CITY OF MANHATTAN BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT

TO: Planning Commission

FROM: Richard Thompson, Director of Community Development

BY: Angelica Ochoa, Associate Planner

DATE: August 28, 2014

SUBJECT: Consideration of a Use Permit to Remodel an Existing Multi-tenant Commercial Building for a New Pre-School (Daycare), Playground and Parking Lot at 1114-1126 22nd Street (Chalk Preschool)

RECOMMENDATION

Staff recommends that the Planning Commission **CONDUCT** the **PUBLIC HEARING, DISCUSS** and **PROVIDE DIRECTION** to staff.

APPLICANT

Patrick Killen, Studio9one2 Architecture, c/o CHALK Preschool
930 Manhattan Beach Boulevard
Manhattan Beach, CA 90266

PROJECT OVERVIEW

LOCATION

Location	1114-1126 22nd Street (Exhibit A)
Legal Description	Portion of Lots 6 and 7, Section 19, Township 3 South Range 14 West
Area District	II

LAND USE

General Plan	General Commercial
Zoning (Exhibit B)	CG, General Commercial

Land Use:	Existing	Proposed
	Multi-tenant Commercial Building	Pre-school (Day Care) Playground/Parking Lot

Neighboring Land Uses/Zoning

Commercial to the North (across 22nd Street), Walgreens Pharmacy, further north is the Manhattan Village Mall, Single Family Residential uses are developed to the east (across Cedar Avenue) and northeast (across 22nd Street), Commercial uses directly to the west is the UCLA Radiology Center and further west across Sepulveda Boulevard there are restaurants, offices, a jewelry store, car rental agency, hair salon and a variety of retail uses; Single Family residential uses to the southeast and commercial uses are developed to the south, including the Manhattan Bread and Bagel Center, Rubios, Citizens Bank and other offices.

PROJECT DETAILS

Parcel Size: 22,455 sf

Building Area:	Existing	Proposed	Allowed
	6,371 sf (Multi-tenant)	6,371 sf (Day Care)	22,455 sf
	1,840 sf (Office - (Separate building)	1,840 sf (Day Care)	
TOTAL	**8, 212 sf**	**8,212 sf** (same as existing)	

Parking:	Existing	Proposed	Required
	23 standard spaces	12 standard spaces	1 space per
	1 handicap space	5 compact spaces	7 children
		1 handicap space	17 spaces total

Hours of Operation:	Existing	Proposed	Allowed
	M-F Varies	M-F 7am to 6pm	By use permit

Employees:	Proposed	Allowed
	5 full time	By use permit
	1-3 part-time teachers	
	1-2 part-time office	

Students:	Proposed	Allowed
	118	By use permit

Landscaping:	Proposed	Required
	358 sq. ft.	241 sq. ft. (5% of 5172 sq.ft. parking area)
	5 trees	3 trees

ENVIRONMENTAL DETERMINATION
In accordance with the provisions of the California Environmental Quality Act (CEQA) as amended by the City of Manhattan Beach CEQA Guidelines, the Community Development Department found that the subject project is exempt as an in-fill Development Project, Class 32, Section 15332.

BACKGROUND (Exhibit B)
The project site is located at 1114-1126 22nd Street, on the corner of 22nd Street and Cedar Avenue in the General Commercial (CG) District, Area District II. It is currently developed as an existing multi-tenant one-story 6,371 square feet building consisting of 5 tenants, a printing shop, 2 restaurants, Stir Fry and Magic Skewer, 1 restaurant/bar, Schooner's, and a hair salon with a surface parking lot with 1 driveway on 22nd Street and two driveways on Cedar Avenue. There is an existing one story 1,840 square feet building located at the southwest of the site in the existing parking lot that is office use and will also be developed as day care use. The surrounding area is developed with a mix of commercial, offices, a pharmacy, a bank, retail, medical centers, restaurants, and residential uses to the east (directly across Cedar Avenue), northeast (across 22nd Street), and further west of the site, across Sepulveda behind commercial uses.

The applicant's architect, Patrick Killen of Studio9one2 Architecture, filed a Use Permit application on June 6, 2014 to remodel and reuse the existing building for a new day care use (CHALK PRESCHOOL). Per Section 10.16.020 of the Commercial Chapter of the City of Manhattan Beach Municipal Code, the subject application requires a use permit for a change in the existing commercial uses to day care. Preschools are classified as day care in the Municipal Code Section 10.08.040 (D). A Use Permit application for a new pre-school at 1030 Manhattan Beach Boulevard was filed by the same applicant in July 2011 and was approved by the Planning Commission on December 14, 2011 and by the City Council on February 21, 2012. However, the project was not built by the owner due to financing issues.

CHALK Pre-School currently has five other locations, including Westwood, Venice, and three in Chicago. The owners of CHALK Pre-School would like to expand their school to the City of Manhattan Beach and offer a pre-school program in a new facility, with a large playground and an on-site parking area. The pre-school program will offer classes and activities to students ranging in ages 2 through 5 with operating hours from 7am to 6pm.

DISCUSSION
Project Proposal
The subject applicant is proposing to remodel both of the existing buildings with a new pre-school use. Specifically, the multi-tenant building will be remodeled and consist of 5 classrooms and a large entry with a check-in and office area, a 7,363 square feet outdoor playground and 12 standard, 5 compact and 1 ADA accessible space for a total of 17 parking spaces. The existing building at the southwest of the site will be remodeled to be used for gross motor skills development. The playground will be developed in the

middle of the site between the main day care facility, the parking area and the motor skills building. The existing driveway on 22nd Street is being removed and will create one new public parking space on the street. The existing driveway on Cedar Avenue closer to the corner of 22nd Street will be removed which will add a second new public parking space, and the second driveway will be widened to create a two-way access to the site.

The proposed hours of operation will be from 7am to 6pm to allow for early drop off and pick up of children. A full-time 7:30-5:30pm program is offered as well as a half-day program from 8:30am to 12:30pm. The expected peak times for drop off will be between 7:30am to 9:15am and peak pick up times between 3pm to 6pm. According to the applicant, it is anticipated that about 50% of the students will attend only half day until 12:30pm and the remainder a full day program. The applicant feels this will eliminate the crowding of the parking area due to the spreading of times students attend classes. Special events or activities, such as an open house, a maximum of three times annually are proposed. Also, no food service will be provided on-site. The students will be required to bring their own food for consumption. For this reason, no food deliveries will be provided at the subject site.

