benches and trash cans will be located at all stops/stations and shelters will be located at those stops/stations that are anticipated to serve 400 or more passengers.

5.2.3 Transit LOS Analysis and Results

Transit LOS was evaluated along the major urban corridors throughout the community, including Market Street, Imperial Avenue, National Avenue, and 43rd Street, using the CSLOS methodologies described in Chapter 2.0.

Tables 5.5A and **5.5B** summarize transit LOS analysis results for roadway segments during the AM and PM peak hours (respectively), under buildout of the Preferred Plan.

Figures 5-5a and **5-5b** display transit LOS results by segment and by direction, for the AM and PM peak hours, respectively. Peak hour transit CSLOS analysis output is provided in **Appendix Q**.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

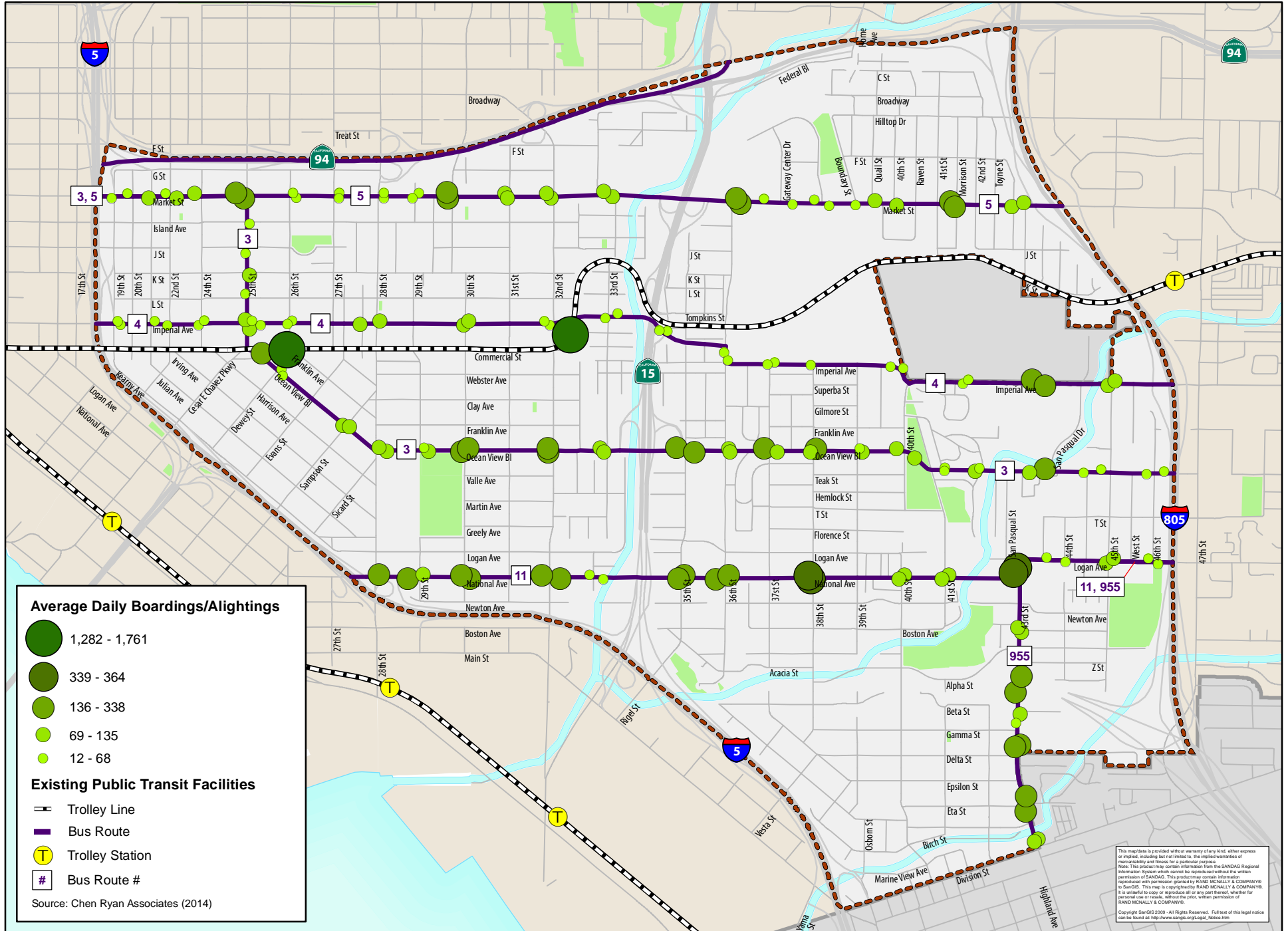
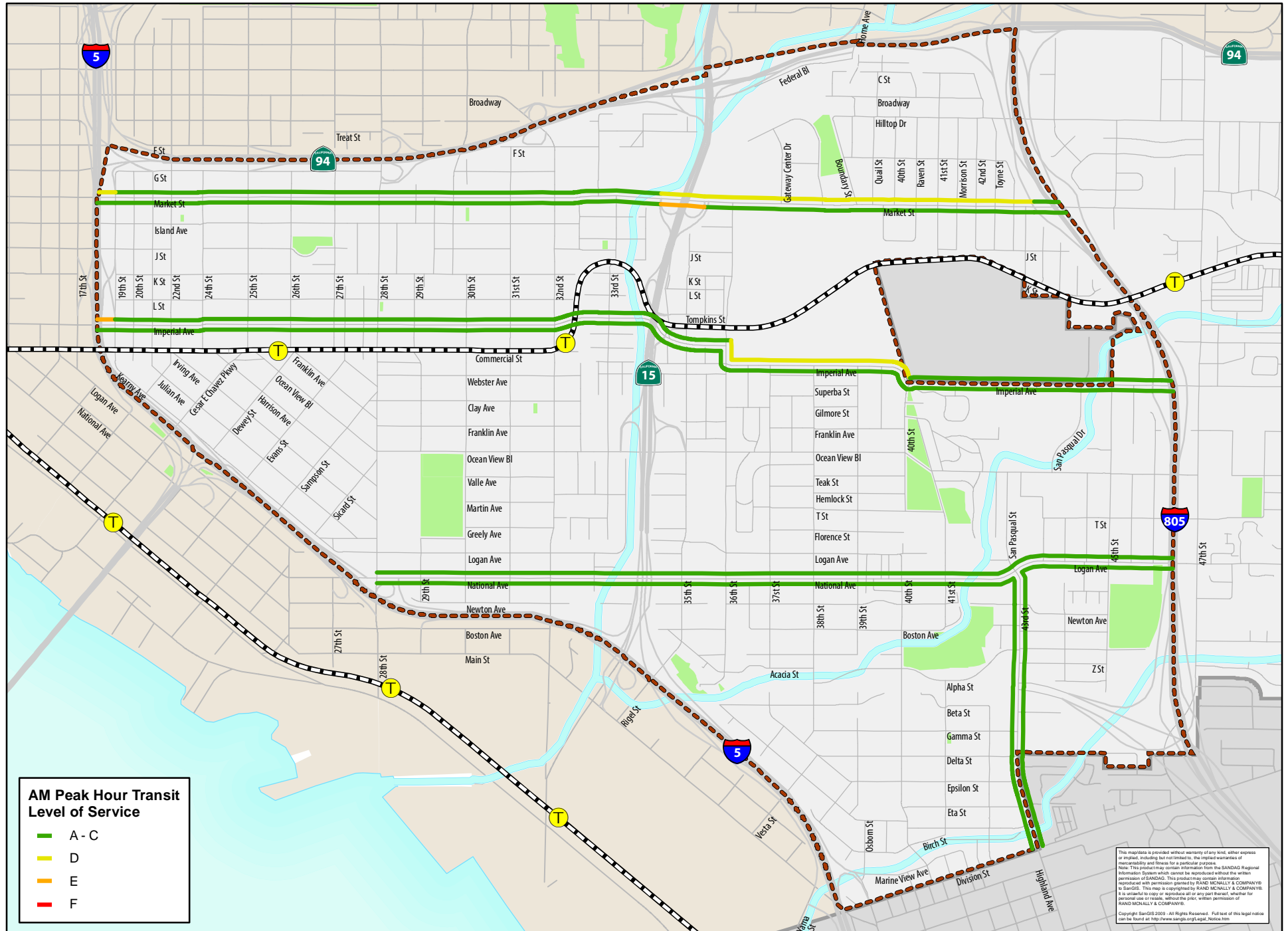


Figure 5-4: Preferred Plan Transit Activity

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Data Source:
 City of San Diego, 2012; SanGIS Regional Data Warehouse, 2012;
 Dyett & Bhatia, 2012



SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

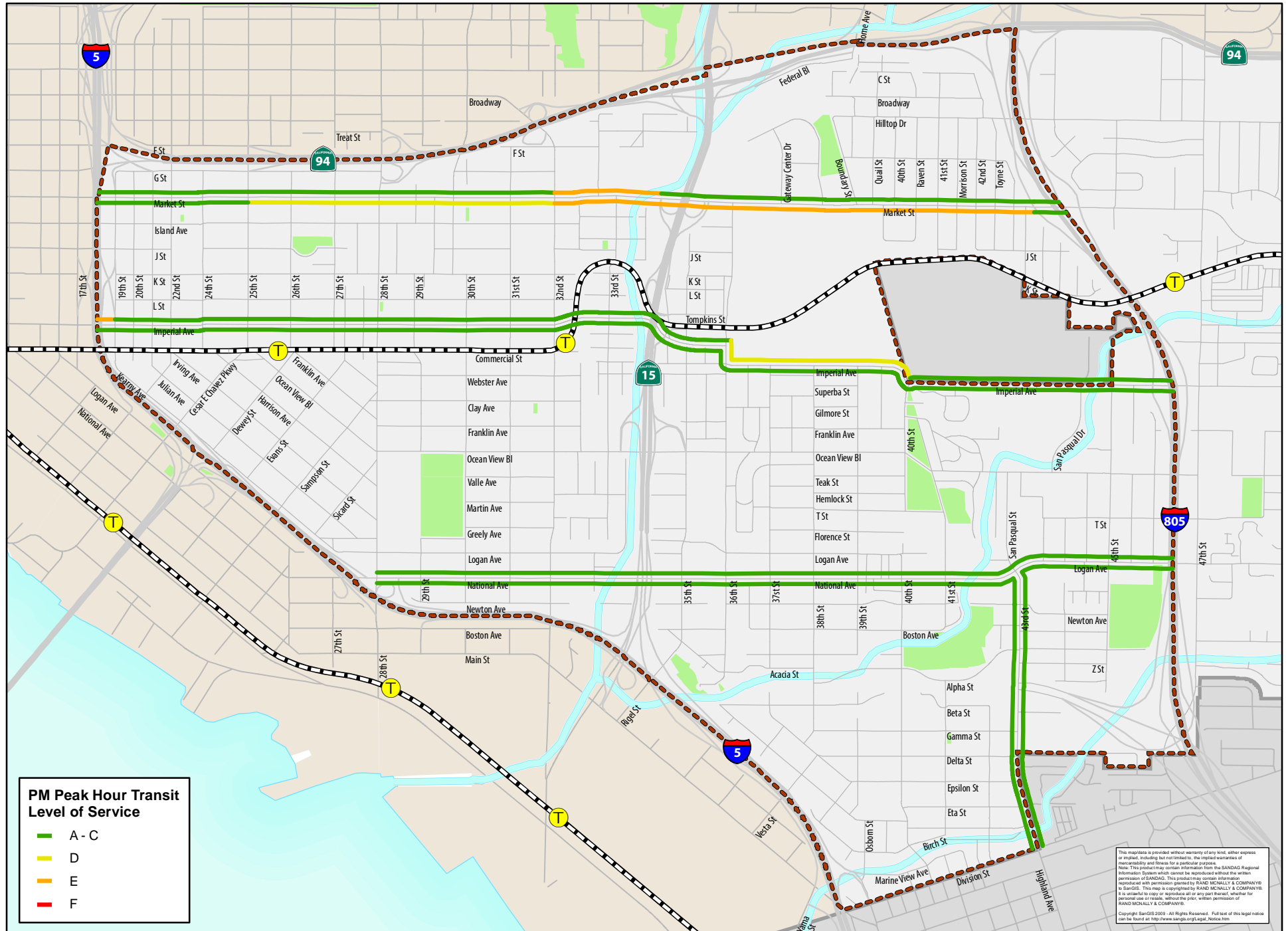


Figure 5-5b: Preferred Plan PM Peak Period Transit Level of Service



Data Source:
City of San Diego, 2012; SanGIS Regional
Data Warehouse, 2012;
Dyett & Bhatia, 2012



**TABLE 5.5A
PREFERRED PLAN MULTI-MODAL ANALYSIS – TRANSIT LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	2.47	B	1.79	A
	19th Street & 25th Street		0.96	A		
	25th Street & 32nd Street		1.62	A		
	32nd Street & I-15 SB Ramps		2.02	B		
	I-15 SB Ramps & I-15 NB Ramps		4.45	E		
	I-15 NB Ramps & I-805 SB Ramps		1.69	A		
	I-805 SB Ramps & I-805 NB Ramps		2.46	B		
	17th Street & 19th Street	Westbound	3.98	D	2.52	B
	19th Street & 25th Street		0.58	A		
	25th Street & 32nd Street		1.46	A		
	32nd Street & I-15 SB Ramps		2.24	B		
	I-15 SB Ramps & I-15 NB Ramps		4.03	D		
	I-15 NB Ramps & I-805 SB Ramps		4.03	D		
	I-805 SB Ramps & I-805 NB Ramps		2.14	B		
Imperial Avenue	17th Street & 19th Street	Eastbound	2.72	B	1.83	A
	19th Street & 25th Street		1.65	A		
	25th Street & 28th Street		1.47	A		
	28th Street & 30th Street		1.65	A		
	30th Street & 32nd Street		1.87	A		
	32nd Street & 36th Street		1.63	A		
	36th Street & 40th Street		2.12	B		
	40th Street & I-805 SB Ramps		1.88	A		
	I-805 SB Ramps & I-805 NB Ramps		2.45	B		
	17th Street & 19th Street	Westbound	4.32	E	2.29	B
	19th Street & 25th Street		2.08	B		
	25th Street & 28th Street		1.80	A		
	28th Street & 30th Street		1.76	A		
	30th Street & 32nd Street		1.80	A		
	32nd Street & 36th Street		1.79	A		
	36th Street & 40th Street		3.58	D		
	40th Street & I-805 SB Ramps		1.87	A		
	I-805 SB Ramps & I-805 NB Ramps		2.96	C		

**TABLE 5.5A
PREFERRED PLAN MULTI-MODAL ANALYSIS – TRANSIT LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	1.18	A	1.45	A
	32nd Street & 43rd Street		1.60	A		
	43rd Street & 47th Street		1.32	A		
	28th Street & 32nd Street	Westbound	1.30	A	1.24	A
	32nd Street & 43rd Street		1.16	A		
	43rd Street & 47th Street		1.39	A		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	2.93	C	2.77	C
	I-805 Ramps & Division Street		2.66	B		
	Logan Avenue & I-805 Ramps	Southbound	2.91	C	2.61	B
	I-805 Ramps & Division Street		2.42	B		

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

The transit LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

**TABLE 5.5B
PREFERRED PLAN MULTI-MODAL ANALYSIS – TRANSIT LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	1.75	A	3.55	D
	19th Street & 25th Street		0.86	A		
	25th Street & 32nd Street		3.94	D		
	32nd Street & I-15 SB Ramps		4.27	E		
	I-15 SB Ramps & I-15 NB Ramps		4.45	E		
	I-15 NB Ramps & I-805 SB Ramps		4.30	E		
	I-805 SB Ramps & I-805 NB Ramps		2.20	B		
	17th Street & 19th Street	Westbound	3.31	C	1.60	A
	19th Street & 25th Street		0.22	A		
	25th Street & 32nd Street		1.39	A		
	32nd Street & I-15 SB Ramps		4.34	E		
	I-15 SB Ramps & I-15 NB Ramps		3.20	C		
	I-15 NB Ramps & I-805 SB Ramps		0.92	A		
	I-805 SB Ramps & I-805 NB Ramps		2.65	B		
Imperial Avenue	17th Street & 19th Street	Eastbound	2.27	B	1.88	A
	19th Street & 25th Street		2.06	B		
	25th Street & 28th Street		1.58	A		
	28th Street & 30th Street		1.77	A		
	30th Street & 32nd Street		1.87	A		
	32nd Street & 36th Street		2.12	B		
	36th Street & 40th Street		1.92	A		
	40th Street & I-805 SB Ramps		1.68	A		
	I-805 SB Ramps & I-805 NB Ramps		2.40	B		
	17th Street & 19th Street	Westbound	4.36	E	2.55	B
	19th Street & 25th Street		2.01	B		
	25th Street & 28th Street		2.38	B		
	28th Street & 30th Street		1.90	A		
	30th Street & 32nd Street		1.80	A		
	32nd Street & 36th Street		1.85	A		
	36th Street & 40th Street		4.12	D		
	40th Street & I-805 SB Ramps		2.22	B		
	I-805 SB Ramps & I-805 NB Ramps		3.22	C		

**TABLE 5.5B
PREFERRED PLAN MULTI-MODAL ANALYSIS – TRANSIT LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	1.31	A	1.33	A
	32nd Street & 43rd Street		1.37	A		
	43rd Street & 47th Street		1.24	A		
	28th Street & 32nd Street	Westbound	1.84	A	1.51	A
	32nd Street & 43rd Street		1.20	A		
	43rd Street & 47th Street		2.04	B		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	2.44	B	2.67	B
	I-805 Ramps & Division Street		3.02	C		
	Logan Avenue & I-805 Ramps	Southbound	2.92	C	3.09	C
	I-805 Ramps & Division Street		3.19	C		

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

The transit LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

As shown, all transit facilities are projected to operate at LOS D or better under buildout of the Preferred Plan, with the following exceptions:

- Eastbound and westbound Market Street, between 32nd Street and I-15 SB Ramps – LOS E (PM peak hour);
- Eastbound Market Street, between I-15 SB Ramps and I-15 NB Ramps – LOS E (AM and PM peak hours);
- Eastbound Marker Street, between I-15 NB Ramps and I-805 SB Ramps – LOS E (PM Peak hour); and
- Westbound Imperial Avenue, between 17th Street and 19th Street – LOS E (AM and PM Peak Hours).

The assumed transit improvements outlined in SANDAG’s RTP are projected to maintain or improve the transit CSLOS along the majority of the urban corridors (with the exception of Market Street) within the Southeastern San Diego community, when compared to the current levels of operation.

5.3 Street and Freeway System

This section presents future conditions analysis of key study roadways, intersections and freeways facilities located within Southeastern San Diego, under buildout of the Preferred Plan alternative.

5.3.1 Roadway Improvements

A guiding strategy for street system planning for the Southeastern San Diego community is to make recommendations limited to modifications within the current roadway curb-to-curb widths. This strategy facilitates implementation of the recommendations since they tend to be lower cost by avoiding property acquisition and major construction involving moving curbs and drainage.

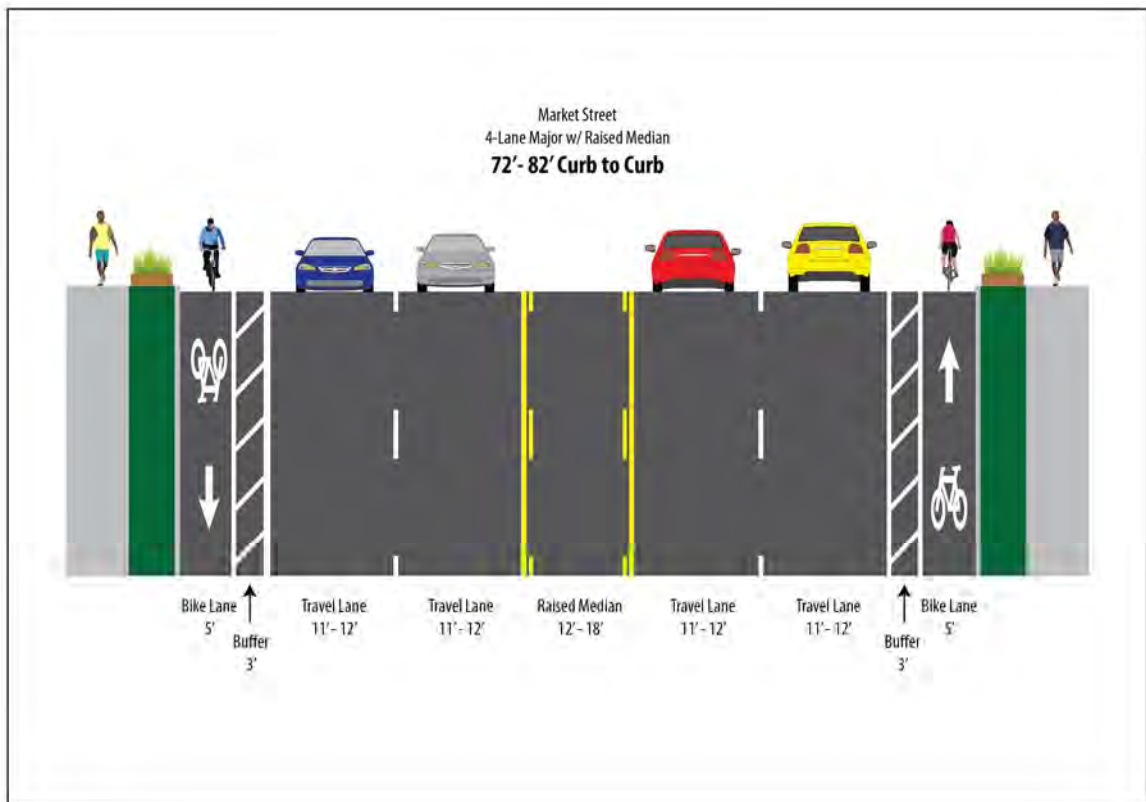
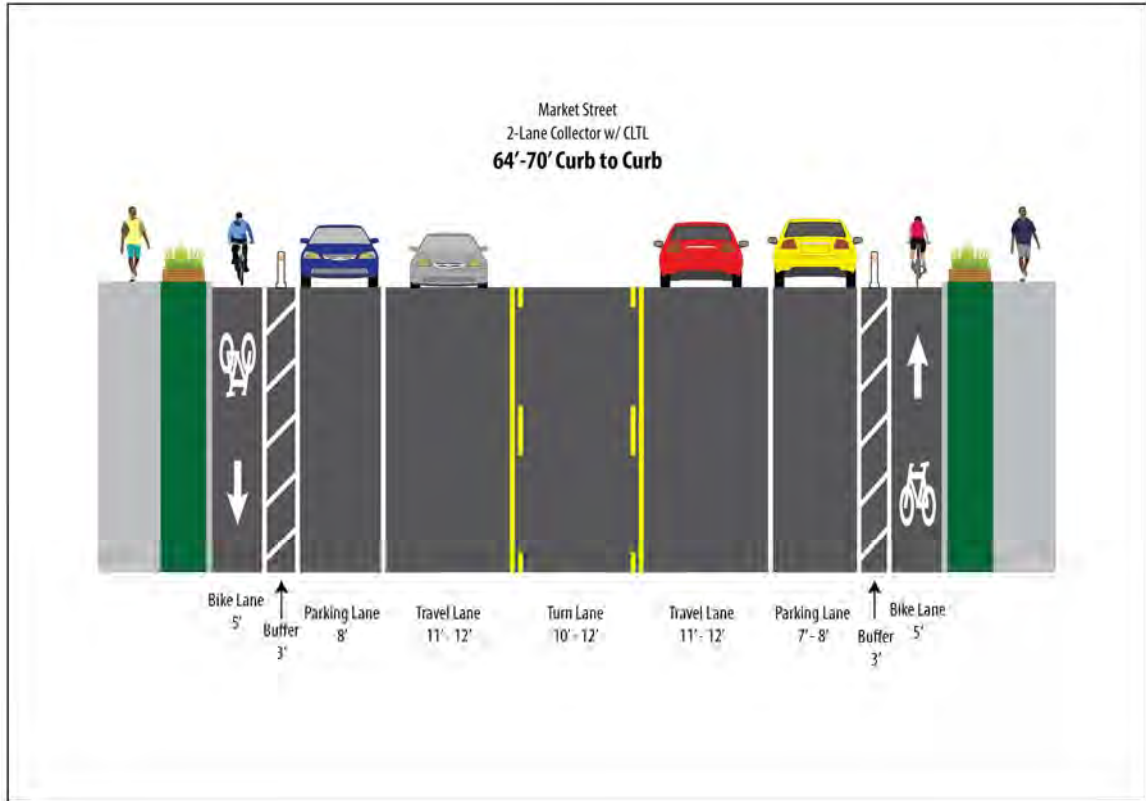
While the majority of roadways in Southeastern San Diego would remain as the current cross-sections, the Preferred Plan includes the implementation of a number of proposed road diets and lane diets (reducing the number of travel lanes and lane widths) to provide a balance between vehicular, bicycle, and pedestrian travel across the community. Facilities with proposed roadway diets include:

