Appendix F
Traffic Impact Study

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS

GOLDEN SHORE MASTER PLAN

Long Beach, California
October 2, 2009

Prepared for:

PCR SERVICES CORPORATION
One Venture, Suite 150
Irvine, CA 92618

and

THE CITY OF LONG BEACH
Department of Development Services
333 West Ocean Boulevard
Long Beach, California 90802

LLG Ref. 2-08-2995

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Mr. David A. Crook, AICP, Principal Planner
PCR Services Corporation
One Venture, Suite 150
Irvine, California 92618

LLG Reference: 2.08.2995.1

Subject: **Traffic Impact Analysis for the Golden Shore Master Plan**
Long Beach, California

Dear Mr. Crook:

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Traffic Impact Analysis for the Golden Shore Master Plan. The proposed Project site is located on the east side and west side of Golden Shore, south of Ocean Boulevard and north of Shoreline Drive in downtown Long Beach. The proposed Project includes the construction of 1,110 high-rise residential condominium units, a 400-room hotel, and 367,000 square-feet (SF) of office space in place of 294,003 SF of existing office space.

This traffic impact analysis presents an inventory of existing characteristics and traffic volumes at 30 key study intersections within the vicinity of the Project, forecasts vehicular traffic generated by the proposed Project, and evaluates potential project-related traffic impacts on the surrounding street system.

We appreciate the opportunity to prepare this study. A summary of findings, conclusions and recommendations can be found on pages 48 and 52 of this report. Should you have any questions or comments regarding the findings this report, please contact our office at (714) 641-1587.

Very truly yours,
Linscott, Law & Greenspan, Engineers

Richard E. Barretto, P.E.
Principal

cc: file

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TRAFFIC IMPACT ANALYSIS

GOLDEN SHORE MASTER PLAN

Long Beach, California
October 2, 2009

1.0 INTRODUCTION

This Traffic Impact Analysis report addresses the potential traffic impacts and circulation needs demand associated with the Golden Shore Master Plan project (hereinafter referred to as Project). The proposed Project site is located on the east side and west side of Golden Shore, south of Ocean Boulevard and north of Shoreline Drive in downtown Long Beach. The Project site is currently developed with three multi-level office buildings totaling 294,003 square-feet (SF) and 920 parking spaces. The proposed Project includes the construction of 1,110 high-rise residential condominium units, a 400-room hotel, 367,000 square-feet (SF) of office space and 3,430 parking spaces, which will be provided in a combination of structure and surface parking facilities in place of the existing uses.

1.1 Scope of Work

This report documents the findings and recommendations of the traffic impact analysis, as well as the parking analysis, conducted by Linscott, Law & Greenspan, Engineers (LLG) for the proposed Project. The traffic analysis evaluates the existing operating conditions at thirty (30) intersections within the project vicinity, estimates the trip generation potential of the proposed Project, and forecasts future operating conditions without and with the Project. Where necessary, intersection improvements/ mitigation measures are identified.

The traffic report satisfies the traffic impact requirements of the City of Long Beach and is consistent with the requirements and procedures outlined in the *2004 Congestion Management Program (CMP) for Los Angeles County.* The Scope of Work for this report has been developed in coordination with City of Long Beach staff.

The project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing peak hour traffic information has been collected at thirty (30) study locations on a "typical" weekday for use in the preparation of intersection level of service calculations. Information concerning cumulative projects (planned and/or approved) in the vicinity of the Project has been researched at the City of Long Beach. Based on our research, there are nineteen (19) related projects in the City of Long Beach that will contribute to the traffic analysis. These nineteen (19) proposed projects were considered in the cumulative traffic analysis for this project.

This traffic report analyzes existing and future weekday AM peak hour and PM peak hour traffic conditions for the Year 2020 upon completion of the Proposed Project. Peak hour traffic forecasts for the Year 2020 horizon year have been projected by increasing existing traffic volumes by an

annual growth rate of 1.0% per year and adding traffic volumes generated by nineteen (19) related projects.

1.2 Study Area

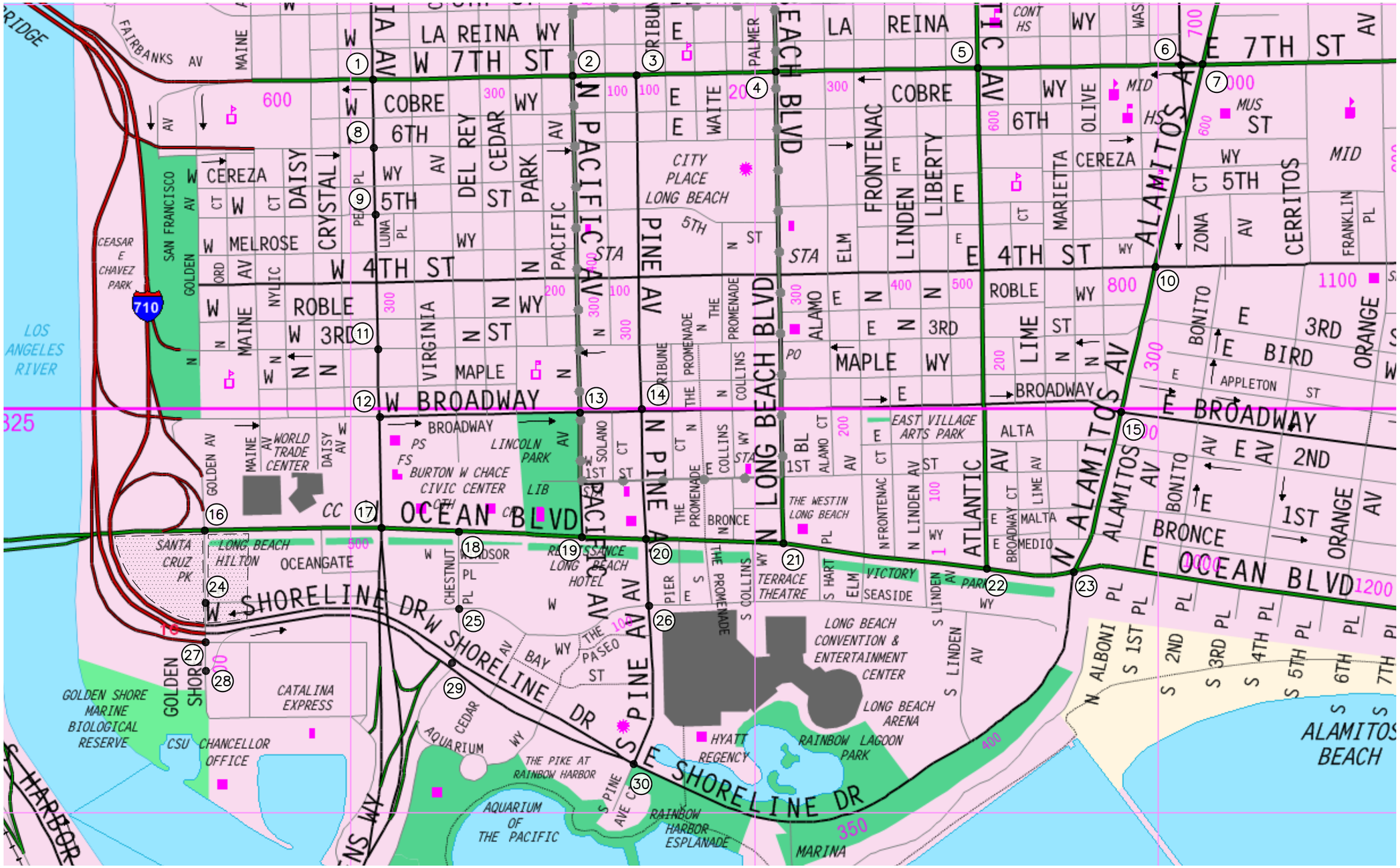
The thirty (30) key area intersections selected for evaluation in this report provide both regional and local access to the study area. They consist of the following:

1. Magnolia Avenue at 7th Street
2. Pacific Avenue at 7th Street
3. Pine Avenue at 7th Street
4. Long Beach Boulevard at 7th Street
5. Atlantic Avenue at 7th Street
6. Martin Luther King Jr. Ave at 7th St
7. Alamitos Avenue at 7th Street
8. Magnolia Avenue at 6th Street
9. Magnolia Avenue at 5th Street
10. Alamitos Avenue at 4th Street
11. Magnolia Avenue at 3rd Street
12. Magnolia Avenue at Broadway
13. Pacific Avenue at Broadway
14. Pine Avenue at Broadway
15. Alamitos Avenue at Broadway
16. Golden Avenue\Golden Shore at Ocean Boulevard
17. Magnolia Avenue at Ocean Boulevard
18. Chestnut Place at Ocean Boulevard
19. Pacific Avenue at Ocean Boulevard
20. Pine Avenue at Ocean Boulevard
21. Long Beach Boulevard at Ocean Boulevard
22. Atlantic Avenue at Ocean Boulevard
23. Alamitos Ave/Shoreline Drive at Ocean Boulevard
24. Golden Shore at Seaside Way
25. Chestnut Place at Seaside Way
26. Pine Avenue at Seaside Way
27. Golden Shore at I-710 Southbound Off-Ramp
28. Golden Shore at Eastbound Shoreline Dr On-Ramp
29. Chestnut Place at Shoreline Drive
30. Pine Avenue at Shoreline Drive

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the project and depicts the study locations and surrounding street system.

Level of Service (LOS) calculations for the AM and PM peak hours at these thirty (30) study intersections were performed to evaluate the future potential traffic impacts associated with anticipated area growth, related projects, and the proposed Golden Shore Master Plan project. Included in this traffic and parking analysis are:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- Estimated cumulative project traffic generation/distribution/assignment,
- AM and PM peak hour capacity analyses for existing conditions (Year 2008),
- AM and PM peak hour capacity analyses for future (Year 2020) conditions without and with project traffic,
- Area Traffic Improvements,
- Site Access Evaluation,
- Parking Evaluation; and.
- Congestion Management Program Compliance Assessment.



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: THOMAS BROS.

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 1–1

VICINITY MAP

GOLDEN SHORE MASTER PLAN, LONG BEACH

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2.0 PROJECT DESCRIPTION

The proposed Project site, consisting of two parcels with a total land area of 5.87 acres, is located on both the east side and west side of Golden Shore, south of Ocean Boulevard and north of Shoreline Drive in downtown Long Beach.

2.1 Existing Land Uses

The West Site, which totals 4.31 acres of land and is located west of Golden Shore and south of Ocean Boulevard, is currently developed with two multi-level office buildings with a total floor area of 136,341 square-feet (SF) and a parking supply of 557 spaces located in combined surface and subterranean parking facilities.

The East Site, which totals 1.56 acres of land and is located east of Golden Shore and south of Ocean Boulevard, is currently developed with a 14-story, 157,662 SF office building as well as 363 spaces located in combined surface and structure parking facilities. Combined, the site is currently developed with three multi-level office buildings totaling 294,003 SF of general office uses (includes 11,860 SF of ancillary retail space) and 920 parking spaces. All existing site uses will be demolished as part of the proposed Project.

2.2 Proposed Project

The proposed Golden Shore Master Plan, to be constructed in two separate phases, involves the development of up 1,110 residential condominiums, a 400 room hotel and 367,000 SF of office space in place of the existing development. The project would provide on-site parking in parking structures. ***Table 2-1*** summarizes the existing and proposed Project development totals for the West Site and East Site of the project. ***Figure 2-1*** presents the proposed site plan for the Project.

As shown in *Table 2-1,* the development on the West Site consists of 574 residential units, 279,000 SF of office space (includes 19,000 SF of ancillary retail space), a 400-room hotel with 27,000 SF of banquet space and 2,265 parking spaces. The proposed Project uses on the East Site consists of 536 residential units, 88,000 SF of office space (includes 8,000 SF of ancillary retail space) and 1,165 parking spaces. The proposed Project is anticipated to be completed by Year 2020.

2.3 Site Access

As illustrated in the conceptual site plan in *Figure 2-1*, access to the project will be provided from Golden Shore and Seaside Way; no direct vehicle access is proposed from Ocean Boulevard or Shoreline Drive. As currently proposed, primary access to the West Site and East Site of the Project will be provided via one full-access driveway on Golden Shore, between Ocean Boulevard and Seaside Way, with secondary access provided from Seaside Way.

TABLE 2-1

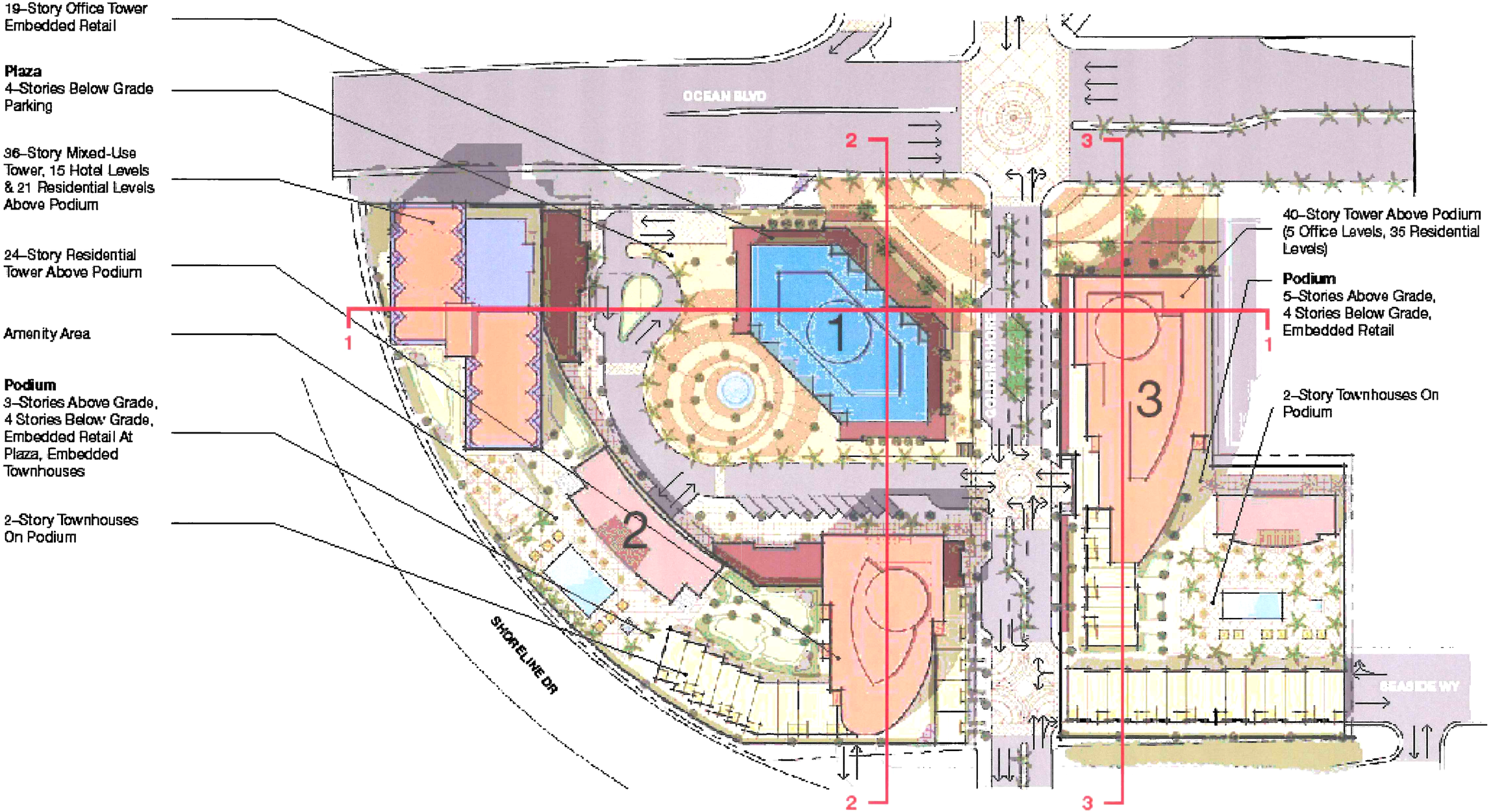
PROJECT DEVELOPMENT SUMMARY[1]

Land Use / Project Description	(1) Existing Development Totals	(2) Proposed Development Totals
Golden Shore Master Plan		
West Site		
▪ One Golden Shore Office Building	32,000 SF	--
▪ 11 Golden Shore Office Building	104,341 SF (includes 4,705 SF of retail space)	--
▪ High-Rise Residential Condominiums	--	574 DU
▪ Hotel	--	400 rooms with 27,000 SF of banquet space
▪ Office Buildings	--	279,000 SF (includes 19,000 SF of retail)
▪ Parking Supply	557 spaces	2,265 spaces
East Site		
▪ 400 Oceangate Tower	157,662 SF (includes 7,155 SF of retail space)	--
▪ High-Rise Residential Condominiums	--	536 DU
▪ Office Buildings		88,000 SF (includes 8,000 SF of retail)
▪ Parking Supply	363 spaces	1,165spaces
Total		
▪ **Office**	**294,003 SF**	**367,000 SF (includes 27,000 SF of retail)**
▪ **High-Rise Residential Condominiums**	**--**	**1,110 DU**
▪ **Hotel**	**--**	**400 rooms with 27,000 SF of banquet space**
▪ **Parking Supply**	**920 spaces**	**3,430 spaces**

Notes:

- SF = square foot of development
- DU = dwelling unit

[1] Source: *Golden Shores Master Plan Project Description, prepared by PCR, Issued Date July 2009.*



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE PCR

FIGURE 2–1

SITE PLAN

GOLDEN SHORE MASTER PLAN, LONG BEACH

3.0 EXISTING CONDITIONS

Regional access to the Project site is provided by the Long Beach (I-710) Freeway, which is a north-south regional highway located west of the Project site. The Long Beach (I-710) Freeway begins at Queensway Bay in Long Beach and extends north to Valley Boulevard in Alhambra. The 1-710 Freeway generally provides four travel lanes in each direction. Freeway access to the Project site is provided via on and off-ramps with Golden Shore.

The network of roadways that surround our project include Golden Shore, Magnolia Avenue, Pacific Avenue, Long Beach Boulevard, Atlantic Avenue, Alamitos Avenue, 7th Street, 6th Street, 3rd Street, Broadway, Ocean Boulevard, and Seaside Way, and Shoreline Drive. The following discussion provides a brief synopsis of these key area streets. The descriptions are based on an inventory of existing roadway conditions.

3.1 Street Network

Golden Shore is a four-lane divided roadway that extends primarily in the north-south direction, through the project site. Parking is not permitted on either side of this roadway within the vicinity of the project. The posted speed limit on Golden Shore is 30 miles per hour. The intersection of Golden Shore at Ocean Boulevard is controlled by a traffic signal, while the intersections of Golden Shore at Seaside Way, Golden Shore at Shoreline Drive Off-Ramp, and Golden Shore at Shoreline Drive On-Ramp are stop-controlled.

Magnolia Avenue is a two-lane divided roadway that extends in the north-south direction, east of the project site. Parking is permitted on both sides of this roadway within the vicinity of the project. The posted speed limit on Magnolia Avenue is 25 miles per hour. The intersections of Magnolia Avenue at 7th Street, Magnolia Avenue at 6th Street, Magnolia Avenue at 3rd Street, Magnolia Avenue at Broadway, and Magnolia Avenue at Ocean Boulevard are all controlled by traffic signals, while the intersection of Magnolia Avenue at 5th Street is stop-controlled.

Pacific Avenue is a four-lane divided roadway that extends in the north-south direction, east of the project site. Parking is generally not permitted on either side of this roadway within the vicinity of the project. The intersections of Pacific Avenue at 7th Street, Pacific Avenue at Broadway, and Pacific Avenue at Ocean Boulevard are controlled by traffic signals.

Long Beach Boulevard is a four-lane divided roadway that extends in the north-south direction, east of the project site. Parking is generally not permitted on either side of this roadway within the vicinity of the project. The posted speed limit on Atlantic Avenue is 30 miles per hour. The intersections of Long Beach Boulevard at 7th Street and Long Beach Boulevard at Ocean Boulevard are both controlled by traffic signals.

Atlantic Avenue is a four-lane divided roadway that extends in the north-south direction, east of the project site. Parking is permitted on both sides of this roadway within the vicinity of the project. The posted speed limit on Atlantic Avenue is 30 miles per hour. The intersections of Atlantic Avenue at 7th Street and Atlantic Avenue at Ocean Boulevard are both controlled by traffic signals.

Alamitos Avenue is a four-lane divided roadway that extends in the north-south direction, east of the project site. Parking is generally permitted on both sides of this roadway within the vicinity of the project. The intersections of Alamitos Avenue at 7th Street, Alamitos Avenue at 4th Street, Alamitos Avenue at Broadway, and Alamitos Avenue at Ocean Boulevard are all controlled by traffic signals.

7th Street is generally a one-way roadway that consists of three lanes flowing in the west direction, north of the project site. East of Martin Luther King Jr. Avenue, 7th Street is a four-lane roadway with traffic flowing in both directions. Parking is generally permitted on both side of this roadway within the vicinity of the project. The posted speed limit on 7th Street is 30 miles per hour. The intersections of 7th Street at Pine Avenue and 7th Street at Martin Luther King Jr. Avenue are controlled by traffic signals.

6th Street is a one-way roadway that consists of three lanes flowing in the east direction, north of the project site. Parking is permitted on both sides of this roadway within the vicinity of the project. West of Long Beach Boulevard, the posted speed limit is 30 miles per hour. East of Long Beach Boulevard, the posted speed limit is 25 miles per hour.

3rd Street is a one-way roadway that consists of three lanes flowing in the west direction, north of the project site. East of Alamitos Avenue, 3rd Street is a two-lane divided roadway with traffic flowing in both directions. Parking is generally permitted on both sides of this roadway within the vicinity of the project. The posted speed limit on 3rd Street is 30 miles per hour.

Broadway is a one-way roadway that consists of three lanes flowing in the east direction, north of the project site. East of Alamitos Avenue, Broadway is a two-lane divided roadway with traffic flowing in both directions. Parking is generally permitted on both sides of this roadway within the vicinity of the project. The posted speed limit on Broadway is 30 miles per hour. The intersection of Broadway at Pine Avenue is controlled by a traffic signal.

Ocean Boulevard is primarily a six-lane divided roadway that extends in the east-west direction, bordering the project site directly to the north. West of Golden Shore, Ocean Boulevard is a four-lane divided roadway. Parking is generally permitted on both sides of this roadway within the vicinity of the project. East of Golden Shore, the posted speed limit on Ocean Boulevard is 30 miles per hour. West of Golden Shore, the posted speed limit on Ocean Boulevard is 45 miles per hour. The intersections of Ocean Boulevard at Chestnut Place and Ocean Boulevard at Pine Avenue are controlled by traffic signals.

Seaside Way is a four-lane divided roadway that extends in the east-west direction, through the project site. West of Magnolia Avenue, parking is not permitted on either side of this roadway within the vicinity of the project. East of Magnolia Avenue, parking is permitted on both sides of the roadway within the vicinity of the project. The intersection of Seaside Way at Chestnut Place is stop-controlled, while the intersection of Seaside Way at Pine Avenue is controlled by a traffic signal.

Shoreline Drive is a six-lane divided roadway that extends in the east-west direction, bordering the project site directly to the south. Parking is generally not permitted on either side of this roadway within the vicinity of the project. The posted speed limit on Shoreline Drive is 40 miles per hour. The intersections of Shoreline Drive at Chestnut Place and Shoreline Drive at Pine Avenue are controlled by traffic signals.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. The number of travel lanes and intersection controls for the key area intersections are identified.

3.2 Existing Public Transit

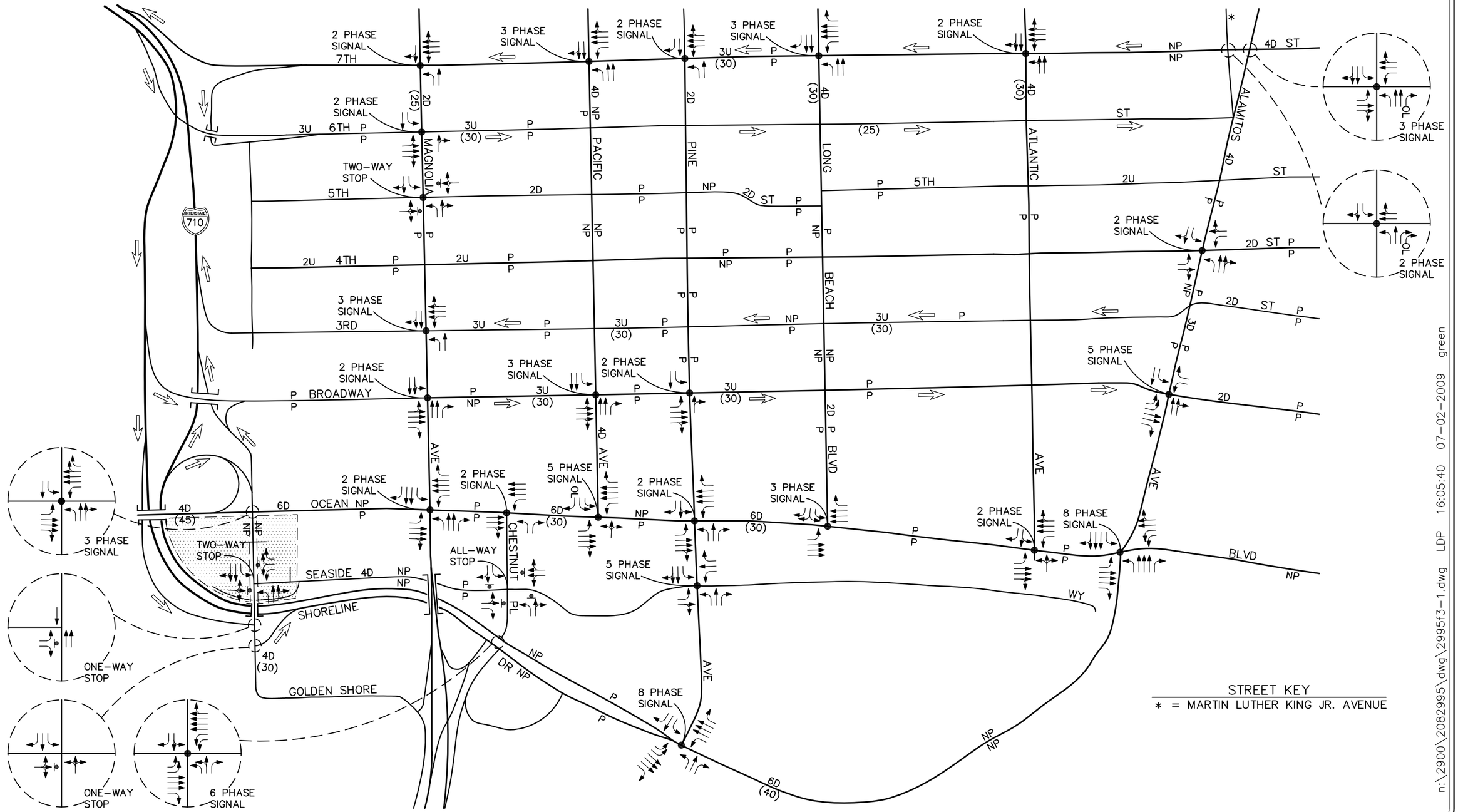
The Los Angeles County Metropolitan Transportation Authority, Long Beach Transit (LBT), and the Orange County Transportation Authority (OCTA) provide public transit services in the vicinity of the proposed Project. In the vicinity of the Project, the Metro Blue Line, Metro Local Line No. 232, Metro Express Line No. 577X, OCTA Route No. 60, Los Angeles Department of Transportation (LADOT) Commuter Express 142, and LBT Route No. 1 currently serves Easy Avenue, LBT No. 7 serves Orange Avenue, LBT Nos. 21, 22, and 23 serves Cherry/Downey Avenue, LBT Nos. 45 and 46 serves Anaheim Street, LBT Nos. 51 and 52 serves Long Beach Boulevard, while LBT Route Nos. 61, 62, 63, and 66 serves Atlantic Avenue. LBT Route No. 81 currently serves 10th Street, LBT Route Nos. 91, 92, 93, 94, and 96 serves 7th Street, LBT Route Nos. 111 and 112 serves Broadway, LBT Route Nos. 171, 172, 173 and 174 serves Pacific Coast Highway, LBT Route Nos. 181 and 182 serves 4th Street, LBT Route Nos. 191, 192, 193 serves Santa Fe Avenue, LBT Passport Routes A and D serves Ocean Boulevard, while LBT Passport Route B serves Downtown Long Beach's East Village and West Gateway attractions, and LBT Passport Route C serves Pine Avenue. A brief description of the transit services is as follows:

Metro Blue Line:

- The Metro Blue Line runs from 7th Street in downtown L.A., through the communities of Vernon, Huntington Park, South Gate, Watts, Compton, Carson, ending in downtown Long Beach.
- The route traverses the study area on Long Beach Boulevard, 7th Street, Pacific Avenue, and Ocean Boulevard and operates throughout the day, Monday through Sunday.
- During the weekday AM peak hour, in the northbound/southbound directions, the Metro Blue Line provides headways of 6 buses in the northbound direction and 5 buses in the southbound direction. During the weekday PM peak hour, in the northbound/southbound directions, the Metro Blue Line provides headways of 5 buses in the northbound direction and 6 buses in the southbound direction.

Metro Local Line 232:

- The Metro Local Line 232 runs from downtown Long Beach Transit Station to LAX City Bus Center.
- The route traverses the study area on Long Beach Boulevard, 7th Street, Pacific Avenue, and Ocean Boulevard and operates throughout the day, Monday through Sunday.



STREET KEY

* = MARTIN LUTHER KING JR. AVENUE

KEY

- ← = APPROACH LANE ASSIGNMENT
- ● = TRAFFIC SIGNAL, ᴛ STOP SIGN
- P = PARKING, NP = NO PARKING
- U = UNDIVIDED, D = DIVIDED
- 2 = NUMBER OF TRAVEL LANES
- (XX) = POSTED SPEED LIMIT (MPH)
- F = FREE-RIGHT, OL = RIGHT-TURN OVERLAP
- ▭ = PROJECT SITE

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

FIGURE 3-1

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

GOLDEN SHORE MASTER PLAN, LONG BEACH

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- During the weekday AM and PM peak hour, in the northbound direction, the Metro Line 232 provides headways of 3 buses. During the weekday AM and PM peak hour, in the southbound direction, the Metro Line 232 provides headways of 3 buses during the AM peak hour and 4 buses in the PM peak hour.

Metro Express Line 577X:

- The Metro Local Line 232 runs from downtown Long Beach Transit Station to El Monte Transit Center.
- The route traverses the study area on Long Beach Boulevard, 7th Street, Pacific Avenue, Ocean Boulevard and Long Beach Boulevard and operates throughout the day, Monday through Friday.
- During the weekday AM and PM peak hour, in the northbound/southbound directions, the Metro Blue Line provides headways of 1 bus in each direction.

OCTA Route 60:

- The OCTA Route 60 runs from Larwin Square in Tustin to 1st Street and Elm Avenue in downtown Long Beach.
- The route traverses the study area on 7th Street, Pacific Avenue, and Ocean Boulevard and operates throughout the day, Monday through Sunday.
- During the weekday AM peak hour, in the eastbound/westbound directions, the OCTA Route 60 provides headways of 4 buses in the eastbound direction and 3 buses in the westbound direction. During the weekday PM peak hour, in the northbound/southbound directions, the Metro Blue Line provides headways of 3 buses in the northbound direction and 4 buses in the southbound direction.

LADOT Commuter Express 142:

- The LADOT Commuter Express 142 runs from Port O'Call and Sampson Way in San Pedro to downtown Long Beach Transit Mall Station.
- The route traverses the study area on Ocean Boulevard, Long Beach Boulevard and Pacific Avenue and operates throughout the day, Monday through Sunday.
- During the weekday AM and PM peak hour, in the eastbound/westbound directions, LADOT Commuter Express 142 provides headways of 2 buses in each direction.

Route 1:

- The route extends from the Long Beach Transit Mall Station to Wardlow Station.
- The route traverses the study area on Long Beach Boulevard, Pacific Avenue and 6th Street and operates throughout the day, Monday through Sunday.
- During the weekday AM and PM peak hour, in the northbound/southbound directions, Route 1 provides headways of 3 buses in each direction.

Route 7:

- The route extends from the Long Beach Transit Mall Station to Orange Avenue and Rosecrans in City of Norwalk.
- The route traverses the study area on Atlantic Avenue, 7th Street, Long Beach Boulevard, 6th Street, and Pacific Avenue and operates throughout the day, Monday through Sunday.

- During the weekday AM and PM peak hour, in the northbound/southbound directions, Route 7 provides headways of 3 buses in each direction.

Routes 21, 22, and 23:

- Routes 21 provide services from Long Beach Transit Mall Station to Garfield Avenue at Alondra Boulevard. Route 22 provides services from downtown Long Beach Transit Mall Station to Downey Avenue at Alondra Boulevard. Route 23 provides services from Long Beach Transit Mall Station to Cherry Avenue at Carson Street.
- The route traverses the study area on Long Beach Boulevard, Ocean Boulevard, and Pacific Avenue. Route 21 and 22 operates throughout the day, Monday through Sunday. On weekdays, route 23 northbound only provides bus service between the hours 8:05 PM to 12:55 AM and southbound only provides bus service between the hours 9:00 PM to 12:21 PM.
- During the weekday AM and PM peak hour, in the northbound/southbound directions, Routes 21 and 22 provide headways of 2 buses in each direction.

Routes 46:

- Route 46 provides services from downtown Long Beach Transit Mall Station to Pacific Coast Highway at Anaheim Street.
- Route 46 traverses the study area on Long Beach Boulevard, Pacific Avenue, and Broadway and operates throughout the day, Monday through Sunday.
- During the weekday AM and PM peak hour, in the eastbound/westbound directions, Routes 46 provide headways of 4 buses in each direction.

Routes 51 and 52:

- The routes extend from downtown Long Beach Transit Mall Station to Artesia Transit Station.
- The route traverses the study area on Long Beach Boulevard, Pacific Avenue, and 7th Street. Route 51 operates throughout the day, Monday through Sunday. On weekdays, Route 52 northbound only provides bus service between the hours 10:05 PM to 12:11 AM, and southbound only provides bus service between the hours 10:47 PM to 12:25AM.
- During the weekday AM and PM peak hour, in the northbound/southbound directions, Route 51 provides headways of 4 buses in each direction.

Routes 61, 62, 63 and 66:

- Routes 61, 62, 63, and 66 provide service between the downtown Long Beach Transit Mall Station and Artesia Transit Station.
- Within the study area, Routes 61, 62, 63 and 66 traverse the study area on Atlantic Avenue, 7th Street, Long Beach Boulevard, Pacific Avenue, and 6th Street. Routes 61 and 62 operate throughout the day, Monday through Sunday. On weekdays, Route 63 northbound only provides bus service between the hours 10:05 PM to 1:10 AM, and southbound only provides bus service from 10:48 PM to 12:25AM. On weekdays, Route

66 northbound only provides bus service till 5:17 PM, southbound only provides service till 5:10 PM, and does not service on weekends.

- During the AM and PM peak hour, in the northbound and southbound directions, Routes 61 and 62 provides headways of 2 buses in each direction. During the AM and PM peak hour Route 66 provide headways of 4 buses and 2 buses respectively in each direction.

Route 81:

- The route extends from the Long Beach Transit Mall Station to Studebaker Road at Atherton Street.
- The route traverses the study area on Pacific Avenue, Long Beach Boulevard and 3rd Street and operates throughout the day, Monday through Friday.
- During the weekday AM and PM peak hour, in the eastbound/westbound directions, Route 81 provides headways of 2 buses in each direction.

Routes 91, 92, 93 and 94:

- Routes 91 and 93 provide service between the downtown Long Beach Transit Mall Station and Bellflower Boulevard at Harvard Street. Route 92 provides service from the Long Beach Transit Mall Station to Woodruff Avenue at Alondra Boulevard. Route 94 provides service from the Long Beach Boulevard Transit Station to Bellflower Boulevard at Stearns Street.
- Within the study area, Routes 91, 92, 93 and 94 traverse the study area on 7th Street, Pacific Avenue, Long Beach Boulevard, and 6th Street. Route 91 operates throughout the day, Monday through Sunday and Routes 92 and 93 operates throughout the day, Monday through Friday. On weekdays, Route 94 eastbound only provides bus service between the hours 5:25 PM to 9:05 PM, and westbound only provides bus service from 6:24 PM to 9:00 PM.
- During the AM and PM peak hour, in the eastbound/westbound directions, Routes 91, 92, 93 provides headways of 1 bus in each direction.

Route 96:

- The route extends from the Long Beach Transit Mall Station to Los Altos Market Center.
- The route traverses the study area on 7th Street, Pacific Avenue, Long Beach Boulevard, and 6th Street and operates throughout the day, Monday through Friday, eastbound only from 6:33 AM to 9:09 PM and westbound from 1:00 PM to 5:14 PM.
- During the weekday AM peak hour, in the eastbound direction, Route 96 provides headways of 6 buses. During the weekday PM peak hour, in the westbound direction, Route 96 provides headways of 5 buses.

Routes 111 and 112:

- The route extends from the Long Beach Transit Mall Station to Downey Avenue at South Street.
- The route traverses the study area on Alamitos Avenue, Pacific Avenue, and Broadway and operates throughout the day, Monday through Sunday.
- During the weekday AM and PM peak hour, in the northbound/southbound directions, Routes 111 and 112 provides headways of 2 buses in each direction.

Routes 172, 173 and 174:

- Routes 172, 173 and 174 provide service between the downtown Long Beach Transit Mall Station and Norwalk Metro Green Line Metro Station.
- Within the study area, Routes 172, 173 and 174 traverse the study area on Pacific Avenue, Long Beach Boulevard, and 7th Street. Routes 172 and 173 operate throughout the day, Monday through Sunday. On weekdays, Route 174 northbound only provides bus service between the hours 10:05 PM and 12:50 AM, and southbound only provides bus service from 5:42 AM to 6:05 AM and from 12:05 AM to 12:25 AM.
- During the AM, PM and Saturday peak hour, in the northbound and southbound directions, Routes 172 and 173 provides headways of 2 buses in each direction.

Routes 181 and 182:

- The route extends from the Colorado Lagoon and Wardlow Transit Station.
- Route 181 traverses the study area on Magnolia Avenue, Broadway, Pacific Avenue, Long Beach Boulevard, 4th Street, and 3rd Street and operates throughout the day, Monday through Sunday. Route 182 traverses the study area on 4th Street, Long Beach Boulevard, Pacific Avenue, and 3rd Street and operates throughout the day, Monday through Sunday.
- During the weekday AM and PM peak hour, in the eastbound and westbound directions, routes 181 and 182 provide headways of 2 buses in each direction.

Routes 191, 192 and 193:

- Route 191 provides service between Long Beach Transit Mall and Bloomfield Street at Del Amo Boulevard. Route 192 provides service between Long Beach Transit Mall and Los Cerritos Center. Route 193 provides service from the downtown Long Beach Transit Mall Station to Del Amo Station.
- Within the study area, Routes 191, 192 and 193 traverse the study area on Magnolia Avenue, Pacific Avenue, and 3rd Street. Routes 191 and 192 operate throughout the day, Monday through Sunday. On weekdays, Route 193 northbound only provides bus service between the hours 10:05 PM and 1:06 AM, and southbound only provides bus service from 11:50 PM to 12:25 AM.
- During the AM and PM peak hour in the northbound/southbound directions, Routes 191 and 192 provides headways of 2 buses in each direction.

Passports Routes A, B, C and D:

- Route A provides free ride service between Alamitos Bay Landing and Catalina Landing. Route B runs from Pine Avenue at 1st Street through downtown Long Beach's East Village, West Gateway and hotspots. Route C provides service between Pine Avenue, downtown Long Beach and Queen Mary. Route D provides service between Los Altos Market Center and Catalina Landing.
- Within the study area, Routes A and D traverse the study area on Ocean Boulevard and Golden Shore and operate throughout the day, Monday through Sunday. Route B traverse the study area on 7th Street, Ocean Boulevard, Pine Avenue, 3rd Street, 6th Street, 4th Street, and Atlantic Avenue. Route C traverse the study area on Long Beach

Boulevard, 5th Street, Pine Avenue, Shoreline Drive, and 7th Street. On weekdays, Route B's Daily East Village Tour only operates from 10:00 AM to 6:55 PM and Route B's Daily West Gateway Tour only operates from 9:40 AM to 7:15 PM. Route C operates throughout the day, Monday through Sunday.

- During the AM and PM peak hour in the eastbound/westbound directions, Routes A and D provides headways of 2 buses in each direction. During the PM peak hour the Route B's Daily East Village Tour provides headways of 1 bus and the Route B's Daily West Gateway Tour provides headways of 2 buses. During AM peak hour in the southbound/northbound directions, Route C provides headways of 4 buses in each direction. During PM peak hour in the southbound/northbound directions, Route C provides headways of 6 buses in each direction.

3.3 Existing Area Traffic Volumes

Manual vehicular turning movement counts were conducted at 30 study locations during the weekday morning and evening peak commuter periods to determine the existing AM peak hour and PM peak hour traffic volumes. Traffic counts at the study intersections were conducted in June 2008 by National Data and Surveying Services.

Figures 3-2 and ***3-3*** depict the existing AM and PM peak hour traffic volumes at the key study intersections, respectively. ***Appendix A*** contains the detailed manual turning movement count sheets for the 30 key study intersections evaluated in this report.

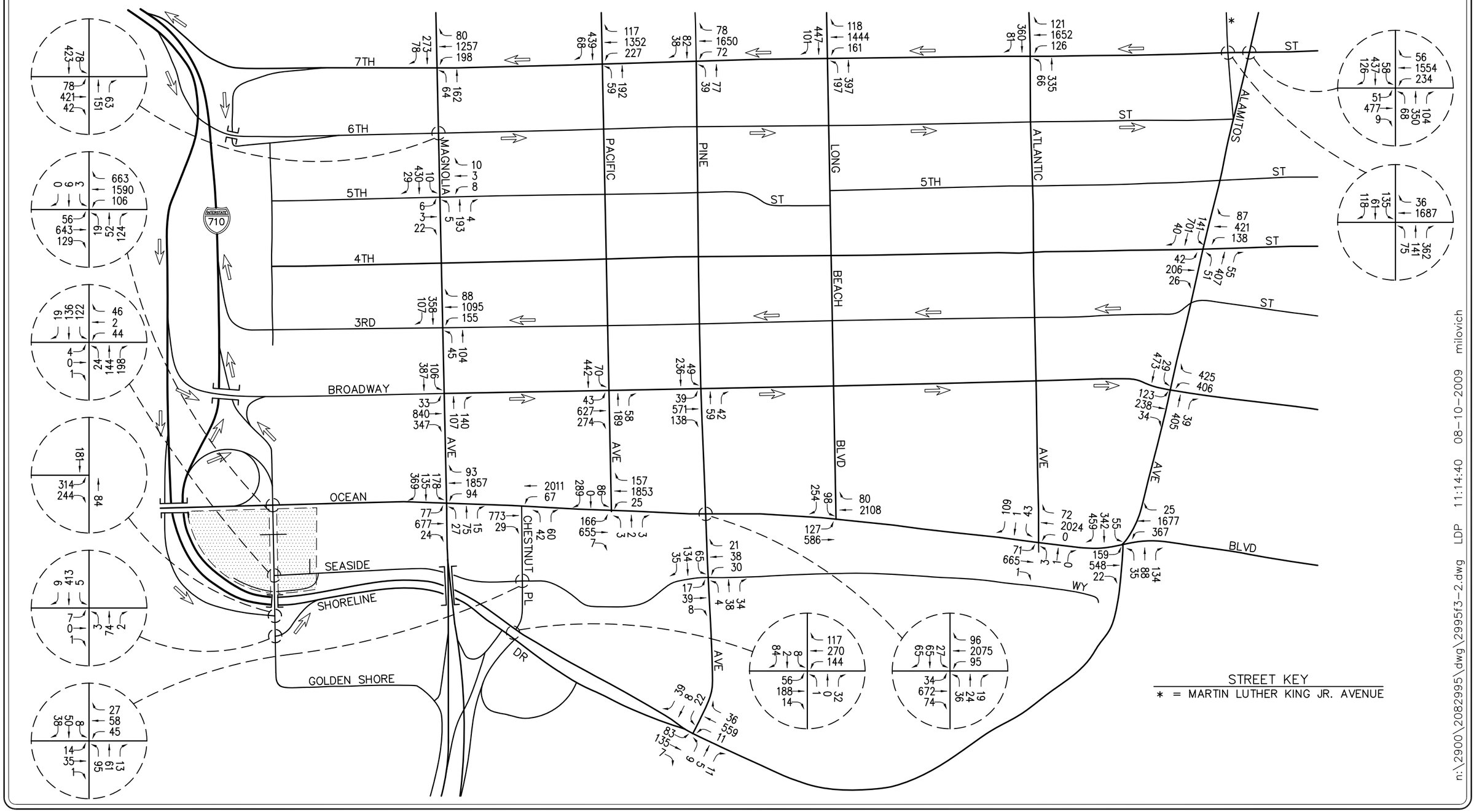


FIGURE 3-2

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH

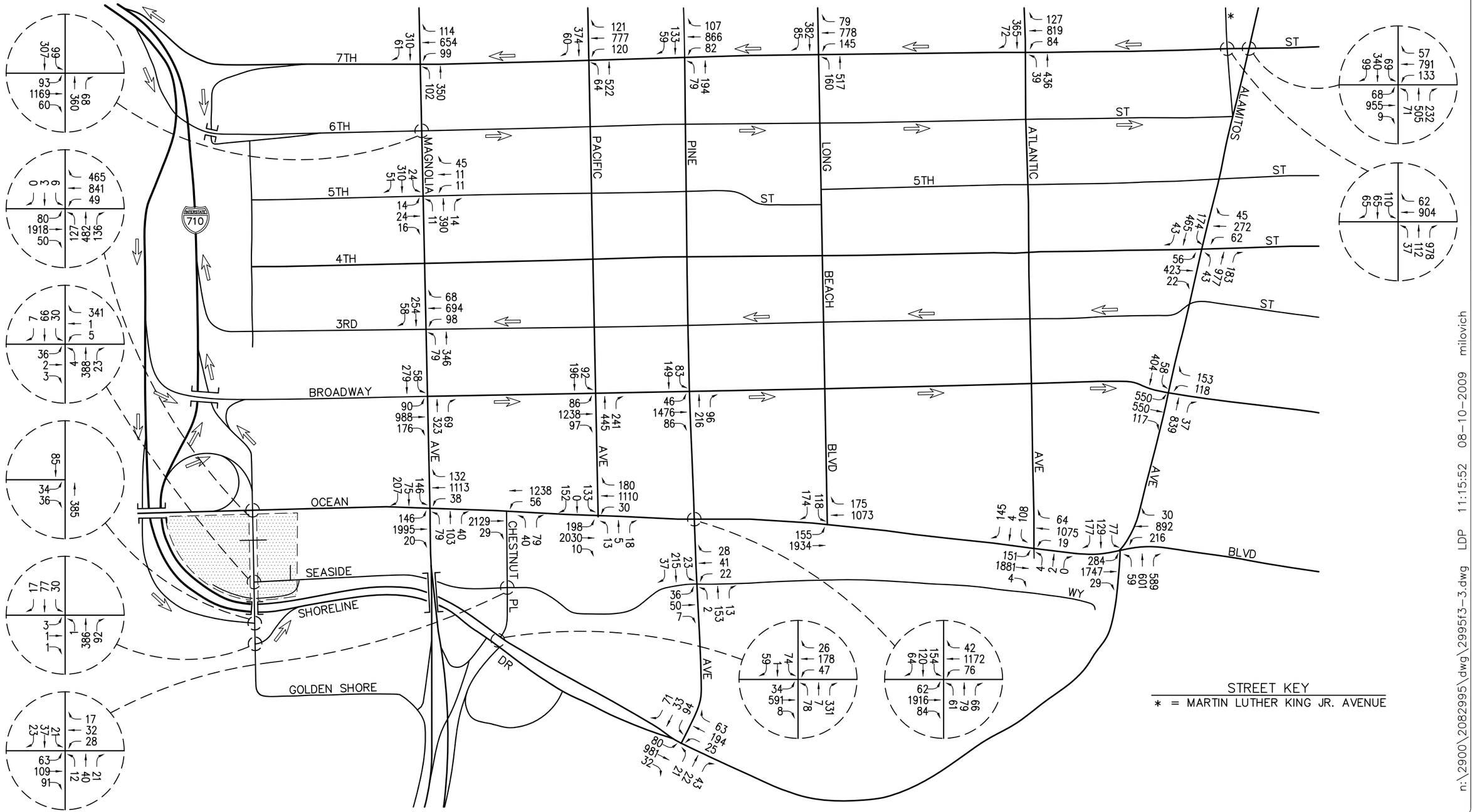


FIGURE 3-3

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH

3.4 Existing Intersection Conditions

Existing AM and PM peak hour operating conditions for the thirty (30) key study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) methodology for signalized intersections and the methodology outlined in Chapter 17 of the *Highway Capacity Manual 2000* (HCM2000) for unsignalized intersections.

3.4.1 *Intersection Capacity Utilization (ICU) Method of Analysis*

In conformance with the City of Long Beach and LA County CMP requirements, existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the *Intersection Capacity Utilization* (ICU) method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time, and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

The ICU value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding ICU value range and are shown in ***Table 3-1***. The ICU value is the sum of the critical volume to capacity ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements.