Employees and Students

The total number of proposed full time employees will be five, plus one to three part-time teachers and one to two part time office staff (owners) for a total maximum of ten employees. The owners have other locations to manage and they expect to be at the Manhattan Beach pre-school a maximum of only once or twice a week for a few hours each time. When the school has activities or classes that require outside instructors, the arrival and departure times will vary during non-peak times to avoid parking and traffic congestion.

The total number of proposed children for the subject site is 118. The required parking per Section 10.64.030 of the Zoning Code for day care use is 1 parking space per 7 children. Based on 118 children, the total required parking is 17 spaces, which is what is proposed. The California Department of Social Services (DSS) restricts the number of children to 1 child per 35 square feet of classroom space. Based on 4,126 square feet of classroom space, the maximum total number of children is 118. Also, 75 square feet of outdoor area for each child is required by DSS. Based on the proposed 7,360 square feet of outdoor play area, only 98 children would be allowed. Per the parking chapter of the Zoning Code, 98 children would require only 14 parking spaces. Therefore, the proposed parking spaces of 17 would satisfy the parking requirement. However, if DSS changes their licensing requirements, and the applicant satisfies those requirements, up to 118 children would be allowed and 17 parking spaces would be the required as proposed.

Parking and Access

In terms of parking, the site will provide a total of 17 parking spaces for employees and visitors. The parking lot will be accessible from Cedar Avenue and will allow egress and ingress from one driveway. The pick-up of trash and recycling for the site will be accessed off of 22nd Street for curb-side pick up during non-peak times to avoid traffic

congestion. The new trash enclosure will be located at the northwest corner of the site per the proposed plans.

Use Permit
The Planning Commission must make the following findings in accordance with Section 10.84.060 for the use permit, if the project is approved:

1. The proposed location of the use is in accord with the objectives of this title and the purposes of the district in which the site is located;
2. The proposed location of the use and the proposed conditions under which it would be operated or maintained will be consistent with the General Plan; will not be detrimental to the public health, safety or welfare of persons residing or working on the proposed project site or in or adjacent to the neighborhood of such use; and will not be detrimental to the public heath, safety or welfare of persons residing or working on the proposed project site or in adjacent to the neighborhood of such use; and will not be detrimental to properties or improvements in the vicinity or to the general welfare of the city;
3. The proposed use will comply with the provisions of this title, including any specific condition required for the proposed use in the district in which it would be located; and
4. The proposed use will not adversely impact or be adversely impacted by nearby properties. Potential impacts are related but not necessarily limited to: traffic, parking noise, vibration, odors, resident security and personal safety, and aesthetics, or create demands exceeding the capacity of public services and facilities which cannot be mitigated.

The Planning Commission, as part of approving the use permit for the subject project, in accordance with Section 10.84.070 can impose reasonable conditions as necessary to:

A. Achieve the general purposes of this ordinance or the specific purposes of the zoning district in which the site is located, or to make it consistent with the General Plan;
B. Protect the public health, safety, and general welfare, or
C. Ensure operation and maintenance of the use in a manner compatible with existing and potential uses on adjoining properties or in the surrounding area.
D. Provide for periodic review of the use to determine compliance with conditions imposed, and Municipal Code requirements.

Public Input
The subject project was noticed to residents within 500 feet and was published in the Beach Reporter on August 28, 2014. Staff has not received any public comments. The applicant's representative and architect had a neighborhood meeting on August 28th at the subject site. Six neighbors attended the meeting and issues, such as parking, traffic, noise and other issues related to the proposed project were discussed. According to the architect, the neighbors concerns and questions were satisfied. A set of plans was left

with one of the neighbors to share with the rest of the neighborhood and for those who did not attend.

City Traffic Engineer/Traffic Impact Study (Exhibit C)
A traffic impact study was prepared by Linscott, Law & Greenspan, Engineers on July 10, 2014, as requested by the City Traffic Engineer, after reviewing the proposed project and estimated that it would generate more than 50 trips per day. As a result, the traffic study concluded that a net increase of 87 vehicle trips during the weekday AM peak hour and 65 vehicle trips during the weekday PM peak hour and that the proposed project would not result in significant traffic impacts and no traffic mitigation measures would be required.

The City Traffic Engineer agreed that based on the results of the Traffic Impact Study, there are no significant traffic impacts and had the following conditions to further address any impacts:

1. The applicant shall prepare and maintain a Traffic Operations and Management Plan (TOMP) as summarized in the Traffic Impact Study to be followed by faculty, staff, students and parents/guardians. The TOMP shall include, but not be limited to, the following requirements:
    a. School staff shall be directed to arrive at the on-site parking lot prior to commencement of student drop-off operations and park within designated spaces.
    b. One to two staff members or volunteers will be positioned within the site parking lot to direct parent/guardian drop-off and pick-up operations and assist during the morning drop-off and afternoon pick-up peak periods.
    c. Staff or volunteers shall wear safety gear including reflective vests at all times when performing traffic control operations within the parking lot.
    d. Parents and guardians shall park their vehicles on-site for short-term parking and then escort their pre-school child/children to the appropriate building entrance.
    e. School-related vehicles (e.g., parents/guardians dropping off students, etc.) will also be directed to travel to the site via Sepulveda Boulevard, Cedar Avenue, and 22nd Street so as to result in a greater disbursement of trips.
    f. Upon entering the project site, parents and guardians will be encouraged to have their student(s) ready to exit and enter the vehicle safely and efficiently.
    g. The parking lot gate will remain open during student drop-off and pick-up times.
    h. School-related vehicles will be directed to not park, drop-off, or pick-up students anywhere along 22nd Street or Cedar Avenue.
    i. The TOMP should include information on parking operations, site access and circulation, and pre-school student drop-off/pick-up operations. The goal of maintaining and reinforcing the TOMP is to facilitate site access and circulation to/from the site, minimize impacts to the neighborhood

surrounding the site, and efficiently manage parking facilities provided on the site.

j. The parking and student drop-off/pick-up operations contained in the TOMP shall be included in Chalk pre-school policies. These school policies should be communicated to faculty, staff, students and parents/guardians at the beginning of the school year and be reinforced throughout the school year.