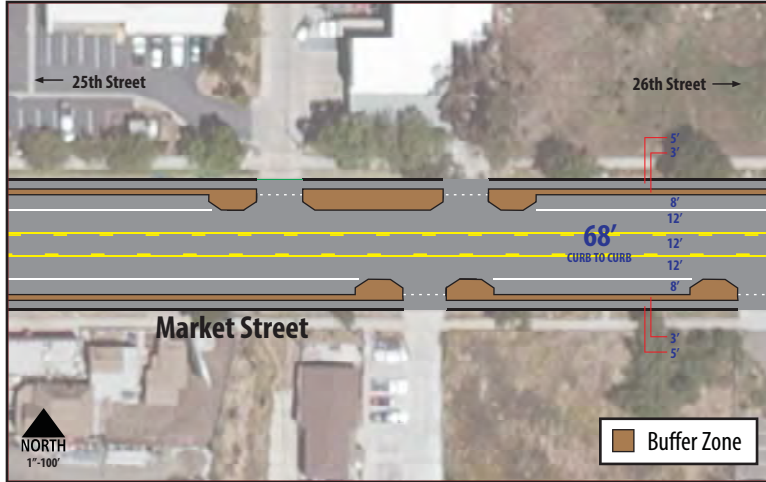
- Market Street, between 19th Street and I-805;
- Imperial Avenue, between I-5 and I-15; and
- National Avenue/Logan Avenue, between I-5 and the I-805 overpass.

The proposed roadway classification changes are detailed as following:

Market Street - Under the Preferred Plan alternative, Market Street, between 19th Street and 32nd Street, will be reduced from its current functional classification (Four-Lane Collector with Center Turn-Lane), and its Adopted Community Plan classification (Four-Lane Major Arterial), to a Two-Lane Collector Street with Center Turn-Lane. The section of Market Street, between 32nd Street and Boundary Street will remain as the existing four travel lanes, but on-street parking will be removed in order to accommodate bicycle facilities. Specific parking discussion is provided in Section 5.7 of this report. One-way cycle tracks will be provided in each direction of the roadway, as shown in the typical cross-sections and concept plans on the following pages.

Cross-section and conceptual plan illustrations are provided to demonstrate general feasibility of the proposed mitigation measures only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

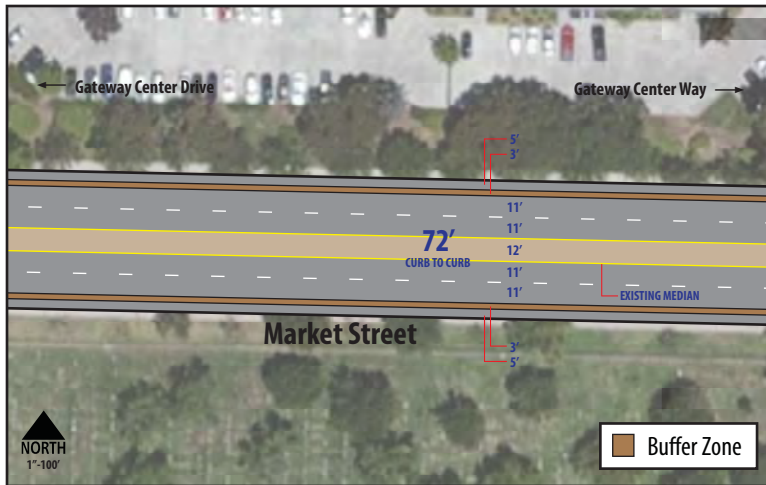




Market Street

From 19th Street to 24th Street
 From 25th Street to 33rd Street

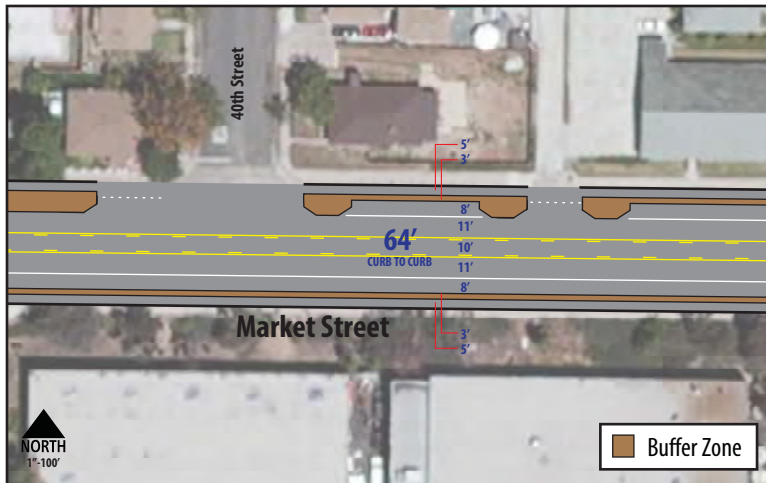
- Bicycle Facility:** One-Way Cycle Track
- Road Type:** 2-Lane w/CLTL
- Parking:** Both
- Curb to Curb Range:** 68'-74'
- Typical Cross-Section:** 5-3-8-12-12-8-3-5



Market Street

From 36th Street to Boundary Street

- Bicycle Facility:** One-Way Cycle Track
- Road Type:** 4-Lane w/RM
- Parking:** None
- Curb to Curb Range:** 72'-82'
- Typical Cross-Section:** 5-3-11-11-12-11-11-3-5



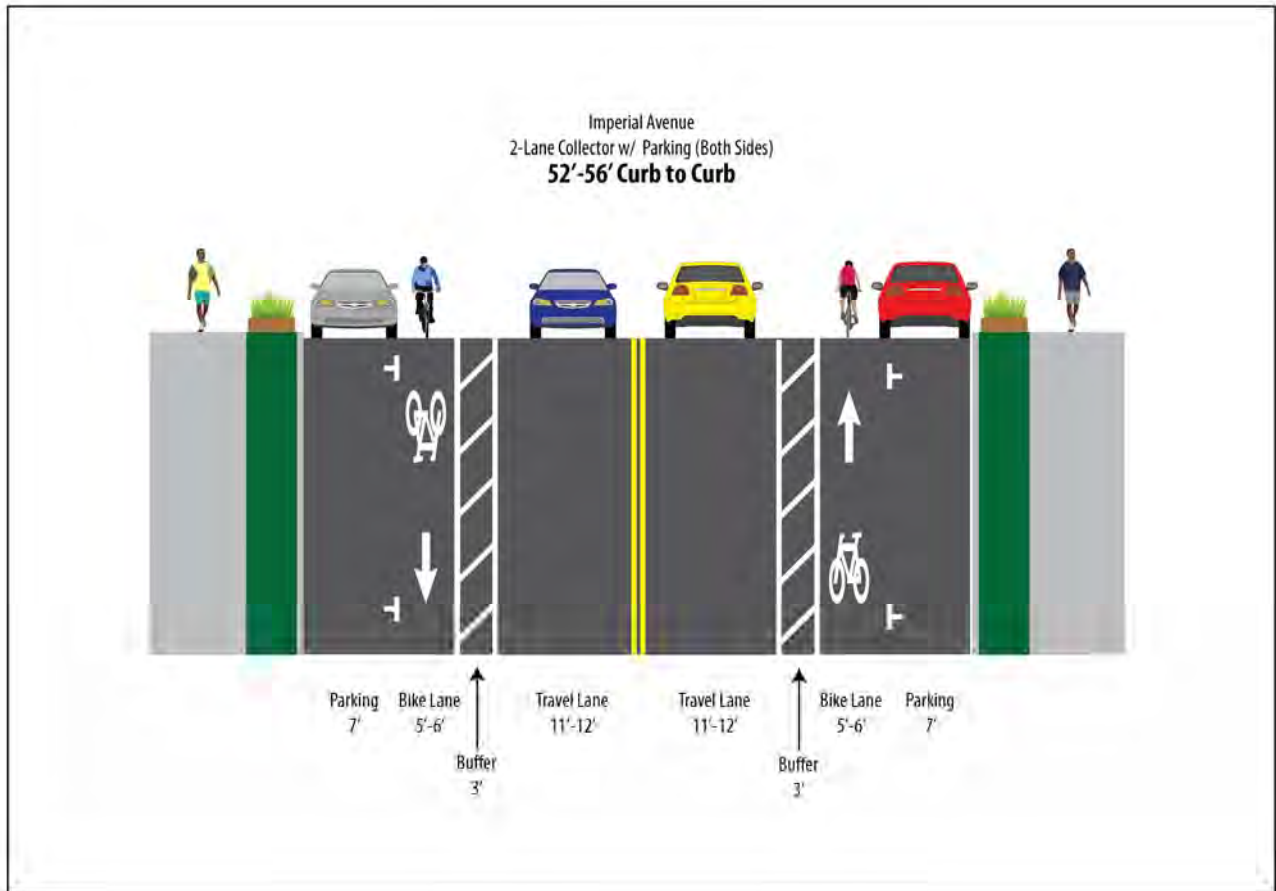
Market Street

From 24th Street to 25th Street
 From Boundary Street to Denby Street

- Bicycle Facility:** One-Way Cycle Track
- Road Type:** 2-Lane w/CLTL
- Parking:** Both Sides
- Curb to Curb Range:** 64'-66'
- Typical Cross-Section:** 5-3-8-11-10-11-8-3-5

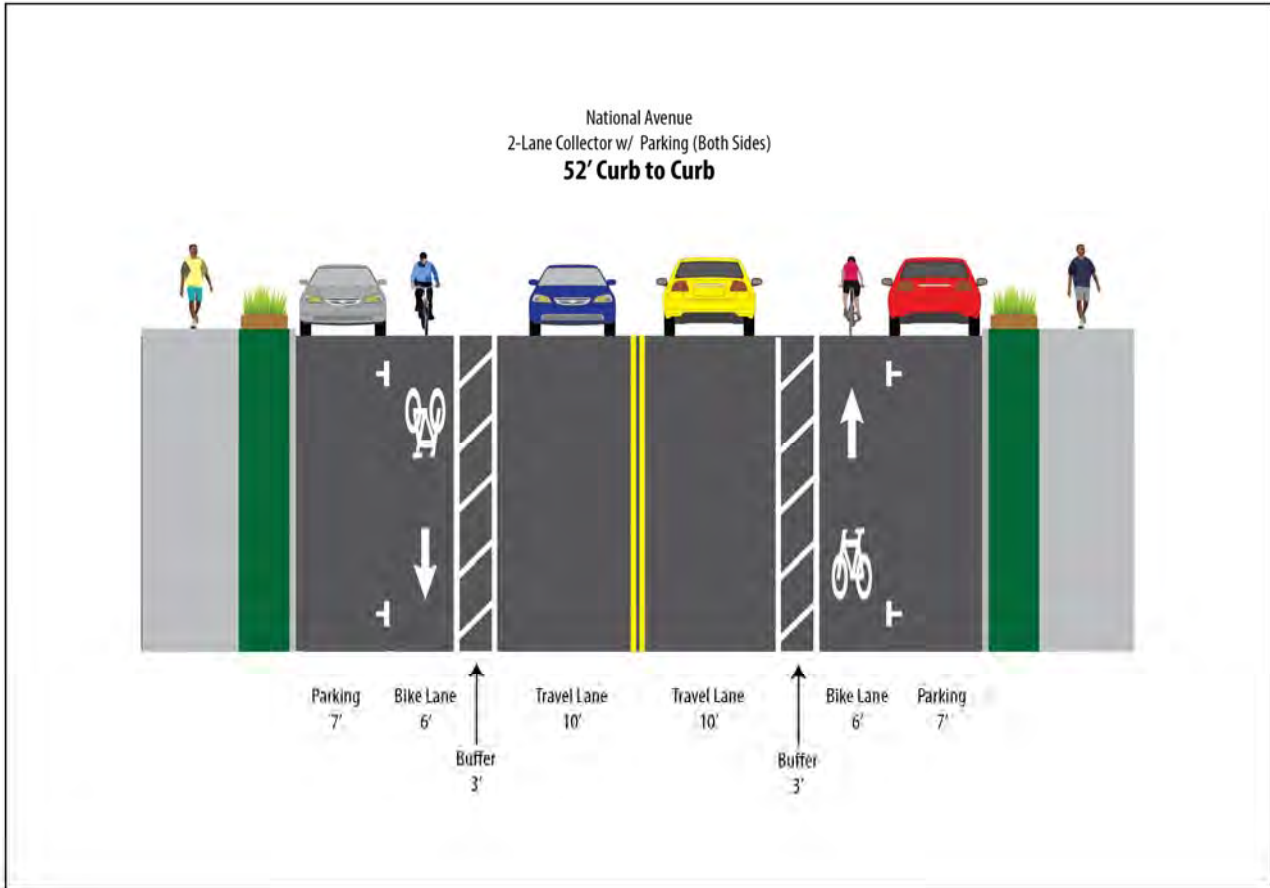
Conceptual street layouts, cross sections, lane dimensions, and bicycle facility configurations are provided to demonstrate general feasibility of proposals only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

Imperial Avenue – Under the buildout of the Preferred Plan the continuous left-turn lane along Imperial Avenue will be removed between 19th Street and 36th Street, to provide the right-of-way for buffered bike lanes in each direction, as shown in the typical cross-section below.



Cross-section and conceptual plan illustrations are provided to demonstrate general feasibility of the proposed mitigation measures only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

National Avenue – Under the buildout of the Preferred Plan the continuous left-turn lane along National Avenue will be removed between 19th Street and Logan Street to provide the right-of-way for buffered bike lanes in each direction, as shown in the typical cross-section below.



Cross-section and conceptual plan illustrations are provided to demonstrate general feasibility of the proposed mitigation measures only. Actual improvements will require additional engineering studies and design work and shall be to the satisfaction of the City Engineer.

5.3.2 Other Roadway Improvements

In addition to the improvements proposed as part of this plan (as described above), there are several other roadway and intersection improvements that were identified by previous planning and engineering efforts. These improvements tend to be very specific or minor in nature and therefore were not analyzed/addressed at the community planning level. The following summarizes the additional specific and/or minor improvements within the Southeastern community that were identified through other studies.

Public Facilities Financing Plan

The adopted *Public Facilities Financing Plan* (PFFP) for Southeastern San Diego currently contains planned transportation improvement projects that have not yet been completed. The following list summarizes some of the top ranked transportation projects planned for Southeastern San Diego, as outlined in the 2003 PFFP:

- SESD-T2 Sherman Heights Street and Sidewalk Improvements – This project provides for the improvements for streets and sidewalks throughout the community as needed. (\$300,000, unfunded)
- SESD-T23 Traffic Signal Upgrades – This project provides for upgrading existing traffic signals as necessary to improve traffic flow and promote safety. Locations may include: 19th Street and Imperial Avenue (\$70,000, unfunded) and 25th Street and Imperial Avenue (\$5,000, unfunded)
- SESD-T24 street connections – This project will provide for the connection of existing sections of fully improved streets through locations where only partial street improvements exist. (\$7 million, unfunded)
- SESD-T26 street improvements and upgrades – This project will provide for the improvements of existing streets at locations where there are inadequate gutters, cross gutters and curbs as a result of street resurfacing and/or deterioration. (\$3.0 million, unfunded).

Note that this PFFP was adopted in 2003. Projects identified above could be no longer needed and by the same token, new projects could be added.

Additional transportation related improvements within the Southeastern San Diego community have been identified in the City of San Diego's Transportation Unfunded Needs List (TUNL) and Transportation and Storm Water Department's FY14 Transportation Plan. However, these improvements are typically too minor to analyze at the Community Plan level and therefore were not taken into account for this study. A list of the current projects on the City of San Diego's TUNL within the Southeastern San Diego community are included in Appendix O. It should be noted this list is being updated on a regular basis and Appendix O only reflects a snap shot of the needs and planned improvements throughout the community at the time in which this report was prepared.

5.3.3 Roadway Analysis

The following section provides a summary of vehicular analysis results along key study roadways, including the projected daily roadway LOS, peak hour arterial speed and LOS, and the peak hour intersection LOS analysis under buildout of the Preferred Plan.

Roadway Classification, Average Daily Traffic (ADT) and LOS

Figure 5-6 displays the proposed Preferred Plan roadway network including designated roadway classifications and Figure 5-7 displays forecast daily traffic volumes for study roadway segments as well as LOS.

Table 5.6 displays the proposed roadway segment classifications, projected ADT volume and associated roadway LOS under buildout of the Preferred Plan alternative.

**TABLE 5.6
PREFERRED PLAN ROADWAY SEGMENT ANALYSIS**

#	Roadway	Segment	Classification	Capacity (LOS E)	ADT	LOS
1	Hilltop Drive	Boundary Street & I-805	Collector (2-lane multi-family)	8,000	4,700	C
2	Market Street	17th Street & 19th Street	Collector (4-lane w/ CLTL)	30,000	8,300	A
3		19th Street & 25th Street	Collector (2-lane w/ CLTL) ¹	15,000	11,800	D
4		25th Street & 28th Street	Collector (2-lane w/ CLTL) ¹	15,000	13,900	E
5		28th Street & 32nd Street	Collector (2-lane w/ CLTL) ¹	15,000	18,100	F
6		32nd Street & I-15 SB Ramps	Major Arterial (4-lane, divided)	40,000	29,000	C
7		I-15 SB Ramps & I-15 NB Ramps	Major Arterial (4-lane, divided)	40,000	27,800	C
8		I-15 NB Ramps & Boundary Street	Major Arterial (4-lane, divided)	40,000	31,600	D
9		Boundary Street & I-805 SB Ramps	Collector (2-lane w/ CLTL) ¹	15,000	22,500	F
10		I-805 SB Ramps & I-805 NB Ramps	Collector (2-lane w/ CLTL) ¹	15,000	20,200	F
11		Imperial Avenue	17th Street & 19th Street	Collector (4-lane w/o center lane)	15,000	13,200
12	19th Street & 25th Street		Collector (2-lane Commercial) ¹	8,000	9,700	F
13	25th Street & 28th Street		Collector (2-lane Commercial) ¹	8,000	9,500	F
14	28th Street & 30th Street		Collector (2-lane Commercial) ¹	8,000	7,200	E
15	30th Street & 32nd Street		Collector (2-lane Commercial) ¹	8,000	5,500	D
16	32nd Street & 36th Street		Collector (2-lane Commercial) ¹	8,000	10,800	F
17	36th Street & 40th Street		Collector (2-lane no fronting)	10,000	12,000	F
18	40th Street & I-805 SB Ramps		Major Arterial (4-lane, divided)	40,000	25,500	C
19	I-805 SB Ramps & I-805 NB Ramps		Major Arterial (4-lane, divided)	40,000	28,900	C