In the City of Long Beach, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours, or the current LOS if the existing LOS is worse than LOS D (i.e. LOS E of F). Please note that the study intersections of Alamitos Avenue at 7th Street and Alamitos Avenue/Shoreline Drive at Ocean Boulevard are a part of the CMPHS of Los Angeles County where LOS E is the minimum acceptable operating condition.

Per LA County CMP requirements, the ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and dual left turn capacity of 2,880 vph. Clearance intervals are based on the number of phases in the intersection and whether the left turning movements are all fully protected or whether some of them are permitted with other left-turn movements being protected. ***Table 3-2*** shows the clearance intervals used in the analysis of the key study intersections within the City of Long Beach.

TABLE 3-1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (V/C)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

TABLE 3-2

CITY OF LONG BEACH CLEARANCE INTERVALS[2]

Number of Signal Phases	Left-turn Phasing Type	Clearance Interval (percent)
2	Permitted	10%
3	Protected and Permitted	12%
3	Fully Protected	15%
4	Protected and Permitted	14%
4	Fully Protected	18%

[2] Source: *City of Long Beach Guidelines for Signalized Intersection Analysis, 2004.*

3.4.2 *Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)*

The 2000 HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each movement. For all-way stop controlled intersections, the overall average control delay measured in seconds per vehicle, and level of service is then calculated for the entire intersection. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, this methodology estimates the worst side street delay, measured in seconds per vehicle and determines the level of service for that approach. The HCM control delay value translates to a Level of Service (LOS) estimate, which is a relative measure of the intersection performance. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 3-3***.

3.5 Existing Level of Service Results

Table 3-4 summarizes the existing peak hour service level calculations for the thirty (30) key study intersections based on existing traffic volumes and current street geometrics. Review of *Table 3-4* indicates that, based on the ICU or HCM method of analysis and the City's LOS criteria, one (1) of the thirty (30) key study intersections currently operate at an unacceptable LOS E or F during the AM and/or PM peak hours. The remaining key study intersections currently operate at acceptable LOS D or better during the AM and PM peak hours. The intersection operating at an adverse level of service is:

	AM Peak Hour		PM Peak Hour	
Key Intersection	ICU/HCM	LOS	ICU/HCM	LOS
23. Alamitos Avenue/Shoreline Drive at Ocean Boulevard	1.120	F	1.062	F

Appendix B presents the peak hour LOS calculation worksheets for the key study intersections.

TABLE 3-3

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 30.0	Little or no delay
B	> 30.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

TABLE 3-4

EXISTING PEAK HOUR LEVELS OF SERVICE[3]

	Key Intersection	Time Period	Control Type	ICU/Delay	LOS
1.	Magnolia Avenue at 7th Street	AM PM	2∅ Traffic Signal	0.679 0.576	B A
2.	Pacific Avenue at 7th Street	AM PM	3∅ Traffic Signal	0.651 0.513	B A
3.	Pine Avenue at 7th Street	AM PM	2∅ Traffic Signal	0.551 0.452	A A
4.	Long Beach Boulevard at 7th Street	AM PM	3∅ Traffic Signal	0.714 0.531	C A
5.	Atlantic Avenue at 7th Street	AM PM	2∅ Traffic Signal	0.675 0.476	B A
6.	Martin Luther King Jr. Avenue at 7th Street	AM PM	2∅ Traffic Signal	0.298 0.474	A A
7.	Alamitos Avenue at 7th Street	AM PM	3∅ Traffic Signal	0.872 0.735	D C
8.	Magnolia Avenue at 6th Street	AM PM	2∅ Traffic Signal	0.477 0.705	A C
9.	Magnolia Avenue at 5th Street	AM PM	Two-Way Stop	12.7 s/v 17.2 s/v	B C
10.	Alamitos Avenue at 4th Street	AM PM	2∅ Traffic Signal	0.707 0.888	C D
11.	Magnolia Avenue at 3rd Street	AM PM	3∅ Traffic Signal	0.602 0.545	B A
12.	Magnolia Avenue at Broadway	AM PM	2∅ Traffic Signal	0.471 0.462	A A
13.	Pacific Avenue at Broadway	AM PM	3∅ Traffic Signal	0.485 0.654	A B
14.	Pine Avenue at Broadway	AM PM	2∅ Traffic Signal	0.395 0.672	A B
15.	Alamitos Avenue at Broadway	AM PM	5∅ Traffic Signal	0.774 0.747	C C

Notes:

Bold ICU/Delay/LOS values indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle (delay).

[3] *Appendix B* contains ICU and HCM LOS sheets for key study intersections.

TABLE 3-4 (CONTINUED)
EXISTING PEAK HOUR LEVELS OF SERVICE[4]

	Key Intersection	Time Period	Control Type	ICU/Delay	LOS
16.	Golden Avenue/Golden Shore at Ocean Boulevard	AM PM	3∅ Traffic Signal	0.616 0.759	B C
17.	Magnolia Avenue at Ocean Boulevard	AM PM	2∅ Traffic Signal	0.783 0.722	C C
18.	Chestnut Place at Ocean Boulevard	AM PM	2∅ Traffic Signal	0.556 0.634	A B
19.	Pacific Avenue at Ocean Boulevard	AM PM	3∅ Traffic Signal	0.689 0.632	B B
20.	Pine Avenue at Ocean Boulevard	AM PM	2∅ Traffic Signal	0.634 0.774	B C
21.	Long Beach Boulevard at Ocean Boulevard	AM PM	3∅ Traffic Signal	0.718 0.584	C A
22.	Atlantic Avenue at Ocean Boulevard	AM PM	2∅ Traffic Signal	0.651 0.598	B A
23.	Alamitos Avenue/Shoreline Drive at Ocean Boulevard	AM PM	8∅ Traffic Signal	**1.120** **1.062**	**F** **F**
24.	Golden Shore at Seaside Way	AM PM	Two-Way Stop	13.3 s/v 16.2 s/v	B C
25.	Chestnut Place at Seaside Way	AM PM	All-Way Stop	8.5 s/v 8.6 s/v	A A
26.	Pine Avenue at Seaside Way	AM PM	5∅ Traffic Signal	0.263 0.308	A A
27.	Golden Shore at I-710 SB Off-Ramp	AM PM	One-Way Stop	11.9 s/v 9.5 s/v	B A
28.	Golden Shore at SB Shoreline Drive On-Ramp	AM PM	One-Way Stop	11.8 s/v 12.2 s/v	B B
29.	Chestnut Place at Shoreline Drive	AM PM	6∅ Traffic Signal	0.345 0.573	A A
30.	Pine Avenue at Shoreline Drive	AM PM	8∅ Traffic Signal	0.355 0.486	A A

Notes:
Bold ICU/Delay/LOS values indicate adverse service levels based on City LOS standards.
s/v = seconds per vehicle (delay).

[4] *Appendix B* contains ICU/LOS sheets for key study intersections.

4.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 8th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2008]. The approach for estimating the trip generation potential of the proposed Project is consistent with the information published in *Chapter 3 – Guidelines for Estimating Trip generation* of *Trip Generation Handbook*, ITE October 1998 and the City's requirements.

Table 5-1 summarizes the trip generation equations and rates used in forecasting the vehicular trips generated by the proposed Project and the existing land uses. ***Table 5-2*** summarizes the Project's trip generation forecast for a typical weekday.

Review of *Table 5-1* shows the trip generation potential of the proposed uses of the Golden Shore Master Plan and existing land uses were estimated using trip rates/equations from ITE Land Use 232: High-Rise Residential Condominium/Townhouse, ITE Land Use 310: Hotel and ITE Land Use 710: General Office Building.

Review of *Table 5-2* shows that the proposed Golden Shore Master Plan project, prior to adjustment for existing land uses, is forecast to generate 12,349 daily trips, with 1,242 trips (752 inbound, 490 outbound) produced in the AM peak hour and 1,258 trips (487 inbound, 771 outbound) produced in the PM peak hour on a "typical" weekday.

With the application of trip generation credits applied for the existing mixed-use development on the site, the proposed Project is forecast to generate 8,761 net daily trips, with 731 net trips (302 inbound, 429 outbound) produced in the AM peak hour and 772 net trips (405 inbound, 367 outbound) produced in the PM peak hour on a "typical" weekday.

The proposed Project uses on the West Site is forecast to generate 7,202 net daily trips, with 641 net trips produced in the AM peak hour and 652 net trips produced in the PM peak hour on a "typical" weekday.

The proposed Project uses on the East Site is forecast to generate 1,559 net daily trips, with 83 net trips produced in the AM peak hour and 120 net trips produced in the PM peak hour on a "typical" weekday.

TABLE 5-1

PROJECT TRAFFIC GENERATION EQUATIONS AND RATES[5]

ITE Land Use Code	Time Period	Rates/Equations	Percent Entering	Percent Exiting
▪ 232: High-Rise Residential Condominium/Townhouse (TE/DU)	Daily	T = 3.77 (X) + 223.66	50%	50%
	AM Peak	T = 0.29 (X) + 28.86	19%	81%
	PM Peak	T = 0.34 (X) + 15.47	62%	38%
▪ 310: Hotel (TE/Occupied Room)	Daily	T = 8.92 (X)	50%	50%
	AM Peak	T = 0.67 (X)	58%	42%
	PM Peak	T = 0.70 (X)	49%	51%
▪ 710:General Office Building (TE/1000 SF)	Daily	LN (T) = 0.77 LN (X) + 3.65	50%	50%
	AM Peak	LN (T) = 0.80 LN (X) + 1.55	88%	12%
	PM Peak	T = 1.12 (X) + 78.81	17%	83%

Notes:
TE/DU = Trip ends per dwelling unit
TE/1,000 SF = Trip ends per 1,000 square feet of development

[5] Source*: Trip Generation, 8th Edition*, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2008)].

TABLE 5-2

PROJECT TRAFFIC GENERATION FORECAST[6]

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
West Site - Proposed Project Uses:							
▪ High-Rise Residential Condominiums (574 DU)	2,388	37	158	195	131	80	211
▪ Hotel (400 Rooms)	3,568	156	112	268	136	144	280
▪ General Office (279,000 SF)	2,940	375	51	426	67	325	392
West Site Trip Generation	8,896	568	321	889	334	549	883
West Site– Existing Uses							
▪ Office Building (136,341 SF)	-1,694	-212	-29	-241	-39	-192	-231
Net West Site Trip Generation	**7,202**	**356**	**292**	**648**	**295**	**357**	**652**
East Site - Proposed Project Uses:							
▪ High-Rise Residential Condominiums (536 DU)	2,244	35	149	184	123	75	198
▪ General Office (88,000 SF)	1,209	149	20	169	30	147	177
East Site Trip Generation	3,453	184	169	353	153	222	375
East Site– Existing Uses							
▪ Office Building (157,662 SF)	-1,894	-238	-32	-270	-43	-212	-255
Net East Site Trip Generation	**1,559**	**-54**	**137**	**83**	**110**	**10**	**120**
Total Project Trip Generation	**12,349**	**752**	**490**	**1,242**	**487**	**771**	**1,258**
Less Existing Trip Generation	**-3,588**	**-450**	**-61**	**-511**	**-82**	**-404**	**-486**
Total Net Project Trip Generation	**8,761**	**302**	**429**	**731**	**405**	**367**	**772**

[6] Source*: Trip Generation, 8th Edition*, Institute of Transportation Engineers, (ITE) [Washington, D.C. (2008)].

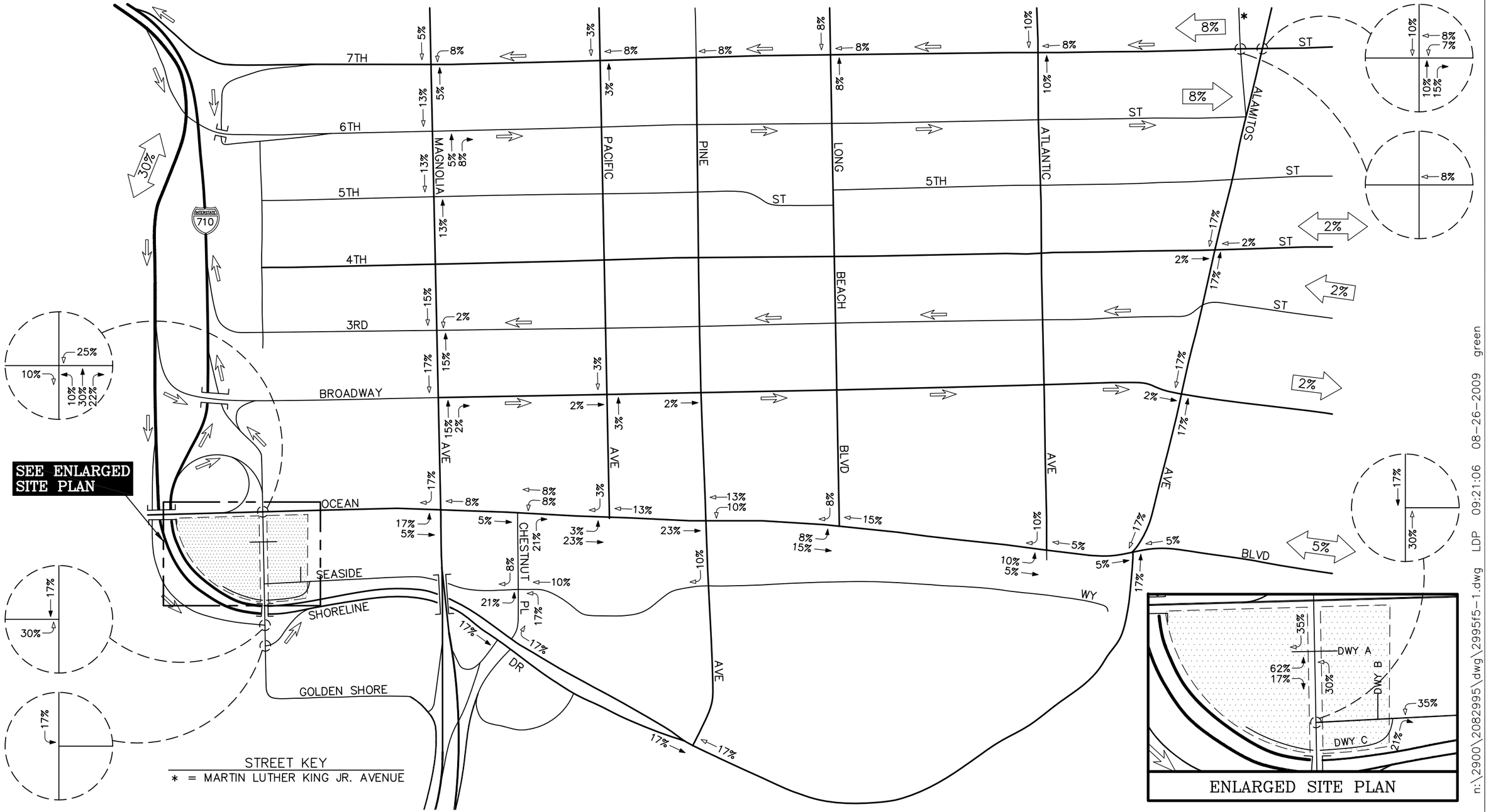
5.2 Project Traffic Distribution and Assignment

The general directional traffic distribution patterns for the proposed/existing site are graphically presented in ***Figure 5-1*** through ***Figure 5-5***. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

1. The site's proximity to major traffic carriers (i.e. Ocean Boulevard, Golden Shore, etc).
2. Expected localized traffic flow patterns based on adjacent street channelization and presence of traffic signals,
3. Existing intersection traffic volumes at the project driveways,
4. Ingress/egress availability at the Project site and the location of existing and proposed parking areas, and
5. Input from City staff.

The anticipated AM and PM peak hour net Project traffic volumes associated with the proposed Project are presented in ***Figures 5-6*** and ***5-7***, respectively. The traffic volume assignments presented in *Figures 5-6* and *5-7* reflect the traffic distribution characteristics shown in *Figures 5-1, 5-2, 5-3, 5-4 and 5-5* in combination with the traffic generation forecast presented in *Table 5-2*.

It should be noted that the traffic volumes presented in these figures represent the net traffic volumes after the trip credit for the existing land uses is applied to the proposed Project trip generation forecast.



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NO SCALE

KEY

= INBOUND TRIP DISTRIBUTION PATTERN

= OUTBOUND TRIP DISTRIBUTION PATTERN

(XX) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-1

TRAFFIC DISTRIBUTION PATTERN (OFFICE) – WEST PARCEL

GOLDEN SHORE MASTER PLAN, LONG BEACH

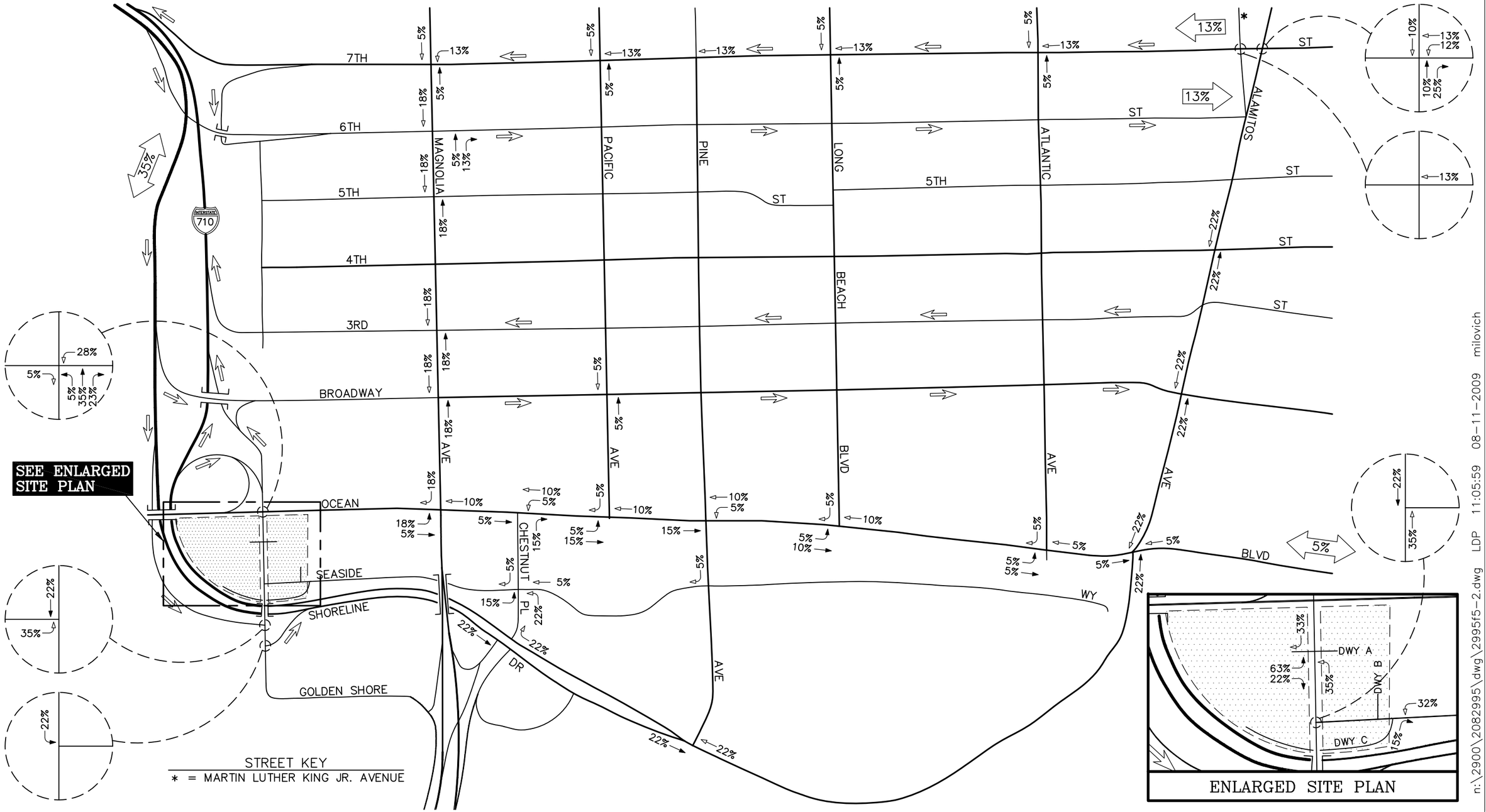
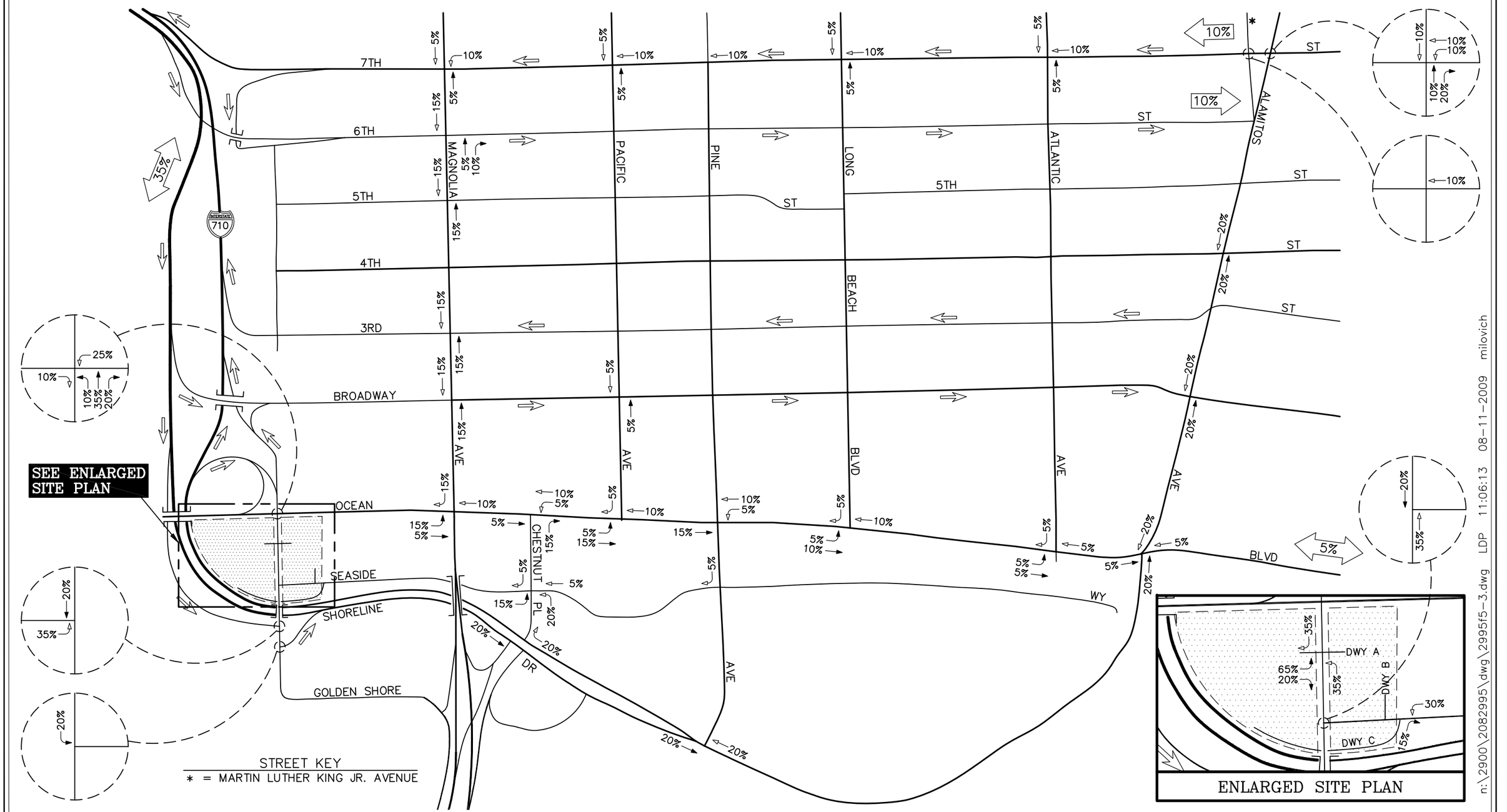


FIGURE 5-2

TRAFFIC DISTRIBUTION PATTERN (HOTEL) – WEST PARCEL

GOLDEN SHORE MASTER PLAN, LONG BEACH



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NO SCALE

KEY

= INBOUND TRIP DISTRIBUTION PATTERN

= OUTBOUND TRIP DISTRIBUTION PATTERN

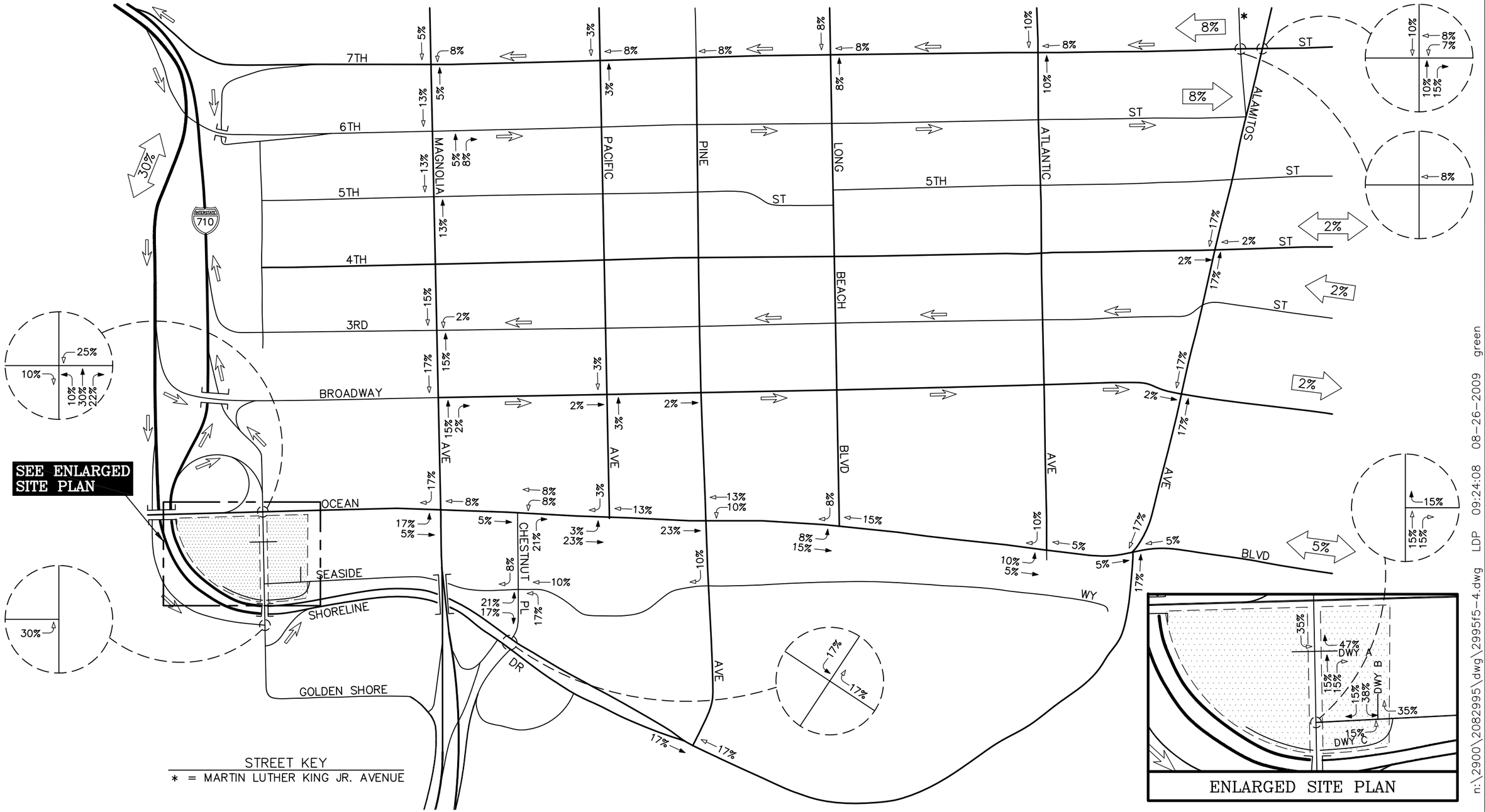
(XX) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5-3

TRAFFIC DISTRIBUTION PATTERN (RESIDENTIAL) – WEST PARCEL

GOLDEN SHORE MASTER PLAN, LONG BEACH



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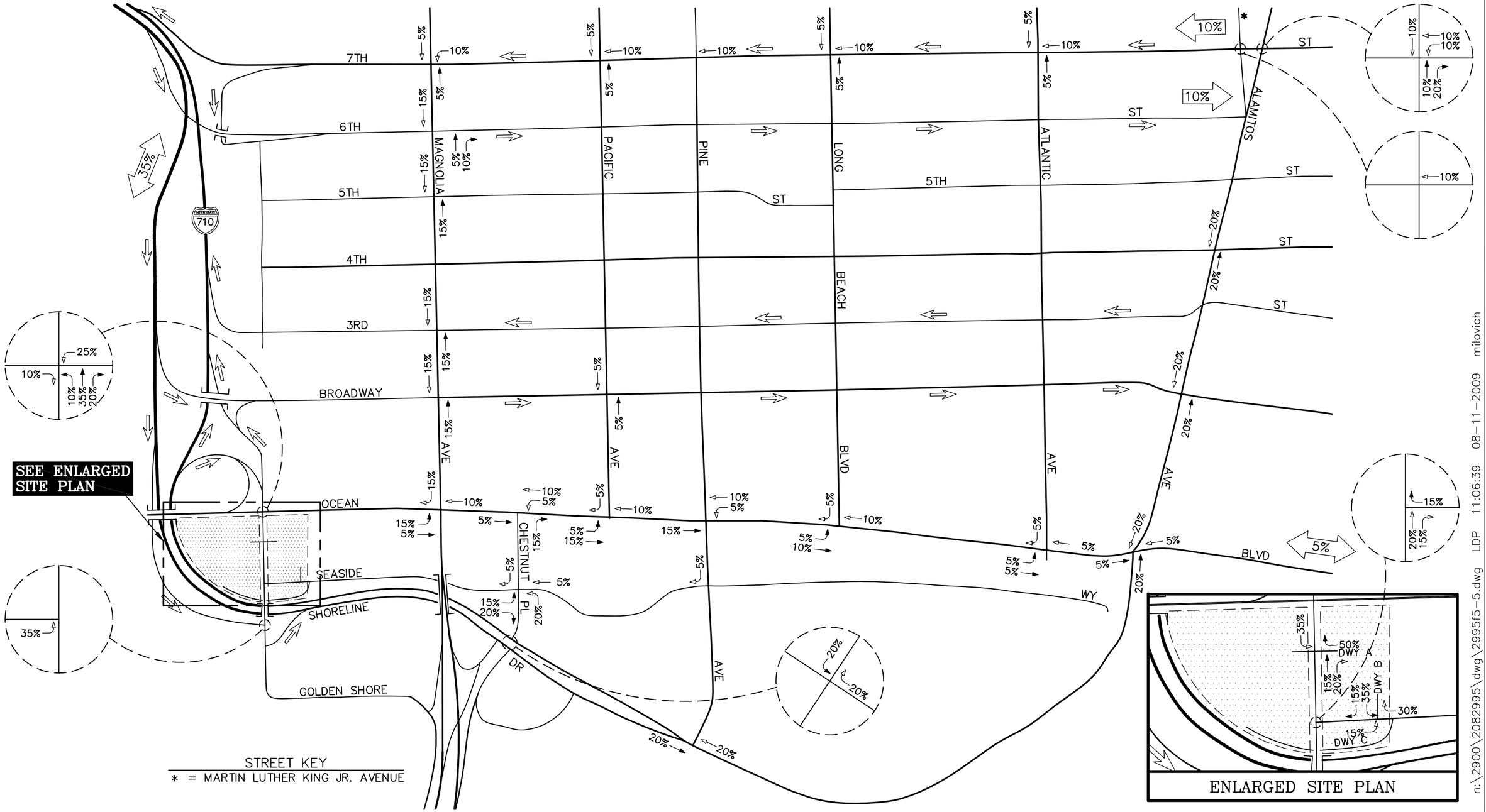
N NO SCALE

KEY
- ⟵ = INBOUND TRIP DISTRIBUTION PATTERN
- ⟵ = OUTBOUND TRIP DISTRIBUTION PATTERN
- (XX) = STUDY INTERSECTION
- = PROJECT SITE

FIGURE 5-4

TRAFFIC DISTRIBUTION PATTERN (OFFICE) – EAST PARCEL
GOLDEN SHORE MASTER PLAN, LONG BEACH



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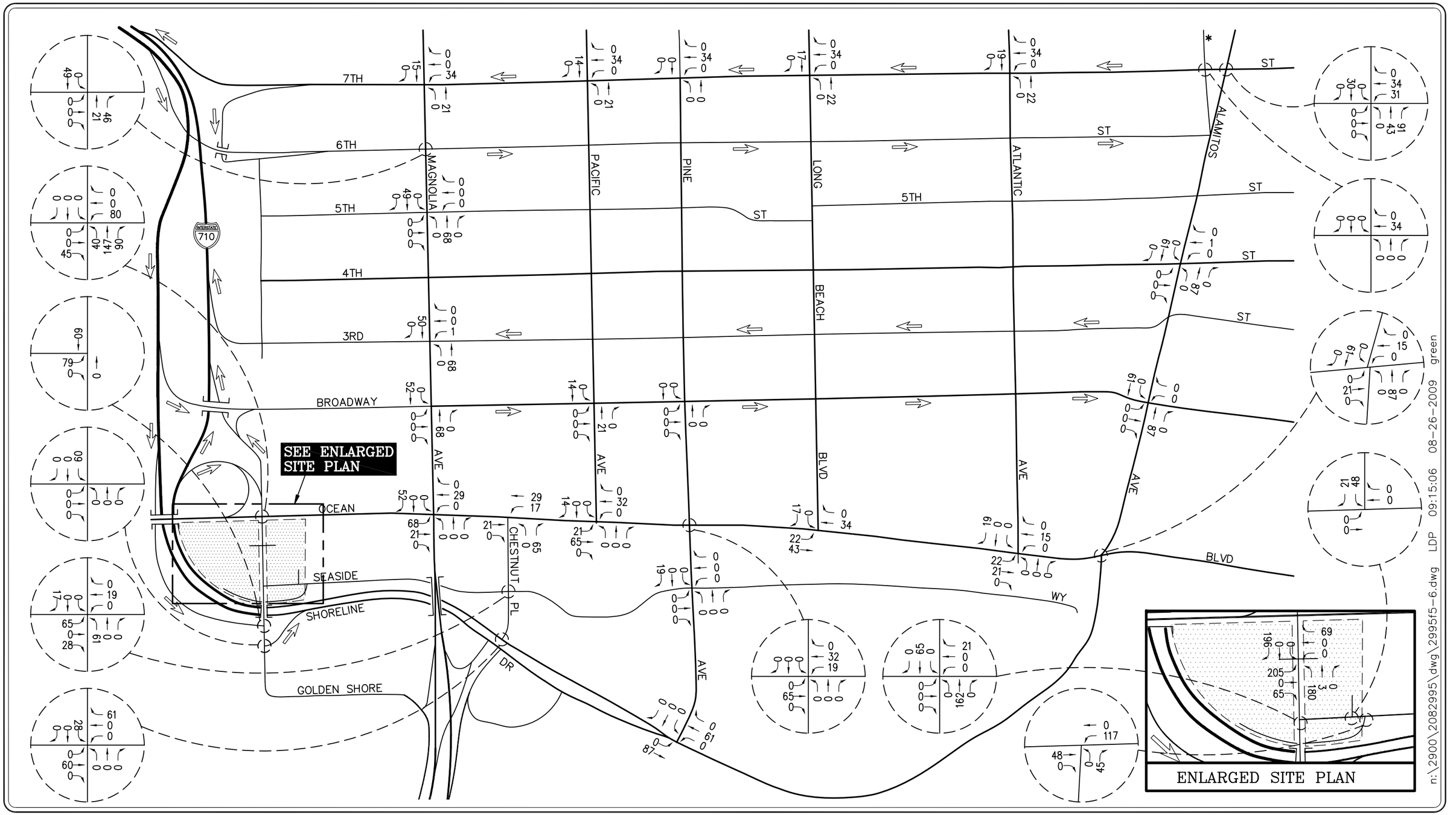
N NO SCALE

KEY
- ⟵ = INBOUND TRIP DISTRIBUTION PATTERN
- ⟵ = OUTBOUND TRIP DISTRIBUTION PATTERN
- (XX) = STUDY INTERSECTION
- = PROJECT SITE

FIGURE 5-5

TRAFFIC DISTRIBUTION PATTERN (RESIDENTIAL) – EAST PARCEL
GOLDEN SHORE MASTER PLAN, LONG BEACH



KEY

= PROJECT SITE

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FIGURE 5-6

AM PEAK HOUR NET PROJECT TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH

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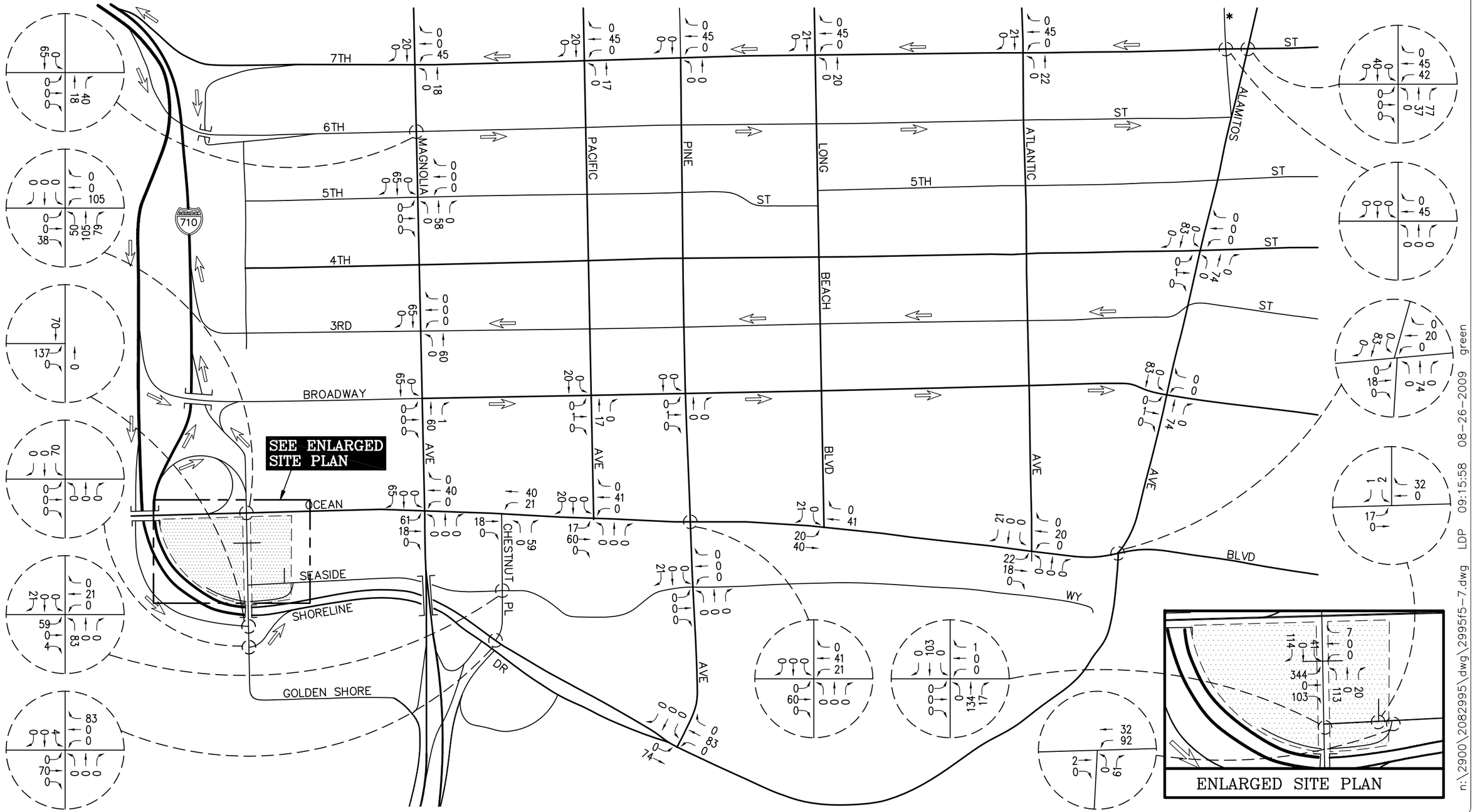

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N NO SCALE

KEY
= PROJECT SITE

FIGURE 5-7

PM PEAK HOUR NET PROJECT TRAFFIC VOLUMES
GOLDEN SHORE MASTER PLAN, LONG BEACH

6.0 FUTURE TRAFFIC CONDITIONS

6.1 Ambient Traffic Growth

Cumulative traffic growth estimates have been calculated using an ambient growth factor. The ambient traffic growth factor is intended to include unknown and future related projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at one percent (1%) per year. Applied to existing Year 2008 traffic volumes results in a twelve percent (12%) increase of growth in existing volumes to horizon year 2020.

6.2 Related Projects Traffic Characteristics

In order to make a realistic estimate of future on-street conditions prior to implementation of the proposed Project, the status of other known development projects (related projects) in the area has been researched. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. Based on our research, there are nineteen (19) related projects within a two-mile radius of the project that are located in the City of Long Beach. These projects have either been built, but not yet fully occupied, or are being processed for approval and have been included as part of the cumulative setting. ***Table 6-1*** provides the location and a brief description for each of the nineteen (19) related projects.

Figure 6-1 graphically illustrates the location of the related projects. These related projects are expected to generate vehicular traffic, which may affect the operating conditions of the key study intersections.

Table 6-2 presents the development totals and resultant trip generation for the related projects. As shown in *Table 6-2*, the related projects are expected to generate a combined total of 29,432 daily trips on a "typical" weekday, with 2,036 trips (862 inbound and 1,174 outbound) forecast during the AM peak hour, and 2,591 trips (1,408 inbound and 1,183 outbound) during the PM peak hour.

The AM and PM peak hour traffic volumes associated with the nineteen (19) related projects are presented in ***Figures 6-2*** and ***6-3***, respectively.

6.3 Year 2020 Traffic Volumes

Figures 6-4 and ***6-5*** present future AM and PM peak hour Cumulative traffic volumes at the key study intersections for the horizon year (Year 2020). Please note that the Cumulative traffic volumes represent the accumulation of existing traffic, ambient growth traffic (calculated at one percent per year) and the nineteen (19) related projects traffic.

Figures 6-6 and ***6-7*** illustrate Year 2020 forecast AM and PM peak hour traffic volumes with the inclusion of the net trips generated by the proposed Project.