The project meets all Zoning Code parking and loading requirements.

Other Departments Input (Exhibit D)
The Fire Department, Building and Safety and Public Works/Engineering Divisions had no specific comments or conditions for the project. Additionally, the City Traffic Engineer suggested conditions of approval as described below.

CONCLUSION
Staff feels that the Planning Commission should review and take public input on the proposal.

If the project is approved, the Use Permit should include conditions in the Resolution to address any issues of concern. The following is a list of possible conditions that staff suggests the Planning Commission consider:

Resolution Conditions

1) Maximum number of students to be 98 per Department of Social Services required play area of 7,360 square feet.
2) If applicant satisfies all requirements, including those of the Department of Social Services, then a maximum of 118 students may be enrolled.
3) Maximum number of employees to be 10, 5 full time, 1-3 part-time teachers and 1-2 part-time office staff
4) No on-site food service or food service delivery allowed.
5) Hours of operation to be 7am to 6pm Monday through Friday.
6) Project to maintain a total of 17 parking spaces on-site.
7) No large delivery trucks, only standard UPS and FedEx single unit size, not to exceed 30 feet in length.
8) Trash and recycling pick up to be conducted during non-peak times, not between 7-9am and 3-6pm.
9) Special activities or events will be limited to a maximum of 3 per year.
10) All school employees and visitors shall be required to park on-site. No employee parking shall be allowed on residential streets and shall be a violation of the Use Permit.
11) Submit annual TOMP parking management plan/program and other conditions required by the City Traffic Engineer including parent, staff, and vendor parking information. The plan should include regular notification and reminders to all who frequent the site.

ALTERNATIVES

The Planning Commission may:

1. **DENY** the project subject to public testimony received, based upon appropriate findings, and **DIRECT** Staff to return a draft Resolution.

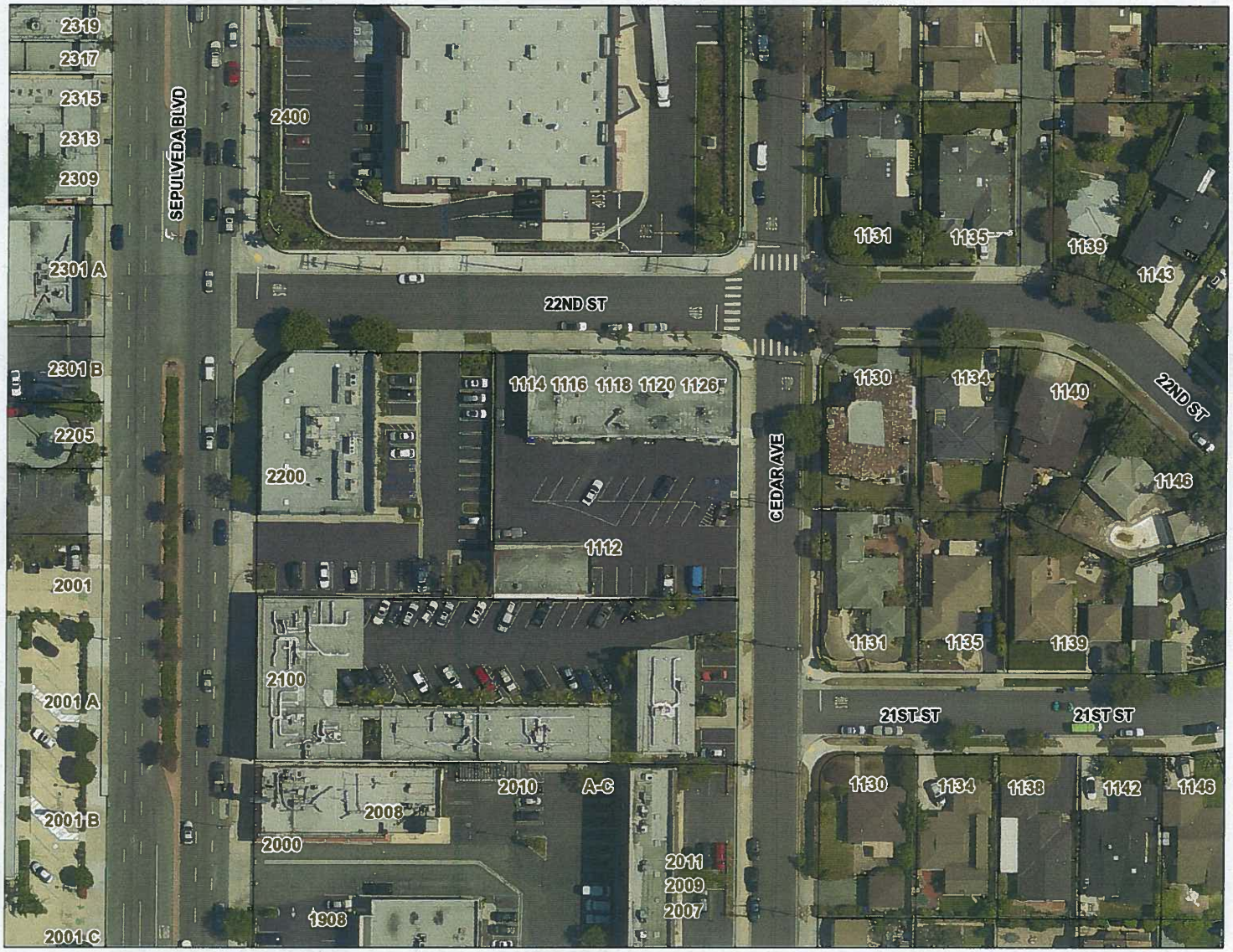
2. **APPROVE** the project subject to public testimony received, based upon appropriate findings, and **DIRECT** Staff to return a draft Resolution.