**TABLE 5.6
PREFERRED PLAN ROADWAY SEGMENT ANALYSIS**

#	Roadway	Segment	Classification	Capacity (LOS E)	ADT	LOS
20	Commercial Street	17th Street & 19th Street	Collector (2-lane multi-family)	8,000	7,100	E
21		19th Street & 25th Street	Collector (2-lane multi-family)	8,000	4,900	C
22		25th Street & 28th Street	Collector (2-lane multi-family)	8,000	3,200	B
23		28th Street & 30th Street	Collector (2-lane multi-family)	8,000	3,500	B
24		30th Street & 32nd Street	Collector (2-lane multi-family)	8,000	3,900	C
25	Ocean View Boulevard	25th Street & 28th Street	Collector (2-lane multi-family)	8,000	6,500	D
26		28th Street & 30th Street	Collector (2-lane multi-family)	8,000	7,400	E
27		30th Street & 32nd Street	Collector (2-lane w/ CLTL)	15,000	9,900	C
28		32nd Street & I-15 SB Ramps	Collector (2-lane w/ CLTL)	15,000	16,500	F
29		I-15 SB Ramps & I-15 NB Ramps	Major Arterial (4-lane, divided)	40,000	17,900	B
30		I-15 NB Ramps & 36th Street	Collector (2-lane w/ CLTL)	15,000	15,000	E
31		36th Street & 40th Street	Collector (2-lane w/ CLTL)	15,000	14,500	E
32		40th Street & 47th Street	Collector (2-lane multi-family)	8,000	11,600	F
33	National Avenue	Commercial Street & Beardsley Street	2-Ln Collector w/ CLTL	15,000	12,200	D
34		Beardsley Street & SR-75 Off-Ramp	2-Ln Collector	8,000	16,000	F
35		SR-75 Off-Ramp & 26th Street	2-Ln Collector w/ CLTL	15,000	6,300	B
36		26th Street & 27th Street/I-5 SB Off-Ramp	2-Ln Collector	8,000	12,000	F
37		27th Street/I-5 SB Off-Ramp & 28th Street	Collector (2-lane no fronting)	10,000	16,300	F
38		28th Street & I-5 NB Ramps	Collector (2-lane Commercial) ¹	8,000	19,400	F
39		I-5 NB Ramps & 32nd Street	Collector (2-lane Commercial) ¹	8,000	13,300	F
40		32nd Street & 43rd Street	Collector (2-lane Commercial) ¹	8,000	13,700	F
41	Logan Avenue	43rd Street & 45th Street	Collector (2-lane w/ CLTL) ¹	15,000	10,600	D
42		45th Street & 47th Street	Collector (2-lane w/ CLTL) ¹	15,000	14,000	E
43	Acacia Street	36th Street & 38th Street	Collector (2-lane multi-family)	8,000	3,900	C
44	Alpha Street	38th Street & 43rd Street	Collector (2-lane multi-family)	8,000	7,000	E
45	Division Street	Main Street & Osborn Street	Collector (2-lane w/ CLTL)	15,000	16,700	F
46		Osborn Street & Highland Avenue	Collector (2-lane w/ CLTL)	15,000	12,700	D
47		Highland Avenue & Palm Avenue	Secondary Arterial (4-lane w/ CLTL)	30,000	13,700	B

**TABLE 5.6
PREFERRED PLAN ROADWAY SEGMENT ANALYSIS**

#	Roadway	Segment	Classification	Capacity (LOS E)	ADT	LOS
48	Cesar Chavez Parkway	Commercial Street & I-5 NB Ramps	Collector (2-lane multi-family)	8,000	10,300	F
49		I-5 NB & SR-75 On-Ramp/Logan Avenue	Secondary Arterial (4-lane w/ CLTL)	30,000	17,300	C
50	25th Street	SR-94 WB Off-Ramp & SR-94 EB On-Ramp	Collector (2-lane w/ CLTL)	15,000	18,700	F
51		SR-94 EB On-Ramp & Market Street	Collector (2-lane w/ CLTL)	15,000	19,500	F
52		Market Street & Imperial Avenue	Collector (2-lane w/ CLTL)	15,000	19,200	F
53		Imperial Avenue & Commercial Street	Collector (2-lane w/ CLTL)	15,000	12,500	D
54	28th Street	SR-94 WB Ramps & SR-94 EB Ramps	Collector (2-lane multi-family)	8,000	11,100	F
55		SR-94 EB Ramps & Market Street	Collector (2-lane multi-family)	8,000	11,700	F
56		Market Street & Imperial Avenue	Collector (2-lane multi-family)	8,000	8,600	F
57		Imperial Avenue & Commercial Street	Collector (2-lane multi-family)	8,000	5,900	D
58		Commercial Street & Ocean View Boulevard	Collector (2-lane multi-family)	8,000	7,100	E
59		Ocean View Boulevard & National Avenue	Collector (2-lane multi-family)	8,000	11,600	F
60		National Avenue & Boston Avenue	Collector (2-lane w/ CLTL)	15,000	27,700	F
61	30th Street	E Street & Imperial Avenue	Collector (2-lane multi-family)	8,000	7,900	E
62		Imperial Avenue & Commercial Street	Collector (2-lane multi-family)	8,000	4,700	C
63		Commercial Street & National Avenue	Collector (2-lane multi-family)	8,000	5,000	C
64	Broadway	SR-94 WB & SR-94 EB On-Ramp / F Street	Collector (2-lane w/ CLTL)	15,000	11,500	D
65	32nd Street	SR-94 EB On-Ramp/F Street & Market Street	Collector (2-lane multi-family)	8,000	11,700	F
66		Market Street & Imperial Avenue	Collector (2-lane multi-family)	8,000	9,000	F
67		Imperial Avenue & Commercial Street	Collector (2-lane multi-family)	8,000	5,800	D
68		Commercial Street & Ocean View Boulevard	Collector (2-lane multi-family)	8,000	6,300	D
69	32nd Street	Ocean View Boulevard & National Avenue	Collector (2-lane multi-family)	8,000	6,900	E
70		National Avenue & Boston Avenue	Collector (2-lane multi-family)	8,000	9,200	F
71	35th Street	Ocean View Boulevard & Main Street	Collector (2-lane multi-family)	8,000	10,600	F
72	36th Street	Imperial Avenue & Ocean View Boulevard	Collector (2-lane multi-family)	8,000	4,000	C

**TABLE 5.6
PREFERRED PLAN ROADWAY SEGMENT ANALYSIS**

#	Roadway	Segment	Classification	Capacity (LOS E)	ADT	LOS
73	36th Street	Ocean View Boulevard & Acacia Street	Collector (2-lane multi-family)	8,000	4,300	C
74	38th Street	Ocean View Boulevard & Acacia Street	Collector (2-lane multi-family)	8,000	3,800	C
75	Vesta Street	Acacia Street & Main Street	Collector (2-lane multi-family)	8,000	6,000	D
76	40th Street	Imperial Avenue & Ocean View Boulevard	Collector (4-lane w/o center lane)	15,000	4,800	A
77		National Avenue & Division Street	Collector (2-lane multi-family)	8,000	3,700	C
78	Boundary Street	Hilltop Drive & Market Street	Collector (2-lane multi-family)	8,000	2,900	B
79	San Pasqual Drive	Imperial Avenue & Ocean View Boulevard	Collector (2-lane no fronting)	10,000	6,500	C
80		Ocean View Boulevard & Logan Avenue	Collector (2-lane no fronting)	10,000	11,400	F
81	43rd Street	Logan Avenue & Newton Avenue	Collector (2-lane w/ CLTL)	15,000	14,000	E
82		Newton Avenue & Beta Street	Collector (4-lane w/o center lane)	15,000	16,100	F
83		Beta Street & Delta Street	Collector (2-lane w/ CLTL)	15,000	25,500	F
84		Delta Street & Division Street	Secondary Arterial (4-lane w/ CLTL)	30,000	21,300	E
85	Highland Avenue	Division Street & 4th Street	Secondary Arterial (4-lane w/ CLTL)	30,000	20,900	D
86	45th Street	Imperial Avenue & Logan Avenue	Collector (2-lane multi-family)	8,000	2,900	B

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

¹Proposed Road Diet/Lane Diet

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

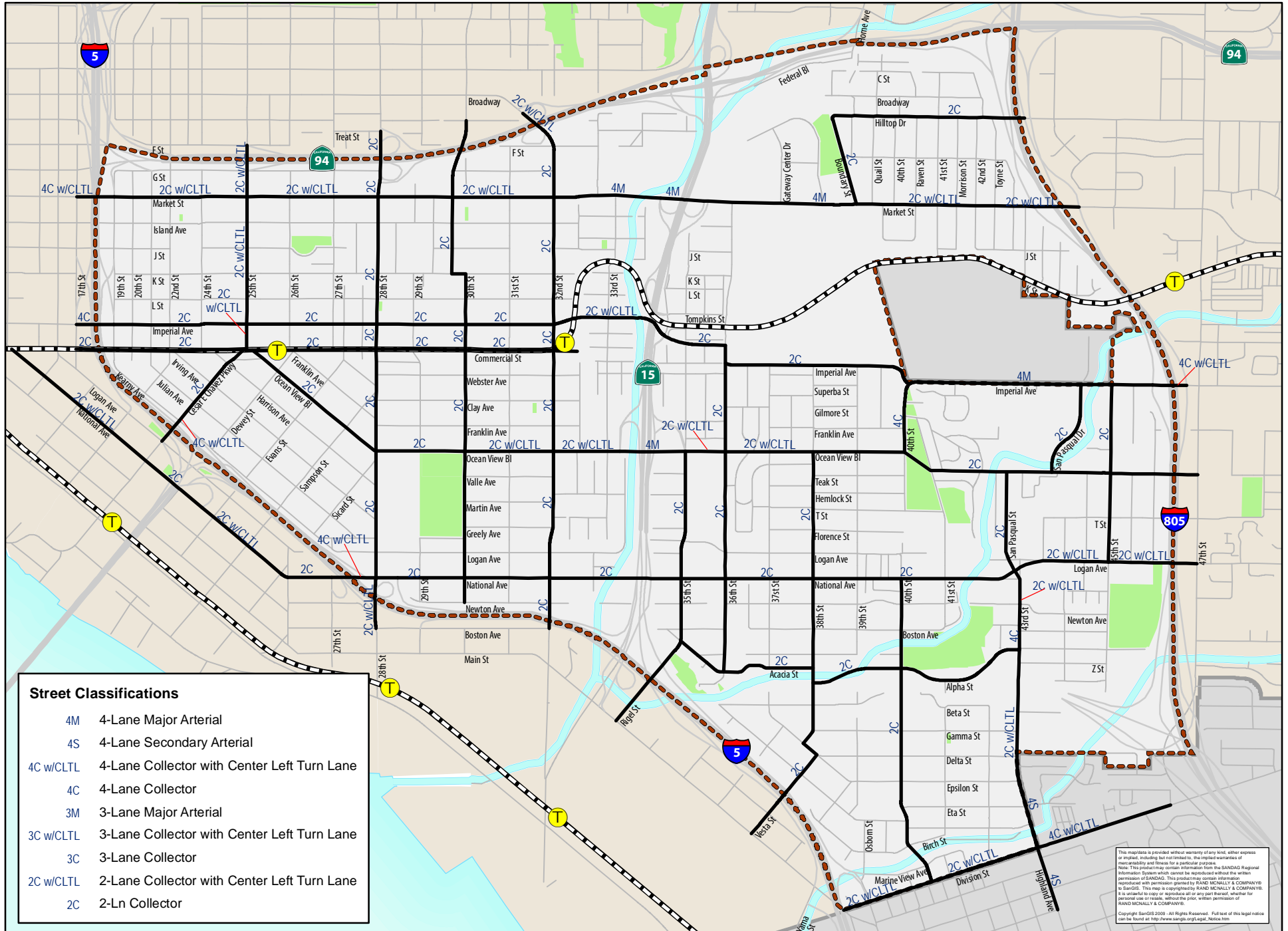
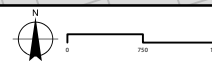


Figure 5-6: Preferred Plan Roadway Network



Data Source:
 City of San Diego, 2012; SanGIS Regional
 Data Warehouse, 2012;
 Dyett & Bhatia, 2012



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SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE



Figure 5-7: Preferred Plan Roadway Traffic Volumes and Level of Service

As shown in the table, assuming the proposed roadway diets and widening, the following forty-eight (48) study area roadway segments are projected to operate at LOS E or F under buildout of the Preferred Plan:

- Market Street, between 25th Street and 28th Street (LOS E)
- Market Street, between 28th Street and 32nd Street (LOS F)
- Market Street, between Boundary Street and I-805 SB Ramps (LOS F)
- Market Street, between I-805 SB Ramps & I-805 NB Ramps (LOS F)
- Imperial Avenue, between 17th Street and 19th Street (LOS E)
- Imperial Avenue, between 19th Street and 25th Street (LOS F)
- Imperial Avenue, between 25th Street and 28th Street (LOS F)
- Imperial Avenue, between 28th Street and 30th Street (LOS E)
- Imperial Avenue, between 32nd Street & 36th Street (LOS F)
- Imperial Avenue, between 36th Street and 40th Street (LOS F)
- Imperial Avenue, between I-805 SB Ramps and I-805 NB Ramps (LOS E)
- Commercial Street, between 17th Street and 19th Street (LOS E)
- Ocean View Boulevard, between 28th Street and 30th Street (LOS E)
- Ocean View Boulevard, between 32nd Street and I-15 SB Ramps (LOS F)
- Ocean View Boulevard, between I-15 NB Ramps and 36th Street (LOS E)
- Ocean View Boulevard, between 36th Street and 40th Street (LOS E)
- Ocean View Boulevard, between 40th Street and 47th Street (LOS F)
- National Avenue, between Commercial Street and Beardsley Street (LOS E)
- National Avenue, between Beardsley Street and SR-75 Off-Ramp (LOS F)
- National Avenue, between 26th Street and 27th Street (LOS F)
- National Avenue, between 27th Street and 28th Street (LOS F)
- National Avenue, between 28th Street and I-5 NB Ramps (LOS F)
- National Avenue, between I-5 NB Ramps and 32nd Street (LOS F)
- National Avenue, between 32nd Street and 43rd Street (LOS F)
- Logan Avenue, 45th Street and 47th Street (LOS E)
- Alpha Street, between 38th Street and 43rd Street (LOS E)
- Division Street, between Main Street and Osborn Street (LOS F)
- Cesar Chavez Parkway, between Commercial Street and I-5 NB Ramps (LOS F)
- 25th Street, between SR-94 WB Off-Ramp and SR-94 EB On-Ramp (LOS F)
- 25th Street, between SR-94 EB On-Ramp and Market Street (LOS F)
- 25th Street, between Market Street and Imperial Avenue (LOS F)
- 28th Street, between SR-94 WB Ramps and SR-94 EB Ramps (LOS F)
- 28th Street, between SR-94 EB Ramps and Market Street (LOS F)
- 28th Street, between Market Street and Imperial Avenue (LOS F)
- 28th Street, between Commercial Street and Ocean View Boulevard (LOS E)
- 28th Street, between Ocean View Boulevard and National Avenue (LOS F)
- 28th Street, between National Avenue and Boston Avenue (LOS F)
- 30th Street, between E Street and Imperial Avenue (LOS E)
- 32nd Street, between SR-94 EB On-Ramp/F Street and Market Street (LOS F)

-
- 32nd Street, between Market Street and Imperial Avenue (LOS F)
 - 32nd Street, between Ocean View Boulevard and National Avenue (LOS E)
 - 32nd Street, between National Avenue and Boston Avenue (LOS F)
 - 35th / Rigel Street, between Ocean View Boulevard and Main Street (LOS F)
 - San Pasqual Drive, between Ocean View Boulevard and Logan Avenue (LOS F)
 - 43rd Street, between Logan Avenue and Newton Avenue (LOS E)
 - 43rd Street, between Newton Avenue and Beta Street (LOS F)
 - 43rd Street, between Beta Street and Delta Street (LOS F)
 - 43rd Street / Highland Avenue, between Delta Street and Division Street (LOS E)

It should be noted that additional vehicular capacity improvements are not proposed in order to improve the projected vehicular level of service at the roadway segments listed above for a variety of reasons. The primary reasons being the constrained right-of-way and/or a desire to improve (or not negatively impact) the quality of the pedestrian, bicycle, and transit environment in order to more safely accommodate and promote these modes of transportation.

Arterial Analysis

As shown in the previous section, the proposed roadway diets along Market Street, Imperial Avenue and National Avenue are projected to degrade daily roadway operations to undesirable LOS E or F along majority of the segments. However, the actual capacity of a roadway facility varies according to its physical and operational attributes. Often, a roadway segment that is analyzed to be LOS E or F based on theoretical capacity is found to operate acceptably in practice. In such cases, HCM arterial analysis may be conducted and utilized to provide a more accurate indication of LOS. Therefore to better understand the true impacts of the proposed roadway diets, peak hour arterial analyses were conducted for roadways in which a reduction in vehicular travel lanes is proposed.

Table 5.7 displays peak hour arterial analyses along Urban Streets under buildout of the Preferred Plan alternative. Peak hour arterial Analysis worksheets, under buildout of the Preferred Plan are provided in **Appendix R**.

As shown in the table, the majority of segments in which a roadway diet is proposed are projected to operate at LOS D or better during both the AM and PM peak hours. There would be some minor pinch points along the roadways; however, roadway speeds are not anticipated to drop below 10 mph hour, with the exception of the following segments:

- Eastbound Market Street, between I-15 SB Ramps & I-15 NB Ramps (AM: LOS F, 6.6 mph);
- Eastbound National Avenue, between 27th Street & I-5 NB Ramps (AM: LOS F, 3.8 mph / PM: LOS F, 4.3 mph); and
- Westbound National Avenue, between 27th Street & I-5 NB Ramps (AM: LOS F, 3.3 mph / PM: LOS F, 4.6 mph).

**TABLE 5.7
PREFERRED PLAN ARTERIAL ANALYSIS ALONG URBAN STREETS**

Roadway	Segment	AM Peak Hour				PM Peak Hour			
		EB		WB		EB		WB	
		Speed (mph)	LOS	Speed (mph)	LOS	Speed (mph)	LOS	Speed (mph)	LOS
Market Street	19th Street & 25th Street	21.8	C	24.6	B	18.7	B	21.2	C
	25th Street & 28th Street	31.4	A	20.7	C	26.1	B	25.5	B
	28th Street & 32nd Street	31.4	A	20.7	C	26.1	B	25.5	B
	32nd Street & I-15 SB Ramps	16.0	D	20.1	C	10.7	E	17.4	D
	I-15 SB Ramps & I-15 NB Ramps	10.6	E	11.2	E	6.6	F	14.2	D
	I-15 NB Ramps & I-805 SB Ramps	27.4	B	32.5	A	15.6	D	33.5	A
	I-805 SB Ramps & I-805 NB Ramps	18.1	C	13.7	E	11.0	E	12.2	E
Imperial Avenue	17th Street & 19th Street	17.0	D	17.7	D	15.5	D	17.3	D
	19th Street & 25th Street	23.8	C	21.0	C	19.2	C	23.5	C
	25th Street & 28th Street	24.7	B	20.8	C	22.6	C	22.1	C
	28th Street & 30th Street	24.9	B	19.9	C	22.8	C	19.9	C
	30th Street & 32nd Street	20.9	C	22.2	C	16.9	D	21.5	B
	32nd Street & 36th Street	19.5	C	18.9	C	20.2	C	21.4	C
	36th Street & 40th Street	14.3	D	18.2	C	12.7	E	17.9	D
	40th Street & I-805 SB Ramps	22.8	C	22.6	C	25.6	B	16.9	D
	I-805 SB Ramps & I-805 NB Ramps	24.4	B	18.0	C	20.1	C	16.6	D
National Avenue	27th Street/I-5 SB Off-Ramp & 28th Street	25.5	B	22.3	C	24.4	B	21	C
	28th Street & I-5 NB Ramps	3.8	F	3.3	F	4.3	F	4.6	F
	I-5 NB Ramps & 32nd Street	24.7	B	17.3	D	21.7	C	15.0	D
	32nd Street & 43rd Street	26.2	B	27.9	B	25.8	B	28.3	B
Logan Avenue	43rd Street & 45th Street	23.8	C	20.6	C	21.7	C	20.6	C
	45th Street & 47th Street	23.8	C	20.6	C	21.7	C	20.6	C

Source: Chen Ryan Associates; February 2015

Note:
Bold letter indicates segment LOS E or F.

Figures 5-8a and **5-8b** display AM and PM peak hour automobile arterial analysis LOS, respectively, using the arterial analysis techniques along Urban Streets for the Preferred Plan by segment