TABLE 6-1

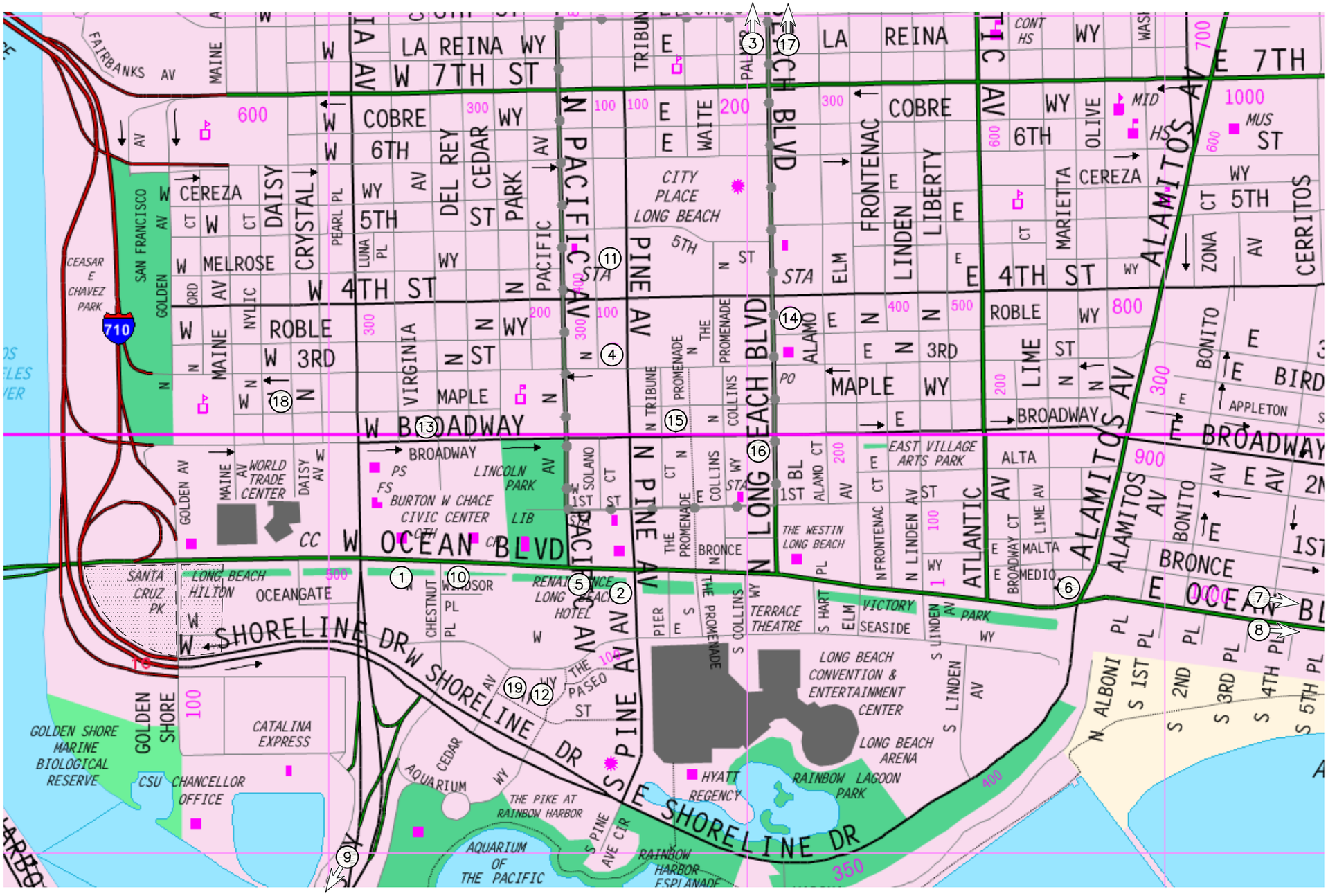
LOCATION AND DESCRIPTION OF RELATED PROJECTS[7]

No.	Location/Address	Description
1.	432-440 W. Ocean Boulevard	107 DU apartments
2.	110 W. Ocean Boulevard	82 hotel rooms
3.	1598 Long Beach Boulevard	64 DU apartments and 15,000 SF commercial
4.	301 Pine Avenue	375 DU apartments and 26,000 SF commercial
5.	150 W. Ocean Boulevard	216 DU condominiums
6.	777 E. Ocean Boulevard	358 DU high-rise condominiums and 13,561 SF commercial
7.	1628-1724 Ocean Boulevard	51 DU condominiums and 47 hotel rooms
8.	2010 Ocean Boulevard	56 DU condominiums
9.	600 Queensway Drive	178 hotel rooms
10.	25 S. Chestnut Place	246 DU high-rise condominiums
11.	433 Pine Avenue	18 DU apartments and 15,000 SF of commercial
12.	285 Bay Street	138 hotel rooms
13.	421 W. Broadway	291 DU apartments and 15,580 SF commercial
14.	350 Long Beach Boulevard	82 DU single family detached housing and 7,000 SF commercial
15.	201 The Promenade	165 hotel rooms
16.	155 Long Beach Boulevard	191 hotel rooms
17.	1235 Long Beach Boulevard	79,543 SF of Retail floor/Restaurant floor area, 152 DU Senior Apartments and 210 Condominiums.
18.	New Long Beach Court House	370,000 SF courtrooms for the Superior Court, 80,000 SF for the County, 75,000 SF commercial offices, and 20,000 SF retail.
19.	Hotel Sierra	125 hotel rooms

[7] Source: City of Long Beach Project Statues List – June 2009

KEY

1. 432–440 W. OCEAN BOULEVARD
2. 110 W. OCEAN BOULEVARD
3. 1598 LONG BEACH BOULEVARD
4. 301 PINE AVENUE
5. 150 W. OCEAN BOULEVARD
6. 777 E. OCEAN BOULEVARD
7. 1628–1724 OCEAN BOULEVARD
8. 2010 OCEAN BOULEVARD
9. 600 QUEENSWAY DRIVE
10. 25 S. CHESTNUT STREET
11. 433 PINE AVENUE
12. 285 BAY STREET
13. 421 W. BROADWAY AVENUE
14. 350 LONG BEACH BOULEVARD
15. 201 THE PROMENADE
16. 155 LONG BEACH BOULEVARD
17. 1235 LONG BEACH BOULEVARD
18. NEW LONG BEACH COURT HOUSE
19. HOTEL SIERRA



KEY

(#) = LOCATION OF RELATED PROJECT

= PROJECT SITE

NO SCALE

FIGURE 6–1

LOCATION OF RELATED PROJECTS

GOLDEN SHORE MASTER PLAN, LONG BEACH

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TABLE 6-2

RELATED PROJECTS TRAFFIC GENERATION FORECAST[8]

Related Projects Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
1. Apartments (107 DU)	712	11	44	55	43	24	67
2. Hotel (82 rooms)	731	32	23	55	28	30	58
3. Apartments (64 DU) & Commercial (15,000 SF)	1,070	15	32	47	53	43	96
4. Apartments (375 DU) & Commercial (26,000 SF)	3,610	54	164	218	198	132	330
5. Condominiums (216 DU)	1,255	15	80	95	76	37	113
6. High-Rise Condominiums (358 DU) & Commercial (13,561 SF)	2,078	29	105	134	111	76	187
7. Condominiums (51 DU) & Hotel (47 rooms)	715	22	32	54	34	26	60
8. Condominiums (56 DU)	325	4	21	25	20	10	30
9. Hotel (178 rooms)	1,588	69	50	119	61	64	125
10. High-Rise Condominiums (246 DU)	1,028	15	69	84	59	34	93
11. Apartments (18 DU) & Commercial (15,000 SF)	764	11	13	24	34	33	67
12. Hotel (138 rooms)	1,231	54	39	93	47	50	97
13. Apartments (291 DU) & Commercial (15,580 SF)	2,604	39	125	164	145	94	239
14. Single Family Detached (82 DU) & Commercial (7,000 SF)	1,086	20	49	69	65	43	108
15. Hotel (165 rooms)	1,472	64	46	110	56	59	115
16. Hotel (191 rooms)	1,704	74	53	127	65	69	134
17. Retail floor/Restaurant floor area (79,543 SF), Senior Apartments (152 DU), and Condominiums (210 DU)[9]	4,424	129	168	297	210	147	357
18. New Long Beach Court House[10]	1,920	156	26	182	60	167	227
19. Hotel Sierra	1,115	49	35	84	43	45	88
Total Related Projects Trip Generation Potential	**29,432**	**862**	**1,174**	**2,036**	**1,408**	**1,183**	**2,591**

8 Source: *Trip Generation*, 8th Edition, Institute of Transportation Engineers (ITE) [Washington, D.C. (2008)].

9 Source: Traffic Impact Analysis for 1235 Long Beach Boulevard Mixed-Used Project, prepared by LLG, October 16, 2008.

10 Source: Traffic Impact Analysis for New Long Beach Court House, prepared by LLG, December 8, 2008.

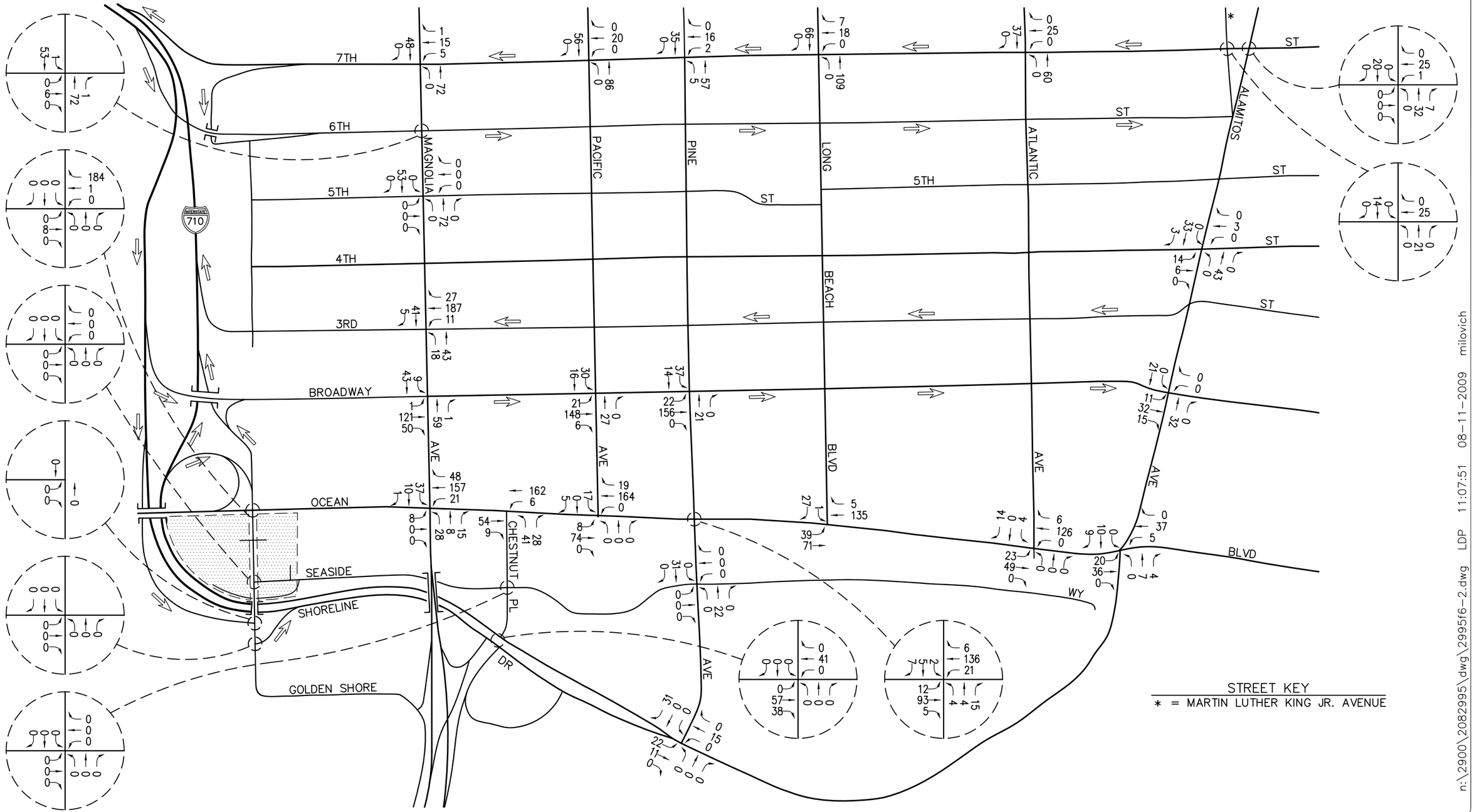

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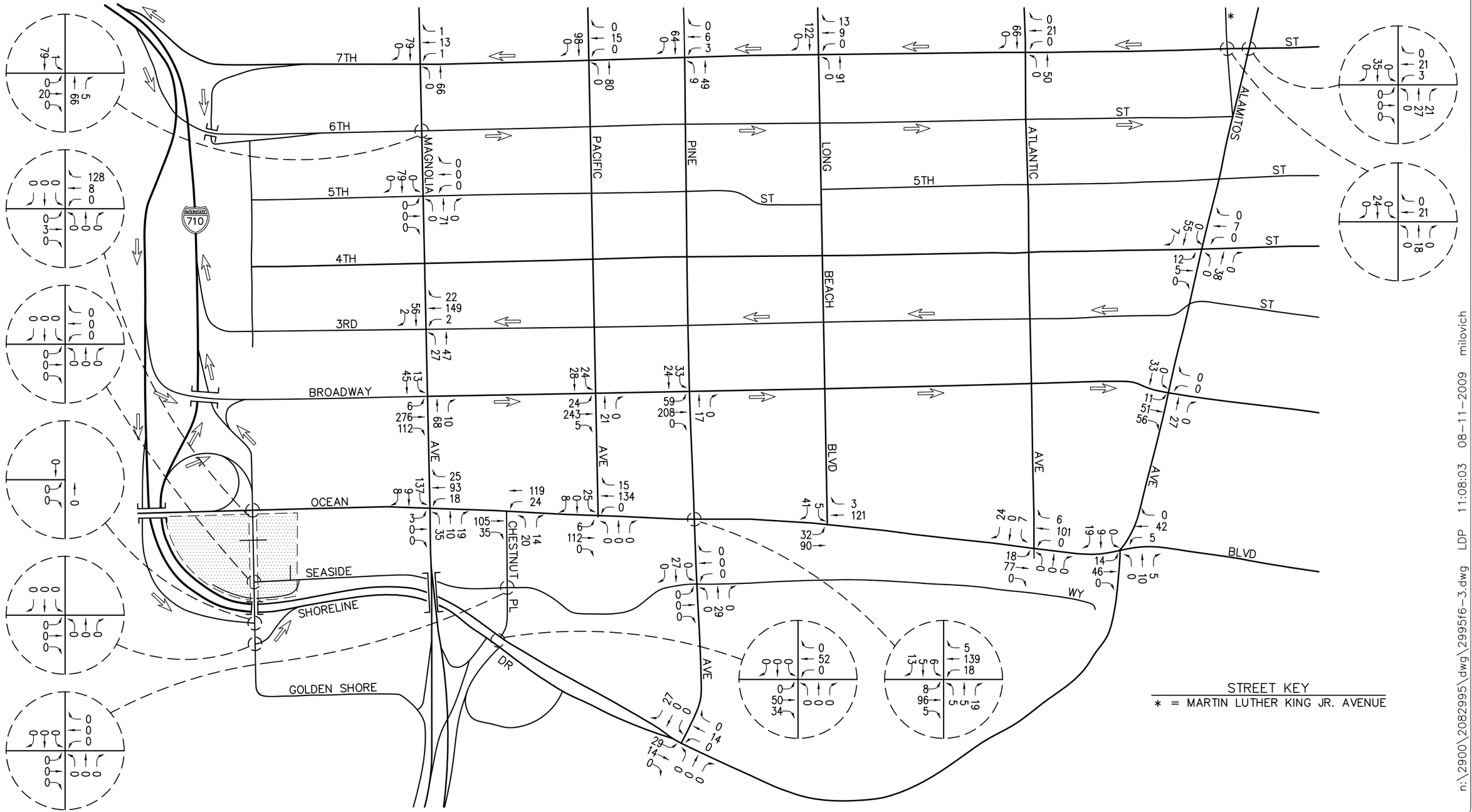
FIGURE 6-2

AM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH



STREET KEY

* = MARTIN LUTHER KING JR. AVENUE

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KEY

= PROJECT SITE

FIGURE 6-3

PM PEAK HOUR RELATED PROJECTS TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH

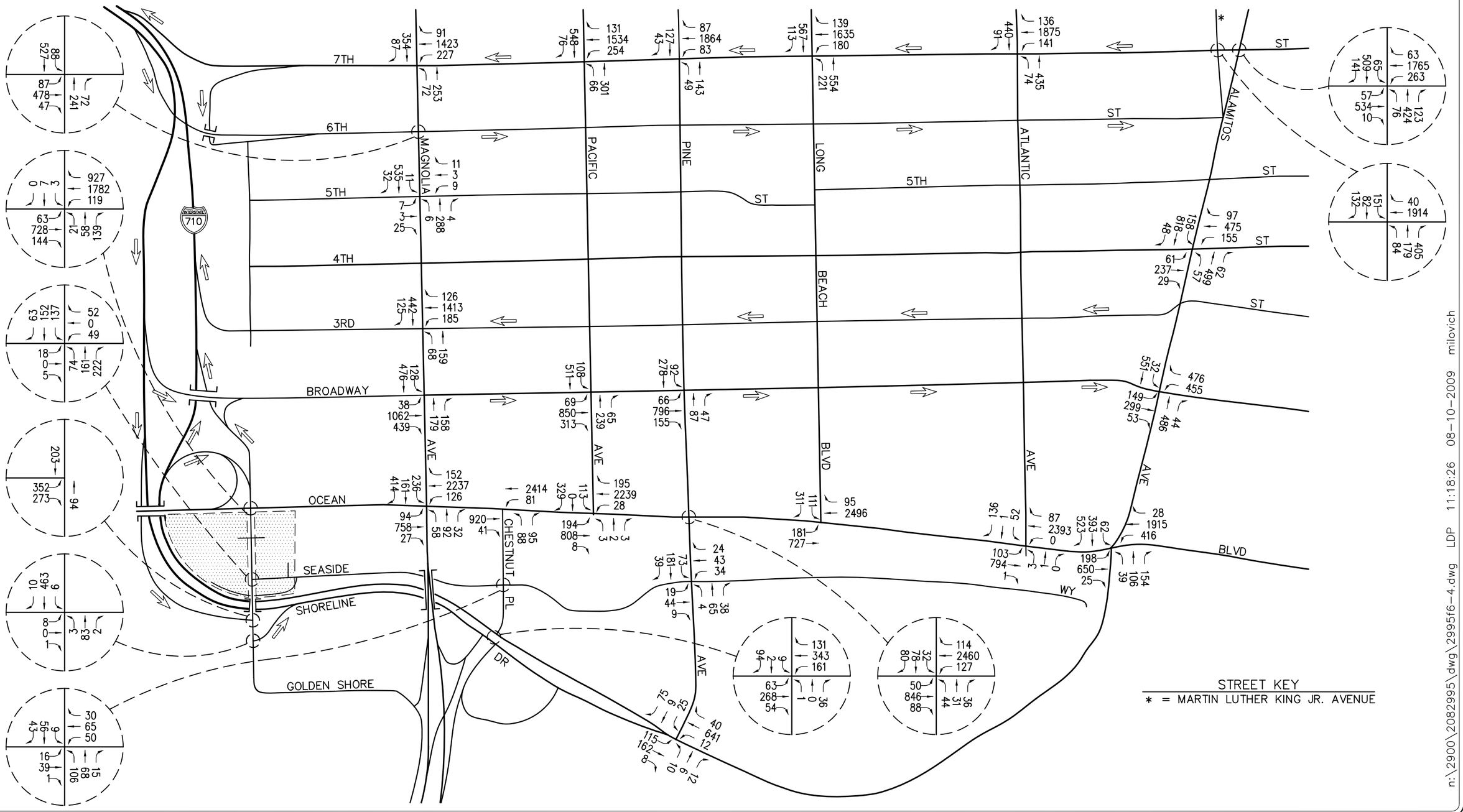

FIGURE 6-4

YEAR 2020 AM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH

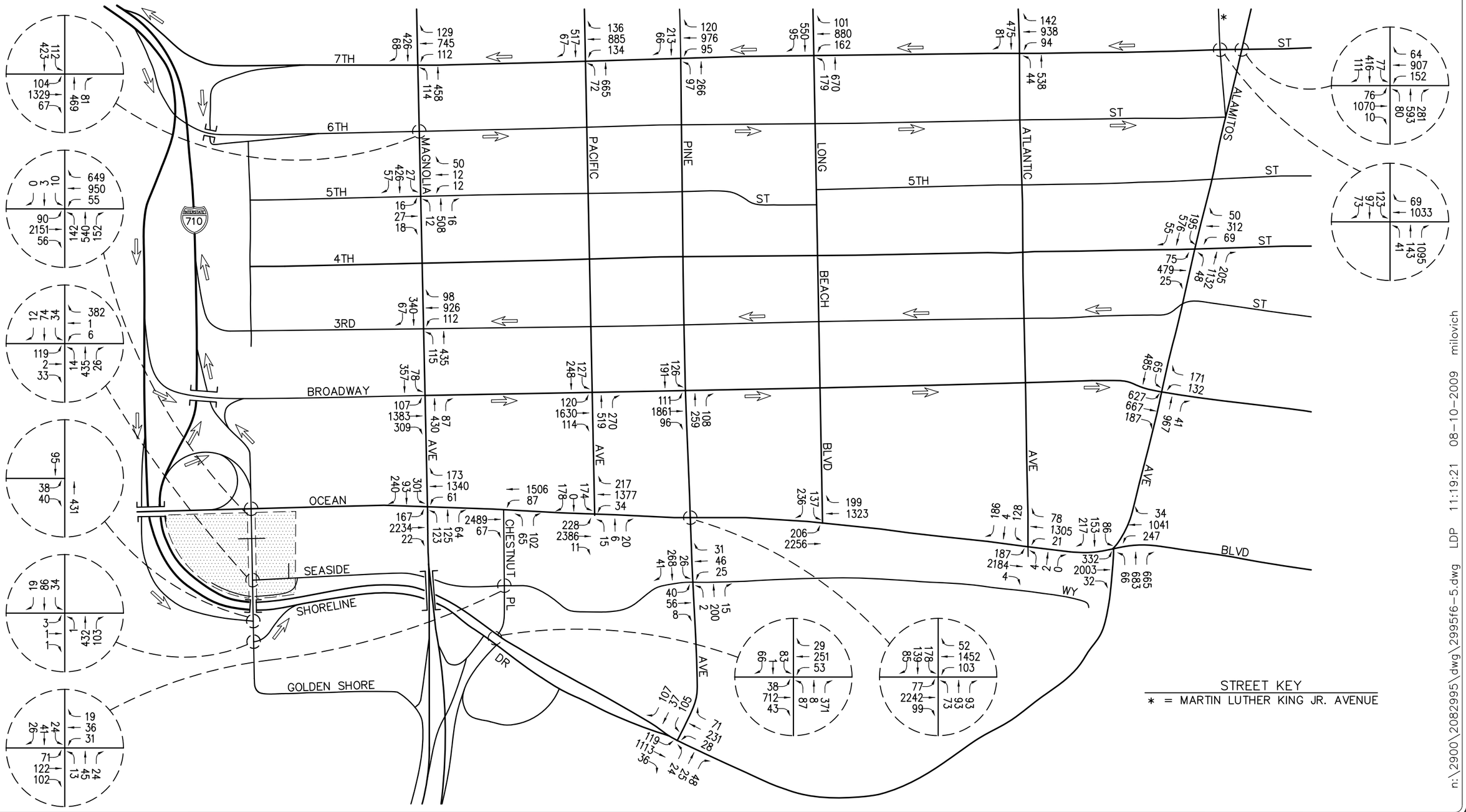

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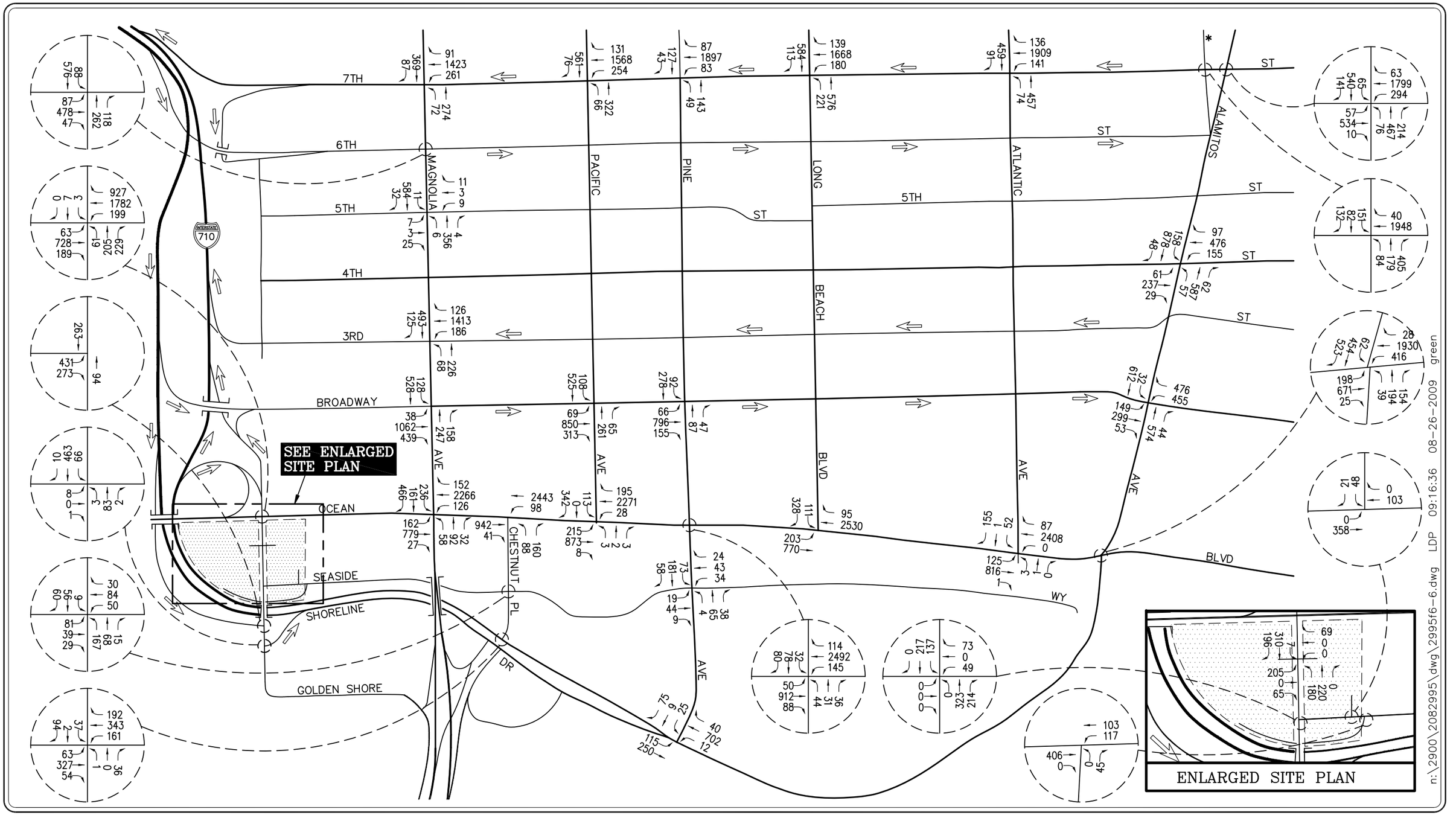
FIGURE 6-5

YEAR 2020 PM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES

GOLDEN SHORE MASTER PLAN, LONG BEACH



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N NO SCALE

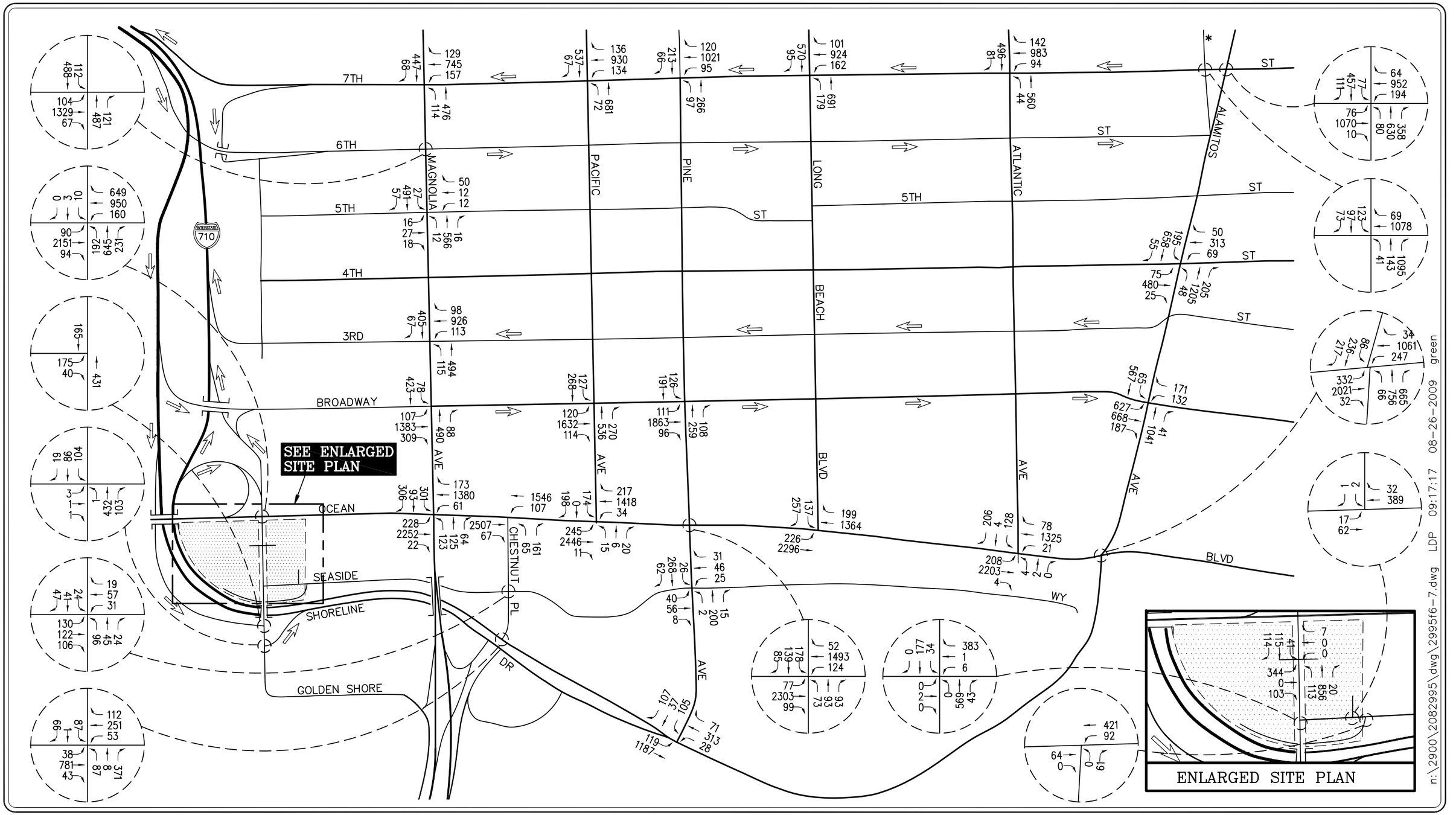
KEY

= PROJECT SITE

FIGURE 6-6

YEAR 2020 AM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES WITH PROJECT

GOLDEN SHORE MASTER PLAN, LONG BEACH



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

= PROJECT SITE

FIGURE 6-7

YEAR 2020 PM PEAK HOUR CUMULATIVE TRAFFIC VOLUMES WITH PROJECT

GOLDEN SHORE MASTER PLAN, LONG BEACH

7.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

7.1 Impact Criteria and Thresholds

The relative impact of the added project traffic volumes generated by the Golden Shore Master Plan project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the thirty (30) key study intersections, without, then with, the proposed Project. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the project at each key intersection was then evaluated using the City's LOS standards and traffic impact criteria defined below.

7.1.1 *LOS Standards and Impact Criteria:*

Within the City of Long Beach, impacts to local and regional transportation systems are considered significant if:

- An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Long Beach considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections. For the City of Long Beach, the current LOS, if worse than LOS D (i.e. LOS E or F), should also be maintained; and

- The project increases traffic demand at the study intersection by 2% of capacity (ICU increase ≥ 0.020), causing or worsening LOS E or F (ICU > 0.901). At unsignalized intersections, a "significant" adverse traffic impact is defined as a project that: adds 2% of more traffic delay (seconds per vehicle) at an intersection operating LOS E or F.

7.2 Traffic Impact Analysis Scenarios

The following scenarios are those for which volume/capacity calculations have been performed using the ICU/HCM methodologies:

A. Year 2008 Existing Traffic Conditions;
B. Year 2020: Cumulative (existing plus ambient growth plus related projects traffic),
C. Year 2020: Cumulative with Project traffic,
D. Scenario (C) with Improvements/Mitigation, if necessary,

8.0 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

8.1 Year 2020 Traffic Conditions

Table 8-1 summarizes the peak hour Level of Service results at the 30 key study intersections for the Year 2020 horizon year. The first column (1) of ICU/LOS and HCM/LOS values in *Table 8-1* presents a summary of existing AM and PM peak hour traffic conditions (which were also presented in *Table 3-4*). The second column (2) lists future Year 2020 Cumulative traffic conditions (existing plus ambient growth traffic plus related projects traffic) based on existing intersection geometry, but without any traffic generated by the proposed Project. The third column (3) presents future forecast traffic conditions with the addition of traffic generated by the proposed Project. The fourth column (4) shows the increase in ICU or HCM value due to the added peak hour project trips and indicates whether the traffic associated with the project will have a significant impact based on the LOS standards and the significance impact criteria defined in this report. The fifth column (5) presents the intersection operating conditions based on the total anticipated Year 2020 horizon year traffic volumes and planned and/or recommended intersection improvements.

8.1.1 *Year 2020 Cumulative Traffic Conditions*

An analysis of Year 2020 Cumulative traffic conditions (without Project traffic) indicates that four (4) intersections operate at adverse levels of service for Year 2020 based on the ICU/HCM methodologies and the City's LOS standards. These intersections, reported below, are forecast to operate at LOS E or LOS F during the peak hour indicated:

	AM Peak Hour		PM Peak Hour	
Key Intersection	ICU/HCM	LOS	ICU/HCM	LOS
7. Alamitos Avenue at 7th Street	0.972	E	--	--
10. Alamitos Avenue at 4th Street	--	--	0.998	E
17. Magnolia Avenue at Ocean Boulevard	0.920	E	--	--
23. Alamitos Ave./Shoreline Dr. at Ocean Blvd.	1.262	F	1.193	F

The remaining key study intersections are expected to operate at acceptable service levels (LOS D or better) during the weekday AM and PM peak commute hours.

TABLE 8-1

YEAR 2020 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2020 Cumulative Traffic Conditions		(3) Year 2020 Plus Project Traffic Conditions		(4) Project Significant Impact[11]		(5) Year 2020 With Recommended Improvements	
		ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	Change in ICU / Delay	Yes/No	ICU / Delay (s/v)	LOS
1. Magnolia Avenue at 7th Street	AM	0.679	B	0.783	C	0.800	C	0.017	No	--	--
	PM	0.576	A	0.686	B	0.708	C	0.022	No	--	--
2. Pacific Avenue at 7th Street	AM	0.651	B	0.733	C	0.744	C	0.011	No	--	--
	PM	0.513	A	0.590	A	0.606	B	0.016	No	--	--
3. Pine Avenue at 7th Street	AM	0.551	A	0.633	B	0.640	B	0.007	No	--	--
	PM	0.452	A	0.542	A	0.551	A	0.009	No	--	--
4. Long Beach Boulevard at 7th Street	AM	0.714	C	0.806	D	0.818	D	0.012	No	--	--
	PM	0.531	A	0.617	B	0.633	B	0.016	No	--	--
5. Atlantic Avenue at 7th Street	AM	0.675	B	0.760	C	0.773	C	0.013	No	--	--
	PM	0.476	A	0.546	A	0.562	A	0.016	No	--	--
6. Martin Luther King Jr. Avenue at 7th Street	AM	0.298	A	0.321	A	0.321	A	0.000	No	--	--
	PM	0.474	A	0.519	A	0.519	A	0.000	No	--	--
7. Alamitos Avenue at 7th Street	AM	0.872	D	**0.972**	**E**	**0.993**	**E**	**0.021**	**Yes**	0.799[12]	C
	PM	0.735	C	0.816	D	0.881	D	0.065	No	0.881[12]	D
8. Magnolia Avenue at 6th Street	AM	0.477	A	0.557	A	0.587	A	0.030	No	--	--
	PM	0.705	C	0.827	D	0.863	D	0.036	No	--	--

Notes:

Bold ICU/Delay values indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle.

[11] Significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

[12] Represents anticipated LOS with the provision of a 3rd westbound through lane on 7th Street, through the intersection of MLK Jr. Avenue and 7th Street. Implementation of this improvement will require the removal of on-street parking on the both the north and south sides of 7th Street, east and west of Alamitos Boulevard. No further intersection improvements (i.e. intersection widening) at this key intersection are feasible due to physical and right-of-way constraints.

TABLE 8-1 (CONTINUED)

YEAR 2020 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2020 Cumulative Traffic Conditions		(3) Year 2020 Plus Project Traffic Conditions		(4) Project Significant Impact[13]		(5) Year 2020 With Recommended Improvements	
		ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	Change in ICU/ Delay	Yes/No	ICU / Delay (s/v)	LOS
9. Magnolia Avenue at 5th Street	AM	12.7 s/v	B	15.3 s/v	C	17.2 s/v	C	1.9 s/v	No	--	--
	PM	17.2 s/v	C	24.4 s/v	C	29.6 s/v	D	5.2 s/v	No	--	--
10. Alamitos Avenue at 4th Street	AM	0.707	C	0.802	D	0.821	D	0.019	No	NF[14]	--
	PM	0.888	D	**0.998**	**E**	**1.021**	**F**	**0.023**	**Yes**	NF[14]	--
11. Magnolia Avenue at 3rd Street	AM	0.602	B	0.729	C	0.745	C	0.016	No	--	--
	PM	0.545	A	0.658	B	0.695	B	0.037	No	--	--
12. Magnolia Avenue at Broadway	AM	0.471	A	0.563	A	0.579	A	0.016	No	--	--
	PM	0.462	A	0.593	A	0.612	B	0.019	No	--	--
13. Pacific Avenue at Broadway	AM	0.485	A	0.566	A	0.571	A	0.005	No	--	--
	PM	0.654	B	0.786	C	0.786	C	0.000	No	--	--
14. Pine Avenue at Broadway	AM	0.395	A	0.472	A	0.472	A	0.000	No	--	--
	PM	0.672	B	0.816	D	0.816	D	0.000	No	--	--
15. Alamitos Avenue at Broadway	AM	0.774	C	0.872	D	**0.910**	**E**	**0.038**	**Yes**	0.741[15]	C
	PM	0.747	C	0.809	D	0.832	D	0.023	No	0.832[15]	D
16. Golden Ave./Golden Shore at Ocean Boulevard	AM	0.616	B	0.701	C	0.758	C	0.057	No	--	--
	PM	0.759	C	0.832	D	0.898	D	0.066	No	--	--

Notes:

Bold ICU/Delay values indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle.

[13] Significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

[14] NF = none feasible. Intersection Improvements at this key intersection are not feasible due to physical and right-of-way constraints.

[15] Represents anticipated LOS with the provision of a 2nd southbound through lane on Alamitos Boulevard. Implementation of this improvement will require the removal of on-street parking on the both the east and west sides of Alamitos Boulevard, north and south of Broadway.

TABLE 8-1 (CONTINUED)
YEAR 2020 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2020 Cumulative Traffic Conditions		(3) Year 2020 Plus Project Traffic Conditions		(4) Project Significant Impact[16]		(5) Year 2020 With Recommended Improvements	
		ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	Change in ICU/ Delay	Yes/No	ICU / Delay (s/v)	LOS
17. Magnolia Avenue at Ocean Boulevard	AM	0.783	C	**0.920**	**E**	**1.001**	**F**	**0.081**	**Yes**	0.900[17]	D
	PM	0.722	C	0.835	D	0.880	D	0.045	No	0.839[17]	D
18. Chestnut Place at Ocean Boulevard	AM	0.556	A	0.662	B	0.709	C	0.047	No	--	--
	PM	0.634	B	0.751	C	0.804	D	0.053	No	--	--
19. Pacific Avenue at Ocean Boulevard	AM	0.689	B	0.794	C	0.809	D	0.015	No	--	--
	PM	0.632	B	0.720	C	0.732	C	0.012	No	--	--
20. Pine Avenue at Ocean Boulevard	AM	0.634	B	0.740	C	0.747	C	0.007	No	0.777[18]	C
	PM	0.774	C	0.897	D	**0.922**	**E**	**0.025**	**Yes**	0.864[18]	D
21. Long Beach Boulevard at Ocean Boulevard	AM	0.718	C	0.851	D	0.877	D	0.026	No	--	--
	PM	0.584	A	0.668	B	0.680	B	0.012	No	--	--
22. Atlantic Avenue at Ocean Boulevard	AM	0.651	B	0.768	C	0.797	C	0.029	No	--	--
	PM	0.598	A	0.688	B	0.705	C	0.017	No	--	--
23. Alamitos Ave/Shoreline Dr at Ocean Boulevard	AM	**1.120**	**F**	**1.262**	**F**	**1.267**	**F**	0.005	No	--	--
	PM	**1.062**	**F**	**1.193**	**F**	**1.199**	**F**	0.006	No	--	--

Notes:
Bold ICU/Delay values indicate adverse service levels based on City LOS standards.
s/v = seconds per vehicle.

[16] Significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

[17] Represents anticipated LOS with the installation of protected left-turn phasing on Ocean Blvd and installation of a southbound right-turn overlap phase on Magnolia Ave.

[18] Represents anticipated LOS with the restriping of southbound Pine Ave to provide a separate left-turn lane and a shared through/right-turn lane. Implementation of this improvement requires the removal of the "passenger loading/unloading zone" on the east side of Pine Ave, north of Ocean Blvd, and it may potentially impact flow of traffic given existing bus stops are located along this section of Pine Avenue.

TABLE 8-1 (CONTINUED)
YEAR 2020 PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2020 Cumulative Traffic Conditions		(3) Year 2020 Plus Project Traffic Conditions		(4) Project Significant Impact[19]		(5) Year 2020 With Recommended Improvements	
		ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	ICU / Delay (s/v)	LOS	Change in ICU/ Delay	Yes/No	ICU / Delay (s/v)	LOS
24. Golden Shore at Seaside Way	AM	13.3 s/v	B	16.9 s/v	C	15.8 s/v	C	0.0[20] s/v	No	--	--
	PM	16.2 s/v	C	26.2 s/v	D	17.3 s/v	C	0.0[20] s/v	No	--	--
25. Chestnut Place at Seaside Way	AM	8.5 s/v	A	8.7 s/v	A	9.7 s/v	A	1.0 s/v	No	--	--
	PM	8.6 s/v	A	8.8 s/v	A	10.1 s/v	B	1.3 s/v	No	--	--
26. Pine Avenue at Seaside Way	AM	0.263	A	0.290	A	0.290	A	0.000	No	--	--
	PM	0.308	A	0.345	A	0.345	A	0.000	No	--	--
27. Golden Shore at I-710 SB Off-Ramp	AM	11.9 s/v	B	12.9 s/v	B	16.1 s/v	C	3.2 s/v	No	--	--
	PM	9.5 s/v	A	9.7 s/v	A	12.3 s/v	B	2.6 s/v	No	--	--
28. Golden Shore at EB Shoreline Drive On-Ramp	AM	11.8 s/v	B	12.3 s/v	B	13.8 s/v	B	1.5 s/v	No	--	--
	PM	12.2 s/v	B	12.8 s/v	B	14.9 s/v	B	2.1 s/v	No	--	--
29. Chestnut Place at Shoreline Drive	AM	0.345	A	0.367	A	0.401	A	0.034	No	--	--
	PM	0.573	A	0.629	B	0.646	B	0.017	No	--	--
30. Pine Avenue at Shoreline Drive	AM	0.355	A	0.402	A	0.415	A	0.013	No	--	--
	PM	0.486	A	0.525	A	0.541	A	0.016	No	--	--

Notes:

Bold ICU/Delay values indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle.

[19] Significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

[20] Theoretical negative project "increase" (that can result with HCM method) reported as 0.0.

8.1.2 *Year 2020 Cumulative Plus Project Conditions*

Review of Columns 3 and 4 of *Table 8-1* indicate that traffic associated with the proposed Golden Shore Master Plan project will have a significant impact at five (5) of the thirty (30) study intersections when compared to the LOS standards and the significant traffic impact criteria defined in this report. The intersections impacted by the proposed Project include:

Key Intersection

7. Alamitos Avenue at 7th Street
10. Alamitos Avenue at 4th Street
15. Alamitos Avenue at Broadway
17. Magnolia Avenue at Ocean Boulevard
20. Pine Avenue at Ocean Boulevard

These intersections are forecast to operate at an adverse service level (i.e., LOS E/F) during the AM and/or PM peak hours in the Year 2020, with the Project. As shown in Column 5 of *Table 8-1*, the implementation of recommended improvements will offset the impact of Project traffic as well as future Cumulative traffic, and return service levels to acceptable operations. The lone exception is the intersections of Alamitos Avenue at 4th Street. Due to physical and right-of-way restrictions that prohibit any widening and/or restriping, intersection capacity enhancing improvements at these key intersections do not appear feasible.

Although the intersection of Alamitos Avenue/Shoreline Drive at Ocean Boulevard is forecast to operate at LOS F during the AM peak hour and PM peak hour, the proposed Project is expected to add less than 0.020 to the ICU value and hence will not have a significant impact. As discussed earlier, a significant Project impact occurs when the Project increases traffic demand at a signalized study intersection by 2% of capacity (ICU $\geq$ 0.020), or a 2% change in delay at unsignalized intersections where the final LOS is E or F.

The remaining key study intersections are forecast to continue to operate at an acceptable LOS with the addition of project generated traffic in the Year 2020.

Appendix C contains the Year 2020 traffic conditions level of service calculation worksheets.

8.2 Traffic Signal Warrant Analysis

8.2.1 *California MUTCD Policy/Criteria*

The level of service analysis at the impacted key unsignalized study intersection is supplemented with an assessment of the need for signalization of the intersection. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant, Warrant #3 described in the current *California Manual on Uniform Traffic Control Devices (MUTCD).* Warrant #3 has two parts: 1) Part A evaluates peak hour vehicle delay for traffic on the minor street approach with the highest delay and 2) Part B evaluates peak-hour traffic volumes on the major and minor streets. This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal. Other traffic signal warrants are available; however, they cannot be checked under future conditions (cumulative without and with Project) because they rely on data for which forecasts are not available (such as accidents, pedestrian volume, and four-hour or eight-hour vehicle volumes).

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants is met. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

8.2.2 *Traffic Signal Warrant Results*

The results of the peak-hour traffic signal warrant analysis for Year 2020 Cumulative Plus Project Traffic Conditions are summarized on ***Table 8-2***. As shown, none of the key unsignalized study intersections exceed the volume thresholds of Warrant #3, Part A and/or Part B. ***Appendix D*** contains the traffic signal warrant worksheets.

TABLE 8-2

TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY[21]

Key Intersection		Time Period	Year 2020 Cumulative Traffic Plus Project	
			Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
9.	Magnolia Avenue at 5th Street	AM	No	No
		PM	No	No
24.	Golden Shore at Seaside Way	AM	No	No
		PM	No	No
25.	Chestnut Place at Seaside Way	AM	No	No
		PM	No	No
27.	Golden Shore at I-710 SB Off-Ramp	AM	No	No
		PM	No	No
28.	Golden Shore at EB Shoreline Drive On-Ramp	AM	No	No
		PM	No	No

[21] Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant are contained in the California MUTCD.

9.0 SITE ACCESS EVALUATION

9.1 Site Access

Vehicular access to the proposed Golden Shore Master Plan project will be provided via three driveways. Driveway A at Golden Shore is a proposed full access driveway located between Ocean Boulevard and Seaside Way that will serve as the primary access to the West Site and East Site. Driveway B at Seaside Way will provide secondary access to the East Site, while Driveway C at Seaside Way will serve as secondary access to the West site.

9.2 Year 2020 Project Access Service Level Characteristics

Table 9-1 summarizes the Year 2020 peak hour level of service results at the three project driveways. Review of *Table 9-1,* shows that one (1) of the three (3) project driveways, Driveway A at Golden Shore, is forecast to operate at LOS E or F during the AM or PM peak hours. However, with the installation of a traffic signal, which is warranted on the basis of the peak-hour traffic signal warrant, Driveway A at Golden Shore is forecast to operate at LOS A or B during the AM and PM peak hours. As such, Project access will be adequate. Motorists entering and exiting the Project site will be able to do so comfortably, safely, and without undue congestion.

9.3 Internal Circulation

Since detailed site plans are not available for review at this time, it is recommended that prior to finalization of the project site plan, the appropriate turning templates (ASSHTO SU-30, WB-50 and fire trucks) be utilized to confirm that all vehicles can properly access and circulate through the site and that all internal drive aisle widths, project driveway widths, and parking stall widths satisfy the City's minimum requirements.

TABLE 9-1

YEAR 2020 CUMULATIVE PLUS PROJECT DRIVEWAY PEAK HOUR LEVELS OF SERVICE SUMMARY

Driveway		Time Period	Intersection Control	Year 2020 Cumulative Plus Project	
				Delay (s/v)	LOS
A.	Golden Shore at	AM	Two-Way	**149.9**	**F**
	Project Driveway A	PM	Stop	**396.5**	**F**
	With Traffic Signal	AM	Two-Phase	0.542	A
		PM	Signal	0.679	B
B.	Project Driveway B	AM	Two-Way	11.2 s/v	B
	Seaside Way	PM	Stop	11.0 s/v	B
C.	Project Driveway C	AM	Two-Way	11.0 s/v	B
	Seaside Way	PM	Stop	8.8 s/v	A

Notes:

Bold ICU/Delay values indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle.

10.0 AREA TRAFFIC IMPROVEMENTS

For the study intersections where projected traffic volumes are expected to result in unacceptable operating conditions, this report recommends (identifies) traffic improvement measures that change the intersection geometry to increase capacity. These capacity improvements involve roadway widening, re-striping to reconfigure (add lanes) to specific approaches of a key intersection and/or implementing peak hour turn restrictions. The identified improvements are expected to:

- mitigate the impact of existing traffic, future non-Project (ambient traffic growth and cumulative project) traffic and Project traffic, and
- improve Levels of Service to an acceptable range and/or to pre-Project conditions.

10.1 Recommended Improvements

The results of the level of service analysis, as summarized in *Table 8-1*, indicates that the proposed Project will cumulatively impact five (5) key study intersections. The following are potential improvements recommended to mitigate the cumulative traffic impacts at the five (5) intersections significantly impacted by Project traffic under future conditions. Subject to the City's requirements, the Project can be expected to pay a fair-share of the construction costs to implement these improvements.

- **No. 7 - Alamitos Avenue at 7th Street:** Restripe 7th Street to provide a third westbound through lane on 7th Street, through the intersection of Martin Luther King, Jr. and 7th Street. The implementation of this improvement would require the removal of curbside parking on both sides of 7th Street, east and west of Alamitos Avenue. Given the demand for curbside parking in the area, the loss of parking may not be considered acceptable. Further, the intersection of Alamitos Avenue and 7th Street is physically constrained with existing development located along the street making the expansion of the roadway to add additional lanes difficult.

  As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately ten percent (10%).

  If recommended roadway improvements are not implement or the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

- **No. 10 - Alamitos Avenue at 4th Street:** No physical mitigation measure feasible; any additional turn lanes will require widening and additional right-of-way. The intersection of Alamitos Avenue and 4th Street is physically constrained with existing development located along the street making the expansion of the roadway to add additional lanes difficult.

  As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately ten percent (10%).

If the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

- **No. 15 - Alamitos Avenue at Broadway:** Restripe Alamitos Avenue to provide a second southbound through lane[22]. The implementation of this improvement may require the removal of curbside parking on both of Alamitos Avenue, north and south of Broadway. Given the demand for curbside parking in the area, the loss of parking may not be considered acceptable. Further, the intersection of Alamitos Avenue and Broadway is physically constrained with existing development located along the street making the expansion of the roadway to add additional lanes difficult.

  As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately fifteen percent (15%).

  If recommended roadway improvements are not implement or the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

- **No. 17 - Magnolia Avenue at Ocean Boulevard:** Modify existing signal to provide protect left-turn phasing for the eastbound and westbound directions on Ocean Boulevard and install a southbound right-turn overlap phase.

- **No. 20 - Pine Avenue at Ocean Boulevard:** Restripe Pine Avenue to provide a separate southbound left-turn lane and a shared through-right lane on Pine Avenue. Implementation of this improvement may require the removal of the passenger loading/unloading zone on the east side of Pine, north of Ocean, and potentially impact the flow of traffic given existing bus stops are located along this section of Pine Avenue, both of which may not be considered acceptable.

  As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately fifteen percent (15%).

  If recommended roadway improvements are not implement or the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

As there are no significant impacts at the remaining twenty four (25) key study intersections, no traffic mitigation measures are required or recommended.

[22] Recommended improvement is generally consistent with City's anticipated (future) improvements for Alamitos Avenue between 7th Street and Ocean Boulevard, which includes the provision of two northbound and southbound through lanes, dedicated left-turn lanes at key intersections, provision of on-street bike lanes, and removal of on-street parking (Source: City of Long Beach Traffic Engineer).

10.2 Recommended Project-Specific Improvements

The implementation of the following improvements will mitigate the impact of project traffic and ensure adequate access is provided for the Project:

- **Project Driveway A at Golden Shore:** Install traffic signal, and associated signing and striping modifications, inclusive of crosswalks. The installation of a traffic signal at Rose Avenue and Pacific Coast Highway, and associated signing and striping modifications, is subject to the approval of the City of Long Beach.

10.3 Project Fair-Share Contribution

Table 10-1 presents the peak hour percentage of net traffic impact at the study intersections cumulatively impacted by the proposed Project for Year 2020 traffic conditions. These fair share calculations are based on the percent project trips of near-term (Year 2020) traffic. As indicated above, the proposed Project can be expected to contribute a fair-share of the construction costs mitigate the proposed Project's significant cumulative traffic impacts.

Review of *Table 10-1* shows that the proposed Project's percentage of net traffic impact ranges approximately 13% and 30%. These percentages represent the project's "fair-share" cost responsibility associated with implementation of the recommended mitigation measures identified in *Section 10.1,* above.

10.4 Transportation Improvement Fee

Pursuant to the requirements of the City of Long Beach Municipal Code, Transportation Improvement Fees will be required of the Project. The Transportation Improvement Fee, based on the size of all new residential and commercial development in the City of Long Beach, is assessed as shown below:

- Residential: $1,125.00 per unit
- Office (downtown CBD area): $3.00 per square-foot
- Hotel (downtown CBD area): $1,125 per quest room

Based on a total Project development of 1,110 high-rise residential dwelling units, a 400-room hotel, 367,000 SF of office space and using the above-referenced unit costs, the proposed Golden Shore Master Plan can be expected to pay up to $2,799,750.00 in Transportation Improvement Fees. The precise fee, plus any credit for existing development, will be determined by the City upon issuance of project building permits.

TABLE 10-1

YEAR 2020 PROJECT FAIR SHARE CONTRIBUTION

Key Intersections	Impacted Peak Hour	(1) Existing Traffic	(2) Year 2020 Cumulative Traffic	(3) Year 2020 w/Project Traffic	(4) Project Percent Increase
7. Alamitos Avenue at 7th Street	AM	3,524	4,030	4,259	31.2%
10. Alamitos Avenue at 4th Street	PM	2,765	3,221	3,378	25.6%
15. Alamitos Avenue at Broadway	AM	2,172	2,545	2,693	28.4%
17. Magnolia Avenue at Ocean Boulevard	AM	3,621	4,387	4,557	18.2%
20. Pine Avenue at Ocean Boulevard	PM	3,896	4,686	4,808	13.4%

Notes:

- Net Project Percent Increase (4) = [Column (3) – Column (2)] / [Column (3) – Column (1)].