Attachments:

A. Vicinity/Aerial Map
B. Applicant's Application/Project Proposal
C. Traffic Impact Study dated July 10, 2014
D. Department Comments
E. Plans

cc: Patrick Killen, Studio9one2 Architecture, Project Architect

Manhattan Beach



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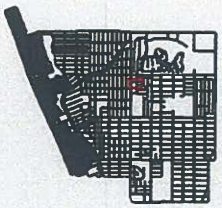

Legend

- Addresses
- City Boundary
- Streets
- Parcels
- L3_6440_1778b.tif
  - Red: Band_1
  - Green: Band_2
  - Blue: Band_3
- L3_6440_1783a.tif
  - Red: Band_1
  - Green: Band_2
  - Blue: Band_3
- Basemap Labels

EXHIBIT A
PC MTG 9-10-14

Scale:1: 1,116

This map is a user generated static output from the "MB GIS Info" Intranet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Notes

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MASTER APPLICATION FORM

CITY OF MANHATTAN BEACH
COMMUNITY DEVELOPMENT DEPARTMENT

Office Use Only	
Date Submitted:	6/6/14 PD
Received By:	
F&G Check Submitted:	

1114 22ND STREET
Project Address

PORTION OF LOTS 6+7, SECTION 19, TOWNSHIP 3 SOUTH, RANGE 14 WEST
Legal Description

	GC	AD 11
General Plan Designation	*Zoning Designation*	*Area District*

For projects requiring a Coastal Development Permit, select one of the following determinations[1]:

Project located in Appeal Jurisdiction
- ☐ Major Development (Public Hearing required)
- ☐ Minor Development (Public Hearing, if requested)

Project not located in Appeal Jurisdiction
- ☐ Public Hearing Required (due to UP, Var., etc.)
- ☐ No Public Hearing Required

***Submitted Application** (check all that apply)*

( ) Appeal to PC/PPIC/BBA/CC		( ) Use Permit (Residential)	
( ) Coastal Development Permit		(X) Use Permit (Commercial)	5,200.00
(X) Environmental Assessment	2260	( ) Use Permit Amendment	
( ) Minor Exception		( ) Variance	
( ) Subdivision (Map Deposit)4300		(X) Public Notification Fee / $85	85.00
( ) Subdivision (Tentative Map)		( ) Park/Rec Quimby Fee 4425	
( ) Subdivision (Final)		( ) Lot Merger/Adjustment/$15 rec. fee	
( ) Subdivision (Lot Line Adjustment)		(X) Other TRAFFIC	1,050

***Fee Summary:** Account No. 4225 (calculate fees on reverse)*

Pre-Application Conference: Yes____ No X Date: _____ Fee: _____

Amount Due: $ 8,595.00 *(less Pre-Application Fee if submitted within past 3 months)*

Receipt Number: _____ Date Paid: _____ Cashier: _____

Applicant(s)/Appellant(s) Information

PATRICK J KILLEN, STUDIO 9ONE2 ARCHITECTURE
Name

930 MANHATTAN BEACH BLVD MANHATTAN BEACH, CA 90266
Mailing Address

ARCHITECT
Applicant(s)/Appellant(s) Relationship to Property

PATRICK KILLEN (310) 376-9171 pjk@studio9one2.com
Contact Person (include relation to applicant/appellant) *Phone number / e-mail*

SAME AS ABOVE
Address

Applicant(s)/Appellant(s) Signature (310) 376-9171 *Phone number*

***Complete Project Description- including any demolition** (attach additional pages if necessary)*

REMODEL / CHANGE OF USE OF EXISTING 8,212 SQ.FT. SINGLE STORY COMMERCIAL BUILDING TO A 119 MAX CHILD PRESCHOOL. ALSO, REMOVAL AND RECONSTRUCTION OF EXISTING NON-CONFORMING PARKING LOT TO 17 SPACE LOT.

[1] An Application for a Coastal Development Permit shall be made prior to, or concurrent with, an application for any other permit or approvals required for the project by the City of Manhattan Beach Municipal Code. *(Continued on reverse)*

EXHIBIT B
PC MTG 9-10-14

OWNER'S AFFIDAVIT

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES

I/We Mary Pat Simmons being duly sworn, depose and say that I am/we are the owner(s) of the property involved in this application and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects true and correct to the best of my/our knowledge and belief(s).

Mary Pat Simmons
Signature of Property Owner(s) – (Not Owner in Escrow or Lessee)

Mary Pat Simmons
Print Name

3760 Mallards Landing Dr Powell Ohio 43065
Mailing Address

614-530-0839
Telephone

Subscribed and sworn to before me,
this 29th day of May, 2014
in and for the County of Franklin
State of Ohio

John W. Echenrode
Notary Public

JOHN W. ECHENRODE
NOTARY PUBLIC • STATE OF OHIO
Recorded in Franklin County
My commission expires May 29, 2016

****

Fee Schedule Summary

Below are the fees typically associated with the corresponding applications. Additional fees not shown on this sheet may apply – refer to current City Fee Resolution (contact the Planning Department for assistance.) Fees are subject to annual adjustment.

Submitted Application *(circle applicable fees, apply total to Fee Summary on application)*

Coastal Development Permit	
Filing Fee (public hearing – no other discretionary approval required):	$ 4,615 ✉
Filing Fee (public hearing – other discretionary approvals required):	1,660 ✉
Filing Fee (no public hearing required – administrative):	920 ✉
Use Permit	
Use Permit Filing Fee:	$ 5,200 ✉
Master Use Permit Filing Fee:	8,255 ✉
Master Use Permit Amendment Filing Fee:	4,740 ✉
Master Use Permit Conversion:	4,075 ✉
Variance	
Filing Fee:	$ 5,160 ✉
Minor Exception	
Filing Fee (without notice):	$ 1,775
Filing Fee (with notice):	2,020 ✉
Subdivision	
Certificate of Compliance:	$ 1,560
Final Parcel Map + mapping deposit:	515
Final Tract Map + mapping deposit:	595
Mapping Deposit (paid with Final Map application):	500
Merger of Parcels or Lot Line Adjustment:	1,155
Quimby (Parks & Recreation) fee (per unit/lot):	1,817
Tentative Parcel Map (4 or less lots / units) No Public Hearing:	915
Tentative Parcel Map (4 or less lots / units) Public Hearing:	3,325 ✉
Tentative Tract Map (5 or more lots / units):	4,080 ✉
Environmental Review (contact Planning Division for applicable fee)	
Environmental Assessment (no Initial Study prepared):	$ 215
Environmental Assessment (if Initial Study is prepared):	2,260
Fish and Game/CEQA Exemption County Clerk Posting Fee[2]:	75
✉ *Public Notification Fee* applies to all projects with public hearings and covers the city's costs of envelopes, postage and handling the mailing of public notices. Add this to filing fees above, as applicable:	$ 85

[2]Make a separate $75 check payable to LA County Clerk, (DO NOT PUT DATE ON CHECK)

STUDIO 9 *ONE* 2
ARCHITECTURE

Patrick J. Killen A.I.A.