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

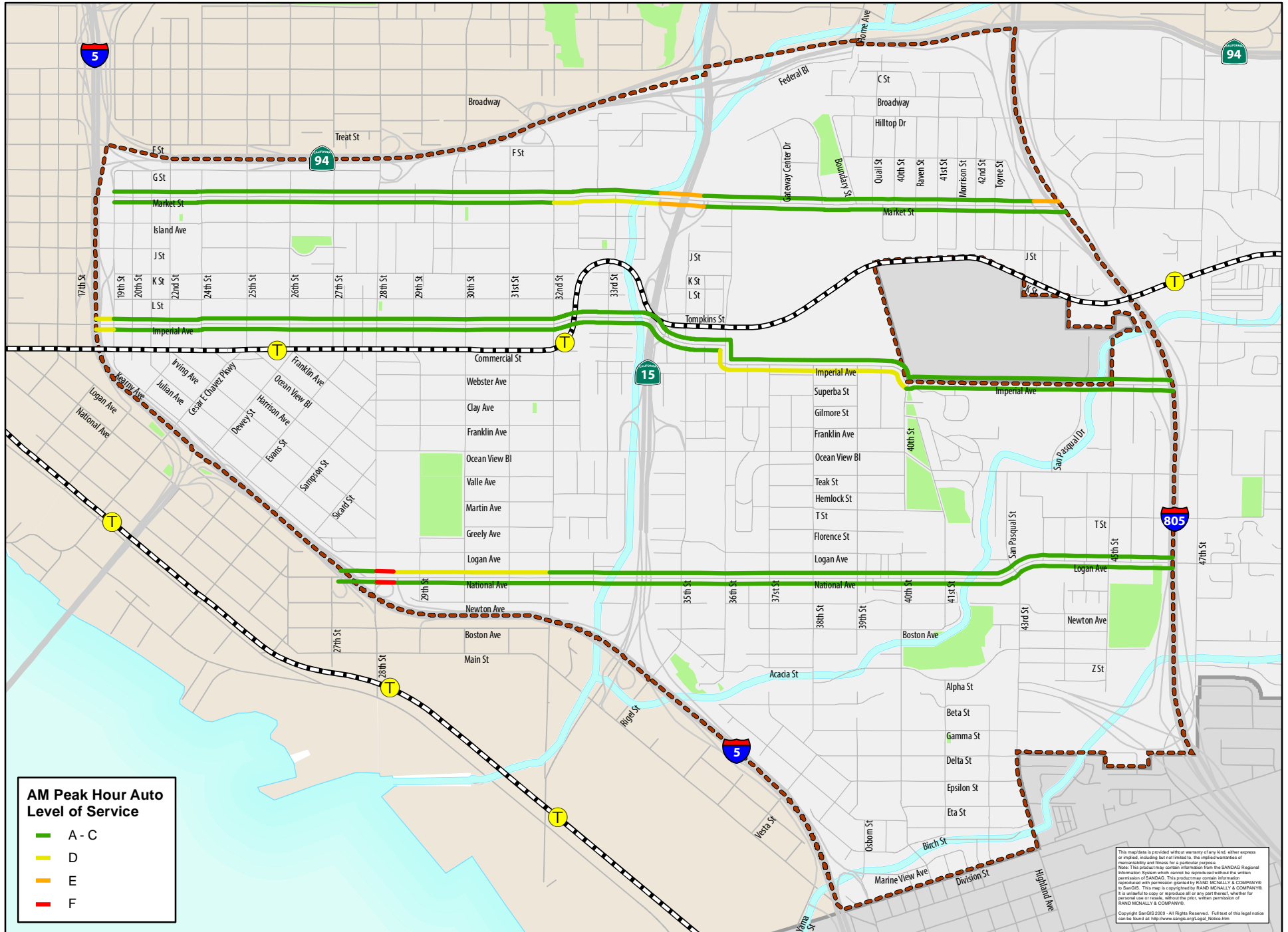


Figure 5-8a: Preferred Plan AM Auto Arterial Analysis Level of Service

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

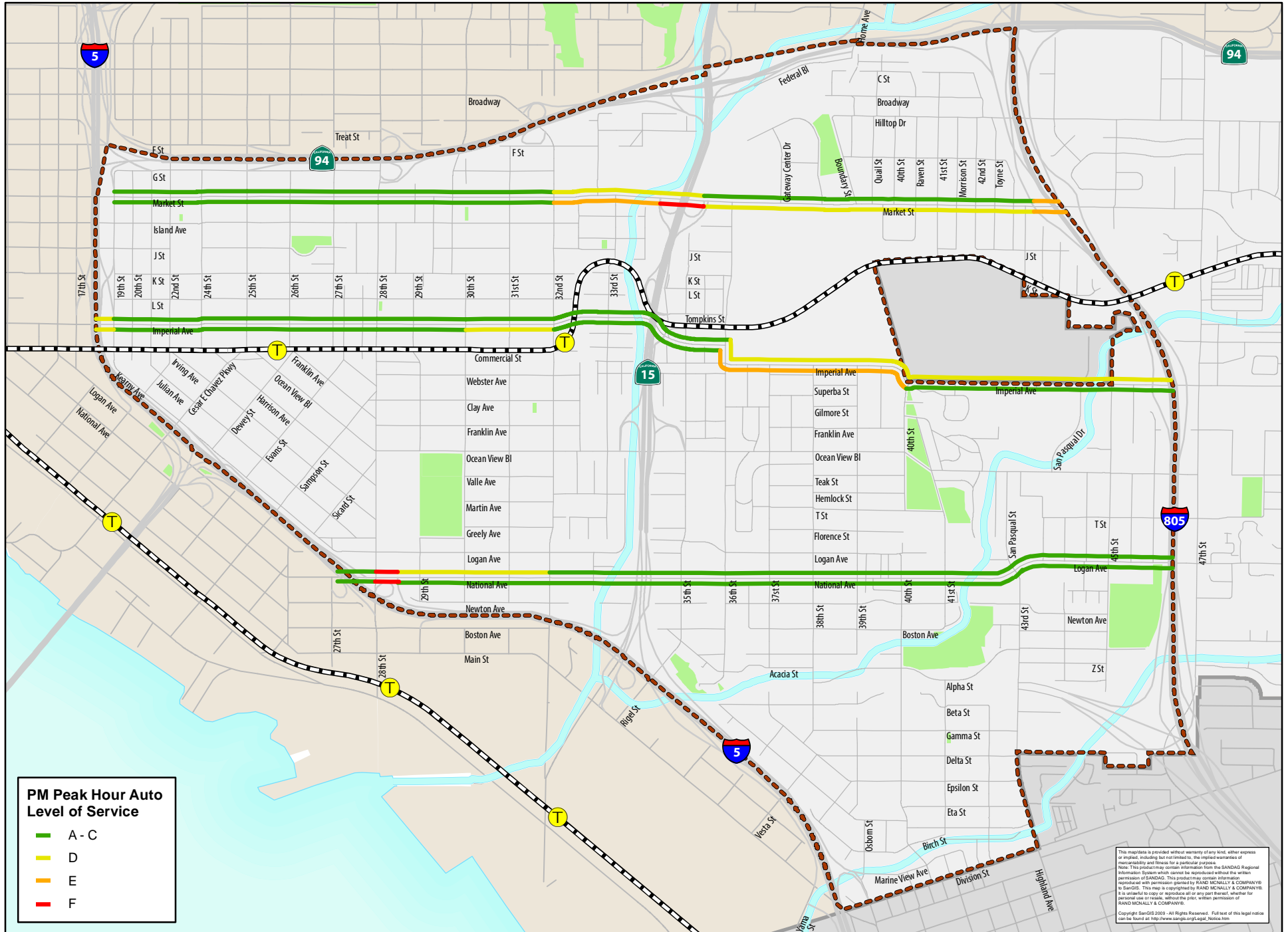


Figure 5-8b: Preferred Plan PM Auto Arterial Analysis Level of Service

5.3.4 Intersection Geometry and LOS Analysis

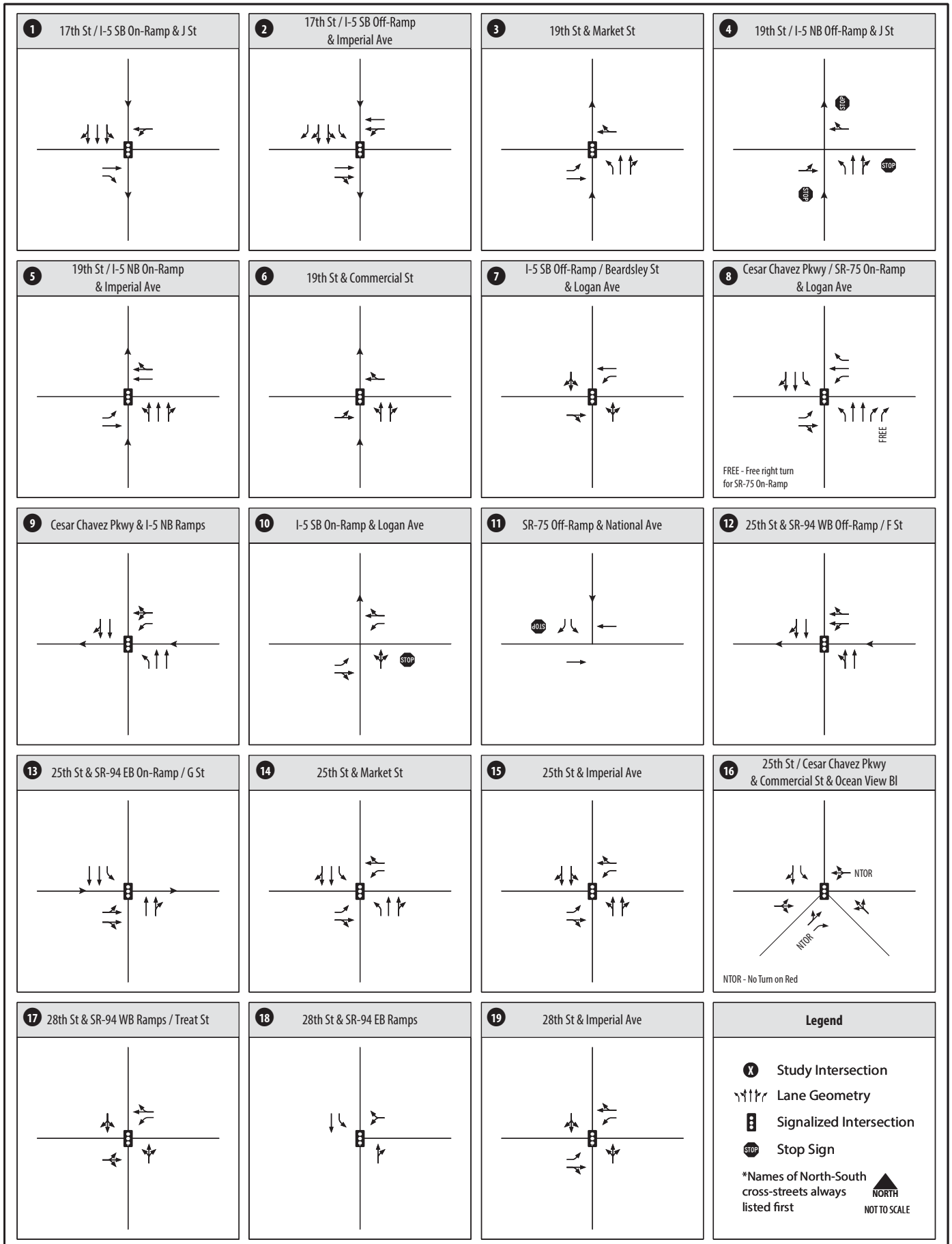
AM and PM peak hour intersection LOS analyses were conducted for Preferred Plan conditions. It was assumed under buildout of the Preferred Plan, the intersection geometries at several locations would be improved, as follows:

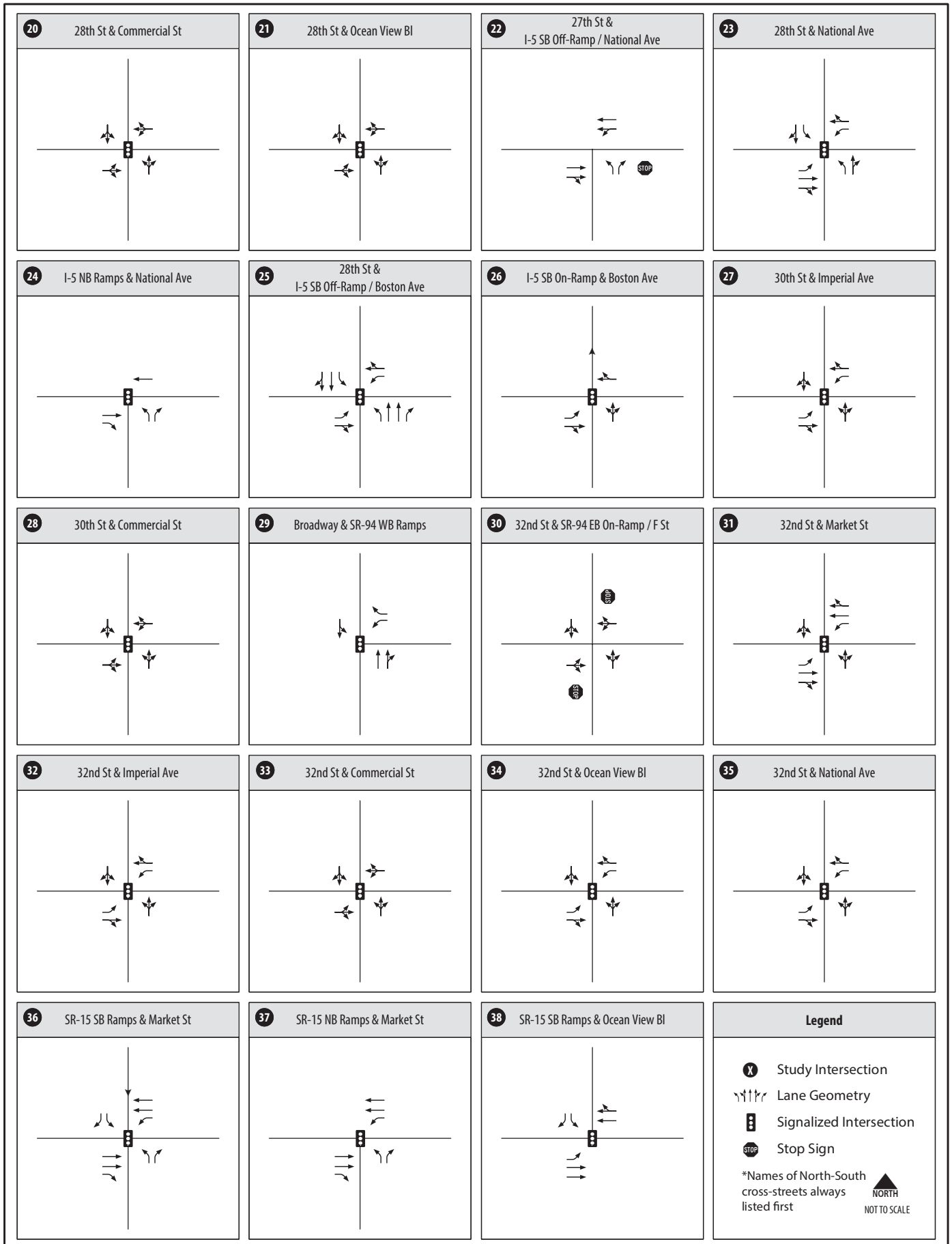
- I-5 SB On-Ramp / Logan Avenue – Signalize intersection
- 25th Street / SR-94 WB Off-Ramp/F Street – Signalize intersection
- 25th Street / SR-94 EB On-Ramp/G Street – Signalize intersection
- 28th Street / SR-94 WB Ramps/Treat Street – Signalize intersection and restripe WB approach to include an exclusive left-turn movement
- 28th Street / SR-94 EB On-Ramp – Signalize intersection
- I-5 SB On-Ramp / Boston Avenue - Signalize intersection and restripe the EB approach to include an exclusive left-turn lane
- Broadway / SR-94 WB Ramps – Signalize intersection
- I-5 NB Ramps / Osborn Street - Signalize intersection and restripe the WB approach to include an exclusive left-turn lane and shared right/left-turn lane
- Osborn Street / Division Street - Signalize intersection and widen roadway to include the following geometries:
 - NB approach: Dual left-turn lanes, single through-lane, exclusive right-turn lane with overlap phase
 - SB approach: Exclusive left-turn lane, shared through/right-lane
 - WB approach: Exclusive left-turn lane, single through lane, exclusive right-turn lane with overlap phase
- I-805 SB Ramps & Market Street - Restripe EB approach to include an exclusive right-turn lane

Traffic signal warrants were conducted at above intersections where signalization is recommended. *Figure 4C-103 (CA) of the California Manual on Uniform Traffic Control Devices (MUTCD) 2012 Edition* was utilized and all nine intersections would meet the warrants. Signal warrants worksheets are included in **Appendix S**.

Figure 5-9 and **Figure 5-10** display the proposed intersection geometrics and forecast AM and PM peak hour turning movement volumes under buildout of the Preferred Plan, respectively.

Table 5.8 displays the LOS results for the key study intersections located within the Southeastern San Diego Community Planning Area under Preferred Plan conditions. LOS analyses were conducted using the methodologies described in Chapter 2.0. Intersection LOS calculation worksheets are provided in **Appendix T**.





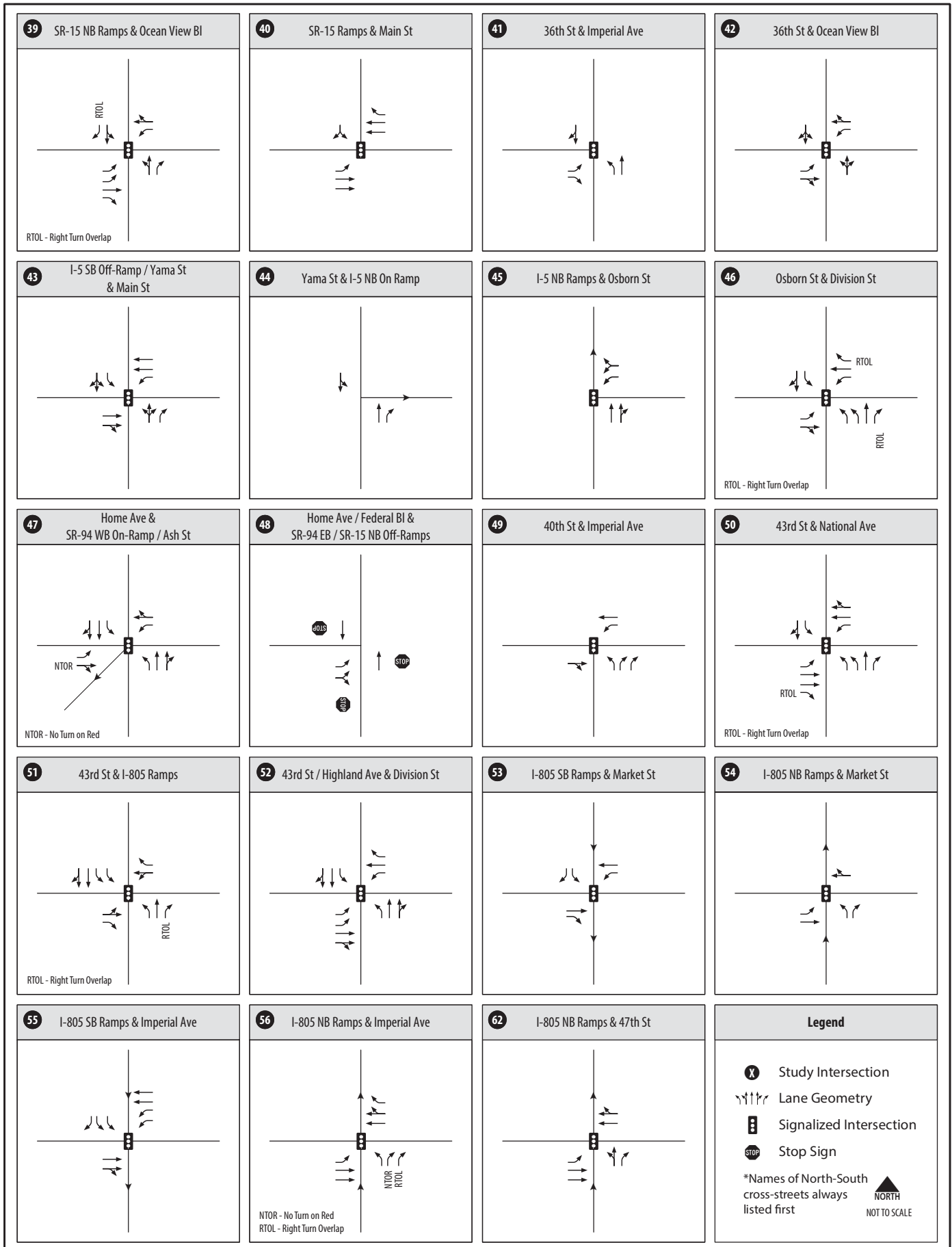
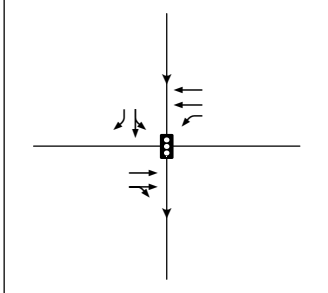