11.0 PARKING ANALYSIS

11.1 City Code Parking Analysis

To determine the number of parking spaces required for the proposed Golden Shore Master Plan project, the City of Long Beach Municipal Code, Chapter 21.41 - *Off-Street Parking and Loading Requirements* was utilized in conjunction with *Downtown Shoreline Planned Development District (PD-6)* and compared to the proposed Project parking supply. The City's Municipal Code specifies the following parking requirements for residential, hotel and office uses:

- Residential - Parking shall be required at:
  - 2.0 spaces per unit for 1 or more bedroom units,
  - Guest parking shall be counted as 1 space for every 6 units.

- Hotel/Motel Uses- Parking shall be required at:
  - 0.75 spaces/room, plus
  - 20 spaces per 1000 SF of banquet area.

- Office: 3 spaces per 1000 SF of usable floor area.

Table 11-1 summarizes the parking requirements for the proposed Golden Shore Master Plan project. As shown, direct application of the City's code to the proposed development in the West Site results in a code-parking requirement totaling 2,921 spaces, consisting of 1,244 spaces for the residential component, 840 spaces for the hotel component and 837 spaces for the office component. With a proposed parking supply of 2,265 parking spaces, the West Site of the proposed Project will be deficient by 656 parking spaces when compared to the City of Long Beach parking code requirement.

The proposed uses in the East Site of the project requires a total of 1,426 spaces based on application of the City's parking code, consisting of 1,162 spaces for the residential component and 264 spaces for the office component. With a proposed parking supply of 1,165 spaces, the East Site of the proposed Project will be 261 spaces short of satisfying the City's code requirements.

However, given the mixed use nature of the Project, especially the West Site, there is an opportunity to share parking spaces based on the utilization profile of each land use component of the Project, as well as the utilization of the banquet facilities of the hotel component. According to the Urban Land Institute's (ULI's) *Shared Parking* 2nd Edition publication, shared parking is defined as parking space that can be used to serve two or more individual land uses without conflict or encroachment. The ULI *Shared Parking* publication provides hourly parking accumulation rates for residential, hotel and office uses, as well as other uses to include retail, theatre, restaurant, hotel, etc. expressed as a percentage of the peak demand for the day. Therefore, it is recommended that prior to finalization of the project site plan, the project applicant prepare a shared parking analysis to verify the adequacy of the proposed Project parking supply or increase the parking supply to meet the City's parking code requirements.

TABLE 11-1

CITY CODE PARKING REQUIREMENTS[23]

Project Description	Square-feet of Development		City of Long Beach Code Parking Ratio	Spaces Required
West Site				
▪ High-Rise Condominiums				
- 1 bedroom or more	574	DU	2 space per 1 units	1,148
- Guest	574	DU	1 space per 6 units	96
▪ Hotel – Rooms	400	Rooms	0.75 space per room	300
- Banquet Area	27,000	SF	20 spaces per 1,000 SF	540
▪ General Office	279,000	SF	3 spaces per 1,000 GFA	837
			Required Parking Supply for West Site:	**2,921**
			Proposed Parking Supply for West Site:	**2,265**
			Parking Surplus/Deficiency (+/-) for West Site:	**-656**
East Site				
▪ High-Rise Condominiums				
- 1 bedroom or more	536	DU	2 space per 1 units	1,072
- Guest	536	DU	1 space per 6 units	90
▪ General Office	88,000	SF	3 spaces per 1,000 GFA	264
			Required Parking Supply for East Site:	**1,426**
			Proposed Parking Supply for East Site:	**1,165**
			Parking Surplus/Deficiency (+/-) for East Site:	**-261**

[23] Source: City of Long Beach Municipal Code, Chapter 21.41 - *Off-Street Parking and Loading Requirements*.

12.0 CONGESTION MANAGEMENT PROGRAM COMPLIANCE ASSESSMENT

The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system.

12.1 Traffic Impact Review

As required by the *2004 Congestion Management Program for Los Angeles County*, a review has been made of designated monitoring locations on the CMP highway system for potential impact analysis.

Per CMP TIA criteria, the geographic area examined in the TIA must include the following, at a minimum:

- All CMP arterial monitoring intersections, including freeway on and off-ramp intersections, where the project will add 50 or more trips during either the AM or PM weekday peak hours.
- Mainline freeway-monitoring stations where the project will add 150 or more trips, in either direction, during the AM or PM weekday peak hours.

Further, for CMP purposes, a project's impact is considered "significant" when the increases traffic demand on a CMP facility by 2.0% of the capacity (V/C ratio increase ≥ 0.020), causing or worsened LOS F (ICU > 1.00) conditions. Please note that the study intersections of Alamitos Avenue at 7th Street and Alamitos Avenue/Shoreline Drive at Ocean Boulevard are a part of the CMPHS of Los Angeles County where LOS E is the minimum acceptable operating condition.

12.1.1 *Freeways*

The closest CMP freeway monitoring location in the project vicinity is the I-710 Freeway n/o Rte 1 (PCH), Willow Street (CMP Station 1078). Based on the project's trip generation potential and distribution pattern, the proposed Project will not add more than 150 trips during the AM/PM peak hour at this CMP mainline freeway-monitoring location. Therefore, a CMP freeway traffic impact analysis is not required.

12.1.2 *Intersections*

The following CMP intersection monitoring location in the project vicinity has been identified:

CMP Station	Int. No.	Location
33	23	Alamitos Avenue at Ocean Boulevard
41	7	Alamitos Avenue at 7th Street

As stated earlier, the CMP guidelines require that arterial monitoring intersection locations must be examined if the proposed Project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic) at CMP monitoring intersections. The proposed Golden Shore Master Plan project will add over 50 trips at the identified CMP intersections during both the AM peak hour and PM peak hour.

- **Alamitos Avenue at 7th Street**– Based on the results of a detailed analysis of project added trips to the CMP system, approximately 229 trips during the AM peak hour and 241 trips during the PM peak hour will be added by the project at this location. Per CMP TIA guidelines, intersection level of service analysis is therefore required. The impact analysis is discussed in detail in this traffic study report and the results are summarized in *Table 8-1*. As presented previously, the analysis indicates that the Project will increase demand at this key intersection by two percent (0.02) or more during the AM peak hour. However, Alamitos Avenue at 7th Street is forecast to operate at LOS E, which meets the minimum acceptable service level that should be maintained at intersections that are part of the CMP network. Hence, based on the CMP significant impact criteria, the proposed Project does not significantly impact this intersection. Nevertheless, with the implementation of recommended improvements at this location, Alamitos Avenue at 7th Street is expected to operate at acceptable LOS D or better during the AM and PM peak hours and project's impact mitigated.

- **Alamitos Avenue/Shoreline Drive at Ocean Boulevard** – Based on the results of a detailed analysis of project added trips to the CMP system, approximately 184 trips during the AM peak hour and 195 trips during the PM peak hour will be added by the project at this location. Per CMP TIA guidelines, intersection level of service analysis is therefore required. The impact analysis is discussed in detail in this traffic study report and the results are summarized in *Table 8-1*. The CMP intersection of Alamitos Avenue at Ocean Boulevard is forecast to operate LOS F during the AM and PM peak hours, without or with Project traffic. However, based on the CMP significant impact criteria, the proposed Project does not significantly impact this intersection as it is expected to add less than two percent to the ICU values at this CMP intersection.

12.2 Transit Impact Review

As required by the *2004 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. As previously discussed, a number of transit services exist in the project area, necessitating the following transit impact review.

The project trip generation, as shown in *Table 5-2*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate project-related transit trip generation. Pursuant to the CMP guidelines, the proposed Project is forecasted to generate 36 transit trips (15 inbound and 21 outbound) during the AM peak hour and 38 transit trips (20 inbound and 18 outbound) during the PM peak hour. Over a 24-hour period the proposed Project is forecasted to generate 429 daily weekday transits.

It is anticipated that the existing transit service in the project area would be able to accommodate the project generated transit trips. Metro Blue Line, Metro Local Line 232, Metro Express Line 577X, OCTA Route 60, LADOT Commuter Express 142, Long Beach Transit (LBT) Routes Nos. 1, 7, 21, 22, 23, 46, 51, 52, 61, 62, 63, 66, 81, 91, 92, 93, 94, 96, 111, 112, 172, 173, 174, 181, 182, 191, 192 and 193 currently serves the surrounding vicinity. Therefore, given the number of transit trips generated by the project and the existing transit routes in the project vicinity, it is concluded that the existing public transit system would not be significantly impacted by the proposed Project.

13.0 SUMMARY OF FINDINGS AND CONCLUSIONS

- ***Project Description*** – The proposed Project site consists of two parcel of land that is located on both the east side and west side of Golden Shore, south of Ocean Boulevard and north of Shoreline Drive in downtown Long Beach. The site is currently developed with multi-level office buildings totaling 294,003 SF of general office uses and 920 parking spaces.

  The proposed Golden Shore Master Plan involves the development of 1,110 dwelling units (DU) of high-rise residential condominiums, a 400 room hotel with 27,000 SF of banquet space, and 367,000 square-feet (SF) of office space on two separate parcels (West Site and East Site) with a parking supply of 3,430 spaces . The proposed Project is anticipated to be completed by Year 2020.

- ***Study Scope*** – The following thirty intersections were selected for detailed peak hour level of service analyses under Existing (Year 2009) Traffic Conditions, Year 2020 Cumulative Traffic Conditions and Year 2020 Cumulative plus Project Traffic Conditions:

  1. Magnolia Avenue at 7th Street
  2. Pacific Avenue at 7th Street
  3. Pine Avenue at 7th Street
  4. Long Beach Boulevard at 7th Street
  5. Atlantic Avenue at 7th Street
  6. Martin Luther King Jr. Ave at 7th St
  7. Alamitos Avenue at 7th Street
  8. Magnolia Avenue at 6th Street
  9. Magnolia Avenue at 5th Street
  10. Alamitos Avenue at 4th Street
  11. Magnolia Avenue at 3rd Street
  12. Magnolia Avenue at Broadway
  13. Pacific Avenue at Broadway
  14. Pine Avenue at Broadway
  15. Alamitos Avenue at Broadway
  16. Golden Ave\Golden Shore at Ocean Blvd
  17. Magnolia Avenue at Ocean Boulevard
  18. Chestnut Place at Ocean Boulevard
  19. Pacific Avenue at Ocean Boulevard
  20. Pine Avenue at Ocean Boulevard
  21. Long Beach Boulevard at Ocean Boulevard
  22. Atlantic Avenue at Ocean Boulevard
  23. Alamitos Ave/Shoreline Dr at Ocean Blvd
  24. Golden Shore at Seaside Way
  25. Chestnut Place at Seaside Way
  26. Pine Avenue at Seaside Way
  27. Golden Shore at I-710 SB Off-Ramp
  28. Golden Shore at EB Shoreline Dr On-Ramp
  29. Chestnut Place at Shoreline Drive
  30. Pine Avenue at Shoreline Drive

  The analysis is focused on assessing potential traffic impacts during the morning and evening commute peak hours (between 7:00-9:00 AM, and 4:00-6:00 PM) on a typical weekday.

- ***Level of Service (LOS) Standards and Significant Impact Criteria*** - Impacts to local and regional transportation systems are considered significant if:
  - An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Long Beach considers LOS D (ICU = 0.801 - 0.900) to be the minimum acceptable LOS for all intersections. For the City of Long Beach, the current LOS, if worse than LOS D (i.e. LOS E or F), should also be maintained; and

- The project increases traffic demand at the study intersection by 2% of capacity (ICU increase ≥ 0.020), causing or worsening LOS E or F (ICU > 0.901). At unsignalized intersections, a "significant" adverse traffic impact is defined as a project that adds 2% or more to traffic delay (seconds per vehicle) at an intersection operating LOS E or F.

- ***Existing Traffic Conditions*** – One of the thirty key study intersections currently operate at an unacceptable LOS E or F during the AM and/or PM peak hours. The remaining key study intersections currently operate at acceptable LOS D or better during the AM and PM peak hours. The intersection operating at an adverse level of service is:

	AM Peak Hour		PM Peak Hour	
Key Intersection	ICU/HCM	LOS	ICU/HCM	LOS
23. Alamitos Ave/Shoreline Dr at Ocean Blvd	1.120	F	1.062	F

- ***Project Trip Generation*** – With the application of trip generation credits applied for the existing mixed-use development on the site, the proposed Project is forecast to generate 8,761 net daily trips, with 731 net trips (302 inbound, 429 outbound) produced in the AM peak hour and 772 net trips (405 inbound, 367 outbound) produced in the PM peak hour on a "typical" weekday.

- ***Related Projects Trip Generation*** – Nineteen (19) related projects were considered as part of the cumulative traffic analysis. On a typical weekday, the related projects are expected to generate a combined total of 29,432 daily trips on a "typical" weekday, with 2,036 trips (862 inbound and 1,174 outbound) forecast during the AM peak hour, and 2,591 trips (1,408 inbound and 1,183 outbound) during the PM peak hour.

- ***Year 2020 Cumulative Traffic Conditions*** – An analysis of future (Year 2020) Cumulative traffic conditions indicates that four (4) intersections operate at adverse levels of service for Year 2020 based on the ICU/HCM methodologies and the City's LOS standards. These intersections, reported below, are forecast to operate at LOS E or LOS F during the peak hour indicated:

	AM Peak Hour		PM Peak Hour	
Key Intersection	ICU/HCM	LOS	ICU/HCM	LOS
7. Alamitos Avenue at 7th Street	0.972	E	--	--
10. Alamitos Avenue at 4th Street	--	--	0.998	E
17. Magnolia Avenue at Ocean Boulevard	0.920	E	--	--
23. Alamitos Ave./Shoreline Dr. at Ocean Blvd.	1.262	F	1.193	F

- ***Year 2020 Cumulative Traffic Conditions Plus Project*** – The results of traffic analysis indicates the proposed Project will significantly impact five (5) of the thirty (30) study intersections when compared to the LOS standards and the significant traffic impact criteria defined in this report. The intersections impacted by the proposed Project include:

Key Intersection

7. Alamitos Avenue at 7th Street

10. Alamitos Avenue at 4th Street

15. Alamitos Avenue at Broadway

17. Magnolia Avenue at Ocean Boulevard

20. Pine Avenue at Ocean Boulevard

- ***Site Access –*** As currently proposed, primary access to the West Site and East Site of the Project will be provided via one full-access driveway on Golden Shore, between Ocean Boulevard and Seaside Way, with secondary access provided by two proposed access driveways from Seaside Way. Analysis of the project driveways on Seaside Way indicate acceptable service levels are projected. For the primary access on Golden Shore, the installation of a traffic signal is recommended to ensure acceptable service levels are achieved.

- ***Internal Circulation –*** Since detail site plans are not available for review at this time, it is recommended that prior to finalization of the project site plan, the appropriate turning templates (ASSHTO SU-30, WB-50 and fire trucks) be utilized to confirm that all vehicles can properly access and circulate through the site and that all internal drive aisle widths, project driveway widths, and parking stall widths satisfy the City's minimum requirements.

- ***Area Traffic Improvements*** – To mitigate the Project's traffic impacts, the following mitigation measures are recommended. The Project can be expected to pay a fair-share of the construction costs to mitigate the proposed Project's significant cumulative traffic impacts at the City's discretion.

  - **No. 7 - Alamitos Avenue at 7th Street:** Restripe 7th Street to provide a third westbound through lane on 7th Street, through the intersection of Martin Luther King, Jr. and 7th Street. The implementation of this improvement would require the removal of curbside parking on both sides of 7th Street, east and west of Alamitos Avenue. Given the demand for curbside parking in the area, the loss of parking may not be considered acceptable. Further, the intersection of Alamitos Avenue and 7th Street is physically constrained with existing development located along the street making the expansion of the roadway to add additional lanes difficult. As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately ten percent (10%).

    If recommended roadway improvements are not implement or the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

  - **No. 10 - Alamitos Avenue at 4th Street:** No physical mitigation measure feasible; any additional turn lanes will require widening and additional right-of-way. The intersection

of Alamitos Avenue and 4th Street is physically constrained with existing development located along the street making the expansion of the roadway to add additional lanes difficult. As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately ten percent (10%).

If the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

- **No. 15 - Alamitos Avenue at Broadway:** Restripe Alamitos Avenue to provide a second southbound through lane. The implementation of this improvement may require the removal of curbside parking on both of Alamitos Avenue, north and south of Broadway. Given the demand for curbside parking in the area, the loss of parking may not be considered acceptable. Further, the intersection of Alamitos Avenue and Broadway is physically constrained with existing development located along the street making the expansion of the roadway to add additional lanes difficult. Please note that the provision of two southbound lanes on Alamitos Avenue is generally consisted with the City's future improvement plans for this key roadway segment. As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately fifteen percent (15%).

  If recommended roadway improvements are not implement or the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

- **No. 17 - Magnolia Avenue at Ocean Boulevard:** Modify existing signal to provide protect left-turn phasing for the eastbound and westbound directions on Ocean Boulevard and install a southbound right-turn overlap phase.

- **No. 20 - Pine Avenue at Ocean Boulevard:** Restripe Pine Avenue to provide a separate southbound left-turn lane and a shared through-right lane on Pine Avenue. Implementation of this improvement may require the removal of the passenger loading/unloading zone on the east side of Pine, north of Ocean, and potentially impact the flow of traffic given existing bus stops are located along this section of Pine Avenue, both of which may not be considered acceptable. As an alternative, the Project's impact at this key intersection could be mitigated by reducing the Project's trip generation potential by approximately fifteen percent (15%).

  If recommended roadway improvements are not implement or the project's trip generation is not reduced, then the Project's impact at this key intersection would be considered and unavoidable.

- ***Project Specific- Improvements –*** The following improvement is recommended to ensure adequate access is provided for the Project:

  - **Project Driveway A at Golden Shore:** Install traffic signal, and associated signing and striping modifications, inclusive of crosswalks. The installation of a traffic signal at Rose Avenue and Pacific Coast Highway, and associated signing and striping modifications, is subject to the approval of the City of Long Beach.

- ***Development Impact Fee*** – Based on a total Project development of 1,110 high-rise residential dwelling units, a 400-room hotel, 367,000 SF of office space and application of the appropriate fees, the proposed Golden Shore Master Plan can be expected to pay up to $2,799,750.00 in Transportation Improvement Fees. The precise fee, plus any credit for existing development, will be determined by the City upon issuance of project building permits.

- ***Parking Analysis*** – Direct application of the City's code to the proposed development in the West Site results in a code-parking requirement totaling 2,921 spaces, consisting of 1,244 spaces for the residential component, 840 spaces for the hotel component and 837 spaces for the office component. With a proposed parking supply of 2,265 parking spaces, the West Site of the proposed Project will be deficient by 656 parking spaces when compared to the City of Long Beach parking code requirement.

  The proposed uses in the East Site of the project requires a total of 1,426 spaces based on application of the City's parking code, consisting of 1,162 spaces for the residential component and 264 spaces for the office component. With a proposed parking supply of 1,165 spaces, the East Site of the proposed Project will be 261 spaces short of satisfying the City's code requirements.

  However, given the mixed use nature of the Project, especially the West Site, there is an opportunity to share parking spaces based on the utilization profile of each land use component of the Project, as well as the utilization of the banquet facilities of the hotel component. According to the Urban Land Institute's (ULI's) *Shared Parking* 2nd Edition publication, shared parking is defined as parking space that can be used to serve two or more individual land uses without conflict or encroachment. The ULI *Shared Parking* publication provides hourly parking accumulation rates for residential, hotel and office uses, as well as other uses to include retail, theatre, restaurant, hotel, etc. expressed as a percentage of the peak demand for the day. Therefore, it is recommended that prior to finalization of the project site plan, the project applicant prepare a shared parking analysis to verify the adequacy of the proposed Project parking supply or increase the parking supply to meet the City's parking code requirements.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

1

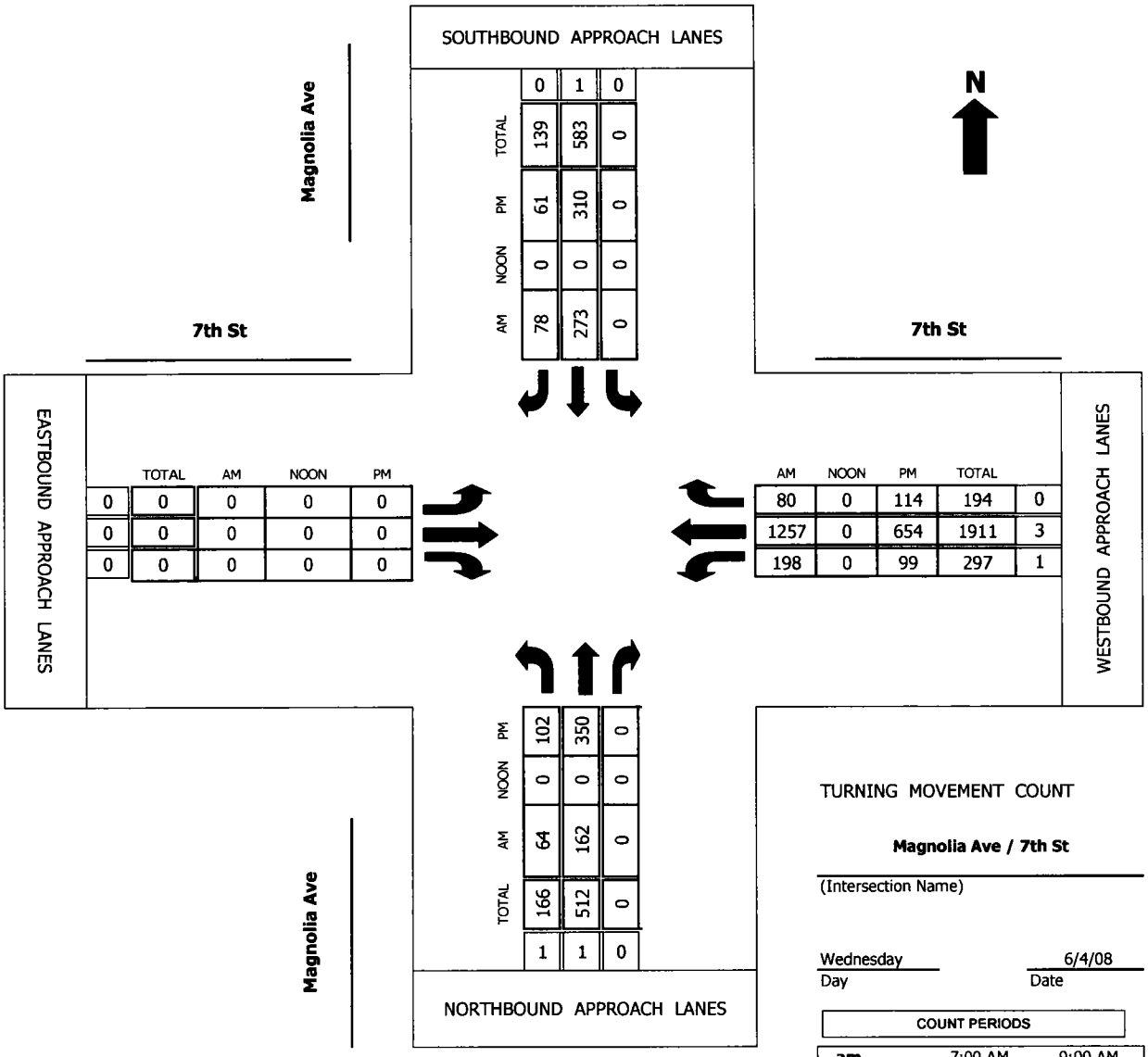
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Magnolia Ave/7th St

Project #: 08-2274-001



TURNING MOVEMENT COUNT

Magnolia Ave / 7th St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 7th St DAY: WEDNESDAY PROJECT# 08-2274-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	0	0	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	21	38			58	14				41	302	13	487
7:15 AM	17	40			46	17				50	340	18	528
7:30 AM	14	37			78	22				47	307	21	526
7:45 AM	15	44			61	19				53	324	17	533
8:00 AM	18	41			88	20				48	286	24	525
8:15 AM	12	47			70	14				50	271	19	483
8:30 AM	9	43			66	10				43	240	21	432
8:45 AM	7	49			69	11				35	216	14	401
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	113	339	0	0	536	127	0	0	0	367	2286	147	3915

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	64	162	0	0	273	78	0	0	0	198	1257	80	2112
PEAK HR. FACTOR:		0.958			0.813			0.000			0.941		0.991

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 7th St | DAY: WEDNESDAY | PROJECT# 08-2274-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	0	0	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	21	50			65	14				19	147	20	336
4:15 PM	27	89			53	17				23	160	29	398
4:30 PM	31	69			80	21				27	167	35	430
4:45 PM	22	94			71	16				31	152	28	414
5:00 PM	30	105			84	11				22	173	22	447
5:15 PM	19	82			75	13				19	162	29	399
5:30 PM	24	67			46	16				22	174	24	373
5:45 PM	17	58			42	10				17	160	19	323
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 191	NT 614	NR 0	SL 0	ST 516	SR 118	EL 0	ET 0	ER 0	WL 180	WT 1295	WR 206	TOTAL 3120

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	102	350	0	0	310	61	0	0	0	99	654	114	1690
PEAK HR. FACTOR:		0.837			0.918			0.000			0.947		0.945

CONTROL: Signalized

2

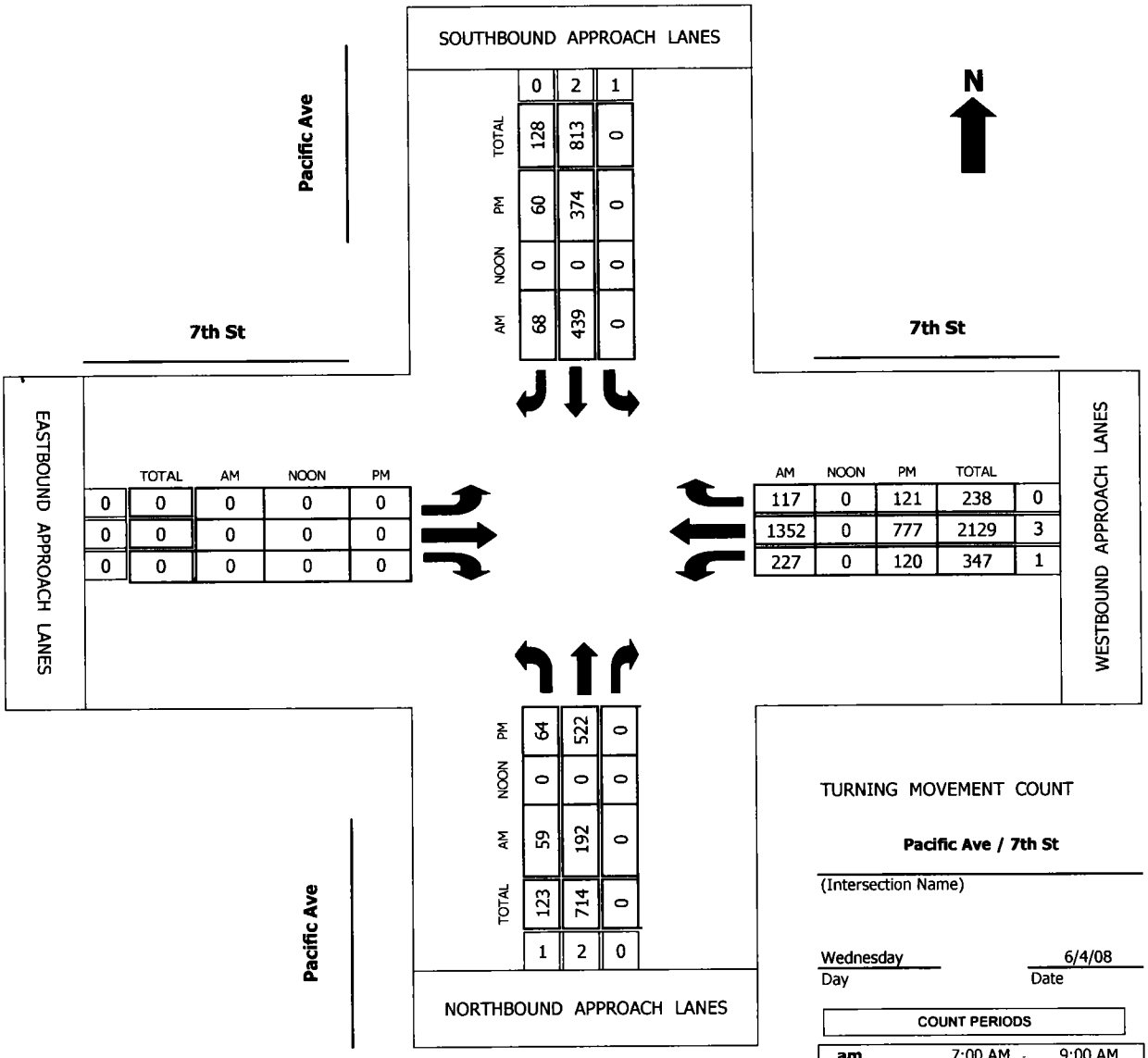
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pacific Ave/7th St

Project #: 08-2274-002



TURNING MOVEMENT COUNT

Pacific Ave / 7th St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pacific Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 7th St | DAY: WEDNESDAY | PROJECT# 08-2274-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	0	0	0	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	7	41			57	10				37	315	19	486
7:15 AM	10	47			75	15				41	370	23	581
7:30 AM	15	53			89	19				52	345	31	604
7:45 AM	11	47			117	21				48	367	36	647
8:00 AM	17	42			129	17				60	324	28	617
8:15 AM	16	50			104	11				67	316	22	586
8:30 AM	14	36			89	14				57	274	25	509
8:45 AM	9	28			73	6				40	252	18	426
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	99	344	0	0	733	113	0	0	0	402	2563	202	4456

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	59	192	0	0	439	68	0	0	0	227	1352	117	2454
PEAK HR. FACTOR:		0.923			0.868			0.000			0.940		0.948

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pacific Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 7th St | DAY: WEDNESDAY | PROJECT# 08-2274-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	0	0	0	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	10	97			81	12				19	180	18	417
4:15 PM	12	121			102	14				22	195	24	490
4:30 PM	14	134			97	10				32	208	31	526
4:45 PM	21	124			89	17				29	193	29	502
5:00 PM	17	143			86	19				37	181	37	520
5:15 PM	22	108			79	20				29	164	42	464
5:30 PM	19	91			72	14				34	152	38	420
5:45 PM	14	79			60	16				24	146	29	368
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	129	897	0	0	666	122	0	0	0	226	1419	248	3707

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	64	522	0	0	374	60	0	0	0	120	777	121	2038
PEAK HR. FACTOR:		0.916			0.935			0.000			0.939		0.969

CONTROL: Signalized

3

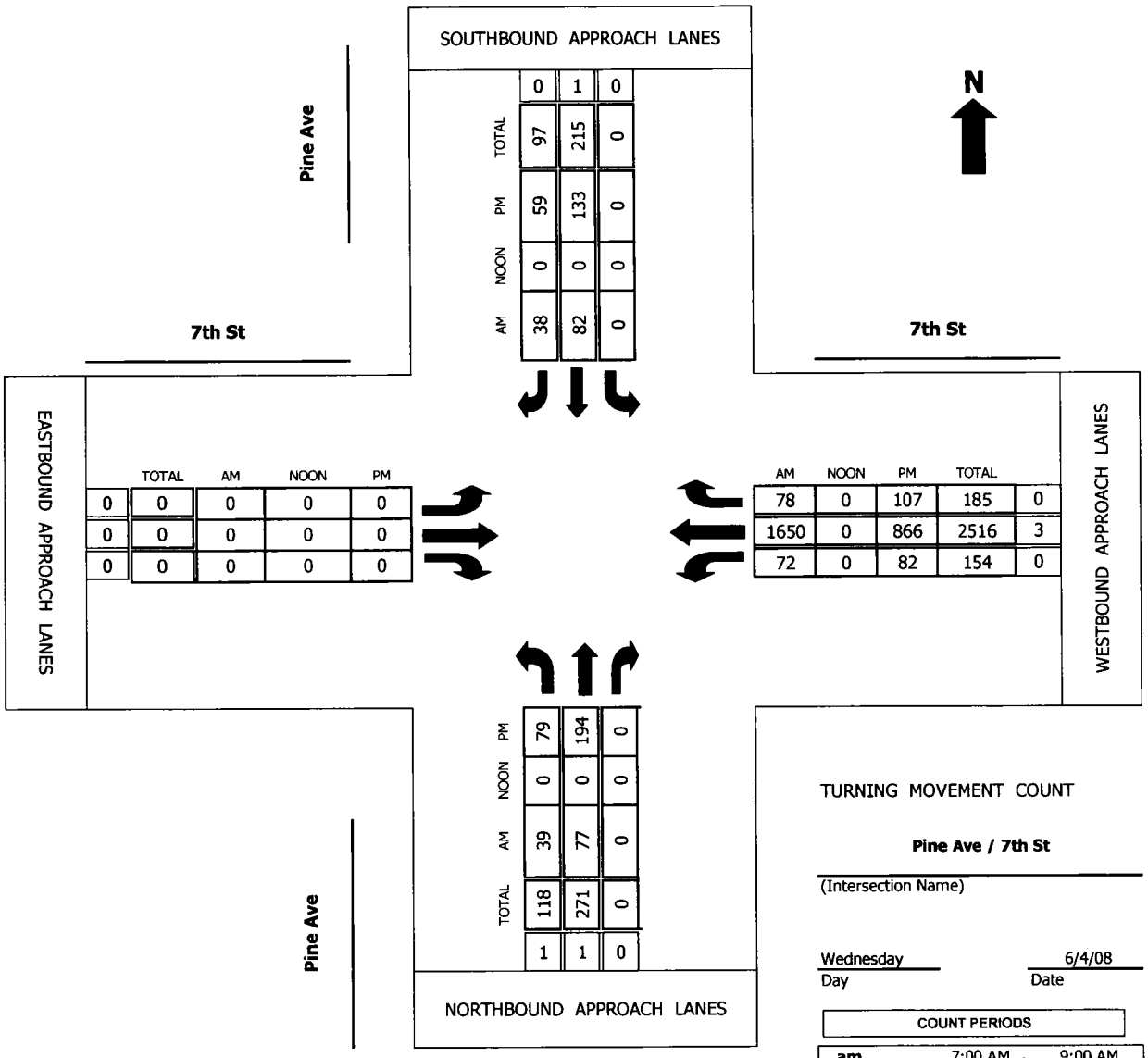
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pine Ave/7th St

Project #: 08-2274-003



TURNING MOVEMENT COUNT

Pine Ave / 7th St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/4/2008 | LOCATION: City of Logn Beach

E-W STREET: 7th St | DAY: WEDNESDAY | PROJECT# 08-2274-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	0	0	0	0	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	6	11			11	5				11	364	13	421
7:15 AM	7	17			15	8				14	421	17	499
7:30 AM	11	16			21	10				17	407	15	497
7:45 AM	12	21			19	11				22	428	22	535
8:00 AM	9	23			27	9				19	394	24	505
8:15 AM	14	19			31	14				25	323	22	448
8:30 AM	17	28			20	11				22	339	18	455
8:45 AM	11	30			17	8				18	294	15	393
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	87	165	0	0	161	76	0	0	0	148	2970	146	3753

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	39	77	0	0	82	38	0	0	0	72	1650	78	2036
PEAK HR. FACTOR:		0.879			0.833			0.000			0.953		0.951

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/4/2008 | LOCATION: City of Logn Beach

E-W STREET: 7th St | DAY: WEDNESDAY | PROJECT# 08-2274-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	0	0	0	0	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	13	30			19	7				12	197	19	297
4:15 PM	17	38			28	10				14	211	17	335
4:30 PM	21	56			35	14				19	229	25	399
4:45 PM	22	41			38	17				21	214	31	384
5:00 PM	17	50			31	18				25	226	29	396
5:15 PM	19	47			29	10				17	197	22	341
5:30 PM	14	39			25	7				26	183	17	311
5:45 PM	11	31			16	5				18	175	13	269
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	134	332	0	0	221	88	0	0	0	152	1632	173	2732

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	79	194	0	0	133	59	0	0	0	82	866	107	1520
PEAK HR. FACTOR:		0.886			0.873			0.000			0.942		0.952

CONTROL: Signalized

4

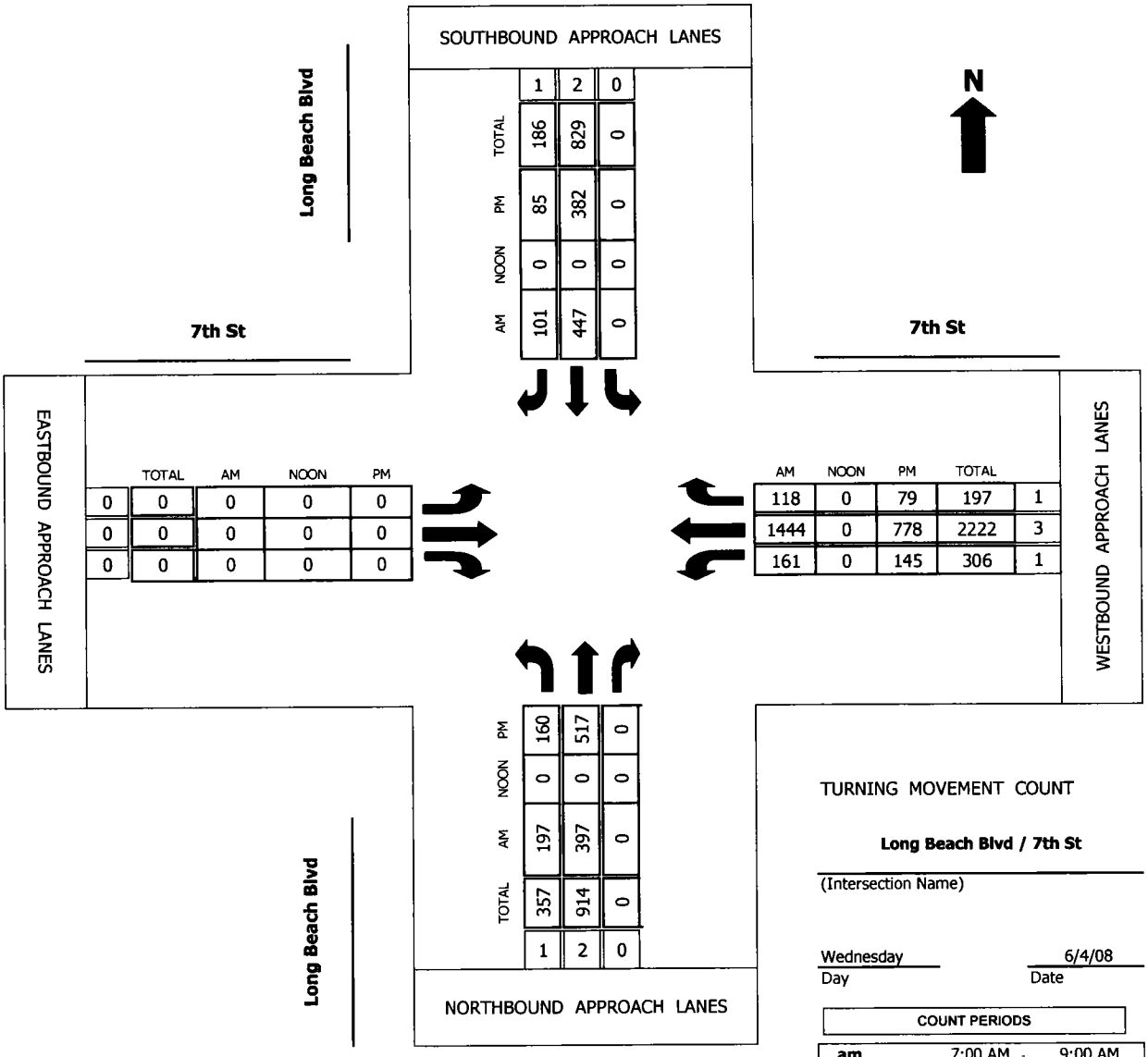
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Long Beach Blvd/7th St

Project #: 08-2274-004



TURNING MOVEMENT COUNT

Long Beach Blvd / 7th St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Long Beach Blvd DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 7th St DAY: WEDNESDAY PROJECT# 08-2274-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	0	0	0	1	3	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	40	57			40	23				44	282	23	509
7:15 AM	52	91			77	24				31	322	28	625
7:30 AM	56	100			74	20				26	335	30	641
7:45 AM	46	101			132	35				32	434	35	815
8:00 AM	52	93			122	23				55	351	24	720
8:15 AM	43	103			119	23				48	324	29	689
8:30 AM	36	68			96	16				26	255	23	520
8:45 AM	34	82			102	19				42	220	23	522
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	359	695	0	0	762	183	0	0	0	304	2523	215	5041

AM Peak Hr Begins at: 730 AM

PEAK													
VOLUMES =	197	397	0	0	447	101	0	0	0	161	1444	118	2865
PEAK HR. FACTOR:		0.952			0.820			0.000			0.860		0.879

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Long Beach Blvd DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 7th St DAY: WEDNESDAY PROJECT# 08-2274-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	2	1	0	0	0	1	3	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	21	51			60	7				27	179	19	364
4:15 PM	37	88			97	11				21	157	21	432
4:30 PM	45	97			110	15				29	183	27	506
4:45 PM	27	137			122	22				33	199	18	558
5:00 PM	36	151			89	25				41	188	23	553
5:15 PM	47	112			97	17				39	195	21	528
5:30 PM	50	117			74	21				32	196	17	507
5:45 PM	39	102			80	14				31	168	19	453
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 302	NT 855	NR 0	SL 0	ST 729	SR 132	EL 0	ET 0	ER 0	WL 253	WT 1465	WR 165	TOTAL 3901

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	160	517	0	0	382	85	0	0	0	145	778	79	2146
PEAK HR. FACTOR:		0.905			0.811			0.000			0.982		0.961

CONTROL: Signalized

5

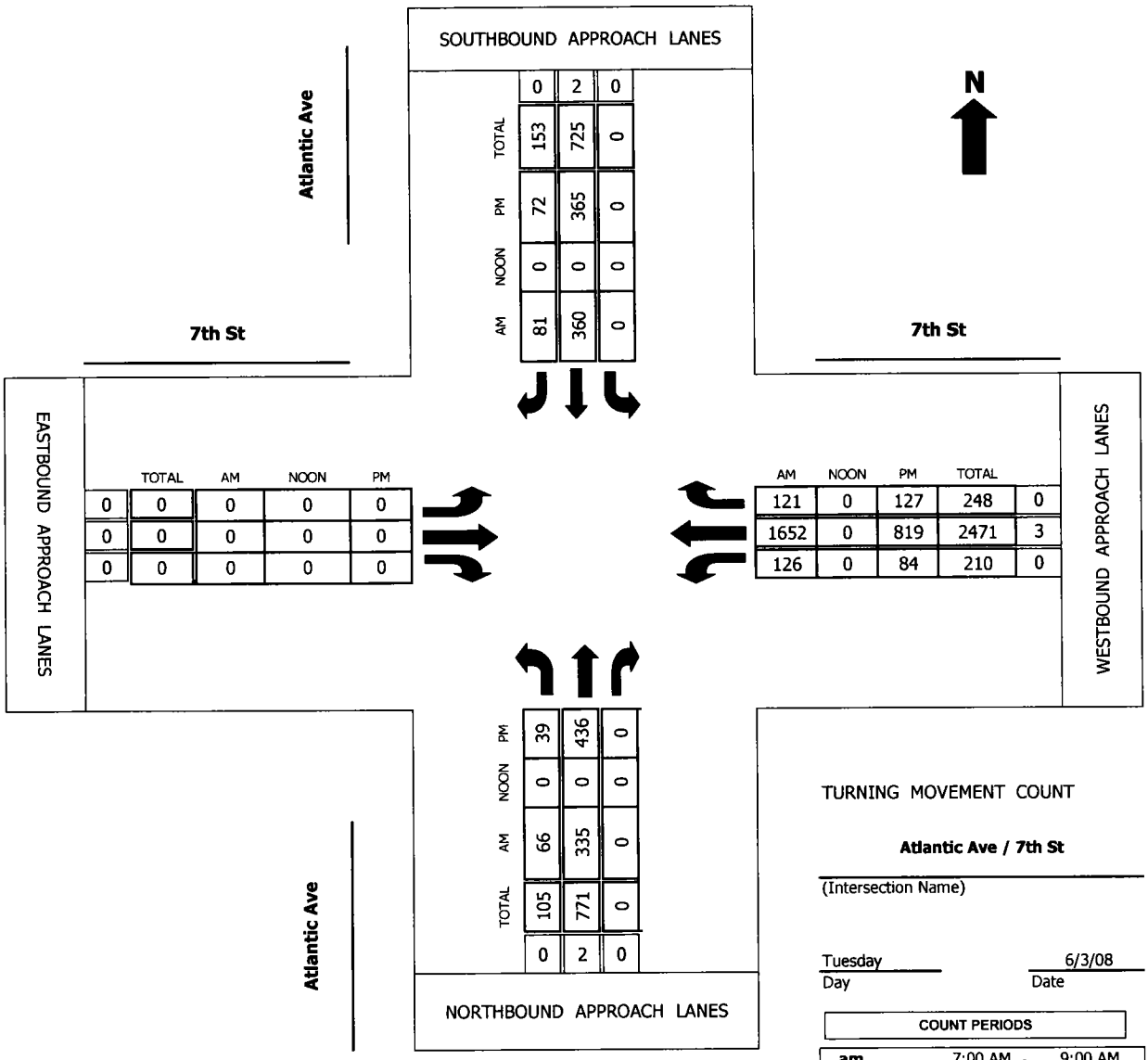
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Atlantic Ave/7th St

Project #: 08-2274-005



TURNING MOVEMENT COUNT

Atlantic Ave / 7th St

(Intersection Name)

Tuesday (Day) 6/3/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Atlantic Ave | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: 7th St | DAY: TUESDAY | PROJECT# 08-2274-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	14	51			61	24				20	333	13	516
7:15 AM	8	71			67	15				36	397	25	619
7:30 AM	15	94			90	30				30	391	37	687
7:45 AM	21	76			103	21				28	428	31	708
8:00 AM	22	94			100	15				32	436	28	727
8:15 AM	1	84			72	18				34	354	36	599
8:30 AM	1	86			89	13				26	270	29	514
8:45 AM	9	81			69	22				18	234	38	471
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	91	637	0	0	651	158	0	0	0	224	2843	237	4841

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	66	335	0	0	360	81	0	0	0	126	1652	121	2741
PEAK HR. FACTOR:		0.864			0.889			0.000			0.957		0.943

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Atlantic Ave DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: 7th St DAY: TUESDAY PROJECT# 08-2274-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	0	0	0	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	7	60			60	12				17	201	14	371
4:15 PM	8	71			80	15				21	189	21	405
4:30 PM	10	102			97	19				19	202	27	476
4:45 PM	14	115			110	17				25	185	26	492
5:00 PM	8	130			91	21				17	227	39	533
5:15 PM	7	89			67	15				23	205	35	441
5:30 PM	11	77			84	11				14	231	27	455
5:45 PM	6	80			75	10				16	189	22	398
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 71	NT 724	NR 0	SL 0	ST 664	SR 120	EL 0	ET 0	ER 0	WL 152	WT 1629	WR 211	TOTAL 3571

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	39	436	0	0	365	72	0	0	0	84	819	127	1942
PEAK HR. FACTOR:		0.861			0.860			0.000			0.910		0.911

CONTROL: Signalized

6

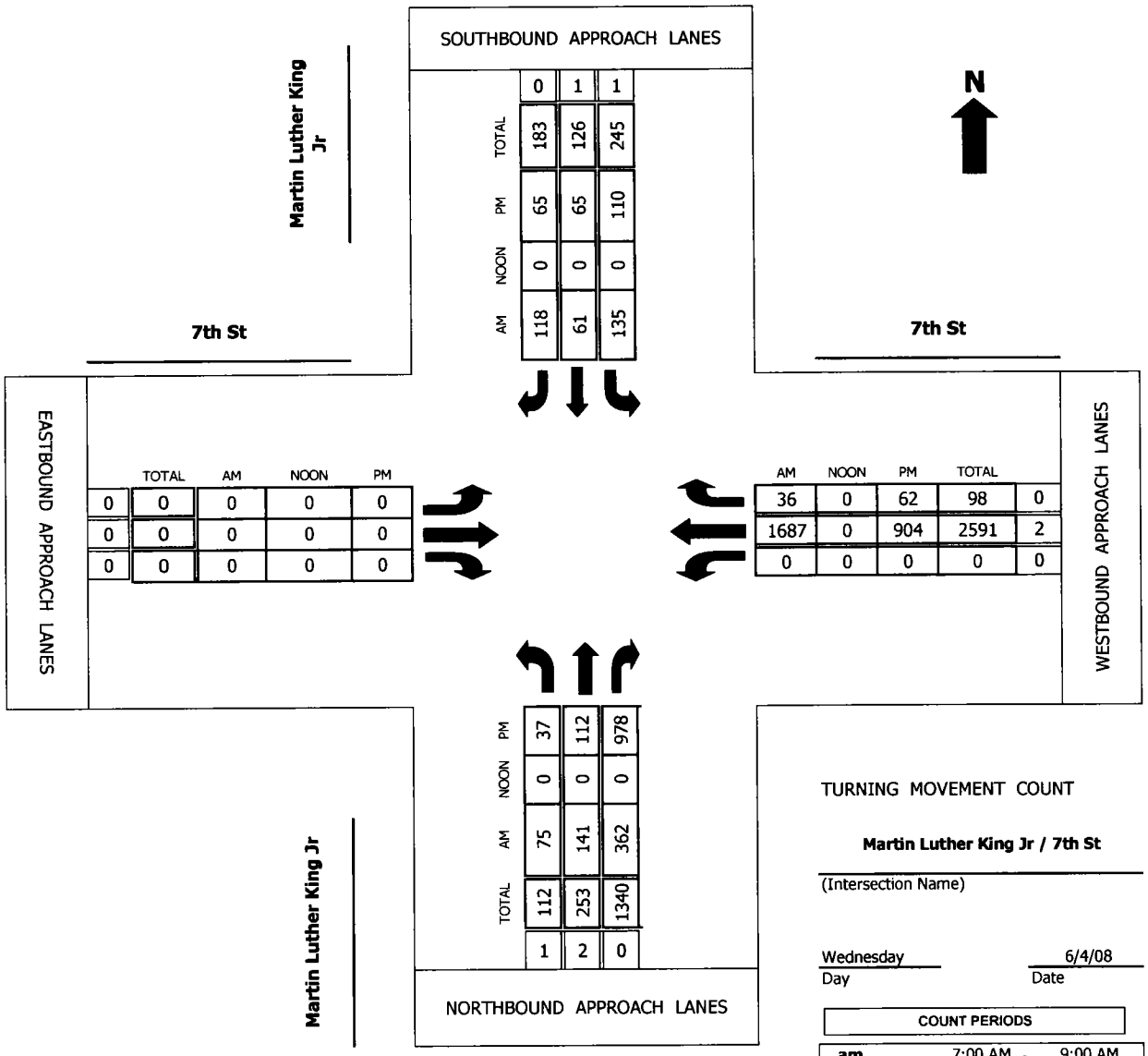
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Martin Luther King Jr/7th St