June 4, 2014

Chalk Preschool Project
1114 22nd Street
Manhattan Beach, CA

PROJECT DESCRIPTION

CHALK Preschool of Manhattan Beach is proposed at 1114 22nd Street in Manhattan Beach, California. This incredible addition to the Manhattan Beach community is a 8,212 square foot sunny facility containing five classrooms surrounding a 7,360 square foot playground. This secured campus is sure to create endless opportunities for on-site explorations and adventures. The school will provide a necessary part time and full time preschool option for the area's many surrounding families having children ages 2-5 years old, with extended hours ranging from 7:00 am - 6:00 pm Monday thru Friday. On site there will be 17 parking spaces for easy drop off and pick up. Drop off peak times will occur between 7:00 am to 9:00 am, with pick up times more varied. Approximately 25% of the children will only attend school for half a day and will be picked up around noon. The remainder will be picked up at times ranging from 3:00 pm to closing, thereby spreading out the car trips entering the parking lot. The school will employ one teacher per classroom full-time. The business owners manage and will also spend time at the facility but as they have six facilities to run, they will only be present once or twice a week for part of those days. The staff count will be 6 full-time and 1 or 2 part time. As do most other local schools, CHALK Preschool will, at times, have special classes and/ or activities for the children. These classes are often taught by outside instructors who typically arrive after the drop-off times and leave prior to the afternoon pick-up times, and as such have little impact on traffic volumes. Roughly 3 times a year, the school will host open house type events where parents are invited to visit the school.

There are presently 5 other CHALK locations in Southern California and Chicago. None of these locations offer food service. All food consumed by the students will be brought to school by the individual. Other supplies used by the school including office and art supplies, are typically purchased by staff at local stores. No large trucks are anticipated to access the site with the possible exception of the intermittent UPS or FedEx deliveries. Trash is currently picked up along the west side of Cedar Avenue. The trash area for this project is designed to allow for curb-side pick up which takes less than 5 minutes to perform. Studio 9one2 will work with Waste Management to ensure the pick up time does not occur during peak traffic hours.

The California Building Code sets the number of occupants at 1 person per 20 square feet of classroom for this building type. Based on this number, the building could have a potential occupancy of 210. The California Department of Social Services, however, restricts the number of children in each classroom to 1 child per 35 square feet. At 4,126 square feet of classroom space, the number of children for which the site could be licensed would be 118. The parking for this development was based on this number (118 at 1 space per 7 = 17 parking spaces required). Moreover, Social Services also requires 75 square feet of outdoor area for each child. With the play area size proposed, it is easily seen that the facility will be licensed for fewer children than the number that could be allowed based on the parking provided (7,360 square feet of play area / 75 square feet per child nets 98 students. Per Manhattan Beach Municipal Code, 98 students would only require 14 parking spaces. In this respect, the facility could be providing more parking than is required by Manhattan Beach Municipal Code.

930 C MANHATTAN BEACH BLVD. MANHATTAN BEACH CA 90266 TEL. 310 / 376-9171 FAX . 310 / 376-1822

Per the Owners of CHALK, the only full-time staff would be the 6 teachers, one in each classroom. If at times the ratio of child to teacher exceeds the State allowed 12 children to 1 adult supervisor, then the school will have part-time teacher aids to bring the ratio into compliance. The number of part-time teacher aids will fluctuate between 1 and 3. With all preschools, the number of children present at any one time is dependent on a number of factors. The number of children enrolled is the largest of these, but also, what type of enrollment to which each child subscribes. Because it is not required education, there is a tremendous amount of flexibility associated with preschools. Some will be full-time Monday through Friday. Others may be full-time but only a few days of the week. Full-time hours are from 7:30 am to 5:30 pm. Still others will be half-day, and some half day students also will not attend every day. Half-day hours are from 8:30 am to 12:30 pm. Currently, CHALK finds that roughly 50% of there students are full-day and 50% are half day. The school will not be able to determine the required staff until two conditions have occurred. First, they will need a license from the DSS which stipulates the maximum number of children allowed. Second, they will need to know an actual number of enrolled students and what hours those students will attend the school. As mentioned previously, office staff will consist solely of the owners and they will be at the location once or twice a week for a few hours each time. There will be no other staff. Based on their experience with the other two locations they presently operate in the Los Angeles area, the owners believe that these staff levels meet the state requirements and they do not anticipate a larger group.

The playground area totals 7,360 square feet. Per the DSS requirement of 75 square feet of outdoor play area per licensed child, that would limit the State License to 98 children. While there has been limited flexibility in the outdoor play area requirements with other preschools, that still would not allow a licensed number of 118 children.

Per Manhattan Beach Municipal Code, we have provided the amount of parking required for 118 children to attend the school. While we do not anticipate that the school will be licensed for that many students, we have, however, provided the parking to allow it. CHALK also varies its allowed drop-off times for the full-day and half-day students. Full-time students may be dropped off between the hours of 7:30 to 8:30 am, while half-day student drop-off is from 8:30 to 9:15 am. With their other facilities, CHALK finds that the average drop-off time for each child to be about 6 minutes. Each parking space could then account for 10 drop-offs per hour. If the school were licensed for 118 students, that would mean roughly 60 kids would need dropped off during each drop-off period (50% each for full-day and half-day). Even accounting for staff use of allotted parking, the remaining number of spaces should be more than adequate to allow a smooth drop-off period. Pick up times are more varied throughout the afternoon and so there tends to be little parking congestion at these times.

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STUDIO
ARCHITECTURE

9 *ONE* 2

Patrick J. Killen A.I.A.