Figure 5-9

63

I-805 SB Ramps & 47th St

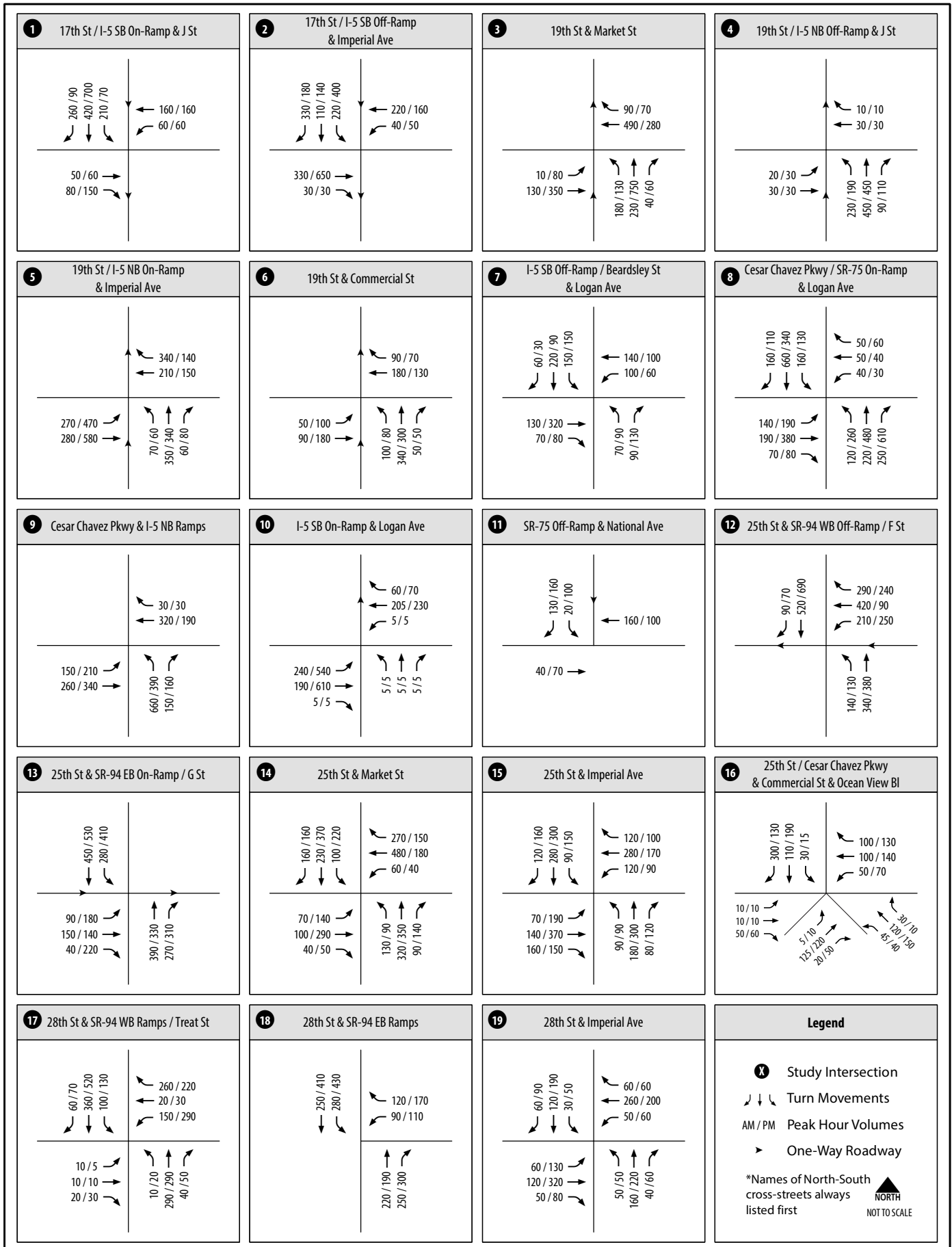


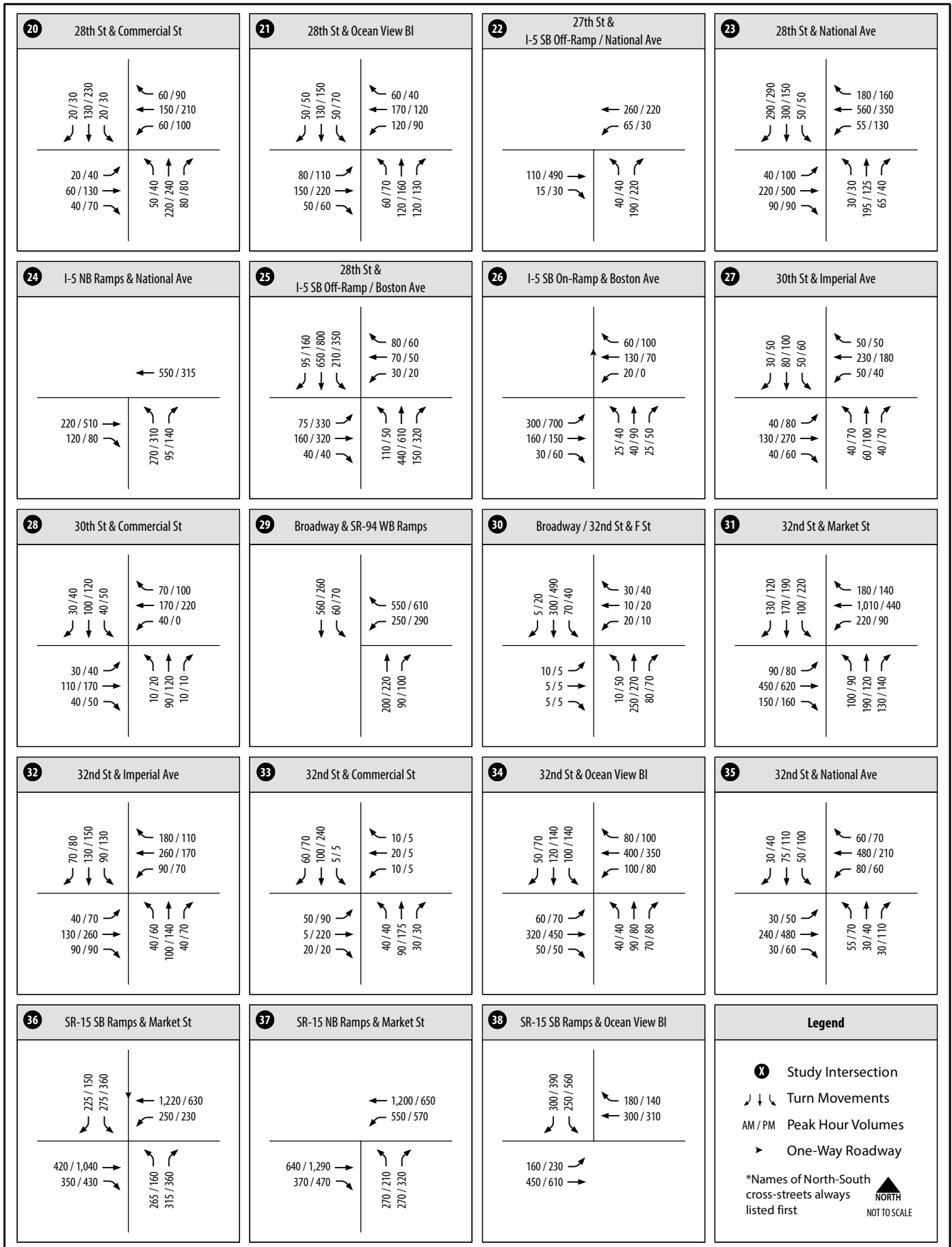
Legend

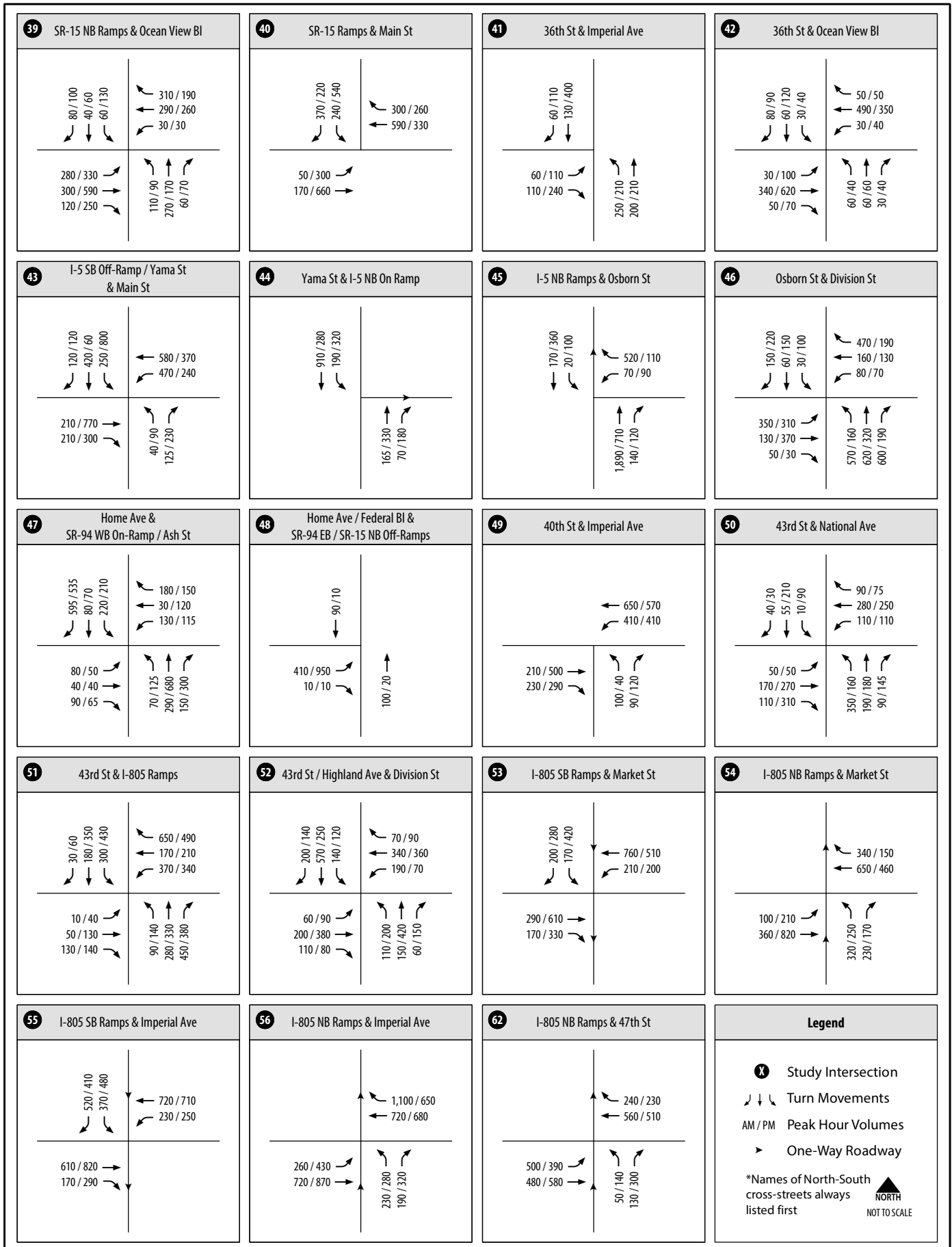
- Study Intersection
- Lane Geometry
- Signalized Intersection
- Stop Sign

*Names of North-South cross-streets always listed first

NORTH
NOT TO SCALE

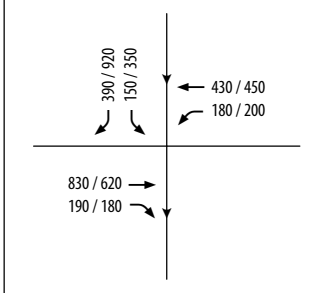






63

I-805 SB Ramps & 47th St



Legend

- Study Intersection
- Turn Movements
- AM / PM Peak Hour Volumes
- One-Way Roadway

*Names of North-South cross-streets always listed first

NORTH
NOT TO SCALE

**TABLE 5.8
PREFERRED PLAN INTERSECTION PEAK HOUR LEVEL OF SERVICE**

ID	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Avg. Delay (sec)	Future LOS	Existing LOS	Avg. Delay (sec)	Future LOS	Existing LOS
1	17th Street/I-5 SB On-Ramp / J Street	Signal	11.7	B	A	8.3	A	A
2	17th Street/I-5 SB Off-Ramp / Imperial Avenue	Signal	18.8	B	B	16.0	B	B
3	19th Street / Market Street	Signal	8.7	A	A	20.7	C	B
4	19th Street/I-5 NB Off-Ramp / J Street	AWSC	16.2	C	A	40.0	E	B
5	19th Street/I-5 NB On-Ramp / Imperial Avenue	Signal	14.2	B	B	14.7	B	B
6	19th Street / Commercial Street	Signal	7.8	A	A	26.6	C	C
7	I-5 SB Off-Ramp/Beardsley Street / Logan Avenue	AWSC	21.2	C	B	38.1	E	B
8	Cesar Chavez Parkway/SR-75 On-Ramp / Logan Avenue	Signal	22.7	C	C	42.1	D	C
9	Cesar Chavez Parkway / I-5 NB Ramps	Signal	25.1	C	C	21.4	C	B
10	I-5 SB On-Ramp / Logan Avenue	Signal	11.1	B	A	18.6	B	E
11	SR-75 Off-Ramp / National Avenue	OWSC	10.9	B	B	10.6	B	B
12	25th Street / SR-94 WB Off-Ramp/F Street	Signal	12.3	B	C	8.9	A	C
13	25th Street / SR-94 EB On-Ramp/G Street	Signal	9.7	A	B	18.3	B	C
14	25th Street / Market Street	Signal	45.5	D	C	36.9	D	C
15	25th Street / Imperial Avenue	Signal	16.7	B	B	20.5	C	B
16	25th Street/Cesar Chavez Parkway/Ocean View Boulevard / Commercial Street	Signal	29.8	C	C	25.4	C	C
17	28th Street / SR-94 WB Ramps/Treat Street	Signal	19.6	B	C	27.5	C	F
18	28th Street / SR-94 EB Ramps	Signal	22.8	C	E	35.0	C	F
19	28th Street / Imperial Avenue	Signal	18.5	B	B	19.5	B	B
20	28th Street / Commercial Street	Signal	10.3	B	A	17.9	B	A
21	28th Street / Ocean View Boulevard	Signal	24.9	C	B	21.4	C	B
22	27th Street/I-5 SB Off-Ramp / National Avenue	OWSC	10.8	B	B	14.8	B	C
23	28th Street / National Avenue	Signal	57.7	E	C	37.5	D	B
24	I-5 NB Ramps / National Avenue	Signal	32.9	C	C	34.1	C	C
25	28th Street/I-5 SB Off-Ramp / Boston Avenue	Signal	16.5	B	B	39.0	D	B
26	I-5 SB On-Ramp / Boston Avenue	Signal	21.8	C	C	22.4	C	F
27	30th Street / Imperial Avenue	Signal	13.4	B	B	14.3	B	A

**TABLE 5.8
PREFERRED PLAN INTERSECTION PEAK HOUR LEVEL OF SERVICE**

ID	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Avg. Delay (sec)	Future LOS	Existing LOS	Avg. Delay (sec)	Future LOS	Existing LOS
28	30th Street / Commercial Street	Signal	9.3	A	A	10.2	B	A
29	Broadway / SR-94 WB Ramps	Signal	16.9	B	E	11.1	B	F
30	Broadway/32nd Street / F Street	TWSC	19.1	C	C	31.0	D	C
31	32nd Street / Market Street	Signal	18.1	B	B	37.5	D	B
32	32nd Street / Imperial Avenue	Signal	27.4	C	B	28.5	C	B
33	32nd Street / Commercial Street	Signal	8.6	A	A	17.1	B	A
34	32nd Street / Ocean View Boulevard	Signal	31.3	C	B	30.4	C	B
35	32nd Street / National Boulevard	Signal	8.2	A	A	10.9	B	A
36	I-15 SB Ramps / Market Street	Signal	36.8	D	B	51.3	D	C
37	I-15 NB Ramps / Market Street	Signal	39.0	D	C	46.4	D	D
38	I-15 SB Ramps / Ocean View Boulevard	Signal	13.3	B	B	23.0	C	B
39	I-15 NB Ramps / Ocean View Boulevard	Signal	75.4	E	E	42.5	D	C
40	I-15 Ramps / Main Street	Signal	34.0	C	C	70.1	E	D
41	36th Street / Imperial Avenue	Signal	18.2	B	B	16.8	B	B
42	36th Street / Ocean View Boulevard	Signal	15.1	B	B	18.0	B	B
43	I-5 SB Off-Ramp/Yama Street / Main Street	Signal	34.8	C	C	104.0	F	D
44	Yama Street / I-5 SB On-Ramp	OWSC	5.0	A	A	11.3	A	B
45	I-5 NB Ramps / Osborn Street	Signal	42.7	D	F	6.7	A	F
46	Osborn Street / Division Street	Signal	53.3	D	F	30.3	C	D
47	Home Avenue / SR-94 WB On-Ramp / Ash Street/Federal Boulevard	Signal	28.8	C	C	44.6	D	C
48	Home Avenue/Federal Boulevard / SR-94 EB Off-Ramp/I-15 NB Off-Ramp	AWSC	11.5	B	A	33.0	D	C
49	40th Street / Imperial Avenue	Signal	45.4	D	B	75.0	E	C
50	43rd Street / National Avenue	Signal	45.7	D	C	21.9	C	C
51	43rd Street / I-805 Ramps	Signal	42.6	D	C	52.4	D	D
52	43rd Street/Highland Avenue / Division Street	Signal	31.6	C	C	42.0	D	C
53	Market Street / I-805 SB Ramps	Signal	13.3	B	B	26.2	C	C
54	Market Street / I-805 NB Ramps	Signal	45.9	D	B	42.4	D	B
55	Imperial Avenue / I-805 SB Ramps	Signal	27.3	C	C	24.5	C	C
56	Imperial Avenue / I-805 NB Ramps	Signal	23.8	C	B	34.4	C	B

**TABLE 5.8
PREFERRED PLAN INTERSECTION PEAK HOUR LEVEL OF SERVICE**

ID	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Avg. Delay (sec)	Future LOS	Existing LOS	Avg. Delay (sec)	Future LOS	Existing LOS
62	47th Street / I-805 NB Ramps	Signal	24.4	C	B	14.4	B	A
63	47th Street / I-805 SB Ramps	Signal	17.3	B	B	67.1	E	C

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates unacceptable LOS E or F.

OWSC = One-way stop controlled.

AWSC = All-way stop controlled.

For one or two-way stop controlled intersections, the delay shown is the worst delay experienced by any of the approaches.

As shown in the table, the following eight (8) study intersections are anticipated to operate at LOS E or F under buildout of the Preferred Plan:

- 19th Street / I-5 NB Off-Ramp / J Street – LOS E during PM Peak Hour
- I-5 SB Off-Ramp / Beardsley Street / Logan Avenue – LOS E during PM Peak Hour
- Broadway / SR-94 WB Ramps – LOS E during AM Peak Hour
- I-15 Ramps / Main Street – LOS E during PM Peak Hour
- I-5 SB Off-Ramp/Yama Street/Main Street – LOS F during PM Peak Hour
- I-5 NB Ramps / Osborn Street _ LOS E during AM Peak Hour
- 40th Street / Imperial Avenue – LOS E during PM Peak Hour
- 47th Street / I-805 SB Ramps – LOS E during PM Peak Hour

Figure 5-11 displays the Preferred Plan intersection LOS analysis results.

It should be noted that additional vehicular capacity improvements are not proposed in order to improve the projected vehicular level of service at the intersections listed above for a variety of reasons. The primary reasons being the constrained right-of-way and/or a desire to improve (or not negatively impact) the quality of the pedestrian, bicycle, and transit environment in order to more safely accommodate and promote these modes of transportation.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

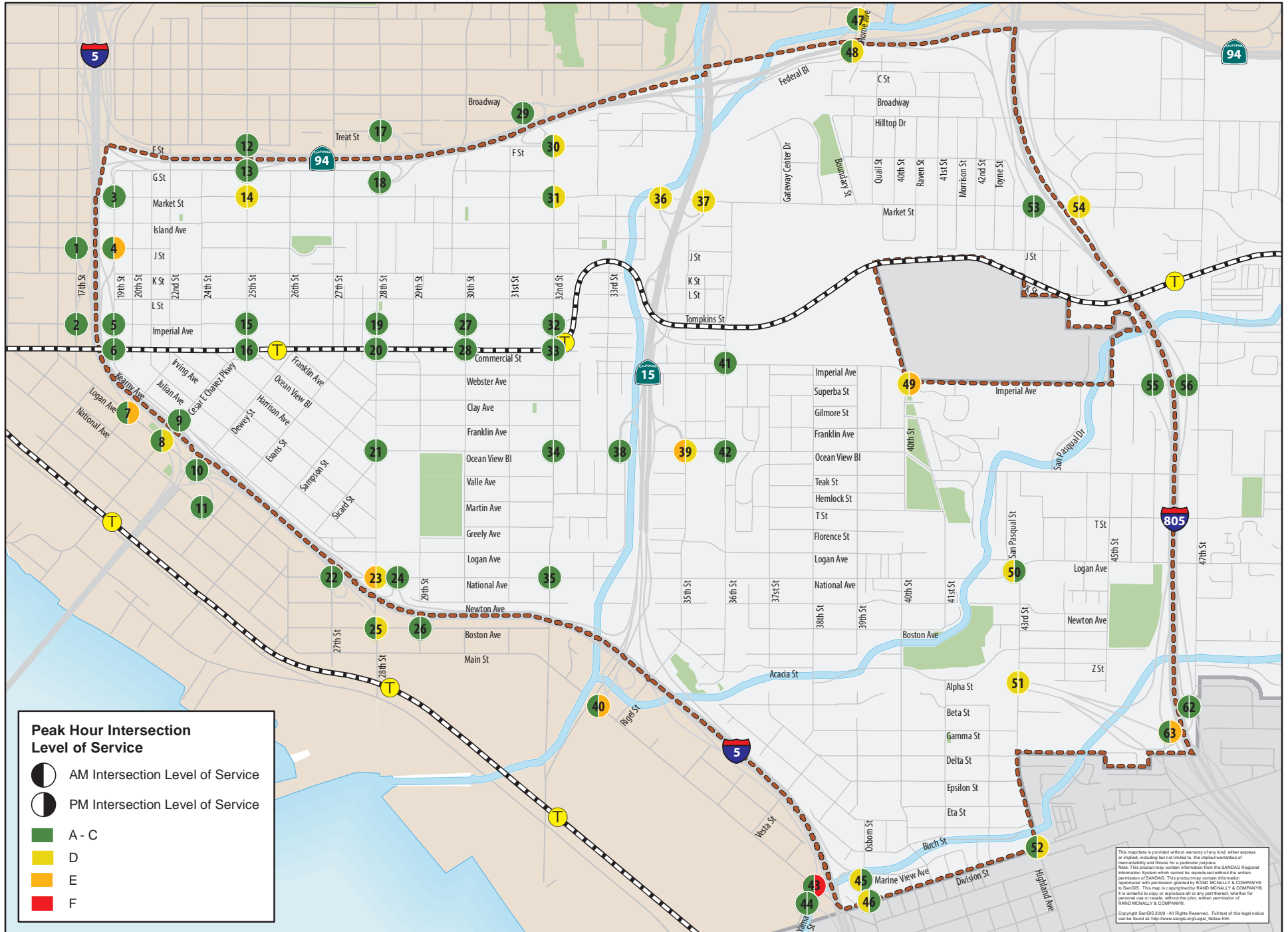


Figure 5-11: Preferred Plan Intersection Level of Service



Data Source:
City of San Diego, 2012; SanGIS Regional
Data Warehouse, 2012;
Dyett & Bhatia, 2012



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5.3.5 Intersection Queuing Analysis

A queuing analysis was conducted under Preferred Plan conditions, at each of the study intersections to assess potential overflowing issues at exclusive turn lanes and closely spaced intersections. Closely spaced intersections include all ramp intersections and intersections within close proximity (less than 500 feet) to one another. The limitations in turn-lane storage capacity could result in turning vehicles overflow into adjacent lanes, while excessive queuing (queue length exceeds distance to upstream intersection) at closely spaced intersection could negatively affect the operations of the upstream intersection. When either situation occurs, traffic operations could deteriorate, resulting in additional levels of congestion.

Table 5.9 displays the intersection queuing analysis during the AM/PM peak hours under Preferred Plan conditions.