Project #: 08-2274-006



TURNING MOVEMENT COUNT

Martin Luther King Jr / 7th St

(Intersection Name)

Wednesday — Day

6/4/08 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Martin Luther King Jr DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 7th St DAY: WEDNESDAY PROJECT# 08-2274-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	2	1	1	0	0	0	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	11	19	62	16	10	10					393	3	524
7:15 AM	19	23	74	24	7	14					365	6	532
7:30 AM	18	31	81	30	17	21					438	4	640
7:45 AM	26	51	95	49	21	28					444	15	729
8:00 AM	17	30	110	32	14	31					425	8	667
8:15 AM	14	29	76	24	9	38					380	9	579
8:30 AM	11	27	74	17	13	25					310	7	484
8:45 AM	12	20	96	16	11	14					258	4	431
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	128	230	668	208	102	181	0	0	0	0	3013	56	4586

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	75	141	362	135	61	118	0	0	0	0	1687	36	2615
PEAK HR. FACTOR:		0.840			0.801			0.000			0.938		0.897

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Martin Luther King Jr DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 7th St DAY: WEDNESDAY PROJECT# 08-2274-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	2	1	1	0	0	0	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	10	17	167	37	16	8				225	10	490	
4:15 PM	15	19	183	36	18	12				199	16	498	
4:30 PM	8	22	177	29	21	15				218	15	505	
4:45 PM	4	23	295	25	19	19				197	10	592	
5:00 PM	10	31	242	38	20	14				246	17	618	
5:15 PM	14	28	237	23	7	15				218	22	564	
5:30 PM	9	30	204	24	19	17				243	13	559	
5:45 PM	12	36	185	27	25	16				176	7	484	
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	82	206	1690	239	145	116	0	0	0	0	1722	110	4310

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	37	112	978	110	65	65	0	0	0	0	904	62	2333
PEAK HR. FACTOR:		0.875			0.833			0.000			0.918		0.944

CONTROL: Signalized

7

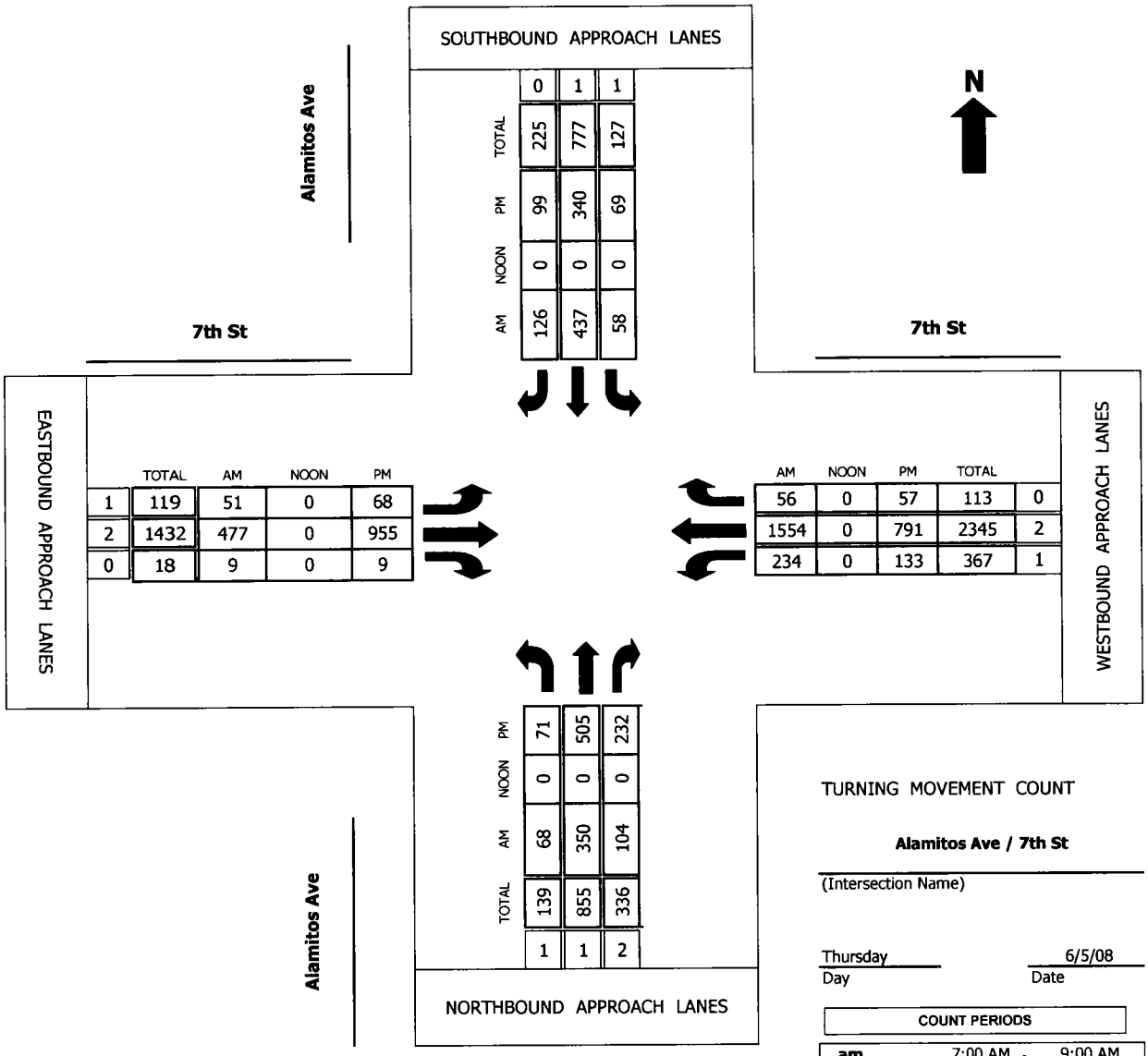
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Alamitos Ave/7th St

Project #: 08-2274-007



	TOTAL	AM	NOON	PM
1	119	51	0	68
2	1432	477	0	955
0	18	9	0	9

	AM	NOON	PM	TOTAL	
	56	0	57	113	0
	1554	0	791	2345	2
	234	0	133	367	1

	0	1	1
TOTAL	225	777	127
PM	99	340	69
NOON	0	0	0
AM	126	437	58

PM	71	505	232
NOON	0	0	0
AM	68	350	104
TOTAL	139	855	336
	1	1	2

TURNING MOVEMENT COUNT

Alamitos Ave / 7th St

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Alamitos Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: 7th St | DAY: THURSDAY | PROJECT# 08-2274-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	12	52	34	14	67	30	5	109	1	33	355	5	717
7:15 AM	14	78	28	11	97	32	7	98	3	42	307	8	725
7:30 AM	12	87	21	13	88	28	8	114	2	54	402	14	843
7:45 AM	17	99	27	12	122	36	14	127	1	65	407	11	938
8:00 AM	21	86	31	15	109	33	18	111	2	55	388	19	888
8:15 AM	18	78	25	18	118	29	11	125	4	60	357	12	855
8:30 AM	16	73	23	17	94	19	4	101	2	58	283	9	699
8:45 AM	12	81	30	10	101	22	6	94	1	43	234	10	644
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	122	634	219	110	796	229	73	879	16	410	2733	88	6309

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	68	350	104	58	437	126	51	477	9	234	1554	56	3524
PEAK HR. FACTOR:		0.913			0.913			0.945			0.954		0.939

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Alamitos Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: 7th St | DAY: THURSDAY | PROJECT# 08-2274-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	14	97	28	14	65	19	11	192	2	35	203	21	701
4:15 PM	17	104	37	17	70	22	14	201	4	29	175	19	709
4:30 PM	20	99	33	14	54	19	11	195	2	34	183	17	681
4:45 PM	18	129	46	19	69	24	15	232	2	28	177	18	777
5:00 PM	16	132	59	13	80	29	18	261	0	32	231	14	885
5:15 PM	19	118	60	20	91	23	17	240	1	34	168	11	802
5:30 PM	18	126	67	17	100	23	18	222	6	39	215	14	865
5:45 PM	13	103	52	14	87	18	14	197	3	26	154	12	693
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 135	NT 908	NR 382	SL 128	ST 616	SR 177	EL 118	ET 1740	ER 20	WL 257	WT 1506	WR 126	TOTAL 6113

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	71	505	232	69	340	99	68	955	9	133	791	57	3329
PEAK HR. FACTOR:		0.957			0.907			0.925			0.885		0.940

CONTROL: Signalized

8

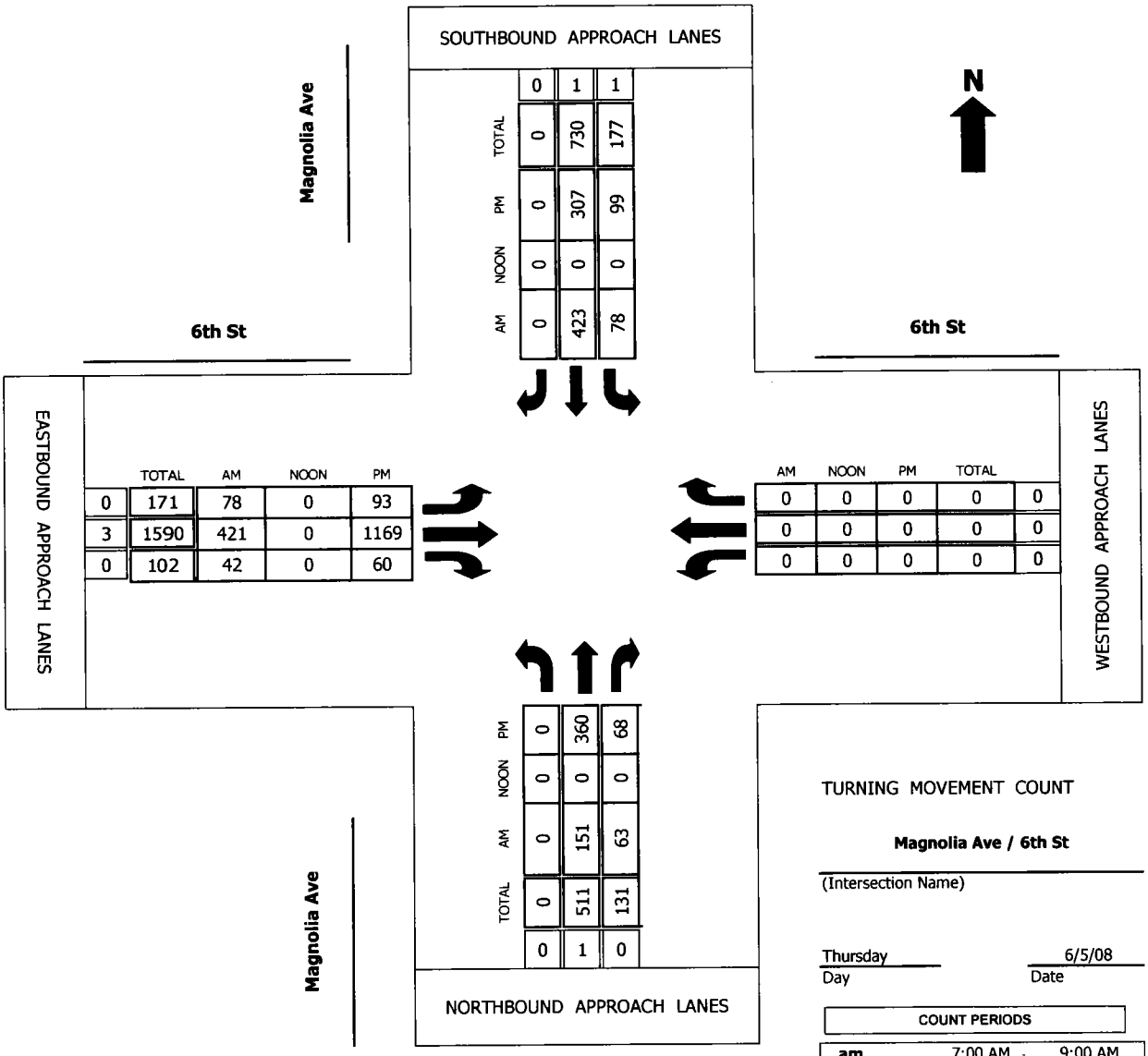
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Magnolia Ave/6th St

Project #: 08-2274-008



TURNING MOVEMENT COUNT

Magnolia Ave / 6th St

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: 6th St | DAY: THURSDAY | PROJECT# 08-2274-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	3	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		40	6	10	90		19	110	9				284
7:15 AM		38	8	17	77		17	131	12				300
7:30 AM		31	14	21	112		21	114	10				323
7:45 AM		36	17	19	94		24	97	8				295
8:00 AM		40	14	22	115		19	112	11				333
8:15 AM		44	18	16	102		14	98	13				305
8:30 AM		36	11	18	93		20	102	8				288
8:45 AM		42	8	12	86		14	115	6				283
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 307	NR 96	SL 135	ST 769	SR 0	EL 148	ET 879	ER 77	WL 0	WT 0	WR 0	TOTAL 2411

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	0	151	63	78	423	0	78	421	42	0	0	0	1256
PEAK HR. FACTOR:		0.863			0.914			0.933			0.000		0.943

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: 6th St | DAY: THURSDAY | PROJECT# 08-2274-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	3	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		53	11	22	60		18	201	10				375
4:15 PM		94	14	19	59		22	244	11				463
4:30 PM		80	12	23	87		20	293	14				529
4:45 PM		95	17	29	68		24	287	17				537
5:00 PM		109	18	26	83		27	310	14				587
5:15 PM		76	21	21	69		22	279	15				503
5:30 PM		75	18	18	54		19	244	10				438
5:45 PM		55	14	16	50		16	220	9				380
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	0	637	125	174	530	0	168	2078	100	0	0	0	3812

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	0	360	68	99	307	0	93	1169	60	0	0	0	2156
PEAK HR. FACTOR:		0.843			0.923			0.942			0.000		0.918

CONTROL: Signalized

9

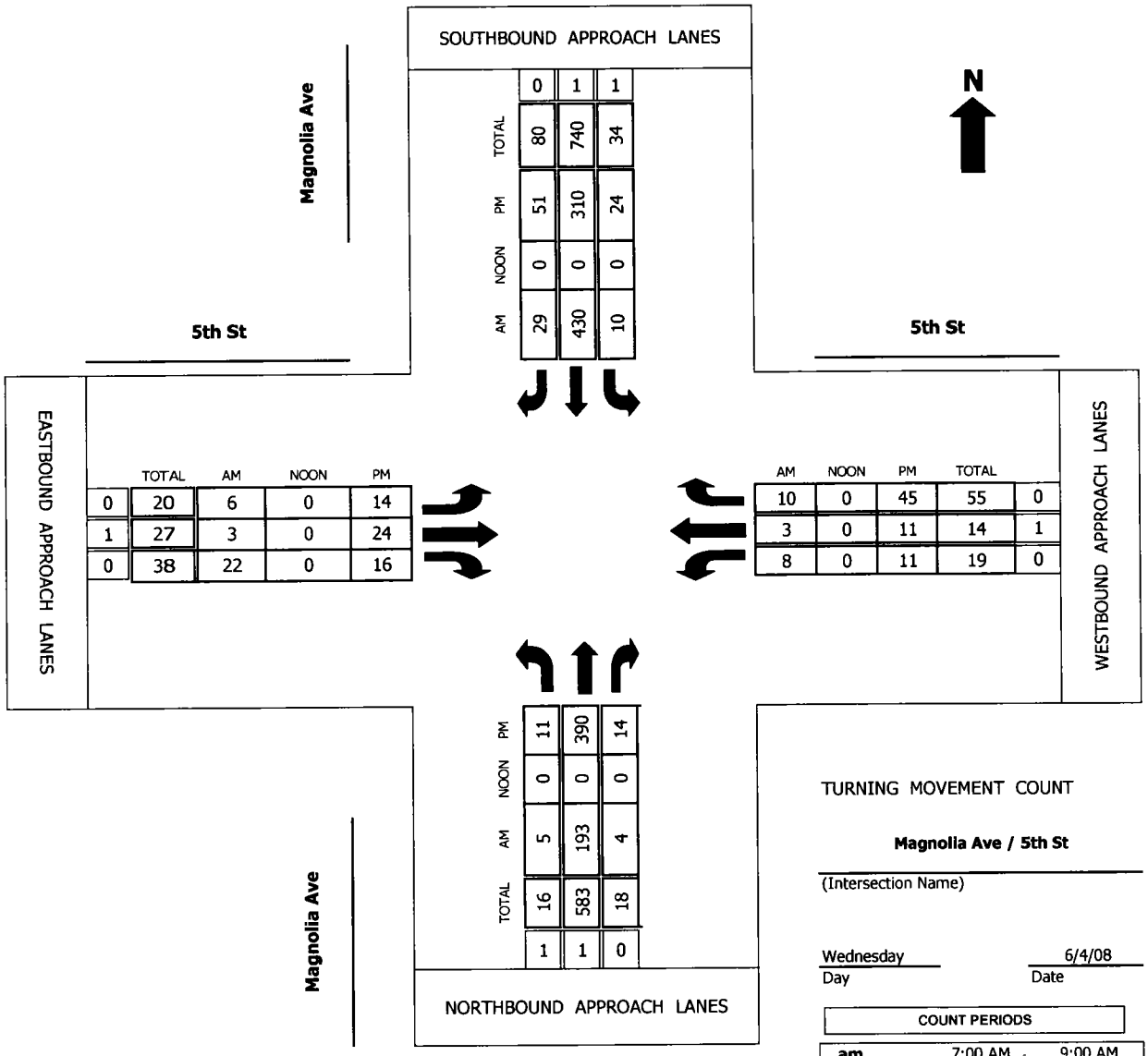
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Magnolia Ave/5th St

Project #: 08-2274-009



TURNING MOVEMENT COUNT

Magnolia Ave / 5th St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 5th St | DAY: WEDNESDAY | PROJECT# 08-2274-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	32	0	0	94	5	0	1	4	1	2	1	140
7:15 AM	2	41	0	4	80	6	0	2	6	2	0	2	145
7:30 AM	1	38	1	2	112	9	0	0	7	0	1	2	173
7:45 AM	3	45	2	3	91	7	3	1	5	4	0	4	168
8:00 AM	1	53	0	4	117	5	2	2	6	3	2	3	198
8:15 AM	0	57	1	1	110	8	1	0	4	1	0	1	184
8:30 AM	2	55	0	3	93	6	0	1	2	2	1	0	165
8:45 AM	1	50	1	2	85	4	0	0	4	1	0	2	150
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	10	371	5	19	782	50	6	7	38	14	6	15	1323

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	5	193	4	10	430	29	6	3	22	8	3	10	723
PEAK HR. FACTOR:		0.871			0.931			0.775			0.656		0.913

CONTROL: 2-Way Stop (EW)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 5th St DAY: WEDNESDAY PROJECT# 08-2274-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	2	56	3	9	68	4	2	5	3	1	3	7	163
4:15 PM	3	94	1	6	63	7	3	7	2	2	4	11	203
4:30 PM	4	75	3	7	91	11	4	6	5	4	3	13	226
4:45 PM	2	111	4	5	74	18	2	4	4	3	1	9	237
5:00 PM	2	110	6	6	82	15	5	7	5	2	3	12	255
5:15 PM	3	80	5	8	66	16	4	3	3	1	4	9	202
5:30 PM	3	83	2	5	54	11	6	5	1	2	3	10	185
5:45 PM	5	56	3	3	51	9	5	4	2	4	5	7	154
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 24	NT 665	NR 27	SL 49	ST 549	SR 91	EL 31	ET 41	ER 25	WL 19	WT 26	WR 78	TOTAL 1625

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	11	390	14	24	310	51	14	24	16	11	11	45	921
PEAK HR. FACTOR:		0.879			0.883			0.794			0.838		0.903

CONTROL: 2-Way Stop (EW)

10

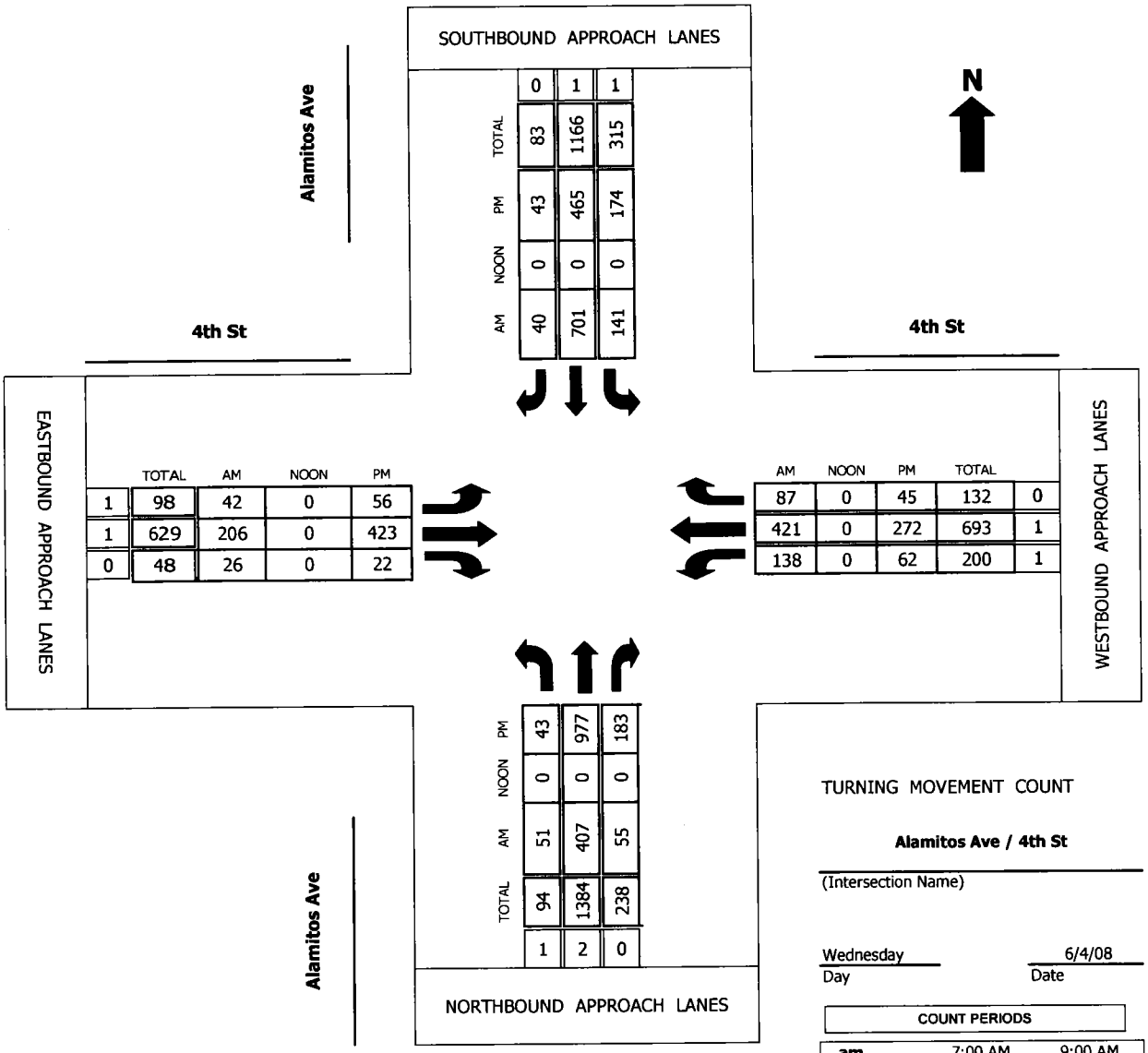
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Alamitos Ave/4th St

Project #: 08-2274-010



	TOTAL	AM	NOON	PM
1	98	42	0	56
1	629	206	0	423
0	48	26	0	22

AM	NOON	PM	TOTAL	
87	0	45	132	0
421	0	272	693	1
138	0	62	200	1

TOTAL	83	1166	315
PM	43	465	174
NOON	0	0	0
AM	40	701	141
	0	1	1

PM	43	977	183
NOON	0	0	0
AM	51	407	55
TOTAL	94	1384	238
	1	2	0

TURNING MOVEMENT COUNT

Alamitos Ave / 4th St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	500 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Alamitos Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: 4th St DAY: WEDNESDAY PROJECT# 08-2274-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	0	1	1	0	1	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	17	80	2	18	89	7	9	25	1	26	73	19	366
7:15 AM	11	79	10	20	124	2	12	42	4	32	83	18	437
7:30 AM	13	94	15	35	141	3	4	41	3	33	112	19	513
7:45 AM	10	108	9	32	196	15	15	69	8	48	150	28	688
8:00 AM	13	109	18	43	189	9	14	43	8	27	76	19	568
8:15 AM	15	96	13	31	175	13	9	53	7	30	83	21	546
8:30 AM	17	85	7	29	120	8	8	56	7	28	79	24	468
8:45 AM	11	88	9	22	152	8	7	46	8	21	62	21	455
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 107	NT 739	NR 83	SL 230	ST 1186	SR 65	EL 78	ET 375	ER 46	WL 245	WT 718	WR 169	TOTAL 4041

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	51	407	55	141	701	40	42	206	26	138	421	87	2315
PEAK HR. FACTOR:		0.916			0.907			0.745			0.715		0.841

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Alamitos Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 4th St | DAY: WEDNESDAY | PROJECT# 08-2274-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	0	1	1	0	1	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	9	194	36	27	115	12	14	86	4	19	71	24	611
4:15 PM	13	188	21	32	108	7	17	101	10	27	69	12	605
4:30 PM	13	197	27	34	106	7	15	108	4	12	55	8	586
4:45 PM	10	226	37	35	126	10	13	130	11	11	77	7	693
5:00 PM	8	266	62	40	114	11	9	118	6	16	76	13	739
5:15 PM	11	262	29	51	118	9	17	101	4	14	58	11	685
5:30 PM	13	196	54	48	116	13	15	95	7	12	68	7	644
5:45 PM	11	253	38	35	117	10	15	109	5	20	70	14	697
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 88	NT 1782	NR 304	SL 302	ST 920	SR 79	EL 115	ET 848	ER 51	WL 131	WT 544	WR 96	TOTAL 5260

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	43	977	183	174	465	43	56	423	22	62	272	45	2765
PEAK HR. FACTOR:		0.895			0.958			0.942			0.902		0.935

CONTROL: Signalized

11

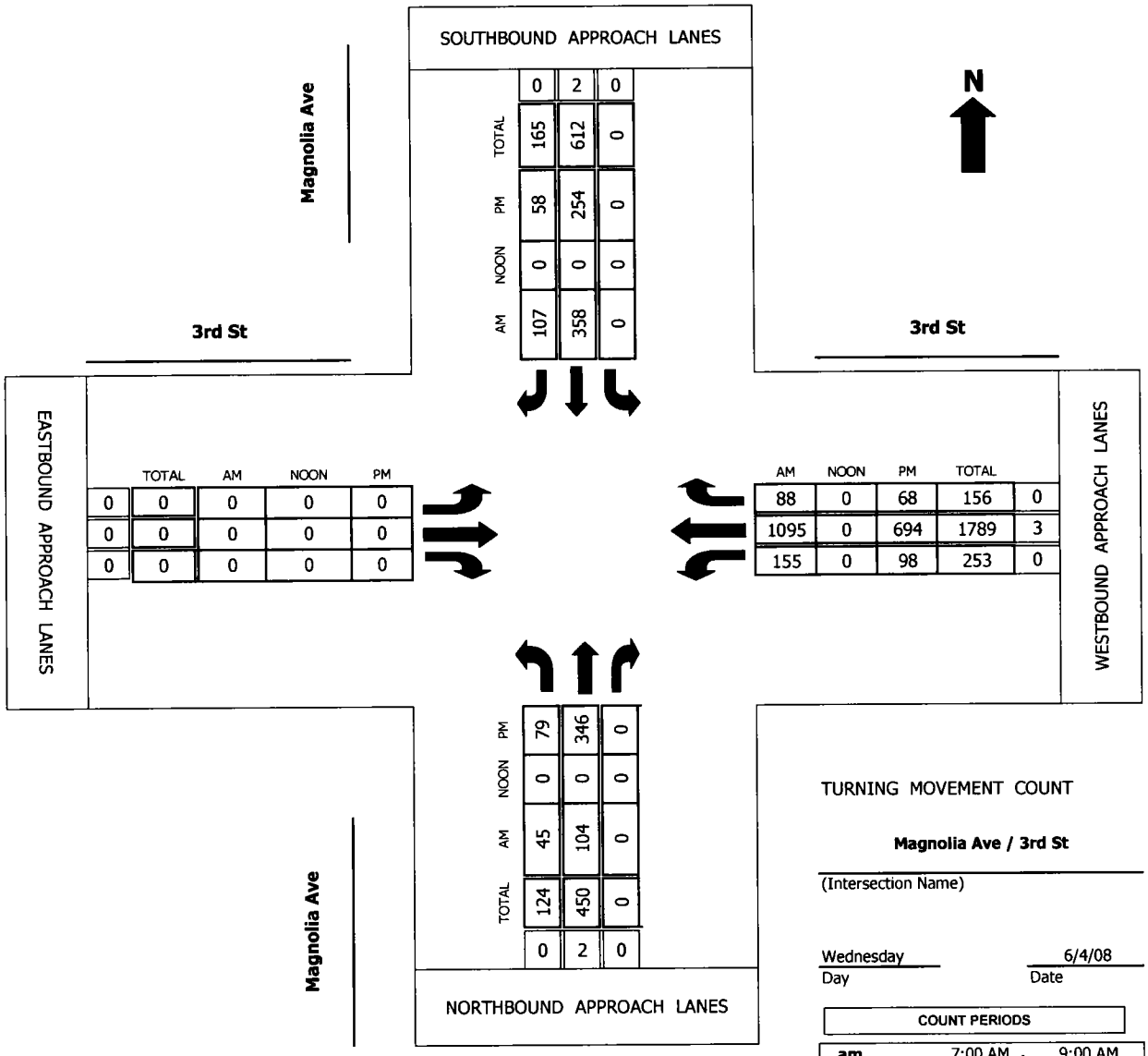
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Magnolia Ave/3rd St

Project #: 08-2274-011



TURNING MOVEMENT COUNT

Magnolia Ave / 3rd St

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 3rd St | DAY: WEDNESDAY | PROJECT# 08-2274-011

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	2	0	0	0	0	0	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	20			81	19				21	261	20	426
7:15 AM	6	9			67	26				29	274	24	435
7:30 AM	5	19			90	28				36	281	23	482
7:45 AM	13	24			80	23				50	290	24	504
8:00 AM	12	23			97	31				39	275	19	496
8:15 AM	15	38			91	25				30	249	22	470
8:30 AM	17	33			71	28				25	212	27	413
8:45 AM	21	38			60	31				17	161	20	348
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	93	204	0	0	637	211	0	0	0	247	2003	179	3574

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	45	104	0	0	358	107	0	0	0	155	1095	88	1952
PEAK HR. FACTOR:		0.703			0.908			0.000			0.919		0.968

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: 3rd St | DAY: WEDNESDAY | PROJECT# 08-2274-011

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	2	0	0	0	0	0	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	21	71			48	14				20	160	14	348
4:15 PM	27	84			59	17				21	170	17	395
4:30 PM	13	78			70	11				27	167	17	383
4:45 PM	22	96			66	12				23	184	16	419
5:00 PM	17	88			59	18				27	173	18	400
5:15 PM	14	74			51	21				19	161	15	355
5:30 PM	11	67			47	17				14	152	11	319
5:45 PM	10	58			37	12				11	136	14	278
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	135	616	0	0	437	122	0	0	0	162	1303	122	2897
PEAK VOLUMES =	79	346	0	0	254	58	0	0	0	98	694	68	1597
PEAK HR. FACTOR:		0.900			0.963			0.000			0.964		0.953

PM Peak Hr Begins at: 415 PM

CONTROL: Signalized

12

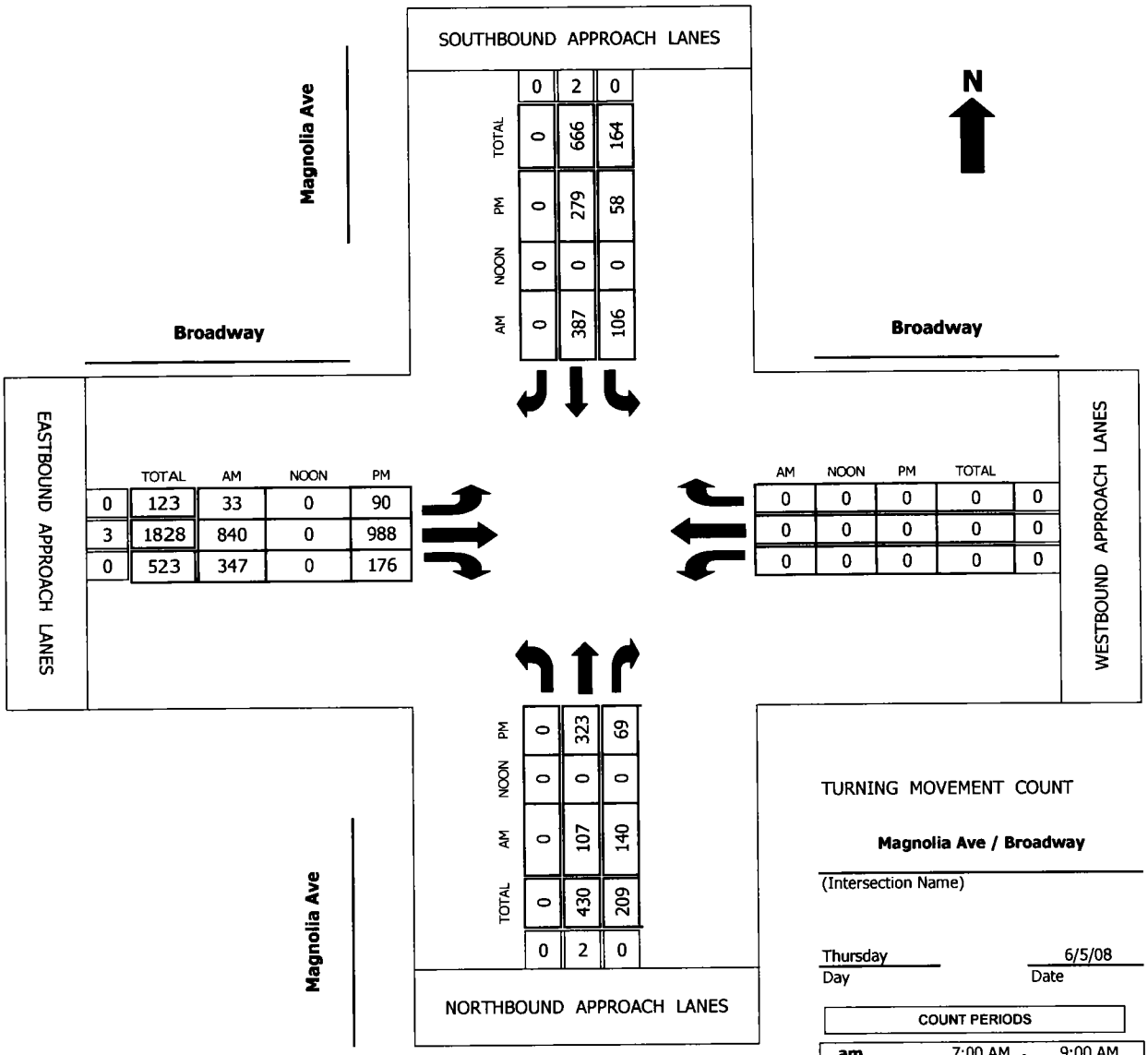
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Magnolia Ave/Broadway

Project #: 08-2274-012



TURNING MOVEMENT COUNT

Magnolia Ave / Broadway

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: Broadway | DAY: THURSDAY | PROJECT# 08-2274-012

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	0	2	0	0	3	1	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		30	13	11	88		9	165	51				367
7:15 AM		24	25	8	78		13	154	58				360
7:30 AM		25	32	21	87		4	179	70				418
7:45 AM		36	35	29	91		8	192	84				475
8:00 AM		22	41	38	109		7	204	102				523
8:15 AM		28	38	25	102		5	234	81				513
8:30 AM		21	26	14	85		13	210	80				449
8:45 AM		34	36	17	72		6	186	76				427
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 220	NR 246	SL 163	ST 712	SR 0	EL 65	ET 1524	ER 602	WL 0	WT 0	WR 0	TOTAL 3532

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	0	107	140	106	387	0	33	840	347	0	0	0	1960
PEAK HR. FACTOR:		0.870			0.838			0.953			0.000		0.937

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: Broadway | DAY: THURSDAY | PROJECT# 08-2274-012

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	0	2	0	0	3	1	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		76	22	15	55		16	247	37				468
4:15 PM		90	19	11	67		17	254	50				508
4:30 PM		66	19	17	78		22	237	53				492
4:45 PM		90	13	18	69		25	246	40				501
5:00 PM		77	18	12	65		26	251	33				482
5:15 PM		69	14	19	56		19	217	39				433
5:30 PM		55	17	21	44		21	209	36				403
5:45 PM		49	12	19	35		17	184	32				348
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	572	134	132	469	0	163	1845	320	0	0	0	3635

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	0	323	69	58	279	0	90	988	176	0	0	0	1983
PEAK HR. FACTOR:		0.899			0.887			0.977			0.000		0.976

CONTROL: Signalized

13

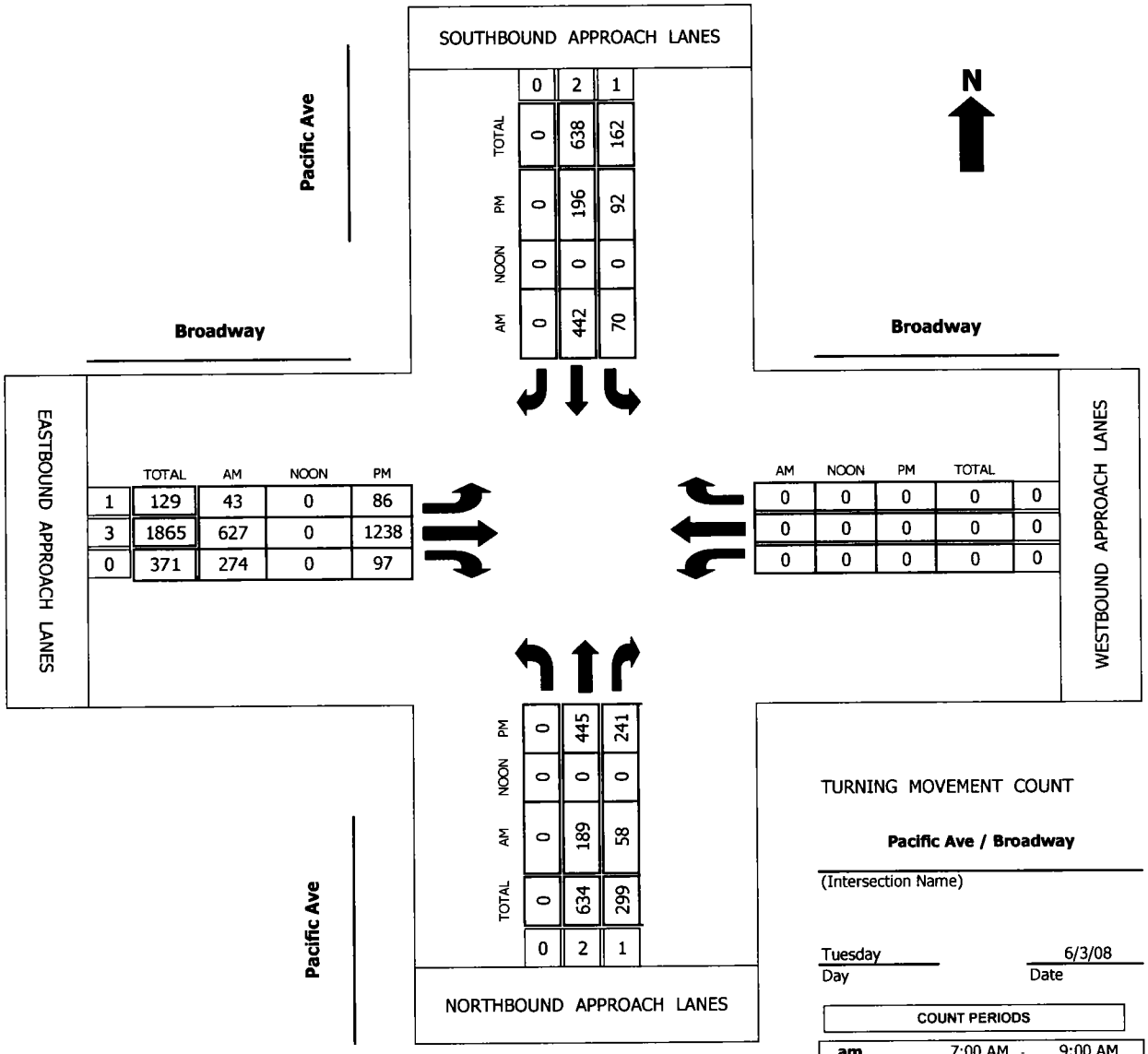
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pacific Ave/Broadway

Project #: 08-2274-013



TURNING MOVEMENT COUNT

Pacific Ave / Broadway

(Intersection Name)

Tuesday (Day) 6/3/08 (Date)

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	800 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pacific Ave DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: Broadway DAY: TUESDAY PROJECT# 08-2274-013

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	1	3	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		30	11	9	61		3	89	30				233
7:15 AM		35	4	17	79		4	116	27				282
7:30 AM		31	5	13	99		7	153	28				336
7:45 AM		48	9	12	112		3	178	41				403
8:00 AM		49	10	18	130		9	141	62				419
8:15 AM		46	11	14	124		8	164	61				428
8:30 AM		50	21	19	102		13	130	81				416
8:45 AM		44	16	19	86		13	192	70				440
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	333	87	121	793	0	60	1163	400	0	0	0	2957

AM Peak Hr Begins at: 800 AM

PEAK													
VOLUMES =	0	189	58	70	442	0	43	627	274	0	0	0	1703
PEAK HR. FACTOR:		0.870			0.865			0.858			0.000		0.968

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pacific Ave | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: Broadway | DAY: TUESDAY | PROJECT# 08-2274-013

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	1	3	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		75	31	25	47		14	272	21				485
4:15 PM		71	37	22	51		11	241	27				460
4:30 PM		89	60	24	47		25	313	31				589
4:45 PM		84	36	27	50		19	298	23				537
5:00 PM		137	71	21	42		25	347	28				671
5:15 PM		118	82	16	59		17	265	17				574
5:30 PM		106	52	28	45		25	328	29				613
5:45 PM		74	50	14	31		10	299	17				495
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 754	NR 419	SL 177	ST 372	SR 0	EL 146	ET 2363	ER 193	WL 0	WT 0	WR 0	TOTAL 4424

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	0	445	241	92	196	0	86	1238	97	0	0	0	2395
PEAK HR. FACTOR:		0.825			0.935			0.888			0.000		0.892

CONTROL: Signalized

14

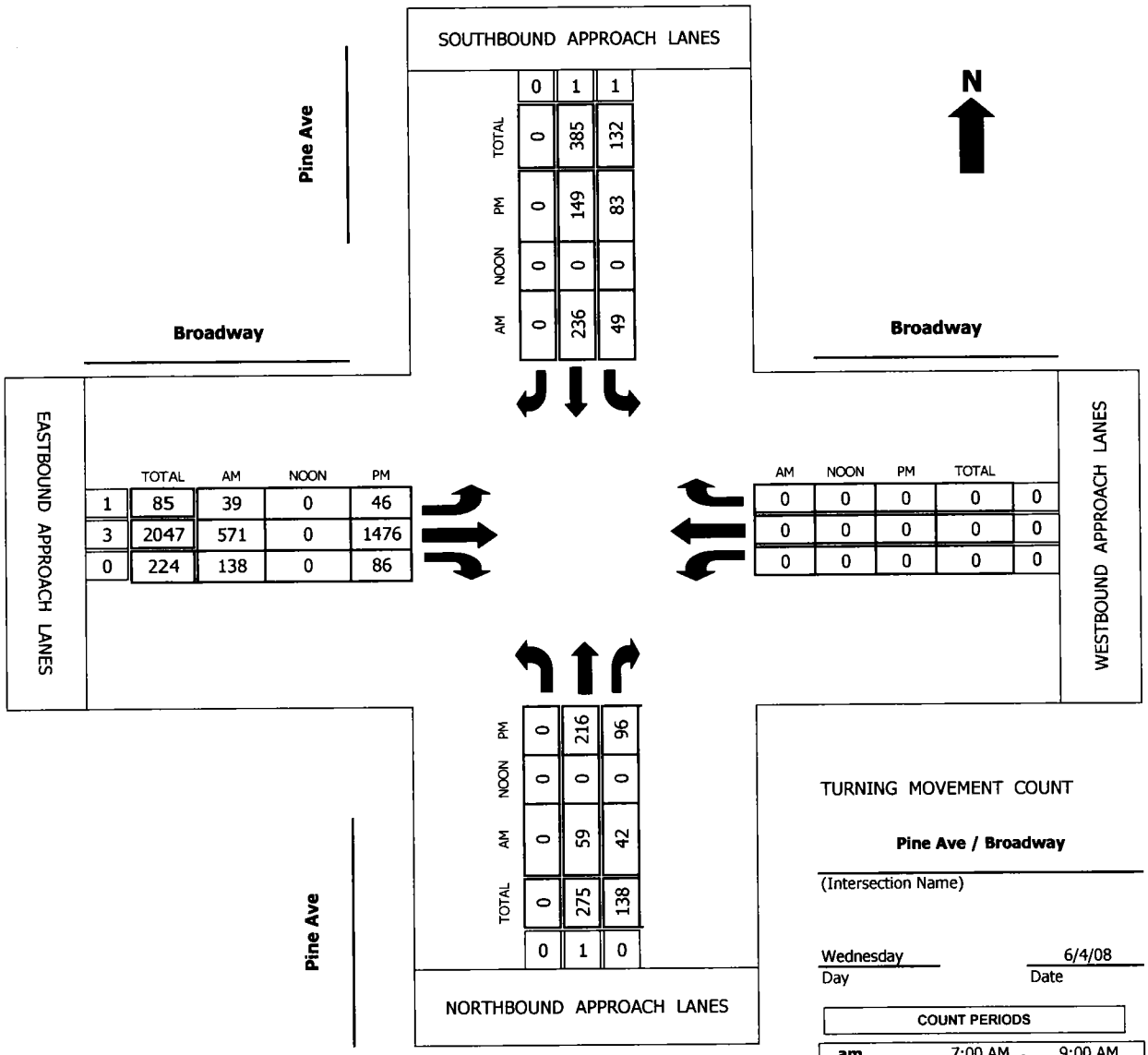
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pine Ave/Broadway

Project #: 08-2274-014



TURNING MOVEMENT COUNT

Pine Ave / Broadway

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	800 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Broadway DAY: WEDNESDAY PROJECT# 08-2274-014

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	1	3	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		6	3	6	36		8	84	23				166
7:15 AM		12	9	9	35		5	117	23				210
7:30 AM		14	10	12	40		6	133	16				231
7:45 AM		8	7	13	48		12	153	32				273
8:00 AM		15	10	16	80		6	131	29				287
8:15 AM		15	9	13	71		8	139	28				283
8:30 AM		17	15	9	44		14	131	43				273
8:45 AM		12	8	11	41		11	170	38				291
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 99	NR 71	SL 89	ST 395	SR 0	EL 70	ET 1058	ER 232	WL 0	WT 0	WR 0	TOTAL 2014

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	0	59	42	49	236	0	39	571	138	0	0	0	1134
PEAK HR. FACTOR:		0.789			0.742			0.854			0.000		0.974

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Broadway DAY: WEDNESDAY PROJECT# 08-2274-014