DATE: June 5, 2014

TO: CITY OF MANHATTAN BEACH
COMMUNITY DEVELOPMENT DEPARTMENT
ATTN: ERIC HAALAND, ASSOCIATE PLANNER

FROM: Studio9One2, Howard Crabtree, Architect

SUBJECT: 1114 – 22nd STREET
CUP for CHALK PRESCHOOL

Applicant : Patrick J. Killen, Architect – Studio 9one2 Architecture

The following documents are submitted in conjunction with the application for Conditional Use Permit

1. Master Application with attached description
2. Environmental Information Form
3. Narrative & response to findings SUBMIT UNDER SEPARATE COVER HOWARD
4. Grant deed
5. Radius Map Package
6. 2 Sets Of Full Scale Architectural Drawings & 3 sets reduced drawings
7. $ 8595 — check payable to MB as filing fee
& undated $25.00 check payable to LA County Clerk

Please let me know if anything further is required with regard to the preliminary review.

930 C MANHATTAN BEACH BLVD. MANHATTAN BEACH CA 90266 TEL. 310 / 376-9171 FAX . 310 / 376-1822

ENVIRONMENTAL INFORMATION FORM

(to be completed by applicant)

CITY OF MANHATTAN BEACH
COMMUNITY DEVELOPMENT DEPARTMENT

Date Filed: 6·5·14

APPLICANT INFORMATION

Name: PATRICK J. KILLEN
Address: 930 MANHATTAN BEACH BL
Phone number: 310 920-9171
Relationship to property: ARCHITECT

Contact Person: HOWARD CRABTREE
Address: 930 MANHATTAN BCH BL M.B. 90266
Phone number: 310 376-9171
Association to applicant: EMPLOYEE

PROJECT LOCATION AND LAND USE

Project Address: 1114 22ND STREET MANHATTAN BEACH
Assessor's Parcel Number:
Legal Description: PORTION OF LOTS 6+7, SECTION 19, TOWNSHIP 3 SOUTH, RANGE 14 WEST
Area District, Zoning, General Plan Designation: AO II, GC,
Surrounding Land Uses:
North RETAIL (CVS)
West RESIDENTIAL
South COMMERCIAL OFFICE
East MEDICAL OFFICE
Existing Land Use: COMMERCIAL (RESTAURANT + BAR)

PROJECT DESCRIPTION

Type of Project: Commercial X Residential _____ Other _____

If Residential, indicate type of development (i.e.; single family, apartment, condominium, etc.) and number of units: N/A

If Commercial, indicate orientation (neighborhood, citywide, or regional), type of use anticipated, hours of operation, number of employees, number of fixed seats, square footage of kitchen, seating, sales, and storage areas: CHALK PRESCHOOL IS A NEIGHBORHOOD ORIENTED PRESCHOOL, OPERATING MON TO FRI. FROM 7AM-6PM WITH 6 EMPLOYEES FOR 5 CLASSROOMS.

If use is other than above, provide detailed operational characteristics and anticipated intensity of the development: N/A

Removed/

	Existing	Proposed	Required	Demolished
Project Site Area:	22,455	22,455	—	—
Building Floor Area:	8,212	8,212	—	—
Height of Structure(s)	22.8'	22.8'	30' MAX	—
Number of Floors/Stories:	ONE	ONE	—	—
Percent Lot Coverage:	37%	37%	—	—
Off-Street Parking:	28 (NON-CONF)	17	17	11
Vehicle Loading Space:	N/A	N/A	N/A	—
Open Space/Landscaping:	0	6,184	241	0

Proposed Grading:
Cut 0 Fill 0 Balance 0 Imported 0 Exported 0

Will the proposed project result in the following (*check all that apply*):

Yes	No	
	X	Changes in existing features or any bays, tidelands, beaches, lakes, or hills, or substantial alteration of ground contours?
	X	Changes to a scenic vista or scenic highway?
	X	A change in pattern, scale or character of a general area?
	X	A generation of significant amount of solid waste or litter?
	X	A violation of air quality regulations/requirements, or the creation of objectionable odors?
	X	Water quality impacts (surface or ground), or affect drainage patters?
	X	An increase in existing noise levels?
	X	A site on filled land, or on a slope of 10% or more?
	X	The use of potentially hazardous chemicals?
	X	An increased demand for municipal services?
	X	An increase in fuel consumption?
	X	A relationship to a larger project, or series of projects?

Explain all "Yes" responses (*attach additional sheets or attachments as necessary*):
N/A

CERTIFICATION: I hereby certify that the statements furnished above and in attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature: _____ *Prepared For*: PATRICK KILLEN ARCHITECT FOR CHACK PRESCHOOL

Date Prepared: 6 · 2 · 2014

Revised 7/97

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT STUDY

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

City of Manhattan Beach, California
July 10, 2014

Prepared for:

Studio 9one2 Architecture
930 Manhattan Beach Boulevard
Manhattan Beach, California 90266

LLG Ref. 1-14-4083-1

REGISTERED PROFESSIONAL ENGINEER
CLARE M. LOOK-JAEGER
TR1878
EXP. 06/30/15
TRAFFIC
STATE OF CALIFORNIA

EXHIBIT C
PC MTG 9-10-14

Under the Supervision of:

Clare M. Look-Jaeger

Clare M. Look-Jaeger, P.E.
Principal

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TRAFFIC IMPACT STUDY

CHALK PRE-SCHOOL

MANHATTAN BEACH PROJECT

City of Manhattan Beach, California
July 10, 2014

1.0 INTRODUCTION

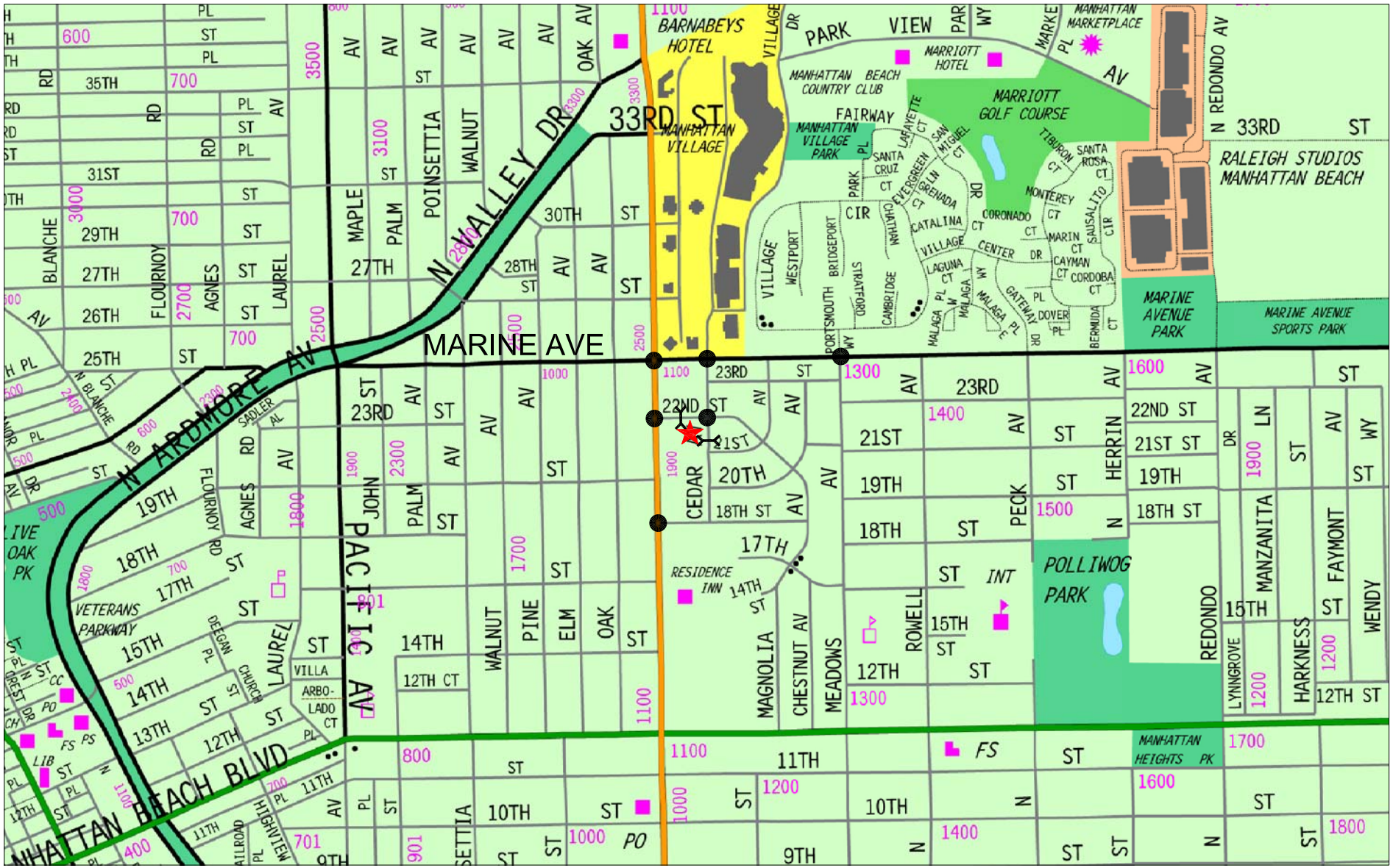
This traffic impact study addresses the potential traffic impacts associated with the proposed Chalk Pre-School Manhattan Beach project ("proposed project"). The project applicant proposes to remodel and re-use the existing buildings on-site for the operation of a private pre-school located at 1114 22nd Street in the City of Manhattan Beach, California. The proposed project site is situated at the southwest corner of Cedar Avenue and 22nd Street. The proposed Chalk Pre-School Manhattan Beach project site location and general vicinity are shown in ***Figure 1-1***.

This report documents the findings and recommendations of a traffic impact analysis prepared by Linscott, Law & Greenspan, Engineers (LLG Engineers) to determine the potential impacts associated with the proposed Chalk Pre-School Manhattan Beach project. The traffic analysis evaluates the existing operating conditions at a total of eight (8) study locations, including six (6) study intersections and two (2) study street segments within the project vicinity, estimates the trip generation potential of the proposed project, and forecasts future operating conditions without and with the proposed project. Where necessary, intersection improvements and/or mitigation measures are identified. The Scope of Work for this traffic study report has been prepared in consultation with City of Manhattan Beach staff and the City's consultant Traffic Engineer.

This traffic report satisfies the traffic impact study requirements of the City of Manhattan Beach and is consistent with the *2010 Congestion Management Program for Los Angeles County.*[1] 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 the six key study intersections on a typical weekday for use in the preparation of intersection Level of Service calculations. The Intersection Capacity Utilization method was used to determine volume-to-capacity ratios and corresponding Levels of Service for the signalized study intersections while the analysis method from the *Highway Capacity Manual*[2] (HCM2010) was utilized to determine intersection delay values and corresponding Levels of Service for the two unsignalized study intersections.

Information concerning cumulative projects (planned and/or approved) in the vicinity of the proposed project has been researched at the Cities of Manhattan Beach, Hermosa Beach and El Segundo. Based on this research, a total of ten (10) related projects have been included in the traffic

[1] *2010 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, 2010.
[2] *Highway Capacity Manual*, Transportation Research Board, National Research Council, Washington D.C., 2010.



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MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

STUDY INTERSECTION

STUDY STREET SEGMENT

LINSCOTT, LAW & GREENSPAN, engineers

FIGURE 1-1
VICINITY MAP

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

impact study. These ten (10) planned and/or approved related projects were therefore 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 a future-term (Year 2015) traffic setting upon completion of the proposed Chalk Pre-School Manhattan Beach project. Peak hour traffic forecasts for the Year 2015 horizon year have been projected by increasing existing traffic volumes by an annual growth rate of one percent (1.0%) per year and adding traffic volumes generated by the ten (10) related projects. In addition, the planned project parking supply is compared with the City of Manhattan Beach Off-street Parking Code requirement.

1.1 Study Area

A total of eight (8) locations, including six study intersections and two study street segments have been identified for evaluation during the weekday morning and afternoon peak hours based upon coordination with the City of Manhattan Beach consultant Traffic Engineer. These study locations provide local access to the study area and define the extent of the boundaries for this traffic impact investigation. Further discussion of the existing street system and study area is provided in Section 4.0 herein.