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
1	17th Street/I-5 SB On-Ramp / J Street	EBR	75	12 / 48	0 / 0	No	0 / 15	0 / 0	No
		WBTL	485	135 / 88	0 / 0	No	87 / 37	0 / 0	No
2	17th Street/I-5 SB Off-Ramp / Imperial Avenue	SBL	140	97 / 136	0 / 0	No	91 / 101	0 / 0	No
		WBTL	460	51 / 26	0 / 0	No	22 / 19	0 / 0	No
3	19th Street / Market Street	EBL	110	9 / 64	0 / 0	No	1 / 24	0 / 0	No
4	19th Street/I-5 NB Off-Ramp / J Street	EBTL	485	25 / 25	0 / 0	No	N/A		
		WBTR	200	25 / 25	0 / 0	No	N/A		
		NBL	100	50 / 50	0 / 0	No	N/A		
		NBTR	180	200 / 425	20 / 245	Yes	N/A		
5	19th Street/I-5 NB On-Ramp / Imperial Avenue	NBLTR	300	43 / 80	0 / 0	No	49 / 64	0 / 0	No
		EBL	460	94 / 309	0 / 0	No	41 / 91	0 / 0	No
		EBT	460	98 / 351	0 / 0	No	44 / 93	0 / 0	No
6	19th Street / Commercial Street	EBTL	500	53 / 390	0 / 0	No	25 / 156	0 / 0	No
7	I-5 SB Off-Ramp/Beardsley Street / Logan Avenue	NBLR	300	50 / 100	0 / 0	No	N/A		
		SBLTR	525	225 / 100	0 / 0	No	N/A		
		EBTR	600	75 / 375	0 / 0	No	N/A		
		WBL	60	50 / 25	0 / 0	No	N/A		
		WBT	590	50 / 50	0 / 0	No	N/A		

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
8	Cesar Chavez Parkway/SR-75 On-Ramp / Logan Avenue	NBL	90	122 / 206	32 / 116	Yes	54 / 136	0 / 46	Yes
		NBT	300	64 / 131	0 / 0	No	38 / 93	0 / 0	No
		NBR	300	67 / 546	0 / 246	Yes	15 / 322	0 / 22	Yes
		SBL	110	158 / 166	48 / 56	Yes	72 / 76	0 / 0	No
		SBT	320	232 / 150	0 / 0	No	166 / 100	0 / 0	No
		EBL	90	97 / 154	7 / 64	Yes	49 / 91	0 / 1	Yes
		EBT	590	152 / 432	0 / 0	No	85 / 254	0 / 0	No
		WBL	100	33 / 41	0 / 0	No	16 / 15	0 / 0	No
		WBT	600	37 / 37	0 / 0	No	19 / 18	0 / 0	No
		WBR	60	7 / 0	0 / 0	No	0 / 0	0 / 0	No
9	Cesar Chavez Parkway / I-5 NB Ramps	NBL	775	406 / 224	0 / 0	No	185 / 124	0 / 0	No
		NBTR	570	317 / 145	0 / 0	No	132 / 66	0 / 0	No
		EBL	180	127 / 172	0 / 0	No	72 / 89	0 / 0	No
		EBT	320	98 / 125	0 / 0	No	64 / 73	0 / 0	No
10	I-5 SB On-Ramp / Logan Avenue	EBL	100	130 / 406	30 / 306	Yes	36 / 211	0 / 111	Yes
		NBLTR	80	19 / 12	0 / 0	No	1 / 11	0 / 0	No
11	SR-75 Off-Ramp / National Avenue	SBL	115	3 / 16	0 / 0	No	N/A		
		SBR	115	19 / 22	0 / 0	No	N/A		
12	25th Street / SR-94 WB Off-Ramp/F Street	NBTL	290	117 / 90	0 / 0	No	59 / 36	0 / 0	No
		SBTR	300	118 / 125	0 / 0	No	77 / 58	0 / 0	No
		WBLTR	680	187 / 88	0 / 0	No	94 / 33	0 / 0	No
13	25th Street / SR-94 EB On-Ramp/G Street	NBTR	300	56 / 51	0 / 0	No	25 / 32	0 / 0	No
		SBL	290	221 / 400	0 / 110	Yes	58 / 175	0 / 0	No
		SBT	290	145 / 174	0 / 0	No	67 / 116	0 / 0	No
		EBLTR	600	70 / 155	0 / 0	No	53 / 97	0 / 0	No
14	25th Street / Market Street	NBL	55	189 / 98	134 / 43	Yes	79 / 63	24 / 8	Yes
		SBL	55	151 / 274	96 / 219	Yes	60 / 141	5 / 86	Yes
		SBTR	300	103 / 195	0 / 0	No	59 / 140	0 / 0	No
		EBL	110	122 / 161	12 / 51	Yes	43 / 86	0 / 0	No
		WBL	85	72 / 56	0 / 0	No	35 / 24	0 / 0	No

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
15	25th Street / Imperial Avenue	NBLTR	300	83 / 127	0 / 0	No	51 / 84	0 / 0	No
		EBL	80	43 / 141	0 / 61	Yes	17 / 62	0 / 0	No
		WBL	75	71 / 58	0 / 0	No	36 / 28	0 / 0	No
16	25th Street/Cesar Chavez Parkway/Ocean View Boulevard / Commercial Street	SBLTR	300	118 / 183	0 / 0	No	53 / 87	0 / 0	No
		SBR	160	315 / 113	155 / 0	Yes	133 / 45	0 / 0	No
		NEL	55	156 / 156	101 / 101	Yes	90 / 98	35 / 43	Yes
17	28th Street / SR-94 WB Ramps/Treat Street	EBT	140	18 / 22	0 / 0	No	9 / 11	0 / 0	No
		WBTL	20	293 / 276	273 / 256	Yes	135 / 17	115 / 0	Yes
18	28th Street / SR-94 EB Ramps	WBLR	700	117 / 284	0 / 0	No	57 / 142	0 / 0	No
19	28th Street / Imperial Avenue	NBLTR	300	153 / 177	0 / 0	No	97 / 137	0 / 0	No
		EBL	150	33 / 61	0 / 0	No	7 / 22	0 / 0	No
		WBL	105	40 / 30	0 / 0	No	14 / 9	0 / 0	No
20	28th Street / Commercial Street	SBLTR	300	64 / 227	0 / 0	No	26 / 110	0 / 0	No
21	28th Street / Ocean View Boulevard	NBLTR	75	139 / 253	64 / 178	Yes	145 / 121	70 / 46	Yes
		SBLTR	310	115 / 166	0 / 0	No	92 / 91	0 / 0	No
		EBLTR	515	124 / 180	0 / 0	No	149 / 157	0 / 0	No
		WBLTR	595	198 / 111	0 / 0	No	134 / 57	0 / 0	No
22	27th Street/I-5 SB Off-Ramp / National Avenue	NBL	310	8 / 13	0 / 0	No	N/A		
		NBR	150	24 / 44	0 / 0	No	N/A		
23	28th Street / National Avenue	NBLTR	690	113 / 40	0 / 0	No	79 / 14	0 / 0	No
		EBL	60	94 / 139	34 / 79	Yes	32 / 48	0 / 0	No
		EBTR	600	95 / 174	0 / 0	No	63 / 117	0 / 0	No
		WBL	80	86 / 137	6 / 57	Yes	43 / 61	0 / 0	No
		WBTR	230	852 / 407	622 / 177	Yes	627 / 212	397 / 0	Yes
24	I-5 NB Ramps / National Avenue	NBL	680	303 / 282	0 / 0	No	142 / 146	0 / 0	No
		NBR	680	41 / 43	0 / 0	No	0 / 0	0 / 0	No
		EBT	230	191 / 401	0 / 171	Yes	118 / 230	0 / 0	No
		EBR	170	43 / 27	0 / 0	No	0 / 0	0 / 0	No

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
25	28th Street/I-5 SB Off-Ramp / Boston Avenue	NBL	65	120 / 64	55 / 0	Yes	32 / 34	0 / 0	No
		SBL	110	200 / 380	90 / 270	Yes	55 / 206	0 / 96	Yes
		SBTR	680	207 / 337	0 / 0	No	98 / 239	0 / 0	No
		EBL	75	56 / 353	0 / 278	Yes	23 / 268	0 / 193	Yes
		WBL	75	28 / 25	0 / 0	No	9 / 11	0 / 0	No
26	I-5 SB On-Ramp / Boston Avenue	NBT	310	50 / 143	0 / 0	No	19 / 69	0 / 0	No
		EBL	600	198 / 591	0 / 0	No	80 / 265	0 / 0	No
27	30th Street / Imperial Avenue	NBLTR	300	78 / 128	0 / 0	No	44 / 83	0 / 0	No
		EBL	90	10 / 56	0 / 0	No	6 / 19	0 / 0	No
		WBL	80	20 / 14	0 / 0	No	8 / 3	0 / 0	No
28	30th Street / Commercial Street	SBLTR	300	71 / 105	0 / 0	No	29 / 41	0 / 0	No
29	Broadway / SR-94 WB Ramps	WBL	350	129 / 128	0 / 0	No	97 / 46	0 / 0	No
		WBR	350	56 / 170	0 / 0	No	37 / 33	0 / 0	No
30	Broadway/32nd Street / F Street	EBT	600	15 / 31	0 / 0	No	N/A		
		WBT	600	5 / 3	0 / 0	No	N/A		
31	32nd Street / Market Street	EBL	120	112 / 99	0 / 0	No	30 / 38	0 / 0	No
		WBL	60	190 / 154	130 / 94	Yes	72 / 57	12 / 0	Yes
32	32nd Street / Imperial Avenue	NBLTR	300	99 / 137	0 / 0	No	71 / 69	0 / 0	No
		EBL	100	52 / 90	0 / 0	No	17 / 33	0 / 0	No
		WBL	95	77 / 88	0 / 0	No	44 / 33	0 / 0	No
33	32nd Street / Commercial Street	SBLTR	300	38 / 199	0 / 0	No	12 / 103	0 / 0	No
34	32nd Street / Ocean View Boulevard	WBL	70	111 / 102	41 / 32	Yes	47 / 36	0 / 0	No
35	32nd Street / National Boulevard	EBL	105	17 / 27	0 / 0	No	3 / 7	0 / 0	No
		WBL	110	37 / 39	0 / 0	No	8 / 9	0 / 0	No
36	I-15 SB Ramps / Market Street	NBL	180	356 / 267	176 / 87	Yes	221 / 146	41 / 0	Yes
		NBR	180	129 / 367	0 / 187	Yes	86 / 258	0 / 78	Yes
		EBR	125	34 / 107	0 / 0	No	0 / 67	0 / 0	No
		WBL	170	315 / 297	145 / 127	Yes	229 / 214	59 / 44	Yes
		WBT	620	388 / 204	0 / 0	No	396 / 173	0 / 0	No

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
37	I-15 NB Ramps / Market Street	NBL	220	312 / 253	92 / 33	Yes	214 / 137	0 / 0	No
		NBR	220	33 / 188	0 / 0	No	0 / 121	0 / 0	No
		EBT	620	220 / 616	0 / 0	No	188 / 452	0 / 0	No
		EBR	90	241 / 228	151 / 138	Yes	119 / 144	29 / 54	Yes
		WBL	200	603 / 682	403 / 482	Yes	425 / 469	225 / 269	Yes
38	I-15 SB Ramps / Ocean View Boulevard	SBL	220	166 / 465	0 / 245	Yes	57 / 211	0 / 0	No
		SBR	220	57 / 86	0 / 0	No	0 / 3	0 / 0	No
		EBL	60	120 / 237	60 / 177	Yes	37 / 93	0 / 33	Yes
		WBT	860	83 / 136	0 / 0	No	42 / 86	0 / 0	No
39	I-15 NB Ramps / Ocean View Boulevard	SBT	1,360	144 / 221	0 / 0	No	97 / 124	0 / 0	No
		SBR	1,360	43 / 56	0 / 0	No	0 / 0	0 / 0	No
		EBL	250	220 / 242	0 / 0	No	154 / 106	0 / 0	No
		EBT	860	326 / 799	0 / 0	No	242 / 342	0 / 0	No
		EBR	860	41 / 122	0 / 0	No	0 / 27	0 / 0	No
		WBL	85	67 / 68	0 / 0	No	30 / 20	0 / 0	No
		WBT	530	926 / 667	396 / 137	Yes	682 / 273	152 / 0	Yes
40	I-15 Ramps / Main Street	EBL	140	85 / 482	0 / 342	Yes	47 / 351	0 / 211	Yes
		WBR	260	66 / 61	0 / 0	No	0 / 0	0 / 0	No
41	36th Street / Imperial Avenue	NBL	80	190 / 182	110 / 102	Yes	96 / 64	16 / 0	Yes
		EBL	190	45 / 76	0 / 0	No	29 / 34	0 / 0	No
42	36th Street / Ocean View Boulevard	EBL	85	15 / 36	0 / 0	No	4 / 14	0 / 0	No
		EBT	530	196 / 478	0 / 0	No	62 / 226	0 / 0	No
		WBL	70	15 / 19	0 / 0	No	4 / 6	0 / 0	No
43	I-5 SB Off-Ramp/Yama Street / Main Street	NBT	200	45 / 114	0 / 0	No	15 / 66	0 / 0	No
		NBR	200	21 / 20	0 / 0	No	0 / 0	0 / 0	No
		WBL	110	569 / 312	459 / 202	Yes	306 / 168	196 / 58	Yes
44	Yama Street / I-5 SB On-Ramp	SBL	200	16 / 65	0 / 0	No	N/A		
45	I-5 NB Ramps / Osborn Street	WBL	50	458 / 63	408 / 13	Yes	312 / 21	262 / 0	Yes
		WBR	50	497 / 27	447 / 0	Yes	346 / 0	296 / 0	Yes

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
46	Osborn Street / Division Street	NBL	40	239 / 88	199 / 48	Yes	176 / 45	136 / 5	Yes
		NBTR	240	623 / 236	383 / 0	Yes	380 / 159	140 / 0	Yes
		SBLTR	150	136 / 272	0 / 122	Yes	58 / 127	0 / 0	No
		EBL	60	451 / 292	391 / 232	Yes	266 / 146	206 / 86	Yes
		EBTR	310	172 / 265	0 / 0	No	97 / 176	0 / 0	No
		WBL	70	95 / 85	25 / 15	Yes	50 / 32	0 / 0	No
		WBTR	420	356 / 105	0 / 0	No	256 / 56	0 / 0	No
47	Home Avenue / SR-94 WB On-Ramp / Ash Street/Federal Boulevard	NBL	140	82 / 176	0 / 36	Yes	34 / 91	0 / 0	No
		NBT	600	170 / 520	0 / 0	No	96 / 364	0 / 0	No
		SBL	110	270 / 304	160 / 194	Yes	123 / 162	13 / 52	Yes
		EBL	80	102 / 76	22 / 0	Yes	48 / 49	0 / 0	No
		WBL	110	138 / 135	28 / 25	Yes	71 / 94	0 / 0	No
48	Home Avenue/Federal Boulevard / SR-94 EB Off-Ramp/I-15 NB Off-Ramp	NBT	90	50 / 25	0 / 0	No	N/A		
		SBT	600	50 / 25	0 / 0	No	N/A		
		EBL	730	75 / 350	0 / 0	No	N/A		
		EBLR	730	50 / 75	0 / 0	No	N/A		
49	40th Street / Imperial Avenue	NBL	110	134 / 84	24 / 0	Yes	76 / 42	0 / 0	No
50	43rd Street / National Avenue	NBL	214	259 / 104	45 / 0	Yes	59 / 31	0 / 0	No
		NBR	220	29 / 38	0 / 0	No	0 / 0	0 / 0	No
		SBL	110	16 / 90	0 / 0	No	3 / 32	0 / 0	No
		EBL	175	50 / 50	0 / 0	No	15 / 19	0 / 0	No
		EBR	300	47 / 33	0 / 0	No	0 / 7	0 / 0	No
		WBL	185	113 / 146	0 / 0	No	29 / 40	0 / 0	No
51	43rd Street / I-805 Ramps	NBL	150	148 / 234	0 / 84	Yes	87 / 108	0 / 0	No
		SBL	215	273 / 334	58 / 119	Yes	131 / 180	0 / 0	No
		EBR	125	0 / 56	0 / 0	No	0 / 0	0 / 0	No
52	43rd Street/Highland Avenue / Division Street	NBL	60	166 / 273	106 / 213	Yes	59 / 105	0 / 45	Yes
		SBL	60	199 / 187	139 / 127	Yes	78 / 65	18 / 5	Yes
		EBL	90	38 / 45	0 / 0	No	19 / 18	0 / 0	No
		WBL	60	228 / 111	168 / 51	Yes	115 / 30	55 / 0	Yes

**TABLE 5.9
PREFERRED PLAN PEAK HOUR INTERSECTION QUEUING ANALYSIS**

ID	Intersection	Turning Movement	Pocket Length (ft)	95 th % Queue			50 th % Queue		
				Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?	Queue Length (ft)	Excess Queue (ft)	Exceed Storage ?
53	Market Street / I-805 SB Ramps	SBL	330	128 / 431	0 / 101	Yes	60 / 253	0 / 0	No
		SBR	330	96 / 64	0 / 0	No	30 / 0	0 / 0	No
		WBL	290	160 / 255	0 / 0	No	70 / 121	0 / 0	No
		WBT	530	308 / 254	0 / 0	No	126 / 147	0 / 0	No
54	Market Street / I-805 NB Ramps	NBL	550	387 / 158	0 / 0	No	272 / 82	0 / 0	No
		NBR	550	67 / 70	0 / 0	No	0 / 23	0 / 0	No
		EBL	100	227 / 326	127 / 226	Yes	90 / 103	0 / 3	Yes
		EBT	530	176 / 676	0 / 146	Yes	99 / 170	0 / 0	No
55	Imperial Avenue / I-805 SB Ramps	SBL	540	92 / 163	0 / 0	No	73 / 115	0 / 0	No
		SBTR	540	350 / 284	0 / 0	No	254 / 169	0 / 0	No
		WBL	190	123 / 140	0 / 0	No	61 / 71	0 / 0	No
		WBT	410	188 / 169	0 / 0	No	139 / 102	0 / 0	No
56	Imperial Avenue / I-805 NB Ramps	NBTL	260	246 / 240	0 / 0	No	144 / 133	0 / 0	No
		NBR	260	28 / 121	0 / 0	No	18 / 82	0 / 0	No
		EBL	140	287 / 361	147 / 221	Yes	151 / 192	11 / 52	Yes
		EBT	510	100 / 124	0 / 0	No	72 / 91	0 / 0	No
62	47th Street / I-805 NB Ramps	NBTL	120	66 / 125	0 / 5	Yes	32 / 68	0 / 0	No
		NBR	95	50 / 86	0 / 0	No	0 / 11	0 / 0	No
		EBL	80	463 / 397	383 / 317	Yes	293 / 121	213 / 41	Yes
		EBT	490	40 / 71	0 / 0	No	20 / 35	0 / 0	No
		WBT	220	267 / 74	47 / 0	Yes	191 / 35	0 / 0	No
63	47th Street / I-805 SB Ramps	SBT	820	104 / 224	0 / 0	No	65 / 149	0 / 0	No
		SBR	820	89 / 898	0 / 78	Yes	21 / 652	0 / 0	No
		EBT	430	268 / 402	0 / 0	No	152 / 274	0 / 0	No
		WBL	140	165 / 282	25 / 142	Yes	75 / 136	0 / 0	No
		WBT	490	57 / 141	0 / 0	No	24 / 103	0 / 0	No

Source: Chen Ryan Associates; February 2015

Notes:

XX/XX: AM/PM queue lengths

N/A: HCM does not provide a methodology to calculate 50th % queues at unsignalized intersection.

As shown, under buildout of the preferred plan, 63 different movements within the Southeastern San Diego community are projected to have queue lengths that exceed their storage capacity at the most congested point of the peak hour (95th % Queue). The spillovers could degrade traffic operations within the intersection or adjacent closely spaced, upstream intersections for approximately one to two cycles during the peak hour. However, only 35 movements are anticipated to have queues that exceed their storage capacity on an average during either peak hour (50th % Queue).

5.3.6 Freeway Segments and LOS Analysis

The Preferred Plan network includes freeway improvements that would directly impact the community as described in the SANDAG 2050 Regional Transportation Plan 2050. Planned freeway improvements include the following:

- SR-94 Express Lane Project (Alternative 1): includes two HOV/Express Lanes within the freeway median (one in each direction) between I-5 and I-805, with a direct freeway-to-freeway High Occupancy Vehicle (HOV) connector at I-805. The Express Lanes would accommodate carpools/vanpools, in addition to new Bus Rapid Transit (BRT) service. The SR-94 Express Lane Project (Alternative 1) also proposes the following modification to interchanges along the SR-94 corridors:
 - Removal of Eastbound SR-94/32nd Street On-ramp
 - Replace On and Off-ramps at Market Street and SR 15
 - Replacement of Left-side Freeway-to-Freeway Interchange with Standard Right-side connectors
 - Replacement of Westbound SR-94/Home Avenue On-Ramp
 - Removal of Northbound SR-15 to Westbound SR-93 Loop Connector
 - Replacement of Westbound SR-94 to Southbound SR-15 connector
 - Removal of Westbound SR-94/49th Street/A Street On-Ramp
- I-805 South Project (Phase 1): Includes two HOV/Express Lanes within the freeway median (one in each direction) between East Palomar Street in Chula Vista and the I-805/SR-15 interchange in San Diego.

Table 5.10 displays the freeway segment LOS in the vicinity of the Southeastern San Diego Community Planning Area. Forecast freeway volumes were obtained from the modeling process described in Chapter 4.0, 2035 ADT Data derived from the SANDAG 2035 Modeling Report, based off of the SANDAG Series 12 model. As shown in Table 5.10, under buildout of the Preferred Plan, numerous of study area freeway segments are anticipated to operate at less than desirable LOS E or F within the mainline. In addition, all of the proposed HOV lanes along I-15, I-805 and SR-94 are anticipated to operate at LOS D or better, with the exception of the following:

- I-805 Southbound, between Market Street and Imperial Avenue (LOS E)
- I-805 Northbound, between Market Street and Imperial Avenue (LOS E)
- I-805 Southbound, Imperial Avenue & 43rd Street (LOS E)

**TABLE 5.10
PREFERRED PLAN
FREEWAY SEGMENT LOS RESULTS**

Freeway	Segment	Direction	ADT	# of Lanes	Capacity	K ¹	HV ²	Peak Hour Volume	V/C Ratio	LOS	
I-5	17th Street & SR-94	NB	128,200	4M+2A	12,220	8.4%	4.0%	11,300	0.92	D	
		SB	125,500	4M	9,400	8.3%	4.0%	11,000	1.17	F	
	SR-94 & Imperial Avenue	NB	135,900	4M+1A	10,810	8.1%	4.0%	11,600	1.07	F	
		SB	116,100	4M+1A	10,810	8.3%	4.0%	10,200	0.94	E	
	Imperial Avenue & SR-75	NB	121,700	4M+1A	10,810	8.1%	3.8%	10,400	0.96	E	
		SB	112,900	4M+1A	10,810	8.2%	3.8%	9,700	0.90	D	
	SR-75 & 28th Street	NB	134,600	4M+2A	12,220	8.4%	5.0%	11,900	0.97	E	
		SB	110,300	4M+1A	10,810	8.2%	5.0%	9,500	0.88	D	
	28th Street & I-15	NB	124,500	4M	9,400	8.4%	5.0%	11,000	1.17	F	
		SB	102,000	4M	9,400	8.2%	5.0%	8,800	0.94	E	
	I-15 & Main Street	NB	155,100	4M+2A	12,220	8.4%	5.0%	13,700	1.12	F	
		SB	144,100	5M	11,750	8.7%	5.0%	13,200	1.12	F	
	I-15	I-805 & SR-94	NB	75,700	3M+1A	8,460	8.0%	5.1%	6,300	0.74	C
				900	1 HOV	2,350	8.0%	5.1%	100	0.04	A
SB			64,000	2M+1A	6,110	8.4%	5.1%	5,700	0.93	E	
			500	1 HOV	2,350	8.4%	5.1%	0	0.00	A	
SR-94 & Market Street		NB	71,800	3M+1A	8,460	8.1%	5.1%	6,100	0.72	C	
		SB	66,600	3M+1A	8,460	9.7%	5.1%	6,800	0.80	D	
Market Street & Ocean View Boulevard		NB	79,100	3M	7,050	8.1%	5.1%	6,700	0.95	E	
		SB	71,300	3M	7,050	9.6%	5.1%	7,200	1.02	F	
Ocean View Boulevard & I-5		NB	74,700	3M+1A	8,460	7.0%	5.1%	5,500	0.65	C	
		SB	67,300	4M+1A	10,810	7.8%	5.1%	5,500	0.51	B	
I-5 & Norman Scott Road		NB	18,600	2M	4,700	7.0%	5.1%	1,400	0.30	A	
		SB	16,500	2M	4,700	7.5%	5.1%	1,300	0.28	A	
I-805		Home Avenue & SR-94	NB	124,700	4M	9,400	7.0%	6.5%	9,200	0.98	E
				29,000	1 HOV	2,350	7.0%	6.5%	2,100	0.89	D
	SB		112,500	4M	9,400	7.8%	6.5%	9,200	0.98	E	
			22,600	1 HOV	2,350	7.8%	6.5%	1,900	0.81	D	
	SR-94 & Market Street	NB	121,500	4M	9,400	7.0%	6.5%	8,900	0.95	E	
			27,400	1 HOV	2,350	7.0%	6.5%	2,000	0.85	D	
		SB	110,000	4M	9,400	7.8%	6.5%	9,000	0.96	E	
			22,800	1 HOV	2,350	7.8%	6.5%	1,900	0.81	D	