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	1	3	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		28	25	25	31		8	244	25				386
4:15 PM		48	21	9	40		15	299	24				456
4:30 PM		51	26	22	43		13	348	27				530
4:45 PM		45	17	14	36		12	341	21				486
5:00 PM		66	31	21	26		12	419	19				594
5:15 PM		54	22	26	44		9	368	19				542
5:30 PM		51	37	17	40		8	333	20				506
5:45 PM		41	17	23	57		7	303	25				473
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 384	NR 196	SL 157	ST 317	SR 0	EL 84	ET 2655	ER 180	WL 0	WT 0	WR 0	TOTAL 3973

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	0	216	96	83	149	0	46	1476	86	0	0	0	2152
PEAK HR. FACTOR:		0.804			0.829			0.893			0.000		0.906

CONTROL: Signalized

15

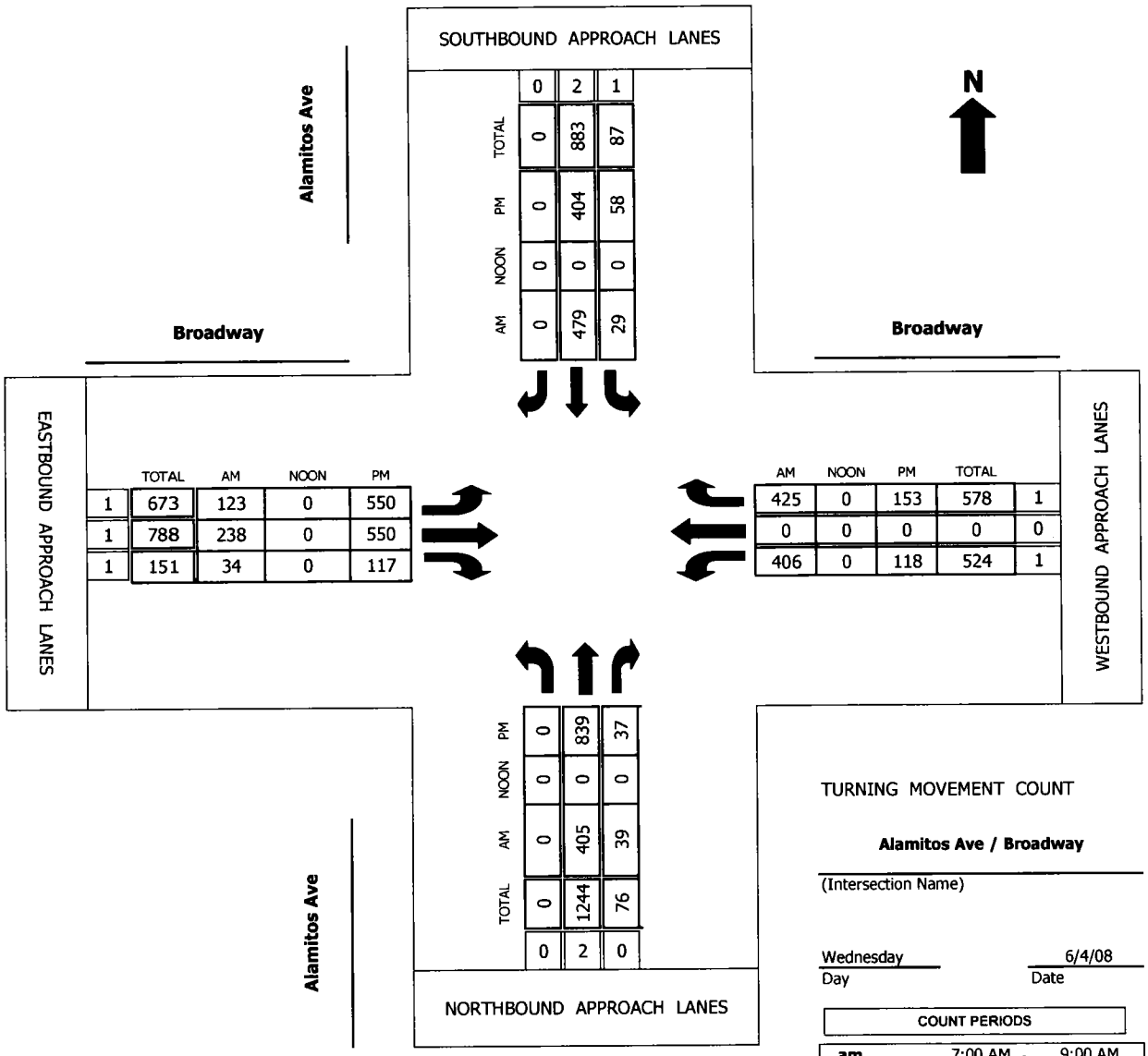
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Alamitos Ave/Broadway

Project #: 08-2274-015



TURNING MOVEMENT COUNT

Alamitos Ave / Broadway

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Alamitos Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: Broadway | DAY: WEDNESDAY | PROJECT# 08-2274-015

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	1	0	2	2	1	1	0	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		80	12	5	81		22	40	9	51		70	370
7:15 AM		91	15	7	74		25	47	8	71		97	435
7:30 AM		102	11	8	111		31	57	11	94		112	537
7:45 AM		94	12	4	131		35	63	7	113		101	560
8:00 AM		112	9	10	123		27	57	10	102		115	565
8:15 AM		97	7	7	114		30	61	6	97		97	516
8:30 AM		110	8	8	120		26	68	9	81		102	532
8:45 AM		94	6	6	98		22	84	8	69		90	477
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 780	NR 80	SL 55	ST 852	SR 0	EL 218	ET 477	ER 68	WL 678	WT 0	WR 784	TOTAL 3992

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	0	405	39	29	479	0	123	238	34	406	0	425	2178
PEAK HR. FACTOR:		0.917			0.941			0.940			0.957		0.964

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Alamitos Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: Broadway | DAY: WEDNESDAY | PROJECT# 08-2274-015

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	1	0	2	2	1	1	0	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		180	7	12	89		97	115	19	19		26	564
4:15 PM		191	10	19	109		112	127	26	22		34	650
4:30 PM		212	12	19	112		138	141	31	31		41	737
4:45 PM		227	8	16	97		147	128	35	32		36	726
5:00 PM		194	10	11	104		129	137	27	26		44	682
5:15 PM		206	7	12	91		136	144	24	29		32	681
5:30 PM		189	12	8	83		141	127	26	34		32	652
5:45 PM		170	8	7	74		122	109	20	25		40	575
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	0	1569	74	104	759	0	1022	1028	208	218	0	285	5267

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	0	839	37	58	404	0	550	550	117	118	0	153	2826
PEAK HR. FACTOR:		0.932			0.882			0.981			0.941		0.959

CONTROL: Signalized

16

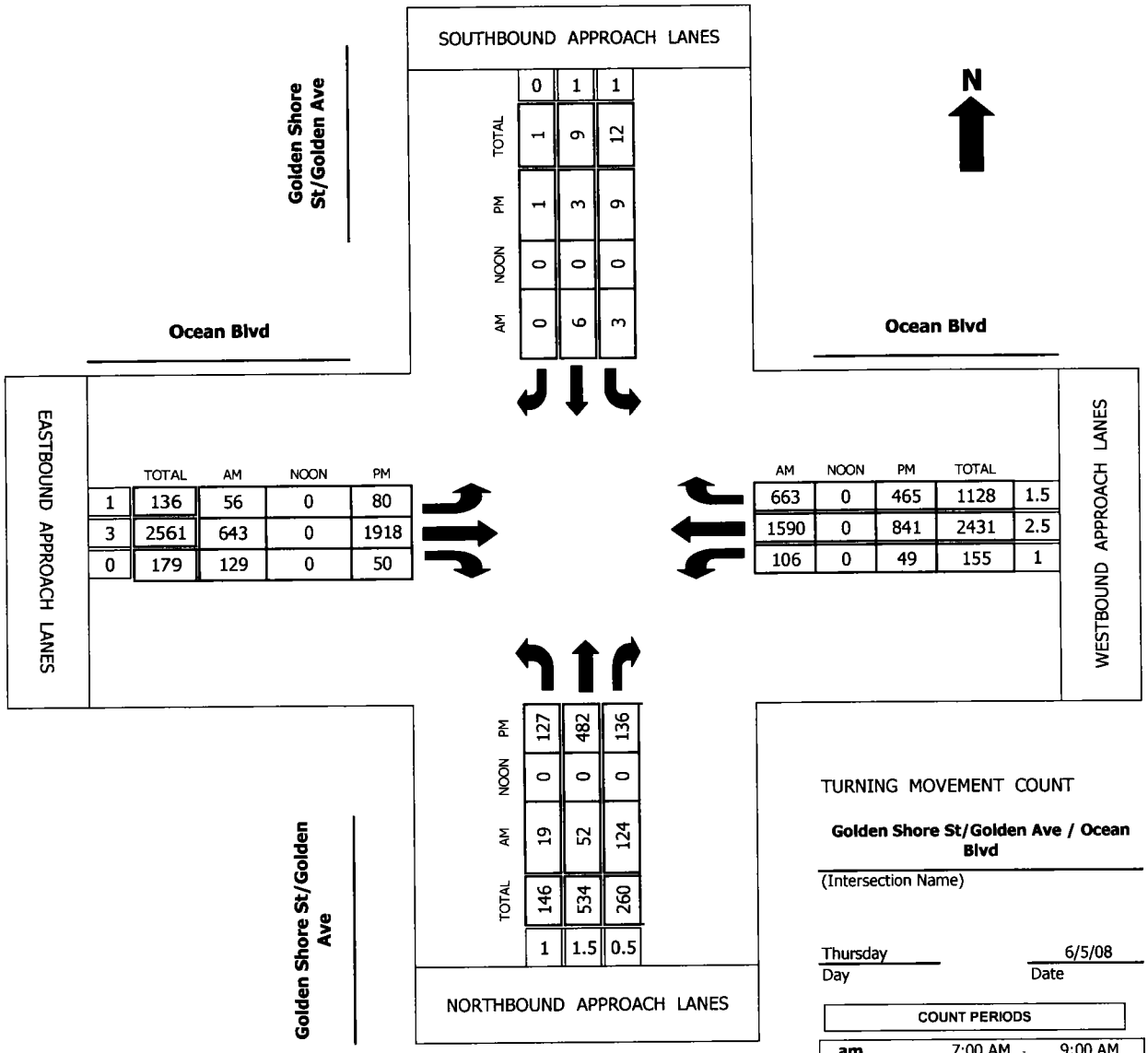
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Golden Shore St/Golden Ave/Ocean Blvd

Project #: 08-2274-016



TURNING MOVEMENT COUNT

Golden Shore St/Golden Ave / Ocean Blvd

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	700 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St/Golden Ave DATE: 6/5/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: THURSDAY PROJECT# 08-2274-016

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1.5	0.5	1	1	1	1	3	0	1	2.5	1.5	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	2	15	22	0	2	0	12	145	35	14	406	161	814
7:15 AM	7	14	36	0	2	0	14	159	38	19	392	189	870
7:30 AM	2	14	35	2	1	0	14	160	28	27	392	164	839
7:45 AM	8	9	31	1	1	0	16	179	28	46	400	149	868
8:00 AM	7	2	10	0	2	0	18	157	16	32	282	151	677
8:15 AM	2	11	16	2	0	0	18	154	11	33	250	152	649
8:30 AM	1	8	5	4	0	1	20	148	5	38	231	168	629
8:45 AM	4	6	13	4	0	1	19	143	7	31	202	172	602
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	33	79	168	13	8	2	131	1245	168	240	2555	1306	5948

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	19	52	124	3	6	0	56	643	129	106	1590	663	3391
PEAK HR. FACTOR:		0.855			0.750			0.928			0.983		0.974

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St/Golden Ave DATE: 6/5/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: THURSDAY PROJECT# 08-2274-016

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1.5	0.5	1	1	1	1	3	0	1	2.5	1.5	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	17	58	21	3	1	1	33	414	12	6	173	133	872
4:15 PM	13	53	32	5	3	0	12	381	8	12	170	130	819
4:30 PM	35	100	28	3	1	0	24	456	7	13	218	124	1009
4:45 PM	18	71	21	1	0	1	16	517	9	15	201	96	966
5:00 PM	32	169	40	2	2	0	19	481	17	11	219	129	1121
5:15 PM	42	142	47	3	0	0	21	464	17	10	203	116	1065
5:30 PM	29	106	35	2	0	0	22	489	9	7	174	110	983
5:45 PM	15	60	22	1	1	0	6	425	2	9	143	104	788
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 201	NT 759	NR 246	SL 20	ST 8	SR 2	EL 153	ET 3627	ER 81	WL 83	WT 1501	WR 942	TOTAL 7623

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	127	482	136	9	3	1	80	1918	50	49	841	465	4161
PEAK HR. FACTOR:		0.773			0.813			0.945			0.944		0.928

CONTROL: Signalized

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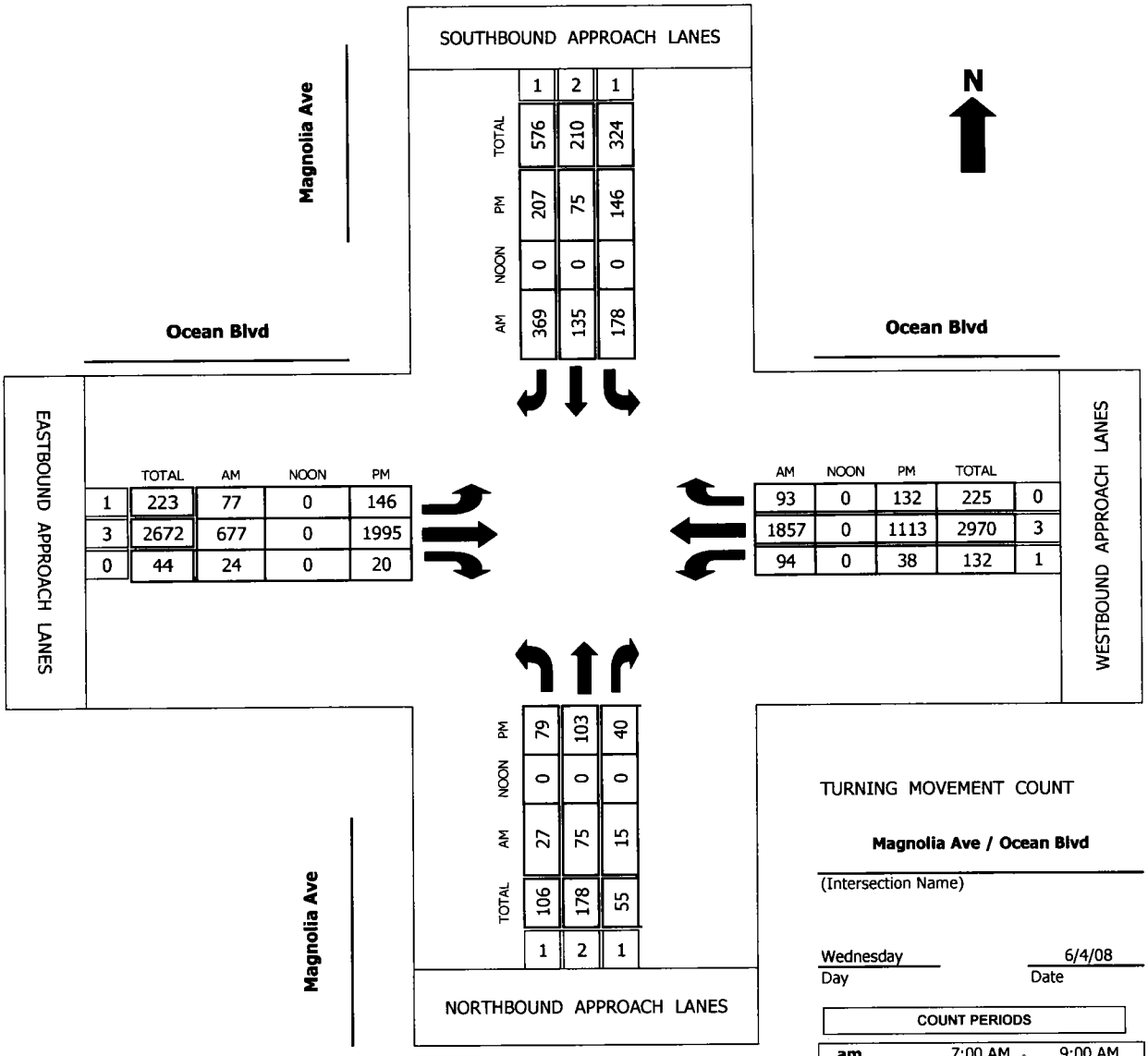
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Magnolia Ave/Ocean Blvd

Project #: 08-2274-017



TURNING MOVEMENT COUNT

Magnolia Ave / Ocean Blvd

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: WEDNESDAY | PROJECT# 08-2274-017

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	16	5	33	32	64	12	113	3	15	372	32	701
7:15 AM	10	18	4	41	31	88	12	94	4	19	437	24	782
7:30 AM	9	20	2	40	37	99	23	137	2	26	423	20	838
7:45 AM	7	12	3	55	41	106	13	135	5	31	436	26	870
8:00 AM	10	22	1	49	34	85	22	155	6	27	463	20	894
8:15 AM	5	23	4	35	35	84	20	182	4	20	540	25	977
8:30 AM	5	18	7	39	25	94	22	205	9	16	418	22	880
8:45 AM	4	16	4	34	26	63	17	180	3	14	357	17	735
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	54	145	30	326	261	683	141	1201	36	168	3446	186	6677

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	27	75	15	178	135	369	77	677	24	94	1857	93	3621
PEAK HR. FACTOR:		0.886			0.844			0.824			0.874		0.927

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Magnolia Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: WEDNESDAY | PROJECT# 08-2274-017

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	3	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	11	16	3	31	14	39	29	389	5	7	200	27	771
4:15 PM	8	22	11	25	20	42	35	437	4	11	238	39	892
4:30 PM	17	26	4	39	22	50	32	490	6	12	286	40	1024
4:45 PM	21	27	7	31	17	59	38	506	2	8	244	26	986
5:00 PM	19	25	10	40	14	47	41	512	5	10	294	37	1054
5:15 PM	22	25	19	36	22	51	35	487	7	8	289	29	1030
5:30 PM	10	14	17	29	19	43	34	471	3	6	273	30	949
5:45 PM	7	10	8	32	14	34	26	453	4	7	236	28	859
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 115	NT 165	NR 79	SL 263	ST 142	SR 365	EL 270	ET 3745	ER 36	WL 69	WT 2060	WR 256	TOTAL 7565

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	79	103	40	146	75	207	146	1995	20	38	1113	132	4094
PEAK HR. FACTOR:		0.841			0.964			0.968			0.941		0.971

CONTROL: Signalized

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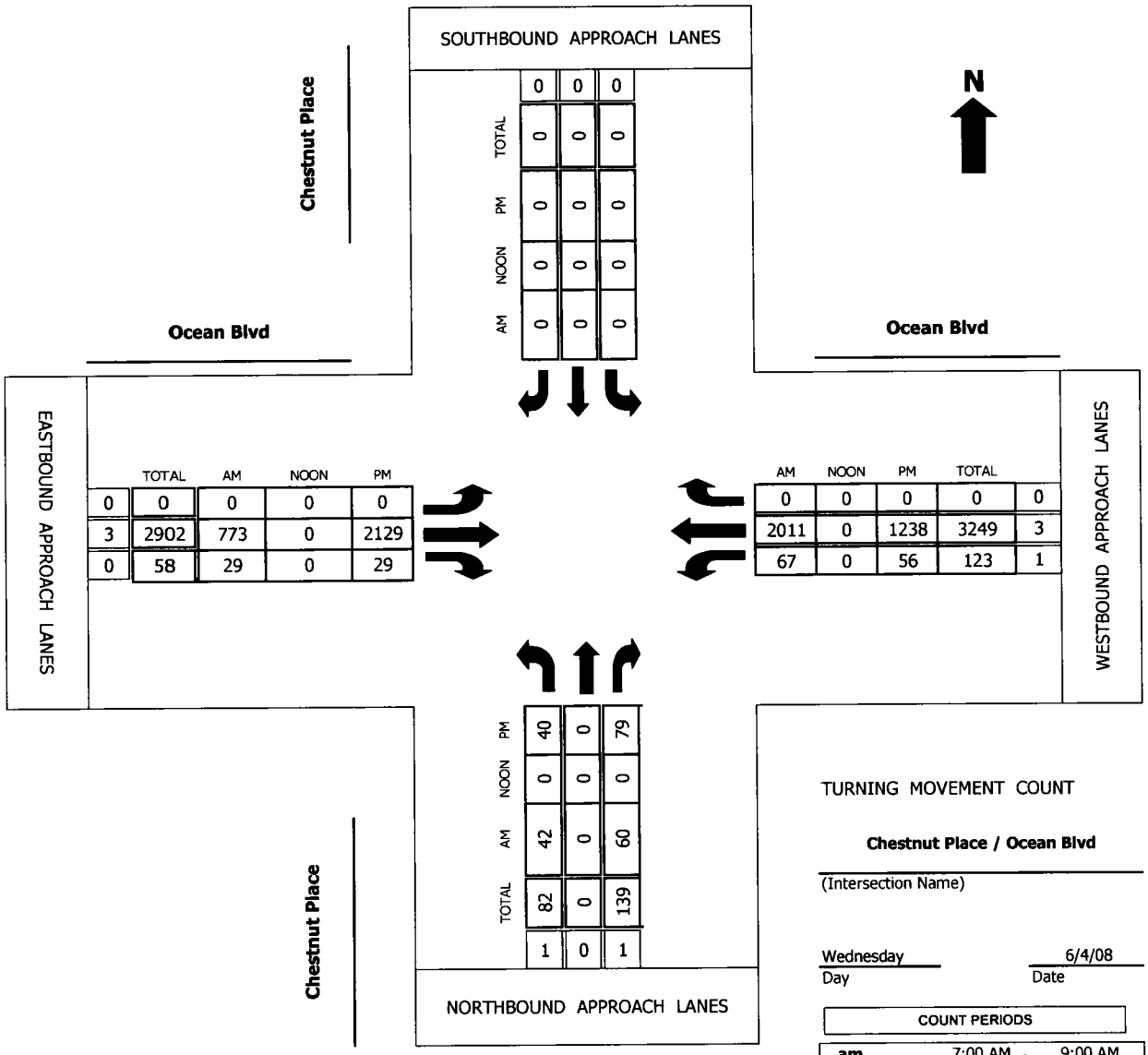
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Chestnut Place/Ocean Blvd

Project #: 08-2274-018



TURNING MOVEMENT COUNT

Chestnut Place / Ocean Blvd

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Chestnut Place DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: WEDNESDAY PROJECT# 08-2274-018

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	10		9					135	3	8	421		586
7:15 AM	12		11					125	4	9	472		633
7:30 AM	11		12					193	6	19	511		752
7:45 AM	11		15					167	7	11	480		691
8:00 AM	7		21					193	12	15	501		749
8:15 AM	13		12					220	4	22	519		790
8:30 AM	12		10					230	3	11	439		705
8:45 AM	9		8					195	2	8	372		594
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 85	NT 0	NR 98	SL 0	ST 0	SR 0	EL 0	ET 1458	ER 41	WL 103	WT 3715	WR 0	TOTAL 5500

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	42	0	60	0	0	0	0	773	29	67	2011	0	2982
PEAK HR. FACTOR:		0.911			0.000			0.895			0.960		0.944

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Chestnut Place | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: WEDNESDAY | PROJECT# 08-2274-018

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	3	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	9		10					415	3	7	215		659
4:15 PM	11		16					464	7	11	276		785
4:30 PM	14		21					510	10	14	303		872
4:45 PM	9		17					541	4	9	280		860
5:00 PM	10		24					553	8	15	334		944
5:15 PM	7		17					525	7	18	321		895
5:30 PM	10		11					501	5	12	299		838
5:45 PM	7		9					479	4	10	275		784
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 77	NT 0	NR 125	SL 0	ST 0	SR 0	EL 0	ET 3988	ER 48	WL 96	WT 2303	WR 0	TOTAL 6637

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	40	0	79	0	0	0	0	2129	29	56	1238	0	3571
PEAK HR. FACTOR:		0.850			0.000			0.962			0.927		0.946

CONTROL: Signalized

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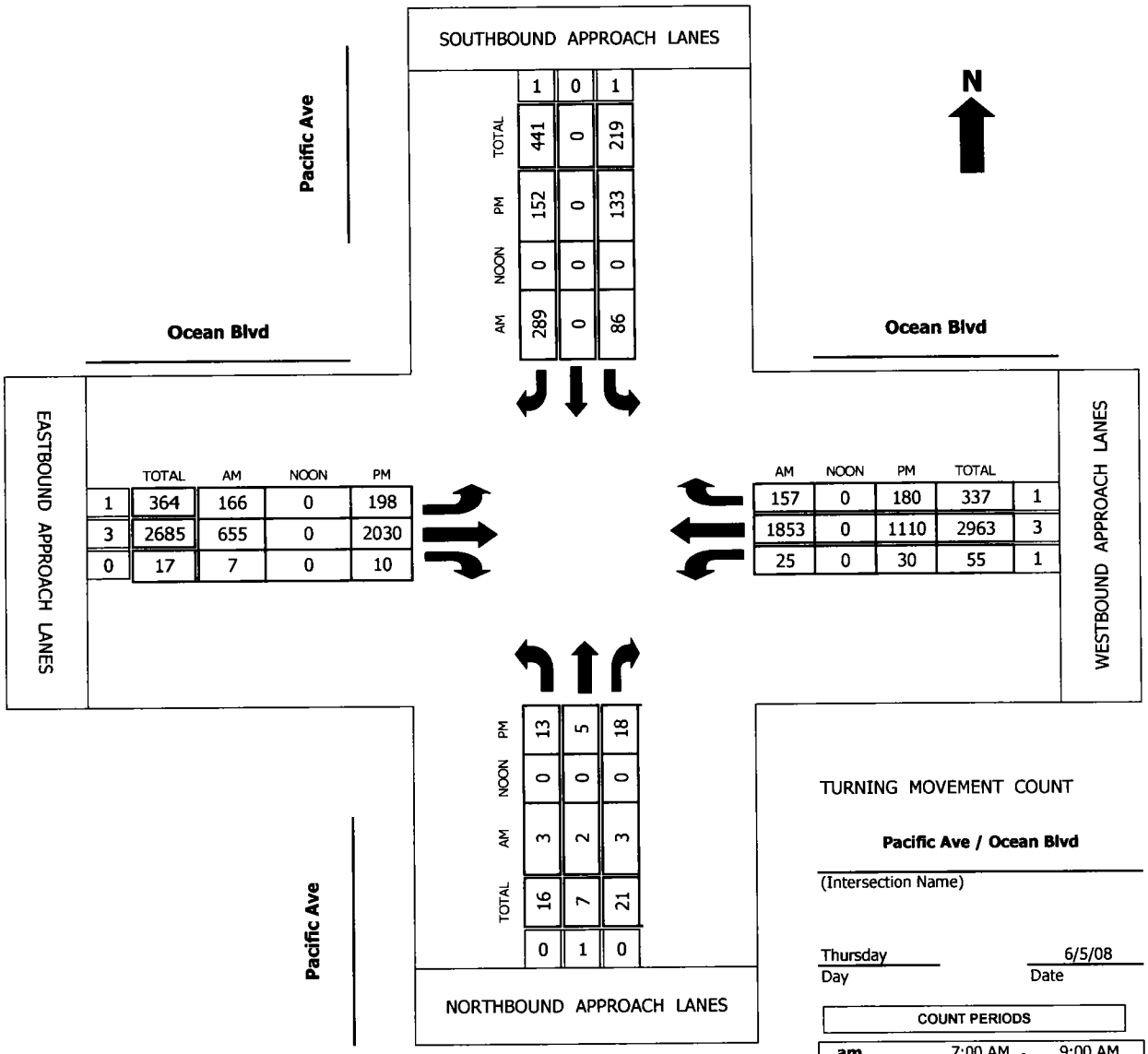
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pacific Ave/Ocean Blvd

Project #: 08-2274-019



1	0	1	
441	0	219	TOTAL
152	0	133	PM
0	0	0	NOON
289	0	86	AM

	TOTAL	AM	NOON	PM
1	364	166	0	198
3	2685	655	0	2030
0	17	7	0	10

AM	NOON	PM	TOTAL	
157	0	180	337	1
1853	0	1110	2963	3
25	0	30	55	1

13	5	18	PM
0	0	0	NOON
3	2	3	AM
16	7	21	TOTAL
0	1	0	

TURNING MOVEMENT COUNT

Pacific Ave / Ocean Blvd

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pacific Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: THURSDAY | PROJECT# 08-2274-019

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	0	1	1	3	0	1	3	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	12		57	19	125	1	4	370	23	611
7:15 AM	1	0	1	15		71	29	106	0	3	411	31	668
7:30 AM	0	1	0	21		75	40	163	2	5	455	39	801
7:45 AM	2	0	2	17		68	47	135	1	7	423	47	749
8:00 AM	1	0	1	23		79	39	167	3	8	455	40	816
8:15 AM	0	1	0	25		67	40	190	1	5	520	31	880
8:30 AM	2	0	0	21		59	30	197	2	6	392	34	743
8:45 AM	3	0	2	22		63	47	158	4	11	357	41	708
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	9	2	6	156	0	539	291	1241	14	49	3383	286	5976

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	3	2	3	86	0	289	166	655	7	25	1853	157	3246
PEAK HR. FACTOR:		0.500			0.919			0.896			0.915		0.922

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pacific Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: THURSDAY | PROJECT# 08-2274-019

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	0	1	1	3	0	1	3	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	1	1	0	18		31	27	393	1	3	197	29	701
4:15 PM	0	0	2	23		40	38	441	2	5	248	38	837
4:30 PM	4	2	4	32		32	46	489	4	10	276	44	943
4:45 PM	2	1	7	33		39	51	505	1	7	239	51	936
5:00 PM	5	0	4	31		44	47	534	3	5	299	46	1018
5:15 PM	2	2	3	37		37	54	502	2	8	296	39	982
5:30 PM	1	1	2	40		41	44	480	1	4	265	31	910
5:45 PM	0	1	1	31		32	37	454	0	3	251	24	834
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 15	NT 8	NR 23	SL 245	ST 0	SR 296	EL 344	ET 3798	ER 14	WL 45	WT 2071	WR 302	TOTAL 7161

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	13	5	18	133	0	152	198	2030	10	30	1110	180	3879
PEAK HR. FACTOR:		0.900			0.950			0.958			0.943		0.953

CONTROL: Signalized

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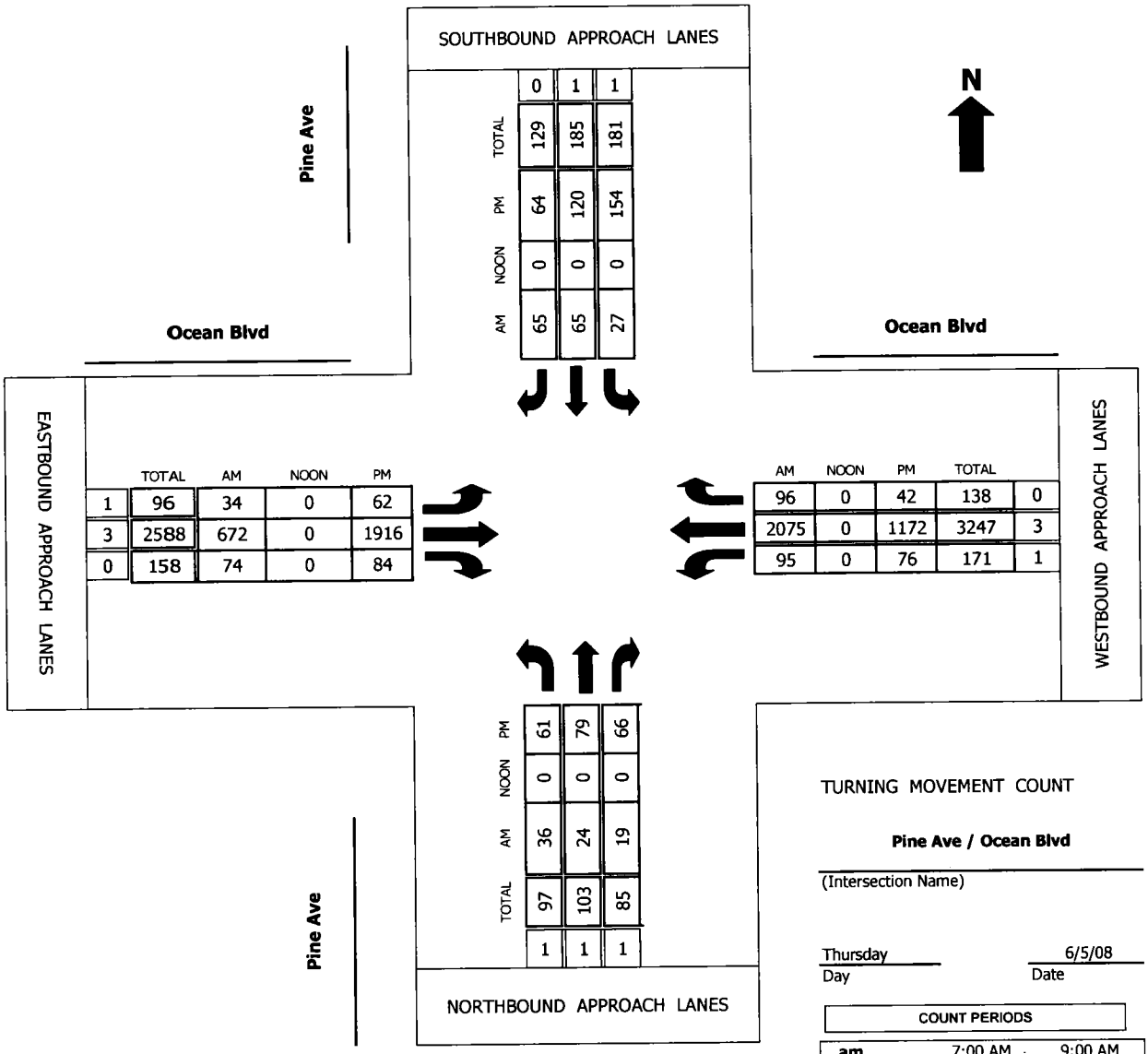
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pine Ave/Ocean Blvd

Project #: 08-2274-020



TURNING MOVEMENT COUNT

Pine Ave / Ocean Blvd

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	500 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: THURSDAY | PROJECT# 08-2274-020

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	0	2	0	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	4	0	3	7	12	4	106	8	12	345	11	516
7:15 AM	7	6	4	4	16	1	3	138	13	20	434	17	663
7:30 AM	4	3	7	6	15	7	6	139	16	29	481	16	729
7:45 AM	10	2	6	4	12	10	8	167	15	22	515	21	792
8:00 AM	7	13	4	9	12	18	7	164	17	28	516	18	813
8:15 AM	11	6	2	4	18	23	12	157	25	19	548	25	850
8:30 AM	8	3	7	10	23	14	7	184	17	26	496	32	827
8:45 AM	9	8	6	11	10	20	12	160	19	16	411	18	700
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	60	45	36	51	113	105	59	1215	130	172	3746	158	5890
AM Peak Hr Begins at:		745 AM											
PEAK VOLUMES =	36	24	19	27	65	65	34	672	74	95	2075	96	3282
PEAK HR. FACTOR:		0.823			0.835			0.938			0.957		0.965

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/5/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: THURSDAY | PROJECT# 08-2274-020

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	0	2	0	1	3	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	9	15	15	24	9	10	13	386	16	17	201	11	726
4:15 PM	11	16	19	35	14	5	11	421	23	23	223	7	808
4:30 PM	16	21	22	33	12	9	14	467	19	15	260	5	893
4:45 PM	21	23	17	39	11	10	12	451	21	21	228	12	866
5:00 PM	12	27	21	40	27	19	16	484	26	10	274	10	966
5:15 PM	17	19	19	45	32	16	24	501	20	20	310	9	1032
5:30 PM	18	22	13	23	23	20	6	478	17	28	325	9	982
5:45 PM	14	11	13	46	38	9	16	453	21	18	263	14	916
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 118	NT 154	NR 139	SL 285	ST 166	SR 98	EL 112	ET 3641	ER 163	WL 152	WT 2084	WR 77	TOTAL 7189

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	61	79	66	154	120	64	62	1916	84	76	1172	42	3896
PEAK HR. FACTOR:		0.858			0.909			0.946			0.891		0.944

CONTROL: Signalized

21

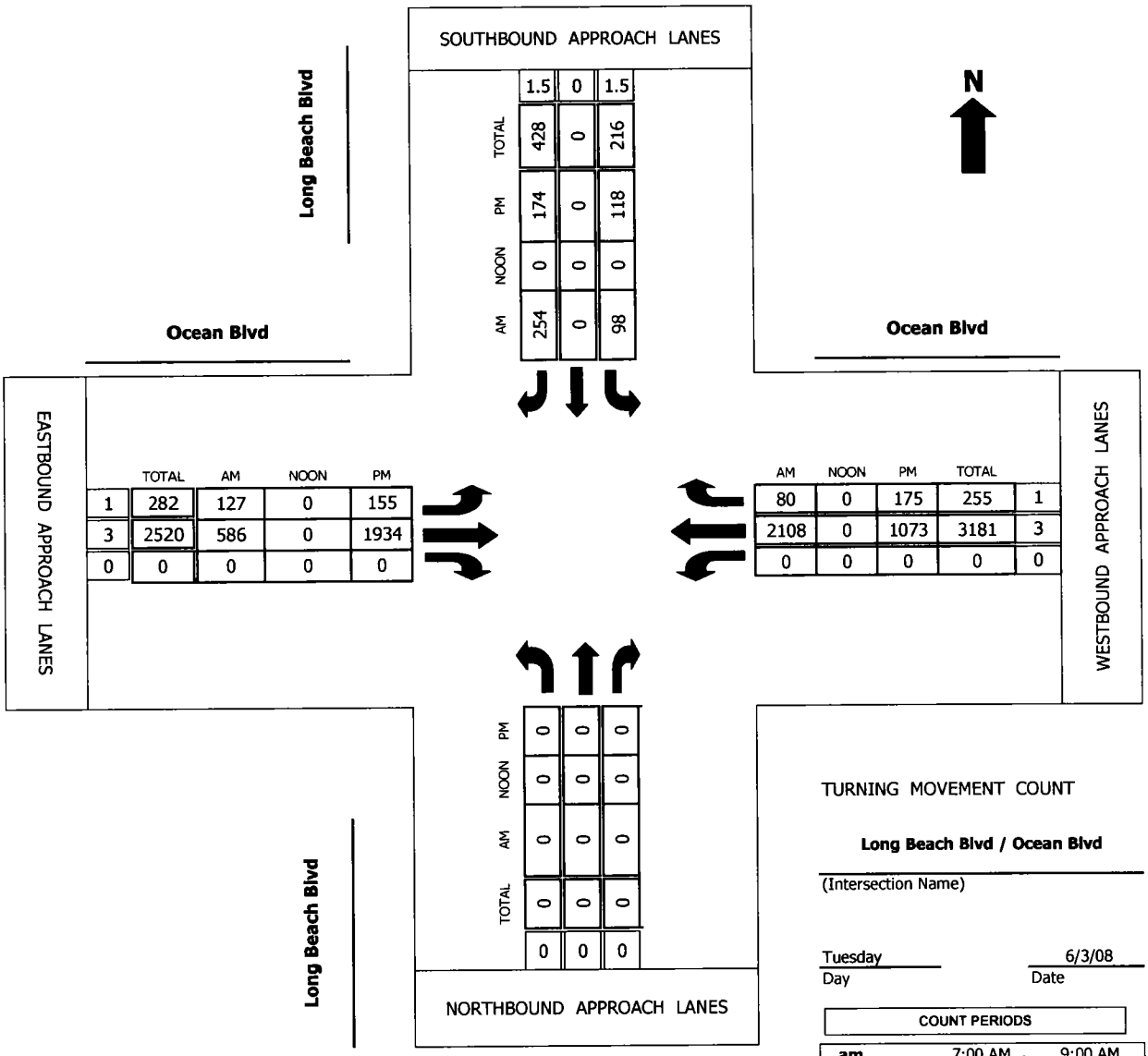
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Long Beach Blvd/Ocean Blvd

Project #: 08-2274-021



TURNING MOVEMENT COUNT

Long Beach Blvd / Ocean Blvd

(Intersection Name)

Tuesday — Day

6/3/08 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Long Beach Blvd DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: TUESDAY PROJECT# 08-2274-021

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.5	0	1.5	1	3	0	0	3	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM				13		36	21	111			356	11	548
7:15 AM				18		57	36	128			478	17	734
7:30 AM				23		65	33	135			485	19	760
7:45 AM				25		61	34	147			521	21	809
8:00 AM				28		69	37	152			526	23	835
8:15 AM				26		66	32	148			548	17	837
8:30 AM				19		58	24	139			513	19	772
8:45 AM				25		61	28	132			385	16	647
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 177	ST 0	SR 473	EL 245	ET 1092	ER 0	WL 0	WT 3812	WR 143	TOTAL 5942

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	0	0	0	98	0	254	127	586	0	0	2108	80	3253
PEAK HR. FACTOR:		0.000			0.907			0.943			0.968		0.972

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Long Beach Blvd DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: TUESDAY PROJECT# 08-2274-021

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.5	0	1.5	1	3	0	0	3	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				13		28	17	361			162	15	596
4:15 PM				19		36	29	421			198	27	730
4:30 PM				25		45	37	464			229	43	843
4:45 PM				22		58	32	458			292	52	914
5:00 PM				33		38	46	483			284	43	927
5:15 PM				29		39	40	501			263	49	921
5:30 PM				34		39	37	492			234	31	867
5:45 PM				20		39	34	469			174	23	759
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	0	0	0	195	0	322	272	3649	0	0	1836	283	6557

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	0	0	0	118	0	174	155	1934	0	0	1073	175	3629
PEAK HR. FACTOR:		0.000			0.913			0.965			0.907		0.979

CONTROL: Signalized

22

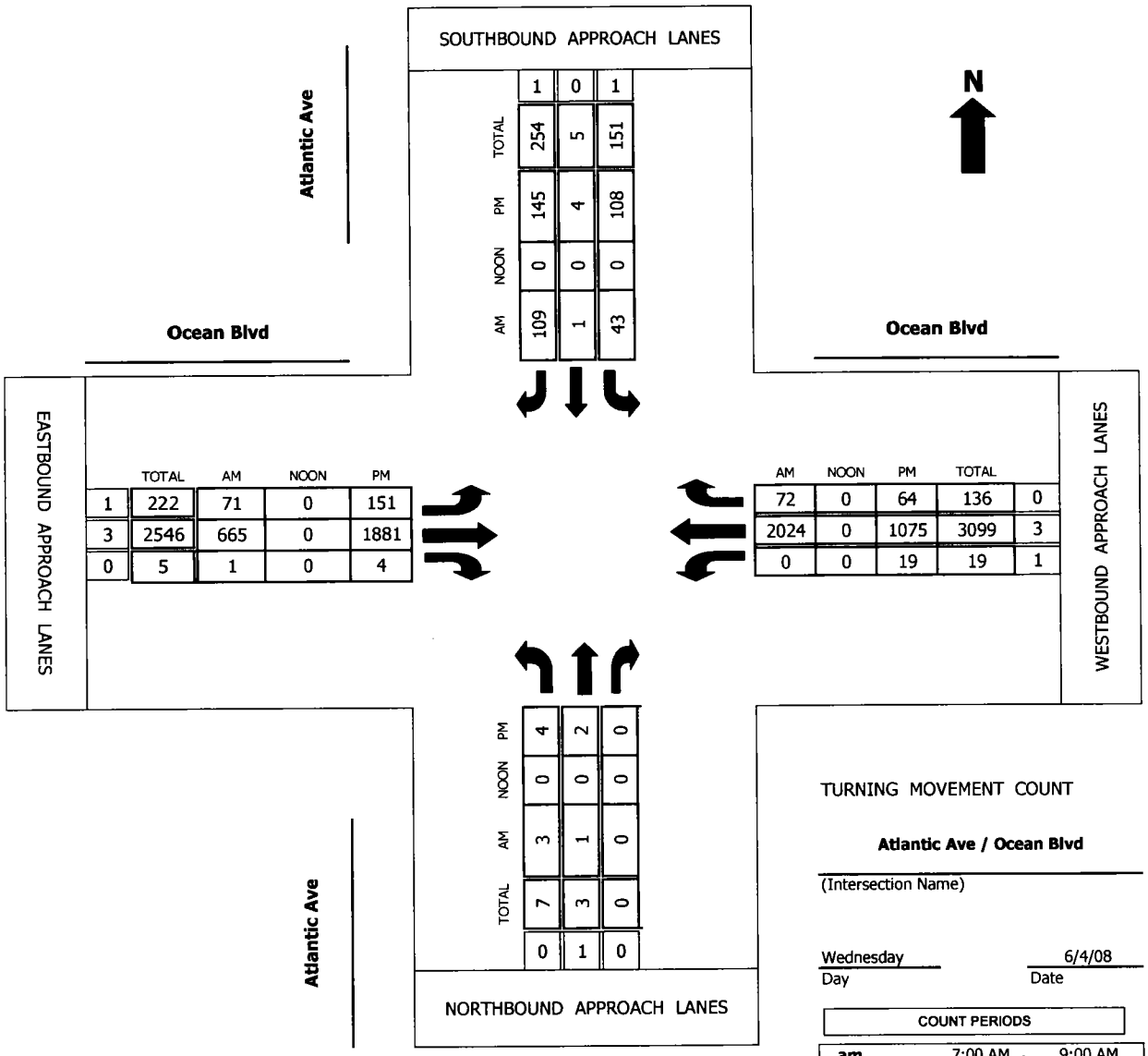
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Atlantic Ave/Ocean Blvd

Project #: 08-2274-022



TURNING MOVEMENT COUNT

Atlantic Ave / Ocean Blvd

(Intersection Name)

Wednesday — Day

6/4/08 — Date

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Atlantic Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: WEDNESDAY PROJECT# 08-2274-022

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	1	1	3	0	1	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0		7	0	19	9	118	0	0	471	10	634
7:15 AM	0	0		11	0	20	10	171	0	0	473	17	702
7:30 AM	1	0		14	0	21	15	158	0	0	516	14	739
7:45 AM	0	0		10	1	29	19	185	1	0	494	21	760
8:00 AM	0	1		12	0	28	20	175	0	0	531	20	787
8:15 AM	2	0		7	0	31	17	147	0	0	483	17	704
8:30 AM	0	0		9	0	35	14	142	0	1	441	14	656
8:45 AM	0	0		8	0	22	10	122	0	0	395	10	567
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	3	1	0	78	1	205	114	1218	1	1	3804	123	5549

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	3	1	0	43	1	109	71	665	1	0	2024	72	2990
PEAK HR. FACTOR:		0.500			0.956			0.899			0.951		0.950

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Atlantic Ave | DATE: 6/4/2008 | LOCATION: City of Long Beach

E-W STREET: Ocean Blvd | DAY: WEDNESDAY | PROJECT# 08-2274-022

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	1	1	3	0	1	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	1	14	1	26	24	382	0	0	227	17	692
4:15 PM	0	1	1	23	2	31	26	430	1	1	226	22	764
4:30 PM	0	0	0	27	0	28	32	388	0	3	227	13	718
4:45 PM	1	1	0	31	1	27	44	452	2	4	307	13	883
5:00 PM	1	0	0	34	1	38	33	548	1	6	266	15	943
5:15 PM	1	1	0	24	1	43	42	457	1	5	263	13	851
5:30 PM	1	0	0	19	1	37	32	424	0	4	239	23	780
5:45 PM	1	0	0	23	0	19	36	400	1	5	180	7	672
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	5	3	2	195	7	249	269	3481	6	28	1935	123	6303

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	4	2	0	108	4	145	151	1881	4	19	1075	64	3457
PEAK HR. FACTOR:		0.750			0.880			0.875			0.894		0.916