**TABLE 5.10
PREFERRED PLAN
FREEWAY SEGMENT LOS RESULTS**

Freeway	Segment	Direction	ADT	# of Lanes	Capacity	K ¹	HV ²	Peak Hour Volume	V/C Ratio	LOS
I-805	Market Street & Imperial Avenue	NB	156,800	4M+2A	12,220	7.0%	6.5%	11,500	0.94	E
			29,400	1 HOV	2,350	7.0%	6.5%	2,200	0.94	E
		SB	142,000	4M+2A	12,220	7.8%	6.5%	11,700	0.96	E
			28,500	1 HOV	2,350	7.8%	6.5%	2,300	0.98	E
	Imperial Avenue & 43rd Street	NB	150,500	5M	11,750	7.0%	6.5%	11,000	0.94	E
			29,100	1 HOV	2,350	7.0%	6.5%	2,100	0.89	D
		SB	141,200	4M+1A	10,810	7.5%	6.5%	11,100	1.03	F
			28,200	1 HOV	2,350	7.5%	6.5%	2,200	0.94	E
	43rd Street & Plaza Boulevard	NB	159,500	4M+2A	12,220	6.0%	6.5%	10,100	0.83	D
			28,100	1 HOV	2,350	6.0%	6.5%	1,800	0.77	C
		SB	131,700	5M	11,750	7.5%	6.5%	10,500	0.89	D
			23,500	1 HOV	2,350	7.5%	6.5%	1,900	0.81	D
SR-94	17th Street & 25th Street	EB	94,400	4M	9,400	9.3%	3.6%	9,300	0.99	E
		WB	105,400	3M+1A	8,460	7.6%	3.6%	8,400	0.99	E
			3,300	1 HOV	2,350	7.6%	3.6%	300	0.13	A
	25th Street & 28th Street	EB	100,300	4M	9,400	9.3%	3.6%	9,900	1.05	F
			6,200	1 HOV	2,350	9.3%	3.6%	600	0.26	A
		WB	109,200	4M	9,400	7.6%	3.6%	8,700	0.93	E
			3,300	1 HOV	2,350	7.6%	3.6%	300	0.13	A
	28th Street & 30th Street	EB	112,200	4M	9,400	8.6%	3.6%	10,200	1.09	F
			7,100	1 HOV	2,350	8.6%	3.6%	600	0.26	A
		WB	123,300	4M	9,400	7.6%	3.6%	9,900	1.05	F
			3,200	1 HOV	2,350	7.6%	3.6%	300	0.13	A
	30th Street & I-15	EB	115,900	4M+1A	10,810	8.6%	3.6%	10,500	0.97	E
			7,100	1 HOV	2,350	8.6%	3.6%	600	0.26	A
		WB	127,400	4M+1A	10,810	7.6%	3.6%	10,200	0.94	E
			3,200	1 HOV	2,350	7.6%	3.6%	300	0.13	A
	I-15 & Home Avenue	EB	99,500	4M+1A	10,810	8.6%	4.2%	9,100	0.84	D
			5,600	1 HOV	2,350	8.6%	4.2%	500	0.21	A
		WB	109,400	4M	9,400	7.6%	4.2%	8,800	0.94	E
			2,100	1 HOV	2,350	7.6%	4.2%	200	0.09	A
	Home Avenue & I-805	EB	101,300	4M+1A	10,810	8.6%	4.2%	9,200	0.85	D
5,900			1 HOV	2,350	8.6%	4.2%	500	0.21	A	

**TABLE 5.10
PREFERRED PLAN
FREEWAY SEGMENT LOS RESULTS**

Freeway	Segment	Direction	ADT	# of Lanes	Capacity	K ¹	HV ²	Peak Hour Volume	V/C Ratio	LOS
SR-94	Home Avenue & I-805	WB	111,300	4M	9,400	7.6%	4.2%	8,900	0.95	E
			2,100	1 HOV	2,350	7.6%	4.2%	200	0.09	A
	I-805 & 47th Street	EB	146,000	5M	11,750	8.6%	3.9%	13,300	1.13	F
		WB	160,400	4M+1A	10,810	7.6%	3.9%	12,800	1.18	F

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates unacceptable LOS E or F.

M = Mainline. A = Auxiliary Lane. HOV = High Occupancy Vehicle Only

¹K = Peak hour %.

²HV = Heavy vehicle %.

5.3.7 Freeway Ramp Meter Analysis

Table 5.11 summarizes the freeway ramp metering analysis results, under buildout of the Preferred Plan, for all ramp meter locations within the Southeastern San Diego community. The volumes were derived using the outputs for the modeling described in Chapter 5.0.

**TABLE 5.11
PREFERRED PLAN FREEWAY RAMP METERING ANALYSIS**

On-Ramp	# of Lanes		Peak Hour	Demand ¹ (veh/hr)	Meter Rate ² (veh/hr)	Excess Demand ³ (veh/hr)	Delay ⁴ (min)	Queue ⁵ (ft)
	SOV	HOV						
SR-94 EB On-Ramp @ 25th Street	2	0	PM	840	868	0	0	0
SR-94 EB On-Ramp @ 28th Street	1	0	PM	730	868	0	0	0
I-805 NB On-Ramp @ 47th Street	2	0	AM	740	880	0	0	0
I-805 NB On-Ramp @ Imperial Avenue	2	0	AM	1,380	1,589	0	0	0

Source: Chen Ryan Associates; February 2015

Notes:

SOV = Single Occupancy Vehicle; HOV = High Occupancy Vehicle.

¹ Demand is the peak hour demand expected to use the on-ramp.

² Meter Rate is the peak hour capacity expected to be processed through the ramp meter. This value was obtained from Caltrans.

³ Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.

⁴ Delay = (Excess Demand / Meter Rate) X 60 min/hr.

⁵ Queue = (Excess Demand) X 29 ft/veh.

As shown, the anticipated peak hour demand is not anticipated exceed the anticipated meter rate at any of the study ramp meter locations. Therefore, no freeway on-ramp queuing issues are anticipated under buildout of the Preferred Plan.

5.4 Intelligent Transportation Systems (ITS)

The implementation of Intelligent Transportation Systems (ITS) can provide many benefits to the local roadway network, including improving roadway traffic operations, improving transit operations, relaying valuable traffic-related information and providing guidance to drivers (e.g. locations of available parking, traffic congestion points, and the location of accidents). Coordinated traffic signals and transit signal priority treatments are examples of ITS programs that can help improve both transit and roadway operations.

The City of San Diego should investigate the feasibility of the following ITS improvements within the Southeast San Diego community:

- Expand signal coordination along major roadway corridors including: Market Street, Imperial Avenue, National Avenue, 25th Street, 28th Street, 43rd Street and 47th Street.
- Regularly update the timing of traffic signals to reflect shifting travel patterns
- Use traffic responsive or adaptive traffic control in areas with variable traffic patterns
- Implement transit signal priority treatments at signalized intersections serving rapid bus routes
- Use variable message signs to direct motorists to available parking and to alert them of street closures.

5.5 Transportation Demand Management (TDM) Strategies

The goal of the City's Transportation Demand Management (TDM) program is to improve mobility, reduce congestion and air pollution, and provide options for employees and residents to commute to and from work. Typical TDM strategies include promoting the following:

- Teleworking
- Alternative Work Schedules
- Walking
- Bicycling
- Carpooling
- Vanpooling
- Transit
- Car-sharing
- Mixed-Use Development
- Other Transportation Options

TDM measures improve the efficiency of the transportation system by helping to reduce vehicle trips during peak periods of demand. The San Diego Association of Governments (SANDAG) has an established program (iCommute) that serves as the administrator for TDM programs throughout the region. iCommute provides the following services:

- RideMatcher – resources for finding carpool partners or available vanpool seats
- SchoolPool – a program that enrolls schools to encourage parents to carpool
- Transit Information - provides a linkage to transit service provider web pages
- Bicycle Information – provides a link to SANDAG's Regional Bikeway Master Plan, which has been updated to show bicycle paths, lanes and routes in the region

-
- Guaranteed Ride Home – a program that allows vanpool riders affordable rides home to deal with emergency meetings or illness

In addition to the iCommute program, Caltrans owns and/or maintains several park-and-ride lots in the region that are used to promote carpool activity.

The City of San Diego’s Land Development Code (LDC) requires new development to provide sufficient bicycle parking stalls, carpool parking and motorcycle facilities to encourage the use of alternative modes of transportation. The City is early in the process of developing recommendations to amend the LDC requirements for pedestrian, bicycle, carpool, and commuter information facilities. The City is also coordinating with SANDAG on the implementation of a car-sharing demonstration program. Pricing strategies are also used to reduce demand on the transportation system.

5.6 Cycling Environment

Bicycle facilities are an integral component of the community’s transportation system. Adequate bicycle facilities encourage non-motorized transportation, enhance recreational opportunities, and help attract visitors. Bikeways not only provide local opportunities for cyclists, but also offer regional connections. One of the most heavily used regional corridors in San Diego is the Bayshore Bikeway, located just outside of the community planning area; this section of the report discusses the Preferred Plan facilities proposed for the Southeastern San Diego Community Planning Area.

5.6.1 Bicycle Facility Network

The Preferred Plan proposes a well-connected network of bicycle facilities. The plan proposes a variety of standard and innovative bicycle facilities in Southeastern San Diego, most notably:

- Market Street, between 19th Street and 32nd Street – One-way cycle track in both directions;
- Imperial Avenue, between 19th Street and 36th Street – Buffered bike lanes in both directions; and
- National Avenue, between 19th Street and Logan Avenue - Buffered bike lanes in both directions.

Additionally, the Preferred Plan Bicycle Network includes a Class I Multi-Use Path within the existing MTS Trolley right-of-way. This Class I Path is included in the *City of San Diego Bicycle Master Plan, December 2013* and is carried over to the community plan. However, it should be noted that a feasibility analysis has not yet been conducted for this facility and it is unclear if it can be constructed due to constraints to the right-of-way, and the right-of-way being on structure for portions of it.

Figure 5-12 displays the location of bicycle facilities within the Southeastern San Diego Community Planning Area. The bicycle facility classifications used in Figure 5-12 are based on SANDAG’s bicycle facility classification system, which is described in **Appendix U**.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

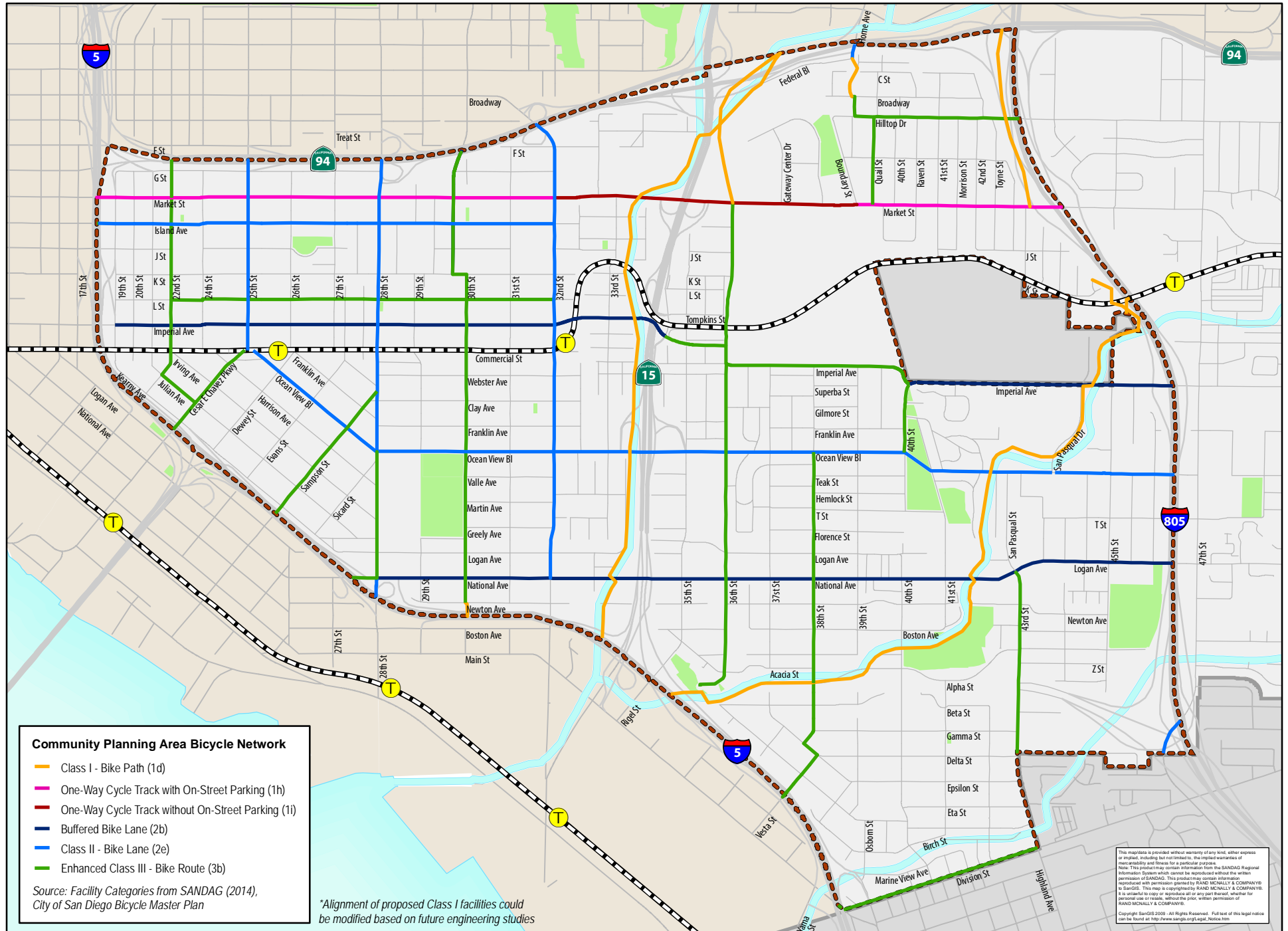


Figure 5-12: Preferred Plan Bicycle Network



Data Source:
City of San Diego, 2012; SanGIS Regional
Data Warehouse, 2012;
Dyett & Bhatia, 2012



Table 5.12 summarizes bicycle facility mileage for existing conditions and for the Preferred Plan. As shown, under the Preferred Plan will provide almost five times the amount of bicycle facilities that are currently available in the Southeastern San Diego community. Including Class I separated facilities (cycle tracks) along Market Street and buffered bike lanes along Imperial Avenue and National Avenue.

**TABLE 5.12
MILEAGE OF PREFERRED PLAN BICYCLE FACILITY EXISTING VS. PREFERRED PLAN**

Facility Type	Existing		Preferred Plan	
	Mileage	Percent of Total	Mileage	Percent of Total
Class I Multi-Use Path	1.5	23%	6.8	22%
One-Way or Two-Way Cycle Track	0	0	2.8	9%
Buffered Bike Lane	0	0	3.1	10%
Class II Bicycle Lane	3.5	55%	8.8	29%
Class III Bicycle Route	1.4	22%	9.2	30%
TOTAL	6.4	100%	30.7	100%

Source: SANDAG, Chen Ryan Associates; February 2015

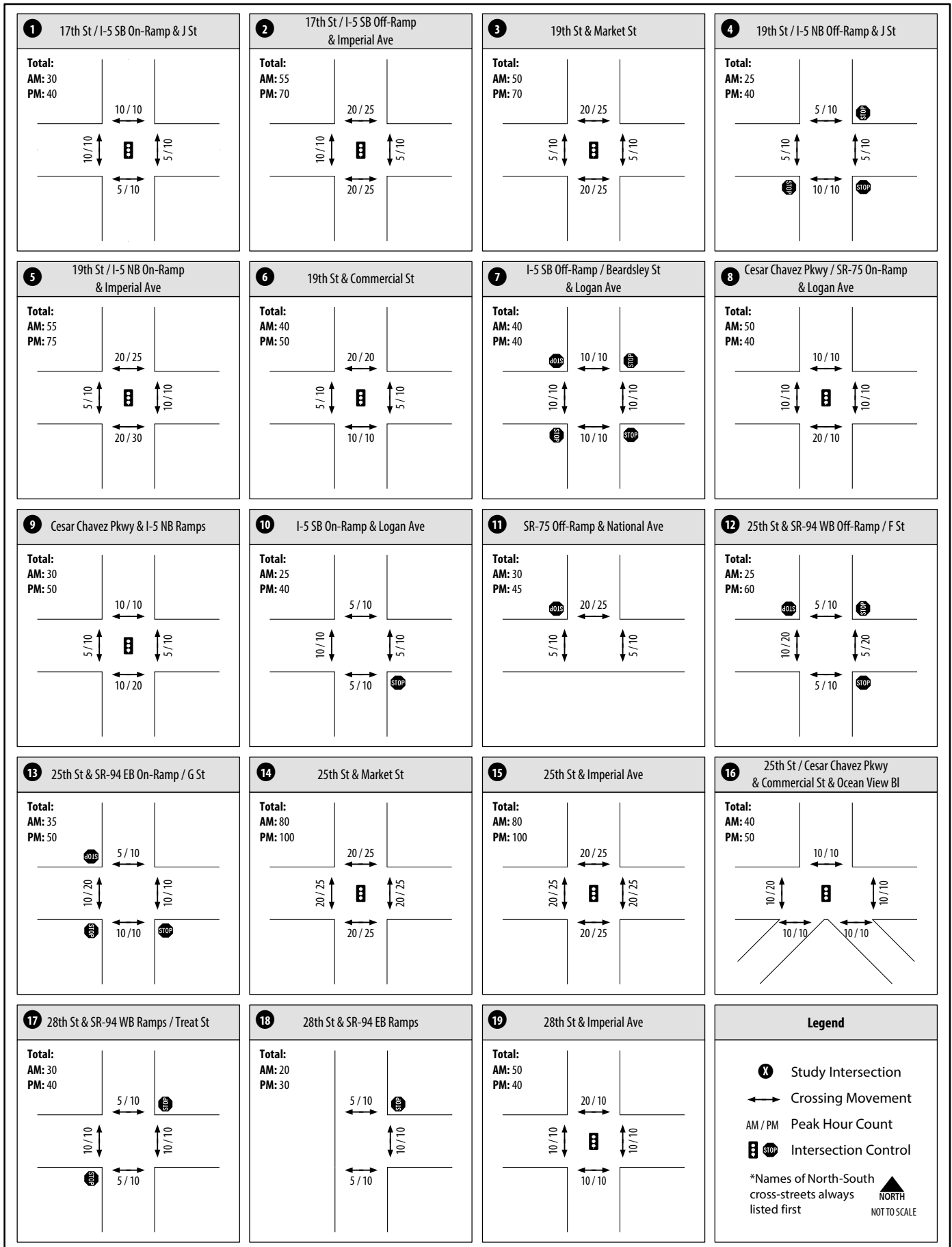
5.6.2 Cycling Activity Levels

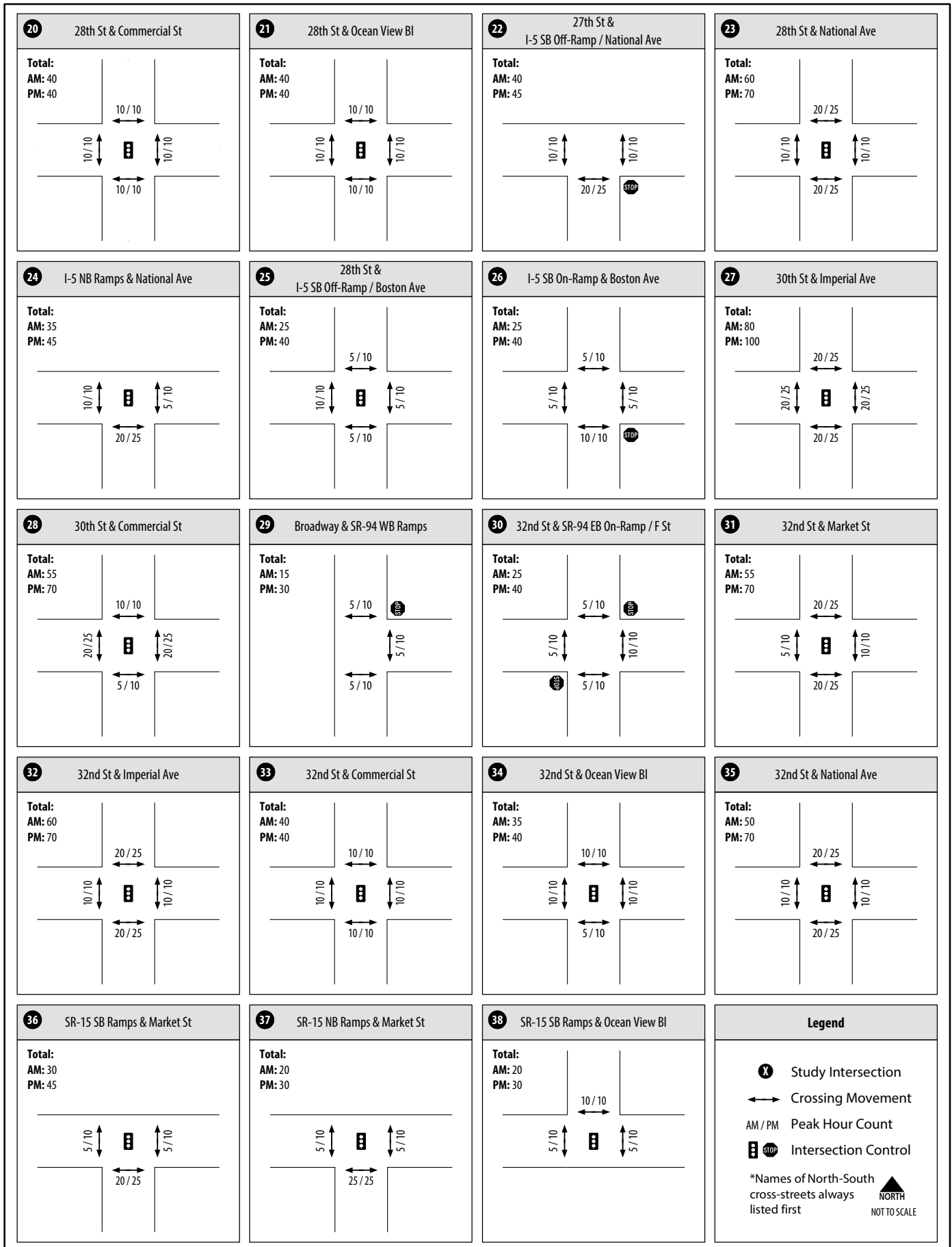
While projecting increases in multi-modal trips requires some level of judgment and is dependent on numerous factors, quantitative methods are available to assist in this process. A community-wide bicycle activity growth factor was derived based on future growth estimates from previous master plan studies³ conducted within the Southeastern San Diego community. These master plan studies utilized SANDAG’s Trip Generation for Smart Growth Tool (MXD) to estimate the specific growth in bicycle activities along the major corridors throughout the community (Imperial Avenue, Commercial Street and National Avenue). Relevant pages from the previous master plan technical reports are provided in Appendix N.

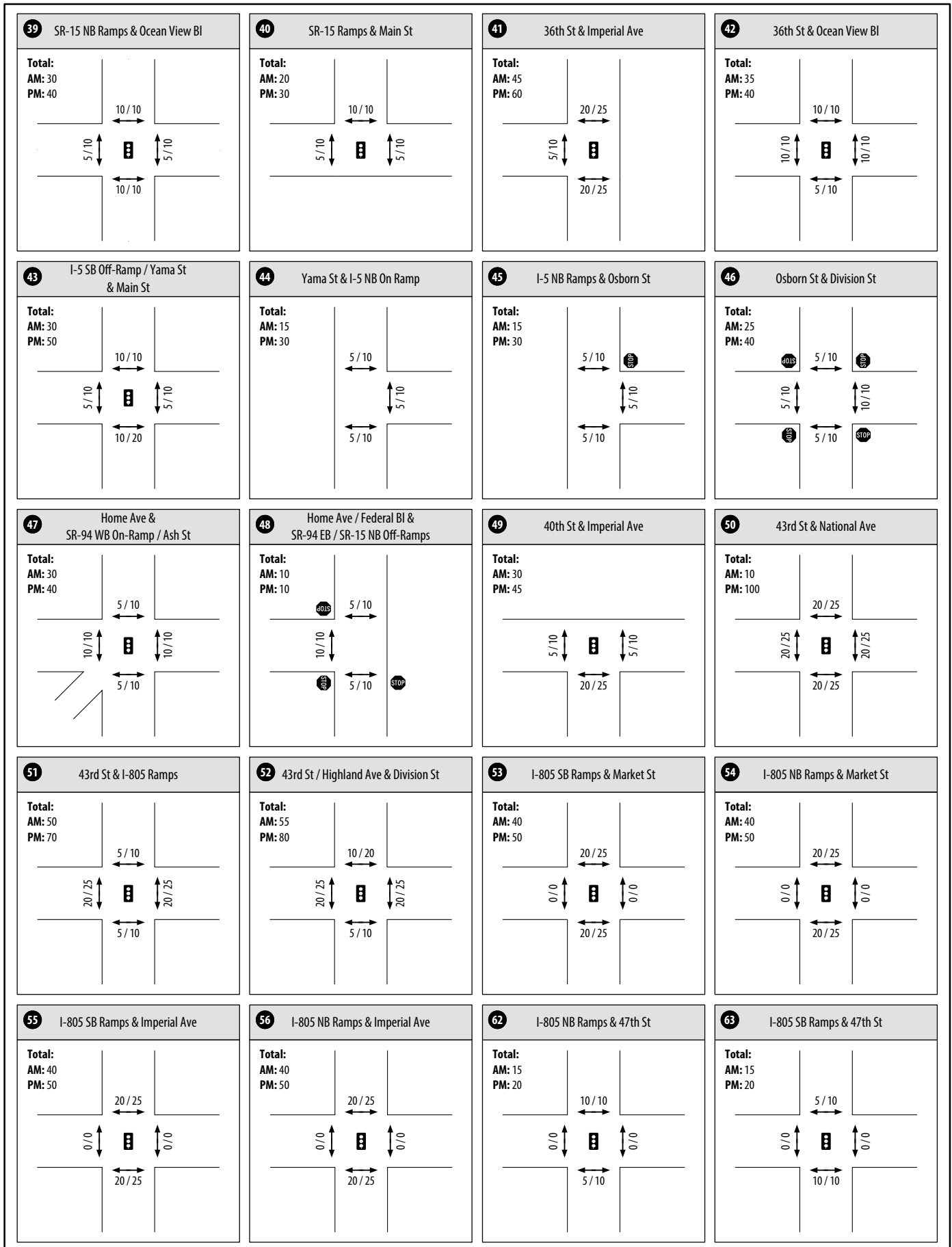
Based on the MXD results in the previous master plans, a 1.6 growth factor was applied to existing bicycle volumes throughout the community, which accounts for external bicycle trips and internal bicycle activities. To be conservative, in addition to applying the 1.6 growth factor to all bicycle volumes, a minimum of 20 additional cyclists in the AM peak hour and 25 cyclists in the PM peak hour were assumed along major facilities (Market Street, Imperial Avenue, National Avenue), and a minimum of 5 additional cyclists in the AM peak hour and 10 cyclists in the PM peak hour along minor side streets.

Figure 5-13 displays the projected bicycle within the Southeastern San Diego community under buildout of the Preferred Plan.

³ Commercial Imperial Corridor Master Plan - Transportation Analysis; Fehr & Peers, April 2013
National Avenue Corridor Master Plan – Future Multi-Modal Conditions Report; Fehr & Peers, April 2014







5.6.3 Cycling LOS Analysis and Results

Bicycle LOS was evaluated along the major urban corridors throughout the community, including Market Street, Imperial Avenue, National Avenue, and 43rd Street, using the CSLOS methodology described in Chapter 2.

Tables 5.13A and 5.13B display the Preferred Plan LOS for cyclists on along major urban streets during the AM and PM peak periods, respectively, by segment and by direction. Peak hour bicycle CSLOS analysis output is provided in Appendix V.

**TABLE 5.13A
PREFERRED PLAN MULTI-MODAL ANALYSIS – BICYCLE LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Facility Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	3.60	D	3.42	C
	19th Street & 25th Street		3.23	C		
	25th Street & 32nd Street		3.14	C		
	32nd Street & I-15 SB Ramps		3.51	D		
	I-15 SB Ramps & I-15 NB Ramps		3.30	C		
	I-15 NB Ramps & I-805 SB Ramps		3.79	D		
	I-805 SB Ramps & I-805 NB Ramps		2.94	C		
	17th Street & 19th Street	Westbound	2.95	C	2.67	B
	19th Street & 25th Street		2.20	B		
	25th Street & 32nd Street		2.19	B		
	32nd Street & I-15 SB Ramps		2.88	C		
	I-15 SB Ramps & I-15 NB Ramps		2.91	C		
	I-15 NB Ramps & I-805 SB Ramps		3.14	C		
	I-805 SB Ramps & I-805 NB Ramps		2.91	C		
Imperial Avenue	17th Street & 19th Street	Eastbound	3.30	C	3.20	C
	19th Street & 25th Street		3.38	C		
	25th Street & 28th Street		3.30	C		
	28th Street & 30th Street		3.15	C		
	30th Street & 32nd Street		3.15	C		
	32nd Street & 36th Street		2.63	B		
	36th Street & 40th Street		3.39	C		
	40th Street & I-805 SB Ramps		3.33	C		
	I-805 SB Ramps & I-805 NB Ramps		3.26	C		

**TABLE 5.13A
PREFERRED PLAN MULTI-MODAL ANALYSIS – BICYCLE LOS
AM PEAK HOUR**

Roadway	Segment	Direction	Facility Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Imperial Avenue	17th Street & 19th Street	Westbound	3.00	C	2.93	C
	19th Street & 25th Street		2.46	B		
	25th Street & 28th Street		2.39	B		
	28th Street & 30th Street		2.39	B		
	30th Street & 32nd Street		2.40	B		
	32nd Street & 36th Street		2.35	B		
	36th Street & 40th Street		4.01	D		
	40th Street & I-805 SB Ramps		3.26	C		
	I-805 SB Ramps & I-805 NB Ramps		3.41	C		
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	2.55	B	2.56	B
	32nd Street & 43rd Street		2.50	B		
	43rd Street & 47th Street		2.73	B		
	28th Street & 32nd Street	Westbound	2.43	B	2.39	B
	32nd Street & 43rd Street		2.38	B		
	43rd Street & 47th Street		2.38	B		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	3.10	C	3.58	D
	I-805 Ramps & Division Street		3.89	D		
	Logan Avenue & I-805 Ramps	Southbound	3.69	D	3.97	D
	I-805 Ramps & Division Street		4.14	D		

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

The bicycle LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

**TABLE 5.13B
PREFERRED PLAN MULTI-MODAL ANALYSIS – BICYCLE LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Facility Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
Market Street	17th Street & 19th Street	Eastbound	3.41	C	3.54	C
	19th Street & 25th Street		3.22	C		
	25th Street & 32nd Street		3.02	C		
	32nd Street & I-15 SB Ramps		3.37	C		
	I-15 SB Ramps & I-15 NB Ramps		3.39	C		
	I-15 NB Ramps & I-805 SB Ramps		4.33	E		
	I-805 SB Ramps & I-805 NB Ramps		2.94	C		
	17th Street & 19th Street	Westbound	2.93	C	2.76	C
	19th Street & 25th Street		2.19	B		
	25th Street & 32nd Street		2.17	B		
	32nd Street & I-15 SB Ramps		2.82	C		
	I-15 SB Ramps & I-15 NB Ramps		2.99	C		
	I-15 NB Ramps & I-805 SB Ramps		3.35	C		
	I-805 SB Ramps & I-805 NB Ramps		2.92	B		
Imperial Avenue	17th Street & 19th Street	Eastbound	3.42	C	3.21	C
	19th Street & 25th Street		3.36	C		
	25th Street & 28th Street		3.30	C		
	28th Street & 30th Street		3.17	C		
	30th Street & 32nd Street		3.15	C		
	32nd Street & 36th Street		2.59	B		
	36th Street & 40th Street		3.43	C		
	40th Street & I-805 SB Ramps		3.36	C		
	I-805 SB Ramps & I-805 NB Ramps		3.24	C		
	17th Street & 19th Street	Westbound	3.07	C	2.96	C
	19th Street & 25th Street		2.47	B		
	25th Street & 28th Street		2.36	B		
	28th Street & 30th Street		2.41	B		
	30th Street & 32nd Street		2.41	B		
	32nd Street & 36th Street		2.35	B		
	36th Street & 40th Street		4.19	D		
	40th Street & I-805 SB Ramps		3.27	C		
	I-805 SB Ramps & I-805 NB Ramps		3.45	C		

**TABLE 5.13B
PREFERRED PLAN MULTI-MODAL ANALYSIS – BICYCLE LOS
PM PEAK HOUR**

Roadway	Segment	Direction	Facility Segment By Direction		Facility by Direction ¹	
			Score	LOS	Score	LOS
National Avenue/ Logan Avenue	28th Street & 32nd Street	Eastbound	2.56	B	2.58	C
	32nd Street & 43rd Street		2.52	B		
	43rd Street & 47th Street		2.76	C		
	28th Street & 32nd Street	Westbound	2.42	B	2.39	B
	32nd Street & 43rd Street		2.40	B		
	43rd Street & 47th Street		2.33	B		
43rd Street	Logan Avenue & I-805 Ramps	Northbound	3.25	C	3.66	D
	I-805 Ramps & Division Street		3.93	D		
	Logan Avenue & I-805 Ramps	Southbound	3.71	D	4.05	D
	I-805 Ramps & Division Street		4.28	E		

Source: Chen Ryan Associates; February 2015

Notes:

Bold letter indicates segment LOS E or F.

The bicycle LOS is calculated based on the NCHRP 3-70 methodology.

¹The facility score is calculated as the weighted average of each individual segment taking in consideration the length of each segment.

As shown in the tables, all of the urban street facilities within the Southeastern San Diego community are expected to operate at LOS D or better for cyclists during the AM peak hour. A majority of the facilities would operate at LOS D or better during the PM peak hour, with the exceptions of eastbound Market Street, between I-15 NB ramps and I-805 SB ramps (LOS E), and southbound 43rd Street, between I-805 Ramps and Division Street (LOS E). The bicycle improvements proposed under the Preferred Plan alternative, are projected to improve the bicycle CSLOS along all of the urban corridors within the community, when compared to the current levels of operation.

Figures 5-14a and 5-14b display bicycle LOS for the AM and PM peak periods, respectively, within the Southeastern San Diego Community Planning Area.

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

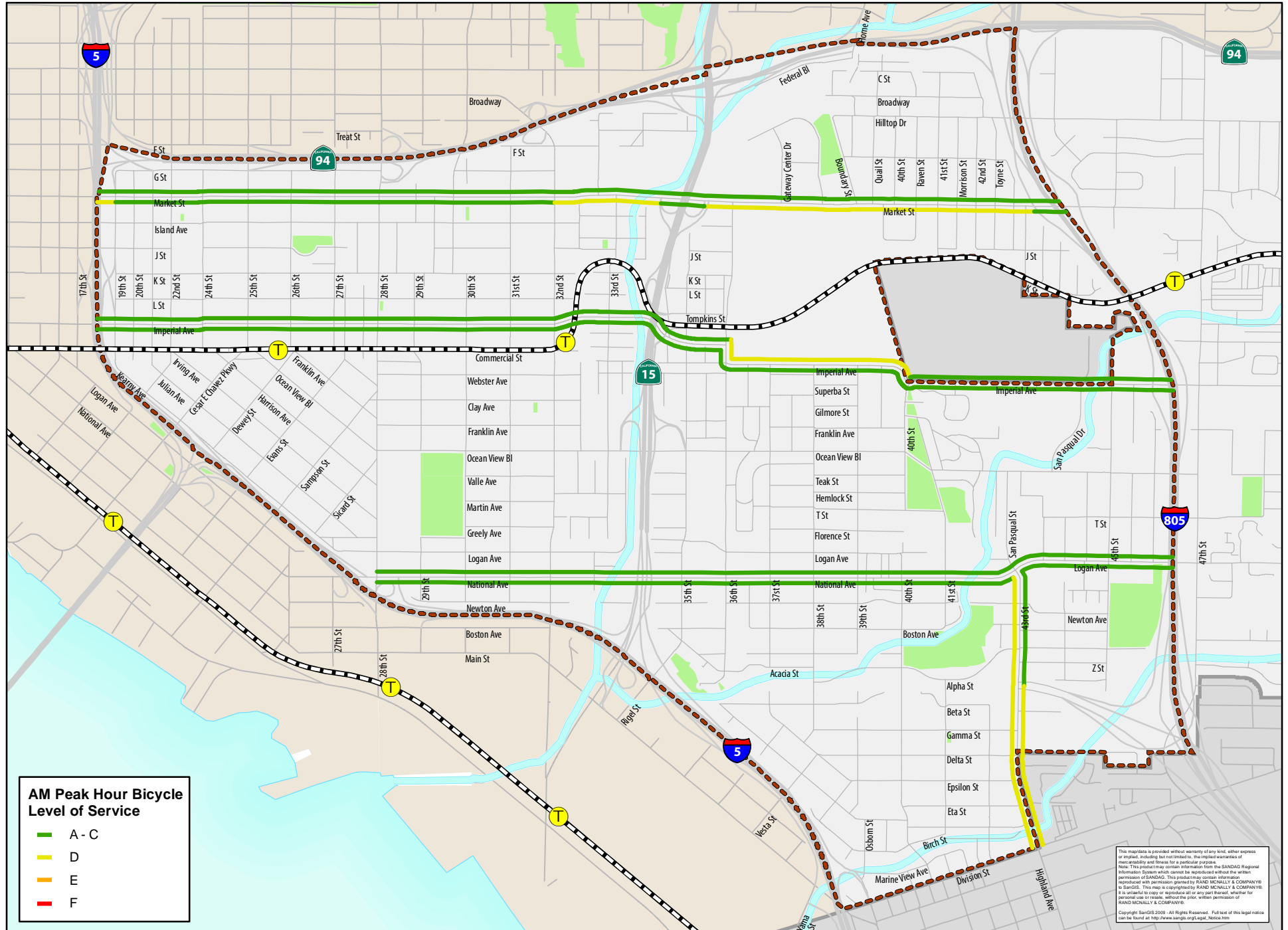


Figure 5-14a: Preferred Plan AM Peak Period Bicycle Level of Service

SOUTHEASTERN SAN DIEGO COMMUNITY PLAN UPDATE

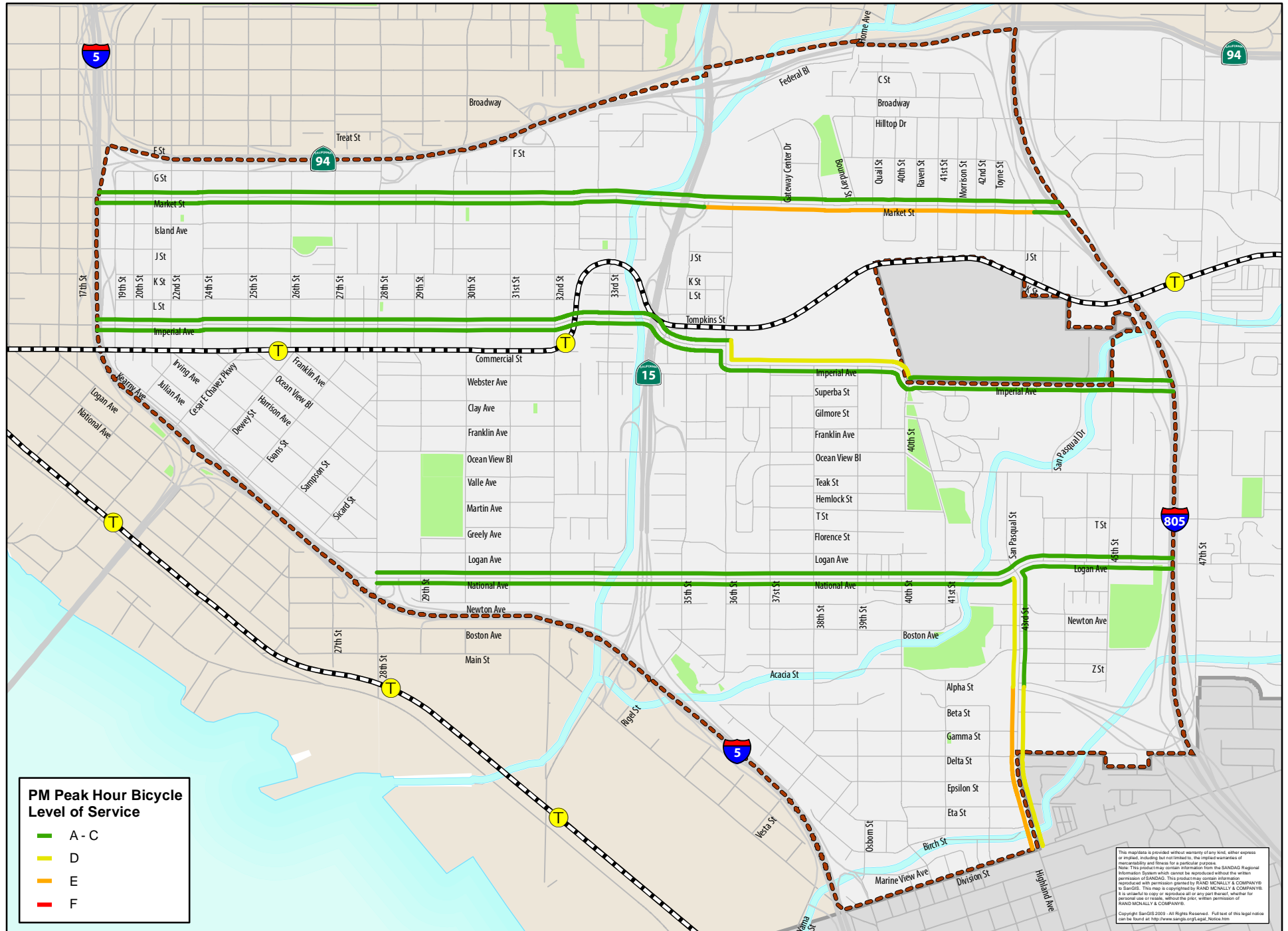
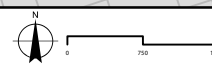


Figure 5-14b: Preferred Plan PM Peak Period Bicycle Level of Service



Data Source:
City of San Diego, 2012; SanGIS Regional
Data Warehouse, 2012;
Dyett & Bhatia, 2012



5.7 Parking Management

It is anticipated that any additional parking demand associated with future developments will be accommodated on-site. It is assumed that all on-street public parking spaces will be maintained under community buildout conditions, with the exception of the following:

- An estimated 130 on-street parking spaces on Market Street between 32nd Street and Boundary Street. Specific segments include between 32nd Street and I-15 (both sides), and between I-15 and Boundary Street (north side). These spaces are proposed to be removed to provide additional right-of-way for a new cycle track along Market Street. These on-street parking spaces are not currently, nor are projected to be, heavily utilized (8% occupancy or 11 occupied spaces during the peak period). The parking demand for the removed spaces (both current and future) should be able to be absorbed by the available capacity of on adjacent side streets (32nd Street, 33rd Street, Gateway Center Drive, and Gateway Center Way) which currently have an occupancy rate of 39%.
- Additional on-street parking spaces will need to be removed on either side of driveways or other access points (30 feet to allow for adequate visibility) along Market Street with the proposed cycle track. Based on national research this typically results in the loss of 15-25% of on-street parking spaces along roadway corridors with cycle tracks. East of 25th Street within the Southeastern San Diego community, Market Street should be able to easily absorb the 15-25% loss of on-street parking (all segments are under 50% occupancy during all times of the day as per the existing parking occupancy survey). However, Market Street between 19th Street and 25th Street which has an occupancy rate between 70% and 84% during most hours of the day, may be impacted from the loss of parking associated with the implementation of the cycle track.