CONTROL: Signalized

23

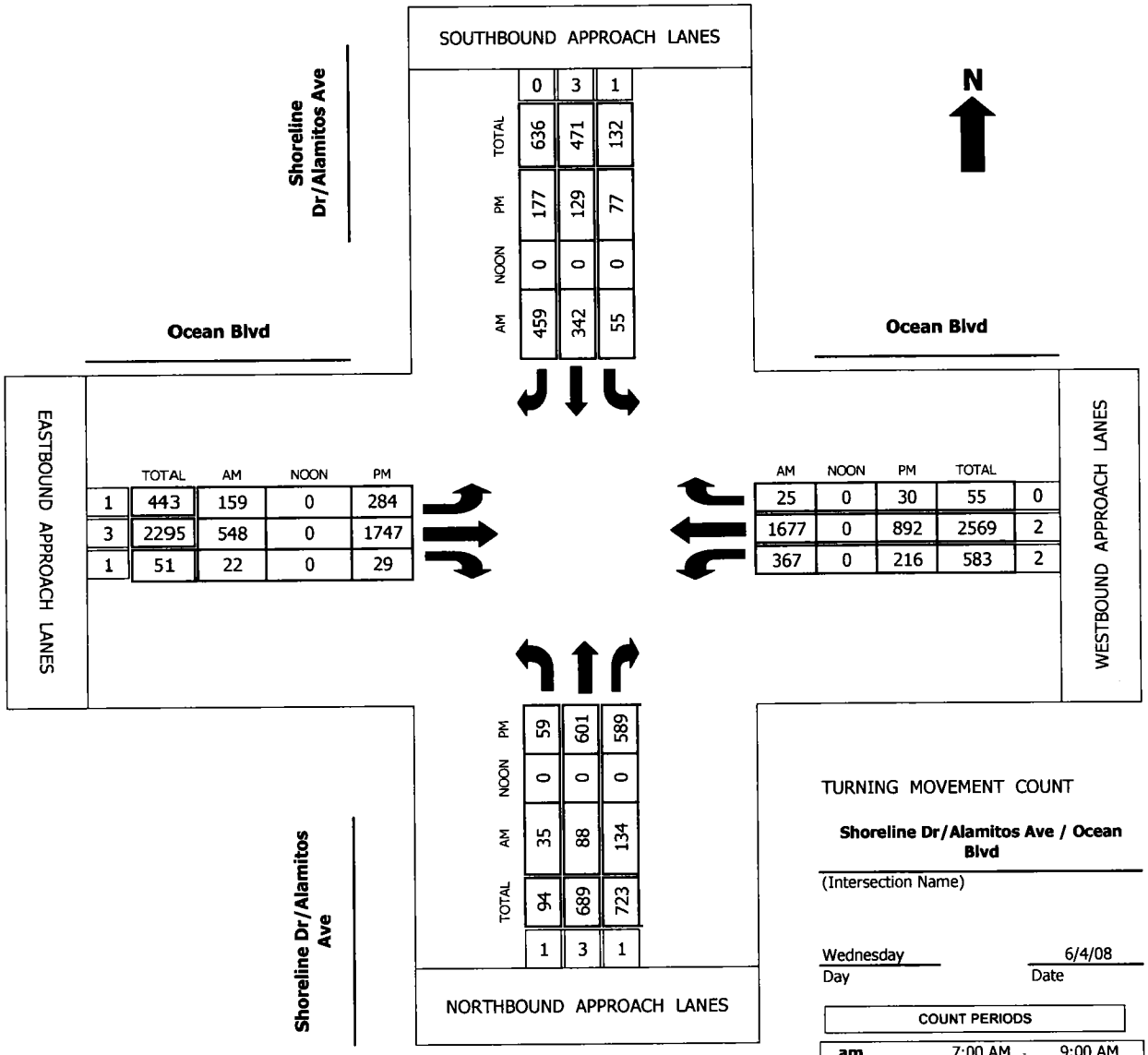
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Shoreline Dr/Alamitos Ave/Ocean Blvd

Project #: 08-2274-023



TURNING MOVEMENT COUNT

Shoreline Dr/Alamitos Ave / Ocean Blvd

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoreline Dr/Alamitos Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: WEDNESDAY PROJECT# 08-2274-023

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	1	3	0	1	3	1	2	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	7	14	19	8	60	77	25	149	2	61	414	9	845
7:15 AM	10	21	24	11	70	91	31	141	4	79	452	7	941
7:30 AM	9	25	32	17	79	115	31	133	3	94	410	4	952
7:45 AM	11	19	37	12	91	123	42	149	4	101	389	6	984
8:00 AM	5	23	41	15	102	130	55	125	11	93	426	8	1034
8:15 AM	8	19	29	16	81	117	40	115	2	79	381	7	894
8:30 AM	9	16	36	12	64	109	32	117	4	67	345	4	815
8:45 AM	7	12	27	10	57	94	28	104	1	53	311	5	709
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	66	149	245	101	604	856	284	1033	31	627	3128	50	7174

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	35	88	134	55	342	459	159	548	22	367	1677	25	3911
PEAK HR. FACTOR:		0.931			0.866			0.935			0.961		0.946

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Shoreline Dr/Alamitos Ave DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Ocean Blvd DAY: WEDNESDAY PROJECT# 08-2274-023

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	1	3	0	1	3	1	2	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	5	84	114	21	22	55	53	343	9	28	148	6	888
4:15 PM	12	97	101	27	31	48	61	392	4	31	195	7	1006
4:30 PM	15	127	142	25	41	51	59	360	2	34	172	10	1038
4:45 PM	21	146	171	19	35	39	71	427	5	52	211	9	1206
5:00 PM	17	157	153	22	29	47	84	504	9	47	203	7	1279
5:15 PM	11	167	137	17	36	51	66	429	7	65	292	8	1286
5:30 PM	10	131	128	19	29	40	63	387	8	52	186	6	1059
5:45 PM	6	83	93	14	28	31	54	353	15	43	140	14	874
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 97	NT 992	NR 1039	SL 164	ST 251	SR 362	EL 511	ET 3195	ER 59	WL 352	WT 1547	WR 67	TOTAL 8636

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	59	601	589	77	129	177	284	1747	29	216	892	30	4830
PEAK HR. FACTOR:		0.924			0.921			0.863			0.779		0.939

CONTROL: Signalized

24

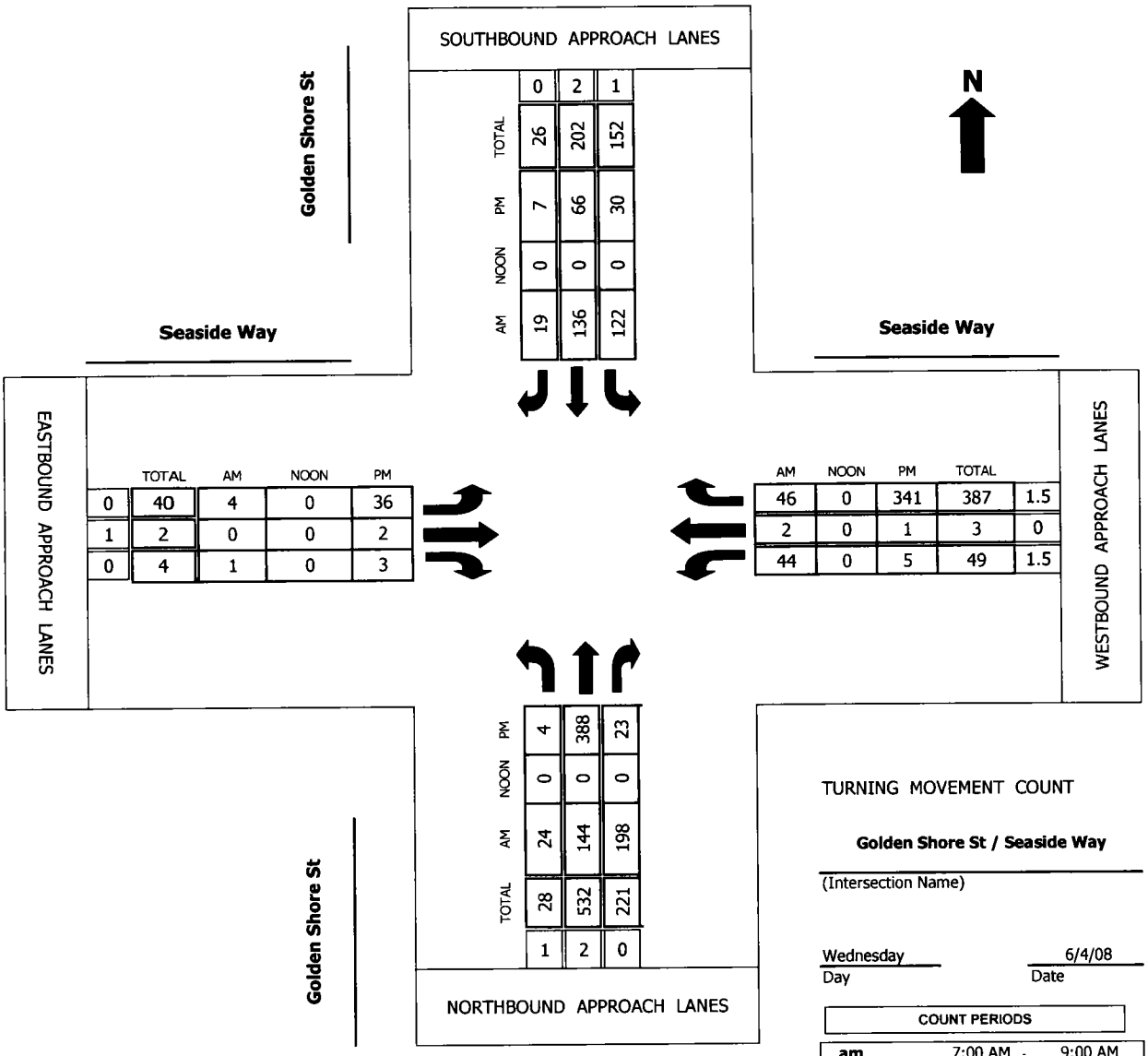
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Golden Shore St/Seaside Way

Project #: 08-2274-024



TURNING MOVEMENT COUNT

Golden Shore St / Seaside Way

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Seaside Way DAY: WEDNESDAY PROJECT# 08-2274-024

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	1.5	0	1.5	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	2	12	24	5	9	4	1		0	5	0	7	69
7:15 AM	2	17	23	14	7	3	0		0	3	1	9	79
7:30 AM	2	17	41	20	26	6	1		1	3	2	8	127
7:45 AM	5	34	41	26	25	5	0		1	10	1	7	155
8:00 AM	5	31	44	20	36	5	0		0	15	0	8	164
8:15 AM	7	31	65	43	37	5	2		0	11	0	15	216
8:30 AM	7	48	48	33	38	4	2		0	8	1	16	205
8:45 AM	7	27	36	12	35	5	1		1	8	1	16	149
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	37	217	322	173	213	37	7	0	3	63	6	86	1164

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	24	144	198	122	136	19	4	0	1	44	2	46	740
PEAK HR. FACTOR:		0.888			0.815			0.625			0.885		0.856

CONTROL: 2-Way stop e/w

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Seaside Way DAY: WEDNESDAY PROJECT# 08-2274-024

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	1.5	0	1.5	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	45	2	7	10	1	12	4	3	3	1	39	127
4:15 PM	1	54	5	5	11	3	3	0	4	0	1	46	133
4:30 PM	0	76	6	5	14	3	12	3	3	4	0	76	202
4:45 PM	0	66	4	8	16	1	7	0	0	1	0	54	157
5:00 PM	2	130	10	8	25	1	12	0	3	1	0	90	282
5:15 PM	2	133	1	6	17	4	7	1	0	2	1	85	259
5:30 PM	0	59	8	8	8	1	10	1	0	1	0	112	208
5:45 PM	0	44	5	1	8	1	2	0	1	0	0	55	117
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 5	NT 607	NR 41	SL 48	ST 109	SR 15	EL 65	ET 9	ER 14	WL 12	WT 3	WR 557	TOTAL 1485

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	4	388	23	30	66	7	36	2	3	5	1	341	906
PEAK HR. FACTOR:		0.731			0.757			0.683			0.768		0.803

CONTROL: 2-Way stop e/w

25

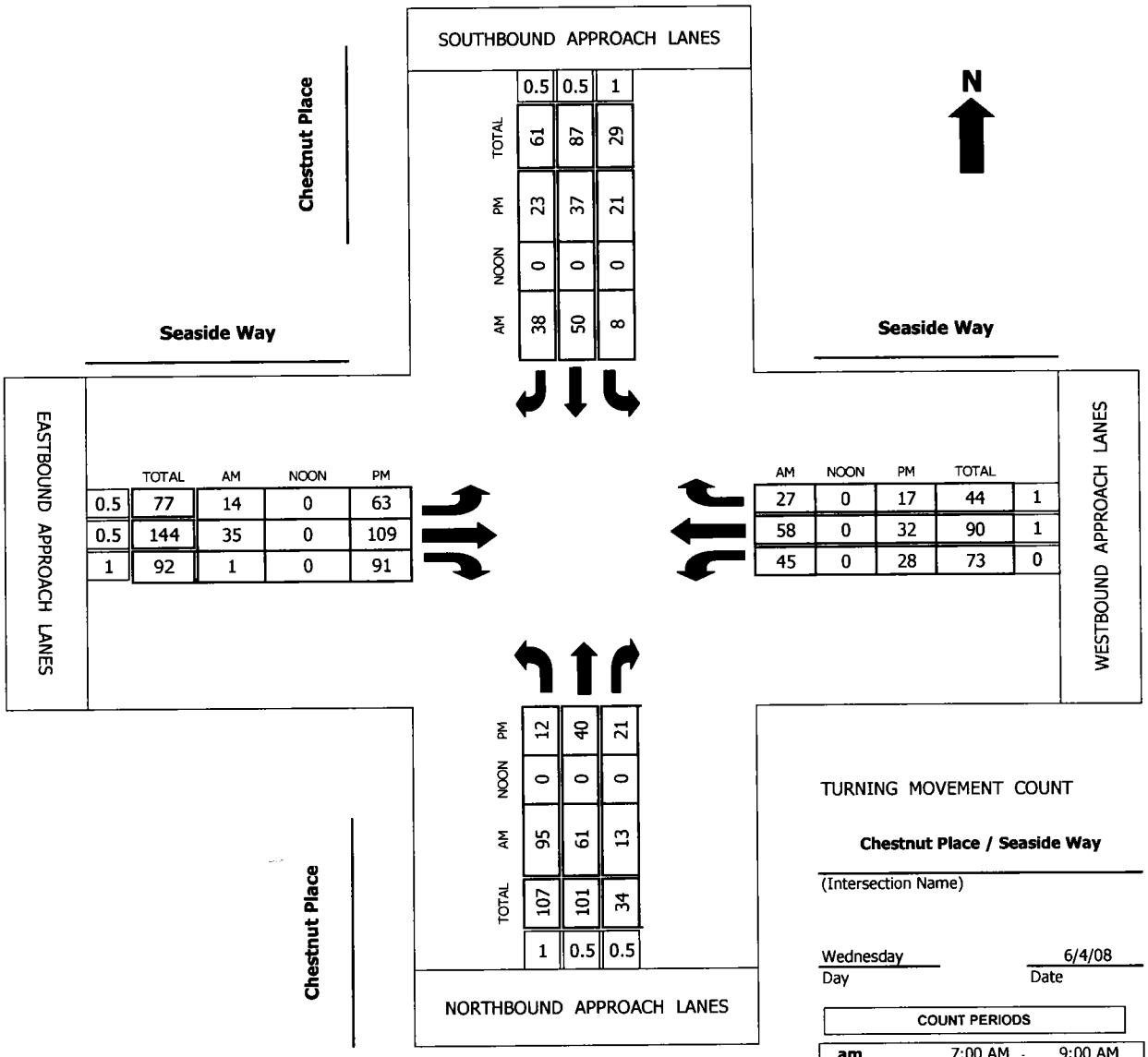
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Chestnut Place/Seaside Way

Project #: 08-2274-025



TURNING MOVEMENT COUNT

Chestnut Place / Seaside Way

(Intersection Name)

Wednesday (Day) 6/4/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	500 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Chestnut Place DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Seaside Way DAY: WEDNESDAY PROJECT# 08-2274-025

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0	1	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	37	9	3	1	6	6	0	3	1	9	9	3	87
7:15 AM	30	10	2	0	5	4	1	3	2	3	6	3	69
7:30 AM	25	9	3	1	6	8	4	4	1	17	10	7	95
7:45 AM	13	9	4	2	18	10	4	5	0	11	10	10	96
8:00 AM	22	18	3	3	17	10	5	12	0	15	18	6	129
8:15 AM	28	20	3	0	11	8	3	12	0	14	13	2	114
8:30 AM	32	14	3	3	4	10	2	6	1	5	17	9	106
8:45 AM	19	8	3	4	8	4	1	5	0	5	16	5	78
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	206	97	24	14	75	60	20	50	5	79	99	45	774
AM Peak Hr Begins at:	745 AM												
PEAK VOLUMES =	95	61	13	8	50	38	14	35	1	45	58	27	445
PEAK HR. FACTOR:		0.828			0.800			0.735			0.833		0.862

CONTROL: 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Chestnut Place DATE: 6/4/2008 LOCATION: City of Long Beach

E-W STREET: Seaside Way DAY: WEDNESDAY PROJECT# 08-2274-025

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0	1	0	0	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	1	9	3	9	2	2	6	10	9	8	7	2	68
4:15 PM	1	9	4	7	4	5	12	19	8	7	11	1	88
4:30 PM	3	8	6	5	5	5	20	23	10	11	10	4	110
4:45 PM	1	13	3	7	9	6	8	24	10	4	7	3	95
5:00 PM	5	6	2	4	10	9	17	29	30	13	5	7	137
5:15 PM	3	17	7	4	9	2	11	32	27	4	7	4	127
5:30 PM	4	6	3	6	8	5	19	31	23	4	15	1	125
5:45 PM	0	11	9	7	10	7	16	17	11	7	5	5	105
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 18	NT 79	NR 37	SL 49	ST 57	SR 41	EL 109	ET 185	ER 128	WL 58	WT 67	WR 27	TOTAL 855

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	12	40	21	21	37	23	63	109	91	28	32	17	494
PEAK HR. FACTOR:		0.676			0.844			0.865			0.770		0.901

CONTROL: 4-Way Stop

26

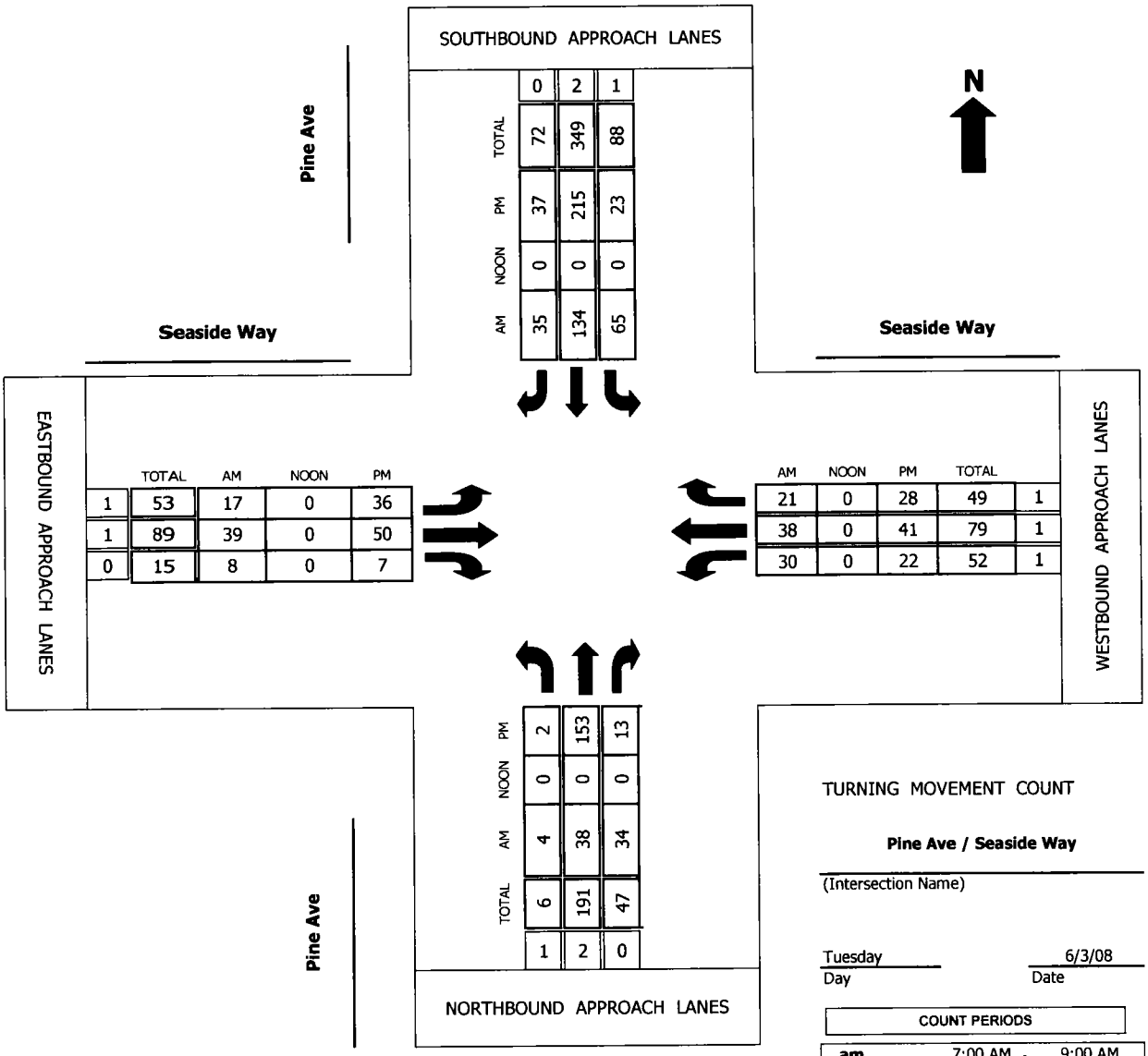
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pine Ave/Seaside Way

Project #: 08-2274-026



TURNING MOVEMENT COUNT

Pine Ave / Seaside Way

(Intersection Name)

Tuesday (Day) 6/3/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: Seaside Way | DAY: TUESDAY | PROJECT# 08-2274-026

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	1	0	1	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	10	8	4	15	2	0	3	4	8	9	2	66
7:15 AM	0	12	5	13	17	9	5	5	1	5	7	4	83
7:30 AM	5	10	10	10	32	6	3	5	0	4	12	3	100
7:45 AM	1	11	12	12	27	12	3	9	0	8	10	8	113
8:00 AM	2	12	9	18	35	7	1	9	1	7	4	5	110
8:15 AM	0	10	11	17	33	9	7	13	1	5	14	5	125
8:30 AM	1	5	2	18	39	7	6	8	6	10	10	3	115
8:45 AM	1	7	8	13	27	6	5	6	4	1	7	4	89
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	11	77	65	105	225	58	30	58	17	48	73	34	801

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	4	38	34	65	134	35	17	39	8	30	38	21	463
PEAK HR. FACTOR:		0.792			0.914			0.762			0.856		0.926

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: Seaside Way | DAY: TUESDAY | PROJECT# 08-2274-026

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	1	0	1	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	22	3	3	35	1	5	3	2	9	9	5	97
4:15 PM	1	31	5	7	42	11	8	7	2	6	13	7	140
4:30 PM	0	35	4	3	39	9	7	9	0	5	10	3	124
4:45 PM	1	38	4	6	43	10	12	7	2	7	8	9	147
5:00 PM	1	50	3	8	54	5	14	15	0	5	12	6	173
5:15 PM	0	36	1	4	61	13	2	9	2	8	5	10	151
5:30 PM	0	29	5	5	57	9	8	19	3	2	16	3	156
5:45 PM	2	21	2	2	62	1	9	7	4	2	1	5	118
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 5	NT 262	NR 27	SL 38	ST 393	SR 59	EL 65	ET 76	ER 15	WL 44	WT 74	WR 48	TOTAL 1106

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	2	153	13	23	215	37	36	50	7	22	41	28	627
PEAK HR. FACTOR:		0.778			0.881			0.775			0.948		0.906

CONTROL: Signalized

27

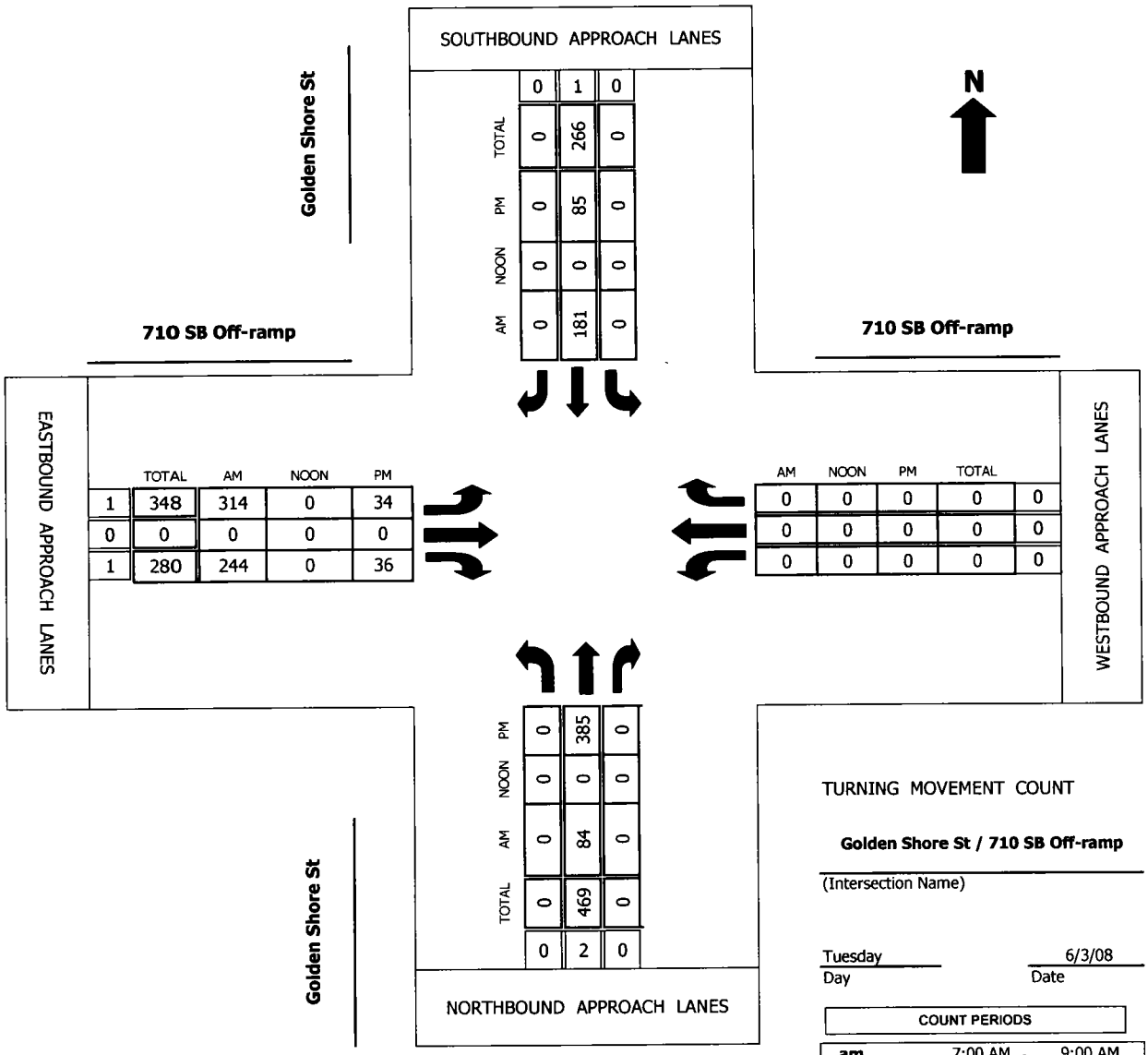
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Golden Shore St/710 SB Off-ramp

Project #: 08-2274-027



TURNING MOVEMENT COUNT

Golden Shore St / 710 SB Off-ramp

(Intersection Name)

Tuesday (Day) 6/3/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	800 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: 710 SB Off-ramp | DAY: TUESDAY | PROJECT# 08-2274-027

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	0	1	0	1	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		4			14		27		12				57
7:15 AM		8			20		39		23				90
7:30 AM		6			25		47		30				108
7:45 AM		6			34		53		43				136
8:00 AM		13			47		78		69				207
8:15 AM		27			56		79		57				219
8:30 AM		17			38		97		63				215
8:45 AM		27			40		60		55				182
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 108	NR 0	SL 0	ST 274	SR 0	EL 480	ET 0	ER 352	WL 0	WT 0	WR 0	TOTAL 1214

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	0	84	0	0	181	0	314	0	244	0	0	0	823
PEAK HR. FACTOR:		0.778			0.808			0.872			0.000		0.939

CONTROL: 1-Way Stop (EB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: 710 SB Off-ramp | DAY: TUESDAY | PROJECT# 08-2274-027

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	0	1	0	1	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		51			17		13		9				90
4:15 PM		46			16		12		4				78
4:30 PM		81			17		11		9				118
4:45 PM		60			20		8		8				96
5:00 PM		129			34		8		14				185
5:15 PM		115			14		7		5				141
5:30 PM		64			10		8		5				87
5:45 PM		31			8		5		5				49
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 577	NR 0	SL 0	ST 136	SR 0	EL 72	ET 0	ER 59	WL 0	WT 0	WR 0	TOTAL 844

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	0	385	0	0	85	0	34	0	36	0	0	0	540
PEAK HR. FACTOR:		0.746			0.625			0.795			0.000		0.730

CONTROL: 1-Way Stop (EB)

28

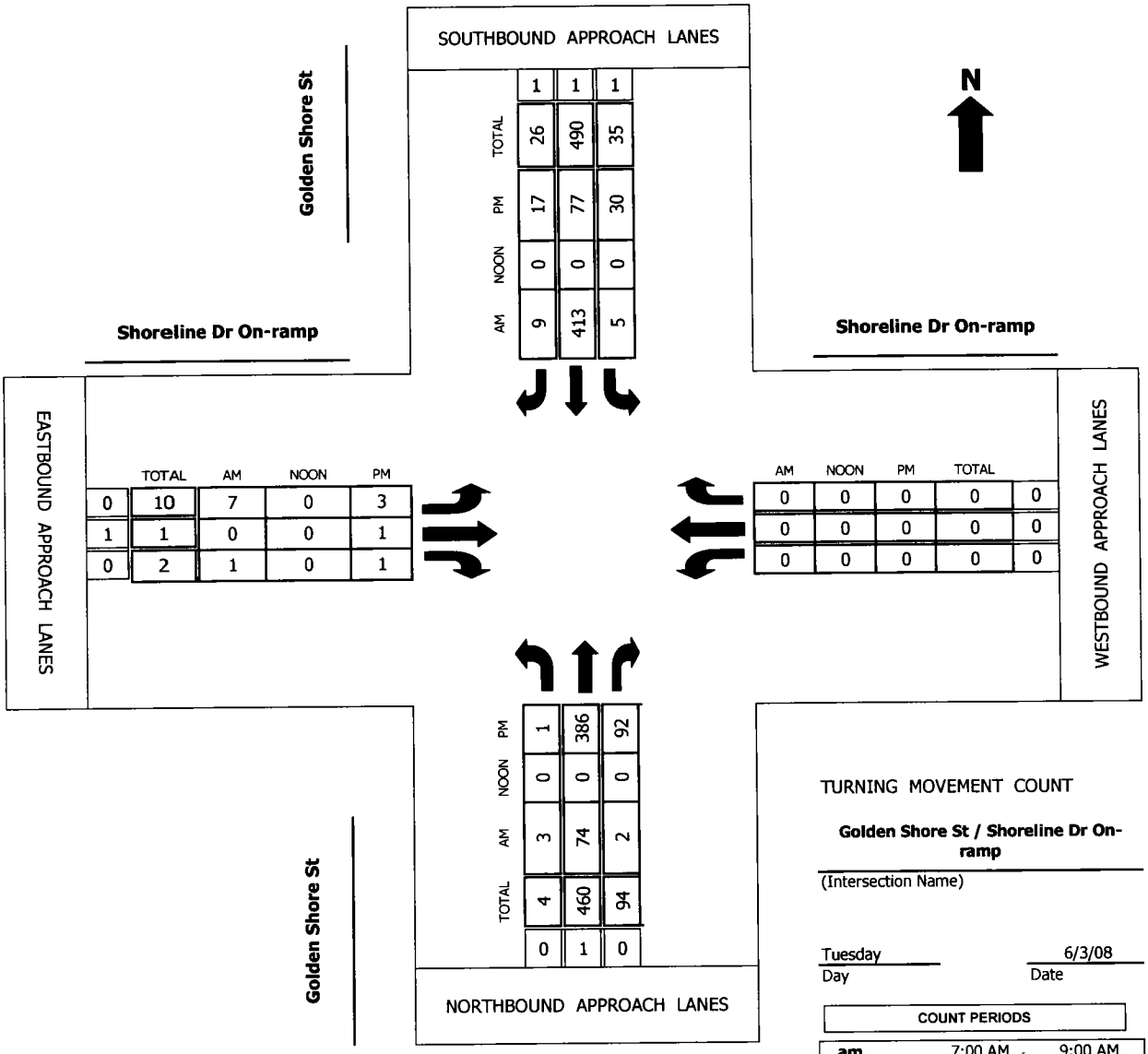
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Golden Shore St/Shoreline Dr On-ramp

Project #: 08-2274-028



TURNING MOVEMENT COUNT

Golden Shore St / Shoreline Dr On-ramp

(Intersection Name)

Tuesday (Day) 6/3/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	-
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	800 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: Shoreline Dr On-ramp DAY: TUESDAY PROJECT# 08-2274-028

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	1	0	1	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	4	1	2	22	0	1		0				31
7:15 AM	1	9	0	3	36	4	3		0				56
7:30 AM	0	6	1	1	52	2	0		0				62
7:45 AM	0	6	1	1	76	1	0		0				85
8:00 AM	0	12	0	0	117	0	1		0				130
8:15 AM	1	24	0	0	109	4	3		0				141
8:30 AM	1	15	1	5	94	1	1		1				119
8:45 AM	1	23	1	0	93	4	2		0				124
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	5	99	5	12	599	16	11	0	1	0	0	0	748

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	3	74	2	5	413	9	7	0	1	0	0	0	514
PEAK HR. FACTOR:		0.790			0.912			0.667			0.000		0.911

CONTROL: 1-Way Stop (EB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Golden Shore St DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: Shoreline Dr On-ramp DAY: TUESDAY PROJECT# 08-2274-028

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	1	0	1	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3	48	15	6	14	7	3	0	0				96
4:15 PM	1	41	10	1	19	1	3	0	1				77
4:30 PM	1	83	21	1	20	6	0	1	0				133
4:45 PM	0	59	11	7	18	4	1	0	0				100
5:00 PM	0	130	24	19	23	7	1	0	1				205
5:15 PM	0	114	36	3	16	0	1	0	0				170
5:30 PM	1	64	34	3	7	5	0	0	0				114
5:45 PM	0	31	19	1	7	5	0	0	0				63
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	6	570	170	41	124	35	9	1	2	0	0	0	958

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	1	386	92	30	77	17	3	1	1	0	0	0	608
PEAK HR. FACTOR:		0.778			0.633			0.625			0.000		0.741

CONTROL: 1-Way Stop (EB)

29

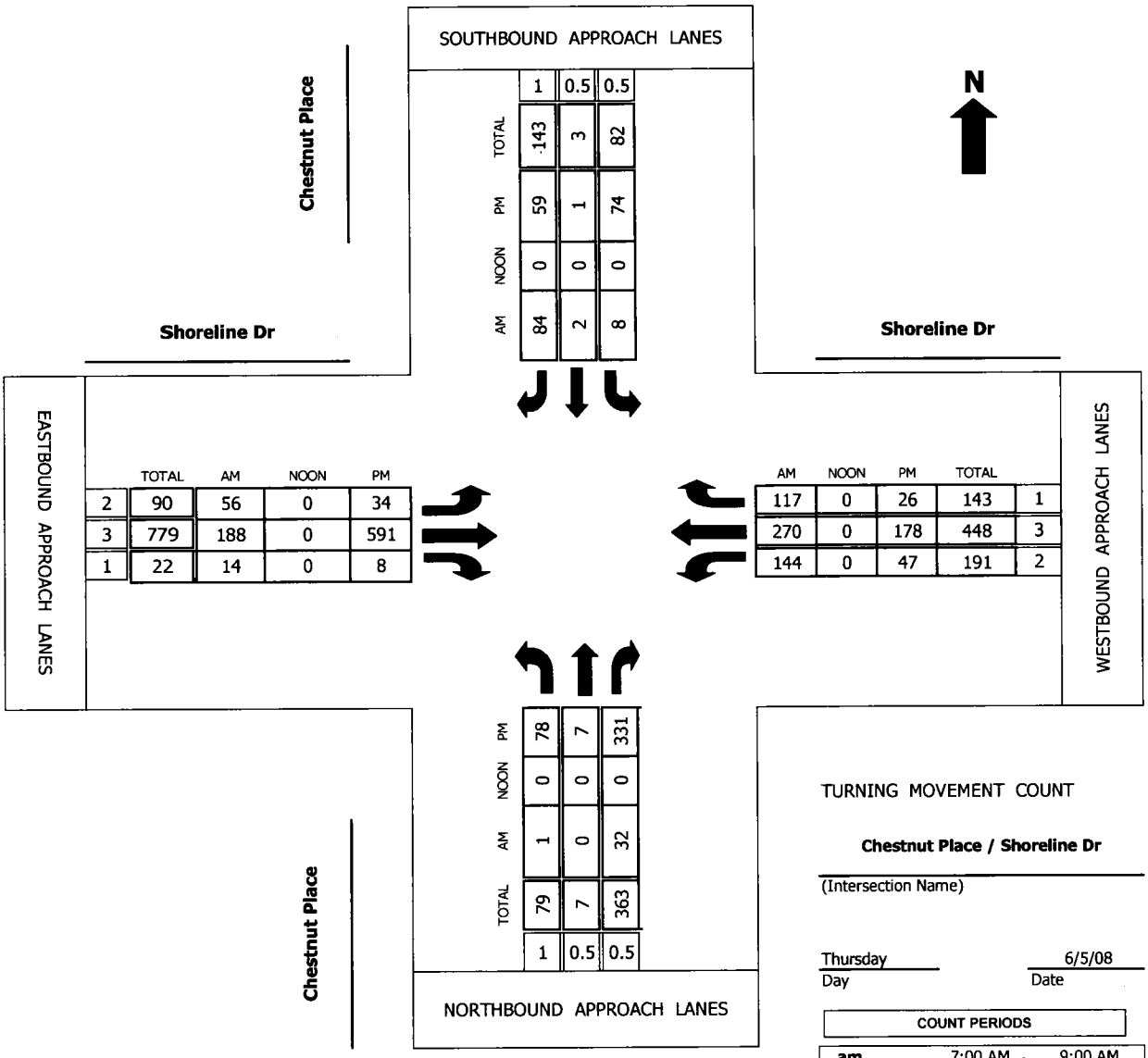
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Chestnut Place/Shoreline Dr

Project #: 08-2274-029



	TOTAL	AM	NOON	PM	
	1	0.5	0.5		
TOTAL	143	3	82		
PM	59	1	74		
NOON	0	0	0		
AM	84	2	8		

	TOTAL	AM	NOON	PM
2	90	56	0	34
3	779	188	0	591
1	22	14	0	8

AM	NOON	PM	TOTAL	
117	0	26	143	1
270	0	178	448	3
144	0	47	191	2

	TOTAL	AM	NOON	PM
PM	78	7	331	
NOON	0	0	0	
AM	1	0	32	
TOTAL	79	7	363	
	1	0.5	0.5	

TURNING MOVEMENT COUNT

Chestnut Place / Shoreline Dr

(Intersection Name)

Thursday (Day) 6/5/08 (Date)

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Chestnut Place DATE: 6/5/2008 LOCATION: City of Long Beach

E-W STREET: Shoreline Dr DAY: THURSDAY PROJECT# 08-2274-029

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.5	0.5	1	0.5	0.5	1	2	3	1	2	3	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	0	4	2	0	12	12	31	2	24	60	8	156
7:15 AM	1	1	4	2	0	16	8	41	4	44	48	19	188
7:30 AM	0	0	11	5	1	30	12	44	6	55	79	20	263
7:45 AM	0	0	6	1	0	17	13	56	1	45	72	30	241
8:00 AM	0	0	6	0	1	12	16	39	5	29	51	31	190
8:15 AM	1	0	9	2	0	25	15	49	2	15	68	36	222
8:30 AM	0	0	5	1	0	15	13	57	2	17	59	30	199
8:45 AM	6	0	12	0	0	10	9	67	1	15	41	20	181
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	9	1	57	13	2	137	98	384	23	244	478	194	1640
PEAK VOLUMES =	1	0	32	8	2	84	56	188	14	144	270	117	916
PEAK HR. FACTOR:		0.750			0.653			0.921			0.862		0.871

AM Peak Hr Begins at: 730 AM

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Chestnut Place DATE: 6/5/2008 LOCATION: City of Long Beach

E-W STREET: Shoreline Dr DAY: THURSDAY PROJECT# 08-2274-029

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.5	0.5	1	0.5	0.5	1	2	3	1	2	3	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	18	0	31	6	0	11	9	121	1	12	28	6	243
4:15 PM	22	2	46	12	1	11	11	129	2	13	41	7	297
4:30 PM	27	1	88	6	0	17	7	111	2	13	47	10	329
4:45 PM	16	2	82	13	1	11	11	126	1	16	44	7	330
5:00 PM	21	2	114	25	0	17	6	182	2	6	44	6	425
5:15 PM	14	2	47	30	0	14	10	172	3	12	43	3	350
5:30 PM	16	2	45	29	0	13	10	117	9	10	38	9	298
5:45 PM	11	0	47	15	0	12	14	149	4	10	35	4	301
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 145	NT 11	NR 500	SL 136	ST 2	SR 106	EL 78	ET 1107	ER 24	WL 92	WT 320	WR 52	TOTAL 2573

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	78	7	331	74	1	59	34	591	8	47	178	26	1434
PEAK HR. FACTOR:		0.759			0.761			0.833			0.896		0.844

CONTROL: Signalized

30

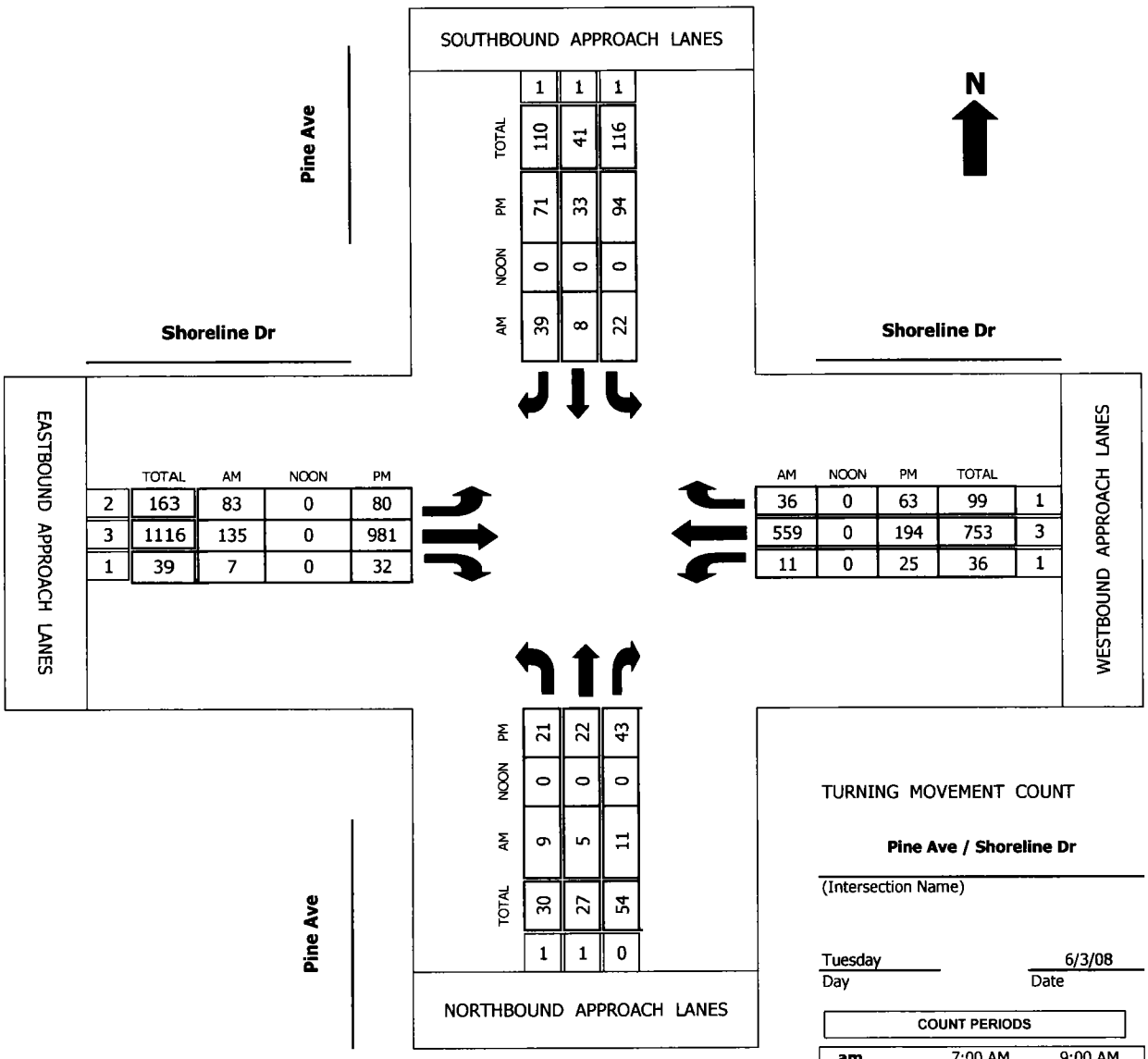
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Pine Ave/Shoreline Dr

Project #: 08-2274-030



	TOTAL	AM	NOON	PM
2	163	83	0	80
3	1116	135	0	981
1	39	7	0	32

AM	NOON	PM	TOTAL	
36	0	63	99	1
559	0	194	753	3
11	0	25	36	1

TOTAL	110	41	116
PM	71	33	94
NOON	0	0	0
AM	39	8	22
	1	1	1

PM	21	22	43
NOON	0	0	0
AM	9	5	11
TOTAL	30	27	54
	1	1	0

TURNING MOVEMENT COUNT

Pine Ave / Shoreline Dr

(Intersection Name)

Tuesday — Day

6/3/08 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	-	
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave DATE: 6/3/2008 LOCATION: City of Long Beach

E-W STREET: Shoreline Dr DAY: TUESDAY PROJECT# 08-2274-030

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	2	3	1	1	3	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	1	2	11	2	13	12	24	1	3	90	4	164
7:15 AM	2	1	1	2	2	10	17	32	1	1	113	9	191
7:30 AM	2	0	2	9	0	10	15	33	2	4	149	12	238
7:45 AM	3	1	2	4	5	10	24	35	2	2	163	6	257
8:00 AM	2	2	1	2	1	10	24	28	2	2	120	12	206
8:15 AM	2	2	6	7	2	9	20	39	1	3	127	6	224
8:30 AM	1	1	5	5	1	20	10	34	4	3	110	12	206
8:45 AM	2	1	2	11	1	16	22	40	3	1	81	10	190
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	15	9	21	51	14	98	144	265	16	19	953	71	1676

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	9	5	11	22	8	39	83	135	7	11	559	36	925
PEAK HR. FACTOR:		0.625			0.908			0.922			0.886		0.900

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Pine Ave | DATE: 6/3/2008 | LOCATION: City of Long Beach

E-W STREET: Shoreline Dr | DAY: TUESDAY | PROJECT# 08-2274-030

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	2	3	1	1	3	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	7	3	7	16	9	26	15	180	7	9	36	7	322
4:15 PM	4	7	7	17	6	17	21	165	8	7	40	13	312
4:30 PM	8	1	10	20	7	16	20	200	7	2	53	14	358
4:45 PM	4	7	12	30	10	15	17	202	9	10	50	19	385
5:00 PM	4	6	8	23	9	19	18	332	7	7	42	16	491
5:15 PM	5	8	13	21	7	21	25	247	9	6	49	14	425
5:30 PM	5	3	6	23	7	17	18	175	7	9	42	14	326
5:45 PM	4	9	12	24	8	26	24	170	9	7	39	18	350
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	41	44	75	174	63	157	158	1671	63	57	351	115	2969
PEAK VOLUMES =	21	22	43	94	33	71	80	981	32	25	194	63	1659
PEAK HR. FACTOR:		0.827			0.900			0.765			0.892		0.845

PM Peak Hr Begins at: 430 PM

CONTROL: Signalized

APPENDIX B

EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Magnolia Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.679
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Magnolia Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	0 1	1 1	0
Volume Module:												
Base Vol:	64	162	0	0	273	78	0	0	0	198	1257	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	162	0	0	273	78	0	0	0	198	1257	80
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	162	0	0	273	78	0	0	0	198	1257	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	162	0	0	273	78	0	0	0	198	1257	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	162	0	0	273	78	0	0	0	198	1257	80
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	162	0	0	273	78	0	0	0	198	1257	80
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	0.78	0.22	0.00	0.00	0.00	0.39	2.46	0.15
Final Sat.:	1600	1600	0	0	1244	356	0	0	0	619	3931	250
Capacity Analysis Module:												
Vol/Sat:	0.04	0.10	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.32	0.32	0.32
Crit Moves:	****				****					****		

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.651
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Pacific Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	1	1 0	0 0	0 0	0	1 0	2	1 0
Volume Module:												
Base Vol:	59	192	0	0	439	68	0	0	0	227	1352	117
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	192	0	0	439	68	0	0	0	227	1352	117
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	59	192	0	0	439	68	0	0	0	227	1352	117
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	59	192	0	0	439	68	0	0	0	227	1352	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	192	0	0	439	68	0	0	0	227	1352	117
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	192	0	0	439	68	0	0	0	227	1352	117
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.73	0.27	0.00	0.00	0.00	1.00	2.76	0.24
Final Sat.:	1600	3200	0	0	2771	429	0	0	0	1600	4418	382
Capacity Analysis Module:												
Vol/Sat:	0.04	0.06	0.00	0.00	0.16	0.16	0.00	0.00	0.00	0.14	0.31	0.31
Crit Moves:	****				****							****

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pine Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.551
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	0	0 0	1 0	1	0 0	0 0	0	0 1	1 1	0
Volume Module:												
Base Vol:	39	77	0	0	82	38	0	0	0	72	1650	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	77	0	0	82	38	0	0	0	72	1650	78
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	39	77	0	0	82	38	0	0	0	72	1650	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	39	77	0	0	82	38	0	0	0	72	1650	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	77	0	0	82	38	0	0	0	72	1650	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	77	0	0	82	38	0	0	0	72	1650	78
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.12	2.75	0.13
Final Sat.:	1600	1600	0	0	1600	1600	0	0	0	192	4400	208
Capacity Analysis Module:												
Vol/Sat:	0.02	0.05	0.00	0.00	0.05	0.02	0.00	0.00	0.00	0.38	0.38	0.38
Crit Moves:	****				****						****	

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LLG Costa Mesa, CA

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Long Beach Boulevard at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.714
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Long Beach Boulevard						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	197	397	0	0	447	101	0	0	0	161	1444	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	197	397	0	0	447	101	0	0	0	161	1444	118
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	197	397	0	0	447	101	0	0	0	161	1444	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	197	397	0	0	447	101	0	0	0	161	1444	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	397	0	0	447	101	0	0	0	161	1444	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	197	397	0	0	447	101	0	0	0	161	1444	118
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.00	0.00	0.14	0.06	0.00	0.00	0.00	0.10	0.30	0.07
Crit Moves:	****				****						****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Atlantic Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.675
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Atlantic Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	1	0 0	0 0	1	1 0	0 0	0	0 0	0 1	1	1 0
Volume Module:												
Base Vol:	66	335	0	0	360	81	0	0	0	126	1652	121
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	66	335	0	0	360	81	0	0	0	126	1652	121
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	335	0	0	360	81	0	0	0	126	1652	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	335	0	0	360	81	0	0	0	126	1652	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	335	0	0	360	81	0	0	0	126	1652	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	335	0	0	360	81	0	0	0	126	1652	121
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.33	1.67	0.00	0.00	1.63	0.37	0.00	0.00	0.00	0.20	2.61	0.19
Final Sat.:	527	2673	0	0	2612	588	0	0	0	318	4176	306
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.00	0.00	0.14	0.14	0.00	0.00	0.00	0.40	0.40	0.40
Crit Moves:	****				****					****		

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Martin Luther King Boulevard at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.298
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Martin Luther King Boulevard						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	2	1 0	0 1	0	0 0	0 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	75	141	362	135	61	118	0	0	0	0	1687	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	141	362	135	61	118	0	0	0	0	1687	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	75	141	362	135	61	118	0	0	0	0	1687	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	141	362	135	61	118	0	0	0	0	1687	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	141	362	135	61	118	0	0	0	0	1687	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	141	362	135	61	118	0	0	0	0	1687	36
OvlAdjVol:			0									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	2.00	1.00	0.34	0.66	0.00	0.00	0.00	0.00	1.96	0.04
Final Sat.:	1600	1600	3200	1600	545	1055	0	0	0	0	3133	67
Capacity Analysis Module:												
Vol/Sat:	0.05	0.09	0.11	0.08	0.11	0.11	0.00	0.00	0.00	0.00	0.54	0.54
OvlAdjV/S:			0.00									
Crit Moves:			****	****							****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Alamitos Boulevard at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.872
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	120	Level Of Service:	D

Street Name:	Alamitos Boulevard						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	68	350	104	58	437	126	51	477	9	234	1554	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	350	104	58	437	126	51	477	9	234	1554	56
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	68	350	104	58	437	126	51	477	9	234	1554	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	350	104	58	437	126	51	477	9	234	1554	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	350	104	58	437	126	51	477	9	234	1554	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	350	104	58	437	126	51	477	9	234	1554	56
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.55	0.45	1.00	1.96	0.04	1.00	1.93	0.07
Final Sat.:	1600	3200	1600	1600	2484	716	1600	3141	59	1600	3089	111
Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.07	0.04	0.18	0.18	0.03	0.15	0.15	0.15	0.50	0.50
Crit Moves:	****				****						****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Magnolia Avenue at 6th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.477
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Magnolia Avenue						6th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 1	0	1 0	1 0	0	0 1	1 1	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	151	63	78	423	0	78	421	42	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	151	63	78	423	0	78	421	42	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	151	63	78	423	0	78	421	42	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	151	63	78	423	0	78	421	42	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	151	63	78	423	0	78	421	42	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	151	63	78	423	0	78	421	42	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.71	0.29	1.00	1.00	0.00	0.43	2.34	0.23	0.00	0.00	0.00
Final Sat.:	0	1129	471	1600	1600	0	692	3735	373	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.13	0.13	0.05	0.26	0.00	0.11	0.11	0.11	0.00	0.00	0.00
Crit Moves:	****				****				****			

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #9 Magnolia Avenue at 5th Street

****

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[12.7]

****

Street Name:	Magnolia Avenue									5th Street								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	5	193		4		10	430		29		6		3		22	8		3		10
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	5	193		4		10	430		29		6		3		22	8		3		10
Added Vol:	0	0		0		0	0		0		0		0		0	0		0		0
PasserByVol:	0	0		0		0	0		0		0		0		0	0		0		0
Initial Fut:	5	193		4		10	430		29		6		3		22	8		3		10
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	5	193		4		10	430		29		6		3		22	8		3		10
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	5	193		4		10	430		29		6		3		22	8		3		10
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1		6.5		6.2	7.1		6.5		6.2
FollowUpTim:	2.2	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5		4.0		3.3	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	459	xxxx	xxxxx			197	xxxx	xxxxx			676		672		445	682		684		195
Potent Cap.:	1113	xxxx	xxxxx			1388	xxxx	xxxxx			370		380		618	367		374		851
Move Cap.:	1113	xxxx	xxxxx			1388	xxxx	xxxxx			360		375		618	348		369		851
Volume/Cap:	0.00	xxxx	xxxx			0.01	xxxx	xxxx			0.02		0.01		0.04	0.02		0.01		0.01
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx			0.0	xxxx	xxxxx			xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	8.3	xxxx	xxxxx			7.6	xxxx	xxxxx			xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	A	*		*		A	*		*		*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx		514		xxxxx	xxxx		490		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx		0.2		xxxxx	xxxxx		0.1		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx		12.4		xxxxx	xxxxx		12.7		xxxxx
Shared LOS:	*	*		*		*	*		*		*		B		*	*		B		*
ApproachDel:	xxxxxx					xxxxxx					12.4					12.7				
ApproachLOS:	*					*					B					B				

****

Note: Queue reported is the number of cars per lane.

****

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Alamitos Boulevard at 4th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.707
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Alamitos Boulevard						4th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	51	407	55	141	701	40	42	206	26	138	421	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	407	55	141	701	40	42	206	26	138	421	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	51	407	55	141	701	40	42	206	26	138	421	87
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	51	407	55	141	701	40	42	206	26	138	421	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	407	55	141	701	40	42	206	26	138	421	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	51	407	55	141	701	40	42	206	26	138	421	87
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.76	0.24	1.00	1.89	0.11	1.00	0.89	0.11	1.00	0.83	0.17
Final Sat.:	1600	2819	381	1600	3027	173	1600	1421	179	1600	1326	274
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.14	0.09	0.23	0.23	0.03	0.14	0.15	0.09	0.32	0.32
Crit Moves:	****				****		****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Magnolia Avenue at 3rd Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Magnolia Avenue						3rd Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	0	0 0	1	1 0	0 0	0 0	0	0 1	1	1 0
Volume Module:												
Base Vol:	45	104	0	0	358	107	0	0	0	155	1095	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	104	0	0	358	107	0	0	0	155	1095	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	104	0	0	358	107	0	0	0	155	1095	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	104	0	0	358	107	0	0	0	155	1095	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	104	0	0	358	107	0	0	0	155	1095	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	104	0	0	358	107	0	0	0	155	1095	88
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.54	0.46	0.00	0.00	0.00	0.35	2.45	0.20
Final Sat.:	1600	1600	0	0	2464	736	0	0	0	556	3928	316
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.00	0.00	0.15	0.15	0.00	0.00	0.00	0.28	0.28	0.28
Crit Moves:	****				****					****		

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Magnolia Avenue at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.471
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Magnolia Avenue						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0	1 1	0 0	0	1 2	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	107	140	106	387	0	33	840	347	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	107	140	106	387	0	33	840	347	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	107	140	106	387	0	33	840	347	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	107	140	106	387	0	33	840	347	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	107	140	106	387	0	33	840	347	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	107	140	106	387	0	33	840	347	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.43	1.57	0.00	0.11	2.89	1.00	0.00	0.00	0.00
Final Sat.:	0	3200	1600	688	2512	0	181	4619	1600	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.03	0.09	0.07	0.15	0.00	0.18	0.18	0.22	0.00	0.00	0.00
Crit Moves:			****	****					****			

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Pacific Avenue at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pacific Avenue						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2 0	1	1 0	2 0	0	0 1	1 1	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	189	58	70	442	0	43	627	274	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	189	58	70	442	0	43	627	274	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	189	58	70	442	0	43	627	274	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	189	58	70	442	0	43	627	274	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	189	58	70	442	0	43	627	274	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	189	58	70	442	0	43	627	274	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.14	1.99	0.87	0.00	0.00	0.00
Final Sat.:	0	3200	1600	1600	3200	0	219	3188	1393	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.06	0.04	0.04	0.14	0.00	0.20	0.20	0.20	0.00	0.00	0.00
Crit Moves:					****			****				

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Pine Avenue at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.395
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 1	0	1 0	1 0	0	1 0	2 1	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	59	42	49	236	0	39	571	138	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	59	42	49	236	0	39	571	138	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	59	42	49	236	0	39	571	138	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	59	42	49	236	0	39	571	138	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	59	42	49	236	0	39	571	138	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	59	42	49	236	0	39	571	138	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.58	0.42	1.00	1.00	0.00	1.00	2.42	0.58	0.00	0.00	0.00
Final Sat.:	0	935	665	1600	1600	0	1600	3866	934	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.06	0.06	0.03	0.15	0.00	0.02	0.15	0.15	0.00	0.00	0.00
Crit Moves:	****				****				****			

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Alamitos Boulevard at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Alamitos Boulevard						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	2 0	2 0	1	1 0	0 0	1
Volume Module:												
Base Vol:	0	405	39	29	473	0	123	238	34	406	0	425
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	405	39	29	473	0	123	238	34	406	0	425
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	405	39	29	473	0	123	238	34	406	0	425
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	405	39	29	473	0	123	238	34	406	0	425
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	405	39	29	473	0	123	238	34	406	0	425
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	405	39	29	473	0	123	238	34	406	0	425
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.82	0.18	1.00	1.00	0.00	2.00	2.00	1.00	1.00	0.00	1.00
Final Sat.:	0	2919	281	1600	1600	0	2880	3200	1600	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.14	0.02	0.30	0.00	0.04	0.07	0.02	0.25	0.00	0.27
Crit Moves:	****				****			****			****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 Golden Shore Street/Golden Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.616
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Golden Shore Street/Golden Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 0	1 0	2	1 0	1 0	2	1 1
Volume Module:												
Base Vol:	19	52	124	3	6	0	56	643	129	106	1590	663
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	52	124	3	6	0	56	643	129	106	1590	663
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	52	124	3	6	0	56	643	129	106	1590	663
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	52	124	3	6	0	56	643	129	106	1590	663
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	19	52	124	3	6	0	56	643	129	106	1590	663
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	19	52	124	3	6	0	56	643	129	106	1590	663
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	2.50	0.50	1.00	2.82	1.18
Final Sat.:	1600	1600	1600	1600	1600	0	1600	3998	802	1600	4517	1883
Capacity Analysis Module:												
Vol/Sat:	0.01	0.03	0.08	0.00	0.00	0.00	0.04	0.16	0.16	0.07	0.35	0.35
Crit Moves:			****	****			****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #17 Magnolia Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.783
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Magnolia Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	27	75	15	178	135	369	77	677	24	94	1857	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	75	15	178	135	369	77	677	24	94	1857	93
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	75	15	178	135	369	77	677	24	94	1857	93
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	75	15	178	135	369	77	677	24	94	1857	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	75	15	178	135	369	77	677	24	94	1857	93
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	75	15	178	135	369	77	677	24	94	1857	93
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.90	0.10	1.00	3.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	4636	164	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.01	0.11	0.04	0.23	0.05	0.15	0.15	0.06	0.39	0.06
Crit Moves:	****					****	****				****	

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #18 Chestnut Place at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.556
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Chestnut Place						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0	0 1	0	0 0	0 0	0	0 2	1 0	1	0 3	0 0
Volume Module:												
Base Vol:	42	0	60	0	0	0	0	773	29	67	2011	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	0	60	0	0	0	0	773	29	67	2011	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	42	0	60	0	0	0	0	773	29	67	2011	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	42	0	60	0	0	0	0	773	29	67	2011	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	0	60	0	0	0	0	773	29	67	2011	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	42	0	60	0	0	0	0	773	29	67	2011	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.89	0.11	1.00	3.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4626	174	1600	4800	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.17	0.17	0.04	0.42	0.00
Crit Moves:			****				****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #19 Pacific Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.689
Loss Time (sec):	12	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Pacific Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	2	0 0	1	1 0	2 1	0	1 0	3 0 1
Volume Module:												
Base Vol:	3	2	3	86	0	289	166	655	7	25	1853	157
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	2	3	86	0	289	166	655	7	25	1853	157
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	2	3	86	0	289	166	655	7	25	1853	157
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	2	3	86	0	289	166	655	7	25	1853	157
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	2	3	86	0	289	166	655	7	25	1853	157
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	2	3	86	0	289	166	655	7	25	1853	157
OvlAdjVol:						123						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.25	0.38	2.00	0.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	600	400	600	2880	0	1600	1600	4749	51	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.01	0.01	0.03	0.00	0.18	0.10	0.14	0.14	0.02	0.39	0.10
OvlAdjV/S:						0.08						
Crit Moves:	****					****	****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #20 Pine Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Pine Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	0	1 0	0 1	1 0	2	1 0	1 0	3	0 1
Volume Module:												
Base Vol:	36	24	19	27	65	65	34	672	74	95	2075	96
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	24	19	27	65	65	34	672	74	95	2075	96
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	24	19	27	65	65	34	672	74	95	2075	96
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	24	19	27	65	65	34	672	74	95	2075	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	24	19	27	65	65	34	672	74	95	2075	96
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	36	24	19	27	65	65	34	672	74	95	2075	96
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.29	0.71	1.00	1.00	2.70	0.30	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	470	1130	1600	1600	4324	476	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.01	0.02	0.06	0.04	0.02	0.16	0.16	0.06	0.43	0.06
Crit Moves:	****				****		****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #21 Long Beach Boulevard at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.718
Loss Time (sec):	12	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Long Beach Boulevard						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1 0	1! 0	1	1 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	98	0	254	127	586	0	0	2108	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	98	0	254	127	586	0	0	2108	80
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	98	0	254	127	586	0	0	2108	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	98	0	254	127	586	0	0	2108	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	98	0	254	127	586	0	0	2108	80
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	98	0	254	127	586	0	0	2108	80
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	2.00	1.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	1600	0	3200	1600	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.08	0.08	0.12	0.00	0.00	0.44	0.05
Crit Moves:						****	****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #22 Atlantic Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.651
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Atlantic Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0	0 0	0 1	0	0 1	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	3	1	0	43	1	109	71	665	1	0	2024	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	1	0	43	1	109	71	665	1	0	2024	72
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	1	0	43	1	109	71	665	1	0	2024	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	1	0	43	1	109	71	665	1	0	2024	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	1	0	43	1	109	71	665	1	0	2024	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	1	0	43	1	109	71	665	1	0	2024	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.75	0.25	0.00	0.98	0.02	1.00	1.00	2.99	0.01	1.00	2.90	0.10
Final Sat.:	1200	400	0	1564	36	1600	1600	4793	7	1600	4635	165
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.03	0.03	0.07	0.04	0.14	0.14	0.00	0.44	0.44
Crit Moves:	****					****	****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #23 Shoreline Drive/Alamitos Boulevard at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	1.120
Loss Time (sec):	18	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	120	Level Of Service:	F

Street Name:	Shoreline Drive/Alamitos Boulevar						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 1	0	1 0	3 0	1	2 0	1 1	0
Volume Module:												
Base Vol:	35	88	134	55	342	459	159	548	22	367	1677	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	88	134	55	342	459	159	548	22	367	1677	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	88	134	55	342	459	159	548	22	367	1677	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	88	134	55	342	459	159	548	22	367	1677	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	88	134	55	342	459	159	548	22	367	1677	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	35	88	134	55	342	459	159	548	22	367	1677	25
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	2.00	1.97	0.03
Final Sat.:	1600	4800	1600	1600	3200	1600	1600	4800	1600	2880	3153	47
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.08	0.03	0.11	0.29	0.10	0.11	0.01	0.13	0.53	0.53
Crit Moves:	****					****	****				****	

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #24 Golden Shore Street at Seaside Way (2)

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: C[15.5]

Street Name:	Golden Shore Street						Seaside Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	1 0	1! 0	1
Volume Module:												
Base Vol:	24	144	198	122	136	19	4	0	1	44	2	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	144	198	122	136	19	4	0	1	44	2	46
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	47	0	0	0	0	42	14	0	4	0	-2	0
Initial Fut:	71	144	198	122	136	61	18	0	5	44	0	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	71	144	198	122	136	61	18	0	5	44	0	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	71	144	198	122	136	61	18	0	5	44	0	46
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	197	xxxx	xxxxx	342	xxxx	xxxxx	625	895	99	697	826	171
Potent Cap.:	1388	xxxx	xxxxx	1228	xxxx	xxxxx	374	282	945	331	310	849
Move Cap.:	1388	xxxx	xxxxx	1228	xxxx	xxxxx	314	241	945	293	265	849
Volume/Cap:	0.05	xxxx	xxxx	0.10	xxxx	xxxx	0.06	0.00	0.01	0.15	0.00	0.05
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	0.1
Control Del:	7.7	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.3	xxxx	9.4
LOS by Move:	A	*	*	A	*	*	*	*	*	C	*	A
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	367	xxxxx	xxxx	440	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	0.3	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	15.5	xxxxx	xxxxx	14.1	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			15.5			13.9		
ApproachLOS:	*			*			C			B		

Note: Queue reported is the number of cars per lane.

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #25 Chestnut Place at Seaside Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.150
Loss Time (sec):	0	Average Delay (sec/veh):	8.5
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Chestnut Place						Seaside Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	0	1 0	0 1	0	0 1	0 1	0	1 0
Volume Module:												
Base Vol:	95	61	13	8	50	38	14	35	1	45	58	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	95	61	13	8	50	38	14	35	1	45	58	27
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	95	61	13	8	50	38	14	35	1	45	58	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	95	61	13	8	50	38	14	35	1	45	58	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	61	13	8	50	38	14	35	1	45	58	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	61	13	8	50	38	14	35	1	45	58	27
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.82	0.18	1.00	0.57	0.43	0.29	0.71	1.00	0.69	0.89	0.42
Final Sat.:	632	584	124	620	410	311	181	453	743	432	602	292
Capacity Analysis Module:												
Vol/Sat:	0.15	0.10	0.10	0.01	0.12	0.12	0.08	0.08	0.00	0.10	0.10	0.09
Crit Moves:	****				****		****			****		
Delay/Veh:	9.2	8.2	8.2	8.4	8.2	8.2	8.6	8.6	7.3	8.9	8.4	8.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.2	8.2	8.2	8.4	8.2	8.2	8.6	8.6	7.3	8.9	8.4	8.1
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.8			8.2			8.5			8.5	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.8			8.2			8.5			8.5	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #26 Pine Avenue at Seaside Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.263
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						Seaside Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 1	0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	4	38	34	65	134	35	17	39	8	30	38	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	38	34	65	134	35	17	39	8	30	38	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	38	34	65	134	35	17	39	8	30	38	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	38	34	65	134	35	17	39	8	30	38	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	38	34	65	134	35	17	39	8	30	38	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	38	34	65	134	35	17	39	8	30	38	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.59	0.41	1.00	0.83	0.17	1.00	1.00	1.00
Final Sat.:	1600	1600	1600	1600	2537	663	1600	1328	272	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.02	0.02	0.04	0.05	0.05	0.01	0.03	0.03	0.02	0.02	0.01
Crit Moves:		****		****				****		****		

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #27 Golden Shore Street at I-710 SB Off-Ramp

****

Average Delay (sec/veh): 8.1 Worst Case Level Of Service: B[11.9]

****

Street Name:	Golden Shore Street						I-710 SB Off-Ramp					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 2	0 0		0 0 1	0 0		1 0 0	0 1		0 0 0	0 0	
Volume Module:												
Base Vol:	0	84	0	0	181	0	314	0	244	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	84	0	0	181	0	314	0	244	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	84	0	0	181	0	314	0	244	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	84	0	0	181	0	314	0	244	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	84	0	0	181	0	314	0	244	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	223	xxxx	181	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	770	xxxx	867	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	770	xxxx	867	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.41	xxxx	0.28	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.0	xxxx	1.2	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.9	xxxx	10.8	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	B	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.9			xxxxxx		
ApproachLOS:	*			*			B			*		

****

Note: Queue reported is the number of cars per lane.

****

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #28 Golden Shore Street at Shoreline Drive

****

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[11.8]

****

Street Name:	Golden Shore Street						Shoreline Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			1 0 1 0 1			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	3	74	2	5	413	9	7	0	1	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	74	2	5	413	9	7	0	1	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	74	2	5	413	9	7	0	1	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	74	2	5	413	9	7	0	1	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	74	2	5	413	9	7	0	1	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	422	xxxx	xxxxx	76	xxxx	xxxxx	504	505	413	xxxx	xxxx	xxxxx
Potent Cap.:	1148	xxxx	xxxxx	1536	xxxx	xxxxx	531	473	643	xxxx	xxxx	xxxxx
Move Cap.:	1148	xxxx	xxxxx	1536	xxxx	xxxxx	529	470	643	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.01	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	541	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.8	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.8			xxxxxx		
ApproachLOS:	*			*			B			*		

****

Note: Queue reported is the number of cars per lane.

****

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AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #29 Chestnut Place at Shoreline Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.345
Loss Time (sec):	18	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Chestnut Place						Shoreline Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	0	1	0 0 1	2	0	3 0 1	2	0	3 1 0
Volume Module:												
Base Vol:	1	0	32	8	2	84	56	188	14	144	270	117
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	0	32	8	2	84	56	188	14	144	270	117
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	32	8	2	84	56	188	14	144	270	117
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	0	32	8	2	84	56	188	14	144	270	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	0	32	8	2	84	56	188	14	144	270	117
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1	0	32	8	2	84	56	188	14	144	270	117
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	0.00	1.00	0.80	0.20	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	0	1600	1280	320	1600	2880	4800	1600	2880	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.01	0.01	0.05	0.02	0.04	0.01	0.05	0.06	0.07
Crit Moves:			****			****	****					****

AM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #30 Pine Avenue at Shoreline Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.355
Loss Time (sec):	18	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						Shoreline Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	2 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	9	5	11	22	8	39	83	135	7	11	559	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	5	11	22	8	39	83	135	7	11	559	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	5	11	22	8	39	83	135	7	11	559	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	5	11	22	8	39	83	135	7	11	559	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	5	11	22	8	39	83	135	7	11	559	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	5	11	22	8	39	83	135	7	11	559	36
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	2880	4800	1600	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.01	0.01	0.02	0.03	0.03	0.00	0.01	0.12	0.02
Crit Moves:	****					****	****				****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Magnolia Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.576
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Magnolia Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	0	0 0	0 1	0	0 0	0 0	0	0 1	1 1	0
Volume Module:												
Base Vol:	102	350	0	0	310	61	0	0	0	99	654	114
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	350	0	0	310	61	0	0	0	99	654	114
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	350	0	0	310	61	0	0	0	99	654	114
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	102	350	0	0	310	61	0	0	0	99	654	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	350	0	0	310	61	0	0	0	99	654	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	350	0	0	310	61	0	0	0	99	654	114
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	0.84	0.16	0.00	0.00	0.00	0.34	2.27	0.39
Final Sat.:	1600	1600	0	0	1337	263	0	0	0	548	3621	631
Capacity Analysis Module:												
Vol/Sat:	0.06	0.22	0.00	0.00	0.23	0.23	0.00	0.00	0.00	0.18	0.18	0.18
Crit Moves:	****				****						****	

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Pacific Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.513
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pacific Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	1 1	0	0 0	0 0	0	1 0	2 1	0
Volume Module:												
Base Vol:	64	522	0	0	374	60	0	0	0	120	777	121
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	64	522	0	0	374	60	0	0	0	120	777	121
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	522	0	0	374	60	0	0	0	120	777	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	522	0	0	374	60	0	0	0	120	777	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	522	0	0	374	60	0	0	0	120	777	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	522	0	0	374	60	0	0	0	120	777	121
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.72	0.28	0.00	0.00	0.00	1.00	2.60	0.40
Final Sat.:	1600	3200	0	0	2758	442	0	0	0	1600	4153	647
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.00	0.00	0.14	0.14	0.00	0.00	0.00	0.08	0.19	0.19
Crit Moves:	****				****							****

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Pine Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.452
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	0	0 0	1 0	1	0 0	0 0	0	0 1	1 1	0
Volume Module:												
Base Vol:	79	194	0	0	133	59	0	0	0	82	866	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	194	0	0	133	59	0	0	0	82	866	107
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	194	0	0	133	59	0	0	0	82	866	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	194	0	0	133	59	0	0	0	82	866	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	194	0	0	133	59	0	0	0	82	866	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	194	0	0	133	59	0	0	0	82	866	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.23	2.47	0.30
Final Sat.:	1600	1600	0	0	1600	1600	0	0	0	373	3940	487
Capacity Analysis Module:												
Vol/Sat:	0.05	0.12	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.22	0.22	0.22
Crit Moves:	****				****							****

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Long Beach Boulevard at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.531
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Long Beach Boulevard						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	160	517	0	0	382	85	0	0	0	145	778	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	160	517	0	0	382	85	0	0	0	145	778	79
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	160	517	0	0	382	85	0	0	0	145	778	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	160	517	0	0	382	85	0	0	0	145	778	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	517	0	0	382	85	0	0	0	145	778	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	160	517	0	0	382	85	0	0	0	145	778	79
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.16	0.00	0.00	0.12	0.05	0.00	0.00	0.00	0.09	0.16	0.05
Crit Moves:	****				****						****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Atlantic Avenue at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.476
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Atlantic Avenue						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	1 0 0	0	0	1 1 0	0	0	0 0 0	0	1	1 1 0
Volume Module:												
Base Vol:	39	436	0	0	365	72	0	0	0	84	819	127
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	436	0	0	365	72	0	0	0	84	819	127
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	39	436	0	0	365	72	0	0	0	84	819	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	39	436	0	0	365	72	0	0	0	84	819	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	436	0	0	365	72	0	0	0	84	819	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	436	0	0	365	72	0	0	0	84	819	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	1.84	0.00	0.00	1.67	0.33	0.00	0.00	0.00	0.24	2.39	0.37
Final Sat.:	263	2937	0	0	2673	527	0	0	0	391	3817	592
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.00	0.00	0.14	0.14	0.00	0.00	0.00	0.21	0.21	0.21
Crit Moves:	****				****					****		

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Martin Luther King Boulevard at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.474
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Martin Luther King Boulevard						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	2	1 0	0 1	0	0 0	0 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	37	112	978	110	65	65	0	0	0	0	904	62
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	112	978	110	65	65	0	0	0	0	904	62
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	37	112	978	110	65	65	0	0	0	0	904	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	112	978	110	65	65	0	0	0	0	904	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	112	978	110	65	65	0	0	0	0	904	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	112	978	110	65	65	0	0	0	0	904	62
OvlAdjVol:			12									
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	2.00	1.00	0.50	0.50	0.00	0.00	0.00	0.00	1.87	0.13
Final Sat.:	1600	1600	3200	1600	800	800	0	0	0	0	2995	205
Capacity Analysis Module:												
Vol/Sat:	0.02	0.07	0.31	0.07	0.08	0.08	0.00	0.00	0.00	0.00	0.30	0.30
OvlAdjV/S:			0.00									
Crit Moves:			****	****								****

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 Alamitos Boulevard at 7th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.735
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Alamitos Boulevard						7th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	71	505	232	69	340	99	68	955	9	133	791	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	505	232	69	340	99	68	955	9	133	791	57
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	71	505	232	69	340	99	68	955	9	133	791	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	71	505	232	69	340	99	68	955	9	133	791	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	505	232	69	340	99	68	955	9	133	791	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	71	505	232	69	340	99	68	955	9	133	791	57
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.55	0.45	1.00	1.98	0.02	1.00	1.87	0.13
Final Sat.:	1600	3200	1600	1600	2478	722	1600	3170	30	1600	2985	215
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.15	0.04	0.14	0.14	0.04	0.30	0.30	0.08	0.27	0.26
Crit Moves:		****		****				****			****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Magnolia Avenue at 6th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.705
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Magnolia Avenue						6th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 1	0	1 0	1 0	0	0 1	1 1	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	360	68	99	307	0	93	1169	60	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	360	68	99	307	0	93	1169	60	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	360	68	99	307	0	93	1169	60	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	360	68	99	307	0	93	1169	60	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	360	68	99	307	0	93	1169	60	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	360	68	99	307	0	93	1169	60	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.84	0.16	1.00	1.00	0.00	0.21	2.65	0.14	0.00	0.00	0.00
Final Sat.:	0	1346	254	1600	1600	0	338	4244	218	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.27	0.06	0.19	0.00	0.28	0.28	0.28	0.00	0.00	0.00
Crit Moves:		****		****				****				

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Magnolia Avenue at 5th Street

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: C[17.2]

Street Name:	Magnolia Avenue									5th Street								
Approach:	North Bound					South Bound				East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	1	0	1	0	0	1	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	11	390		14		24	310		51		14	24		16		11	11		45	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	11	390		14		24	310		51		14	24		16		11	11		45	
Added Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
PasserByVol:	0	0		0		0	0		0		0	0		0		0	0		0	
Initial Fut:	11	390		14		24	310		51		14	24		16		11	11		45	
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
PHF Volume:	11	390		14		24	310		51		14	24		16		11	11		45	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
FinalVolume:	11	390		14		24	310		51		14	24		16		11	11		45	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx			4.1	xxxx	xxxxx			7.1	6.5		6.2		7.1	6.5		6.2	
FollowUpTim:	2.2	xxxx	xxxxx			2.2	xxxx	xxxxx			3.5	4.0		3.3		3.5	4.0		3.3	
Capacity Module:																				
Cnflict Vol:	361	xxxx	xxxxx			404	xxxx	xxxxx			831	810		336		823	828		397	
Potent Cap.:	1209	xxxx	xxxxx			1166	xxxx	xxxxx			291	316		711		295	309		657	
Move Cap.:	1209	xxxx	xxxxx			1166	xxxx	xxxxx			258	307		711		265	300		657	
Volume/Cap:	0.01	xxxx	xxxx			0.02	xxxx	xxxx			0.05	0.08		0.02		0.04	0.04		0.07	
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx			0.1	xxxx	xxxxx			xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx	
Control Del:	8.0	xxxx	xxxxx			8.2	xxxx	xxxxx			xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
LOS by Move:	A	*		*		A	*		*		*	*		*		*	*		*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	349	xxxxx			xxxx	457	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	0.5	xxxxx			xxxxx	0.5	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	17.2	xxxxx			xxxxx	14.2	xxxxx		
Shared LOS:	*	*		*		*	*		*		*	C		*		*	B		*	
ApproachDel:	xxxxxx					xxxxxx					17.2					14.2				
ApproachLOS:	*					*					C					B				

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Alamitos Boulevard at 4th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.888
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	94	Level Of Service:	D

Street Name:	Alamitos Boulevard						4th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	43	977	183	174	465	43	56	423	22	62	272	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	977	183	174	465	43	56	423	22	62	272	45
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	977	183	174	465	43	56	423	22	62	272	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	43	977	183	174	465	43	56	423	22	62	272	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	977	183	174	465	43	56	423	22	62	272	45
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	43	977	183	174	465	43	56	423	22	62	272	45
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	0.92	0.08	1.00	0.95	0.05	1.00	0.86	0.14
Final Sat.:	1600	2695	505	1600	1465	135	1600	1521	79	1600	1373	227
Capacity Analysis Module:												
Vol/Sat:	0.03	0.36	0.36	0.11	0.32	0.32	0.04	0.28	0.28	0.04	0.20	0.20
Crit Moves:		****		****				****			****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Magnolia Avenue at 3rd Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.545
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Magnolia Avenue						3rd Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	0	0 0	1	1 0	0 0	0 0	0	0 1	1	1 0
Volume Module:												
Base Vol:	79	346	0	0	254	58	0	0	0	98	694	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	346	0	0	254	58	0	0	0	98	694	68
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	346	0	0	254	58	0	0	0	98	694	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	346	0	0	254	58	0	0	0	98	694	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	346	0	0	254	58	0	0	0	98	694	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	346	0	0	254	58	0	0	0	98	694	68
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.63	0.37	0.00	0.00	0.00	0.34	2.42	0.24
Final Sat.:	1600	1600	0	0	2605	595	0	0	0	547	3873	380
Capacity Analysis Module:												
Vol/Sat:	0.05	0.22	0.00	0.00	0.10	0.10	0.00	0.00	0.00	0.18	0.18	0.18
Crit Moves:		****										****

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Magnolia Avenue at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.462
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Magnolia Avenue						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 1	1	0 0	0 1	2	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	0	323	69	58	279	0	90	988	176	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	323	69	58	279	0	90	988	176	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	323	69	58	279	0	90	988	176	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	323	69	58	279	0	90	988	176	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	323	69	58	279	0	90	988	176	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	323	69	58	279	0	90	988	176	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.34	1.66	0.00	0.25	2.75	1.00	0.00	0.00	0.00
Final Sat.:	0	3200	1600	551	2649	0	401	4399	1600	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.04	0.04	0.11	0.00	0.22	0.22	0.11	0.00	0.00	0.00
Crit Moves:		****		****				****				

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Pacific Avenue at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.654
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Pacific Avenue						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	1 0	2	0 0	0 1	1	1 0	0 0	0	0 0
Volume Module:												
Base Vol:	0	445	241	92	196	0	86	1238	97	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	445	241	92	196	0	86	1238	97	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	445	241	92	196	0	86	1238	97	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	445	241	92	196	0	86	1238	97	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	445	241	92	196	0	86	1238	97	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	445	241	92	196	0	86	1238	97	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.18	2.62	0.20	0.00	0.00	0.00
Final Sat.:	0	3200	1600	1600	3200	0	290	4182	328	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.15	0.06	0.06	0.00	0.30	0.30	0.30	0.00	0.00	0.00
Crit Moves:			****	****				****				

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Pine Avenue at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.672
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Pine Avenue						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 1	0	1 0	1 0	0	1 0	2 1	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	216	96	83	149	0	46	1476	86	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	216	96	83	149	0	46	1476	86	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	216	96	83	149	0	46	1476	86	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	216	96	83	149	0	46	1476	86	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	216	96	83	149	0	46	1476	86	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	216	96	83	149	0	46	1476	86	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.69	0.31	1.00	1.00	0.00	1.00	2.83	0.17	0.00	0.00	0.00
Final Sat.:	0	1108	492	1600	1600	0	1600	4536	264	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.20	0.05	0.09	0.00	0.03	0.33	0.33	0.00	0.00	0.00
Crit Moves:			****	****				****				

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Alamitos Boulevard at Broadway Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.747
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Alamitos Boulevard						Broadway Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1 1	0	1 0	1 0	0	2 0	2 0	1	1 0	0 0	1
Volume Module:												
Base Vol:	0	839	37	58	404	0	550	550	117	118	0	153
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	839	37	58	404	0	550	550	117	118	0	153
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	839	37	58	404	0	550	550	117	118	0	153
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	839	37	58	404	0	550	550	117	118	0	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	839	37	58	404	0	550	550	117	118	0	153
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	839	37	58	404	0	550	550	117	118	0	153
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.92	0.08	1.00	1.00	0.00	2.00	2.00	1.00	1.00	0.00	1.00
Final Sat.:	0	3065	135	1600	1600	0	2880	3200	1600	1600	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.27	0.04	0.25	0.00	0.19	0.17	0.07	0.07	0.00	0.10
Crit Moves:		****		****			****					****

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 Golden Shore Street/Golden Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.759
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	120	Level Of Service:	C

Street Name:	Golden Shore Street/Golden Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	0 0	1 0	2	1 0	1 0	2	1 1
Volume Module:												
Base Vol:	127	482	136	9	3	0	80	1918	50	49	841	465
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	127	482	136	9	3	0	80	1918	50	49	841	465
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	127	482	136	9	3	0	80	1918	50	49	841	465
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	127	482	136	9	3	0	80	1918	50	49	841	465
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	482	136	9	3	0	80	1918	50	49	841	465
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	127	482	136	9	3	0	80	1918	50	49	841	465
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.56	0.44	1.00	1.00	0.00	1.00	2.92	0.08	1.00	2.58	1.42
Final Sat.:	1600	2496	704	1600	1600	0	1600	4678	122	1600	4121	2279
Capacity Analysis Module:												
Vol/Sat:	0.08	0.19	0.19	0.01	0.00	0.00	0.05	0.41	0.41	0.03	0.20	0.20
Crit Moves:		****		****				****				

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #17 Magnolia Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.722
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Magnolia Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	0 1	1 0	2	0 1	1 0	2	1 0	1 0	3	0 1
Volume Module:												
Base Vol:	79	103	40	146	75	207	146	1995	20	38	1113	132
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	103	40	146	75	207	146	1995	20	38	1113	132
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	103	40	146	75	207	146	1995	20	38	1113	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	103	40	146	75	207	146	1995	20	38	1113	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	103	40	146	75	207	146	1995	20	38	1113	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	103	40	146	75	207	146	1995	20	38	1113	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.97	0.03	1.00	3.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	4752	48	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.03	0.03	0.09	0.02	0.13	0.09	0.42	0.42	0.02	0.23	0.08
Crit Moves:	****					****		****		****		

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #18 Chestnut Place at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Chestnut Place						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0	0 1	0	0	0 0 0	0	0	2 1 0	1	0	3 0 0
Volume Module:												
Base Vol:	40	0	79	0	0	0	0	2129	29	56	1238	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	0	79	0	0	0	0	2129	29	56	1238	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	0	79	0	0	0	0	2129	29	56	1238	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	40	0	79	0	0	0	0	2129	29	56	1238	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	0	79	0	0	0	0	2129	29	56	1238	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	0	79	0	0	0	0	2129	29	56	1238	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.96	0.04	1.00	3.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4735	65	1600	4800	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.05	0.00	0.00	0.00	0.00	0.45	0.45	0.04	0.26	0.00
Crit Moves:			****					****		****		

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #19 Pacific Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.632
Loss Time (sec):	12	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Pacific Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	2	0 0	0 1	1 0	2	1 0	1 0	3	0 1
Volume Module:												
Base Vol:	13	5	18	133	0	152	198	2030	10	30	1110	180
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	5	18	133	0	152	198	2030	10	30	1110	180
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	5	18	133	0	152	198	2030	10	30	1110	180
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	5	18	133	0	152	198	2030	10	30	1110	180
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	5	18	133	0	152	198	2030	10	30	1110	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	5	18	133	0	152	198	2030	10	30	1110	180
OvlAdjVol:						0						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.36	0.14	0.50	2.00	0.00	1.00	1.00	2.99	0.01	1.00	3.00	1.00
Final Sat.:	578	222	800	2880	0	1600	1600	4776	24	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.02	0.02	0.05	0.00	0.10	0.12	0.42	0.43	0.02	0.23	0.11
OvlAdjV/S:						0.00						
Crit Moves:		****		****					****	****		

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #20 Pine Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	C

Street Name:	Pine Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	0 1	0 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	61	79	66	154	120	64	62	1916	84	76	1172	42
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	79	66	154	120	64	62	1916	84	76	1172	42
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	79	66	154	120	64	62	1916	84	76	1172	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	79	66	154	120	64	62	1916	84	76	1172	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	79	66	154	120	64	62	1916	84	76	1172	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	61	79	66	154	120	64	62	1916	84	76	1172	42
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.56	0.44	1.00	1.00	2.87	0.13	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	899	701	1600	1600	4598	202	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.05	0.04	0.10	0.17	0.04	0.04	0.42	0.42	0.05	0.24	0.03
Crit Moves:	****				****			****			****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #21 Long Beach Boulevard at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.584
Loss Time (sec):	12	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Long Beach Boulevard						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Prot+Permit			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	1	0	1! 0 1	1	0	3 0 0	0	0	3 0 1
Volume Module:												
Base Vol:	0	0	0	118	0	174	155	1934	0	0	1073	175
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	118	0	174	155	1934	0	0	1073	175
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	118	0	174	155	1934	0	0	1073	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	118	0	174	155	1934	0	0	1073	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	118	0	174	155	1934	0	0	1073	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	118	0	174	155	1934	0	0	1073	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.21	0.00	1.79	1.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	1940	0	2860	1600	4800	0	0	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.10	0.40	0.00	0.00	0.22	0.11
Crit Moves:						****		****			****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #22 Atlantic Avenue at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.598
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Atlantic Avenue						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 1	0	0 0	0 1	0	0 1	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	4	2	0	108	4	145	151	1881	4	19	1075	64
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	2	0	108	4	145	151	1881	4	19	1075	64
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	2	0	108	4	145	151	1881	4	19	1075	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	2	0	108	4	145	151	1881	4	19	1075	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	2	0	108	4	145	151	1881	4	19	1075	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	4	2	0	108	4	145	151	1881	4	19	1075	64
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.67	0.33	0.00	0.96	0.04	1.00	1.00	2.99	0.01	1.00	2.83	0.17
Final Sat.:	1067	533	0	1543	57	1600	1600	4790	10	1600	4530	270
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.07	0.09	0.09	0.39	0.39	0.01	0.24	0.24
Crit Moves:	****					****		****		****		

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #23 Shoreline Drive/Alamitos Boulevard at Ocean Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	1.062
Loss Time (sec):	18	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	120	Level Of Service:	F

Street Name:	Shoreline Drive/Alamitos Boulevar						Ocean Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 1	0	1 0	3 0	1	2 0	1 1	0
Volume Module:												
Base Vol:	59	601	589	77	129	177	284	1747	29	216	892	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	601	589	77	129	177	284	1747	29	216	892	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	59	601	589	77	129	177	284	1747	29	216	892	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	59	601	589	77	129	177	284	1747	29	216	892	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	601	589	77	129	177	284	1747	29	216	892	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	601	589	77	129	177	284	1747	29	216	892	30
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	2.00	1.93	0.07
Final Sat.:	1600	4800	1600	1600	3200	1600	1600	4800	1600	2880	3096	104
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.37	0.05	0.04	0.11	0.18	0.36	0.02	0.08	0.29	0.29
Crit Moves:			****	****			****				****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #24 Golden Shore Street at Seaside Way (2)

Average Delay (sec/veh): 6.9 Worst Case Level Of Service: C[20.2]

Street Name:	Golden Shore Street						Seaside Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		1 0 1	1 0		0 0 1!	0 0		1 0 1!	0 1	
Volume Module:												
Base Vol:	4	388	23	30	66	7	36	2	3	5	1	341
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	388	23	30	66	7	36	2	3	5	1	341
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	10	0	0	0	0	4	79	0	30	0	0	0
Initial Fut:	14	388	23	30	66	11	115	2	33	5	1	341
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	388	23	30	66	11	115	2	33	5	1	341
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	388	23	30	66	11	115	2	33	5	1	341
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	77	xxxx	xxxxx	411	xxxx	xxxxx	354	571	39	522	565	206
Potent Cap.:	1535	xxxx	xxxxx	1159	xxxx	xxxxx	581	434	1031	442	437	807
Move Cap.:	1535	xxxx	xxxxx	1159	xxxx	xxxxx	326	419	1031	415	422	807
Volume/Cap:	0.01	xxxx	xxxx	0.03	xxxx	xxxx	0.35	0.00	0.03	0.01	0.00	0.42
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.8
Control Del:	7.4	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.7	xxxx	10.6
LOS by Move:	A	*	*	A	*	*	*	*	*	B	*	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	385	xxxxx	xxxx	792	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.8	xxxxx	xxxxx	0.8	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.2	xxxxx	xxxxx	10.8	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			20.2			10.8		
ApproachLOS:	*			*			C			B		

Note: Queue reported is the number of cars per lane.

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #25 Chestnut Place at Seaside Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.252
Loss Time (sec):	0	Average Delay (sec/veh):	8.6
Optimal Cycle:	0	Level Of Service:	A

Street Name:	Chestnut Place						Seaside Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	1 0	1 0	0	1 0	0 1	0	0 1	0 1	0	1 0
Volume Module:												
Base Vol:	12	40	21	21	37	23	63	109	91	28	32	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	40	21	21	37	23	63	109	91	28	32	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	40	21	21	37	23	63	109	91	28	32	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	40	21	21	37	23	63	109	91	28	32	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	40	21	21	37	23	63	109	91	28	32	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	40	21	21	37	23	63	109	91	28	32	17
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.66	0.34	1.00	0.62	0.38	0.37	0.63	1.00	0.73	0.83	0.44
Final Sat.:	583	435	228	585	412	256	250	433	819	462	576	319
Capacity Analysis Module:												
Vol/Sat:	0.02	0.09	0.09	0.04	0.09	0.09	0.25	0.25	0.11	0.06	0.06	0.05
Crit Moves:			****			****		****		****		
Delay/Veh:	8.7	8.3	8.3	8.8	8.3	8.3	9.5	9.5	7.5	8.5	8.0	7.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.7	8.3	8.3	8.8	8.3	8.3	9.5	9.5	7.5	8.5	8.0	7.8
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:		8.4			8.4			8.8			8.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.4			8.4			8.8			8.2	
LOS by Appr:		A			A			A			A	
AllWayAvgQ:	0.0	0.1	0.1	0.0	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1

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PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #26 Pine Avenue at Seaside Way

Cycle (sec):	100	Critical Vol./Cap.(X):	0.308
Loss Time (sec):	15	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						Seaside Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1	1 0	1 0	0	1 0	1 0	1 0	1
Volume Module:												
Base Vol:	2	153	13	23	215	37	36	50	7	22	41	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	153	13	23	215	37	36	50	7	22	41	28
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	153	13	23	215	37	36	50	7	22	41	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	153	13	23	215	37	36	50	7	22	41	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	153	13	23	215	37	36	50	7	22	41	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	2	153	13	23	215	37	36	50	7	22	41	28
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.71	0.29	1.00	0.88	0.12	1.00	1.00	1.00
Final Sat.:	1600	1600	1600	1600	2730	470	1600	1404	196	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.01	0.01	0.08	0.08	0.02	0.04	0.04	0.01	0.03	0.02
Crit Moves:		****		****			****				****	

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Golden Shore Street at I-710 SB Off-Ramp

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[9.5]

Street Name:	Golden Shore Street						I-710 SB Off-Ramp					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 2	0	0	0 0 1	0	0	1 0 0	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	0	385	0	0	85	0	34	0	36	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	385	0	0	85	0	34	0	36	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	385	0	0	85	0	34	0	36	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	385	0	0	85	0	34	0	36	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	385	0	0	85	0	34	0	36	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	278	xxxx	85	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	717	xxxx	980	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	717	xxxx	980	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.3	xxxx	8.8	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	B	*	A	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.5			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

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Golden Shore Master Plan, Long Beach (2.08.2995.1)
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #28 Golden Shore Street at Shoreline Drive

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[12.2]

****

Street Name:	Golden Shore Street						Shoreline Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			1 0 1 0 1			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	1	386	92	30	77	17	3	1	1	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	386	92	30	77	17	3	1	1	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	386	92	30	77	17	3	1	1	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	386	92	30	77	17	3	1	1	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	386	92	30	77	17	3	1	1	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	94	xxxx	xxxxx	478	xxxx	xxxxx	571	617	77	xxxx	xxxx	xxxxx
Potent Cap.:	1513	xxxx	xxxxx	1095	xxxx	xxxxx	486	408	990	xxxx	xxxx	xxxxx
Move Cap.:	1513	xxxx	xxxxx	1095	xxxx	xxxxx	475	397	990	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	0.03	xxxx	xxxx	0.01	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	8.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	508	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			12.2			xxxxxx		
ApproachLOS:	*			*			B			*		

****

Note: Queue reported is the number of cars per lane.

****

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #29 Chestnut Place at Shoreline Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.573
Loss Time (sec):	18	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Chestnut Place						Shoreline Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	0	1	0 0 1	2	0	3 0 1	2	0	3 1 0
Volume Module:												
Base Vol:	78	7	331	74	1	59	34	591	8	47	178	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	78	7	331	74	1	59	34	591	8	47	178	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	78	7	331	74	1	59	34	591	8	47	178	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	78	7	331	74	1	59	34	591	8	47	178	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	7	331	74	1	59	34	591	8	47	178	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	78	7	331	74	1	59	34	591	8	47	178	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	1.84	0.16	1.00	0.99	0.01	1.00	2.00	3.00	1.00	2.00	3.49	0.51
Final Sat.:	2936	264	1600	1579	21	1600	2880	4800	1600	2880	5584	816
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.21	0.05	0.05	0.04	0.01	0.12	0.01	0.02	0.03	0.03
Crit Moves:			****		****			****		****		

PM Existing (2008)
Golden Shore Master Plan, Long Beach (2.08.2995.1)
Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #30 Pine Avenue at Shoreline Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.486
Loss Time (sec):	18	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	Level Of Service:	A

Street Name:	Pine Avenue						Shoreline Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1 0	1	1 0	1 0	1	2 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	21	22	43	94	33	71	80	981	32	25	194	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	21	22	43	94	33	71	80	981	32	25	194	63
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	22	43	94	33	71	80	981	32	25	194	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	22	43	94	33	71	80	981	32	25	194	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	22	43	94	33	71	80	981	32	25	194	63
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	22	43	94	33	71	80	981	32	25	194	63
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1600	1600	1600	1600	1600	1600	2880	4800	1600	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.03	0.06	0.02	0.04	0.03	0.20	0.02	0.02	0.04	0.04
Crit Moves:			****	****				****		****		