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the project site;

b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements.

The locations selected for analysis were based on the above criteria, proposed Chalk Pre-School Manhattan Beach project peak hour vehicle trip generation, anticipated distribution of project vehicular trips and existing intersection/corridor operations. As mentioned previously, a total of eight study locations, including six study intersections and two study street segments define the extent of the boundaries for this traffic impact investigation.

2.0 PROJECT DESCRIPTION

2.1 Site Location

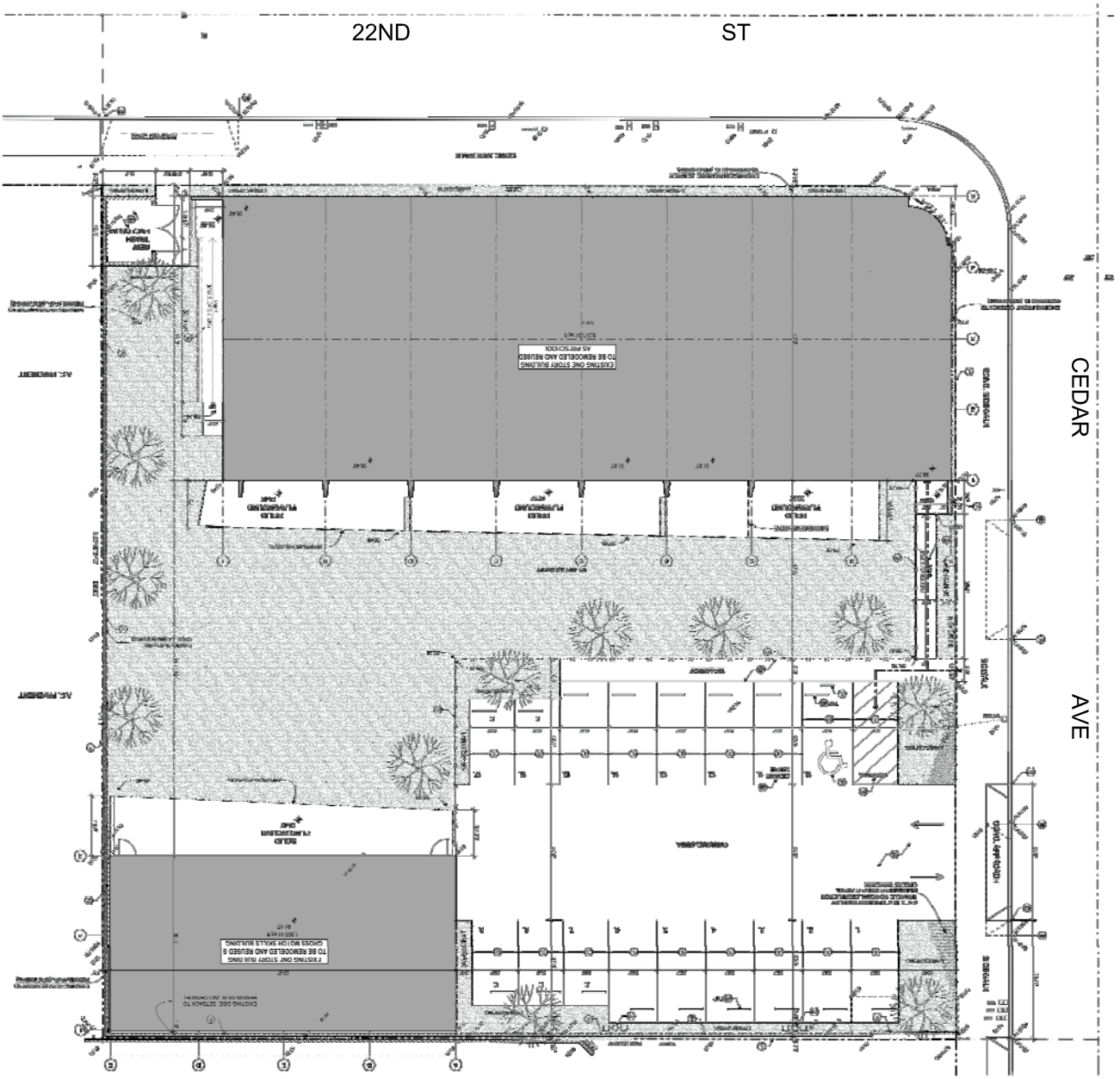
The proposed development project is located at 1114 22nd Street in the City of Manhattan Beach, California. The project site is situated along the south side of 22nd Street west of Cedar Avenue. The project site is bounded by surface parking lots for existing retail and office development to the south and west, 22nd Street to the north, and Cedar Avenue and residential uses to the east. Additionally, the project site is located in the Eastside section of Manhattan Beach, which is primarily comprised of distinct single-family residences with numerous public schools bounded generally by Marine Avenue, Sepulveda Boulevard, Aviation Boulevard and Artesia Boulevard. The proposed project site location and general vicinity are shown in *Figure 1–1*.

2.2 Project Description

The project applicant seeks to obtain entitlements to adaptively re-use the existing buildings located at 1114 22nd Street to operate a private pre-school facility for up to 119 students. Two existing buildings totaling 8,232 square feet of building area is currently utilized as a food sales, retail and personal service type uses. Both buildings will be renovated to accommodate occupancy by the proposed Chalk Pre-School facility. The existing building (6,372 square feet) at the northeast corner of the project site will function as the main pre-school building and a smaller 1,860 square-foot building at the southwest corner of the site will offer a separate motor skills building for the facility. The Chalk Pre-School facility will also include playground areas between the two buildings.

The Chalk Pre-School facility will provide a necessary part-time and full-time preschool option to surrounding families having children ages 2 to 5 years old, with extended hours ranging from 7:00 AM to 6:00 PM, Monday through Friday. Drop-off peak times are expected to occur between 7:00 AM and 9:00 AM, with pick-up times being more varied. Based on information provided by the Applicant, approximately 25 percent of the children will only attend school for half of the day and be picked up around 12:00 Noon. The remainder will be picked up at times ranging from 3:00 PM to closing. The staff count is expected at six full-time and one or two part-time members. If special outside instructors are needed, these instructors would arrive after the drop-off time and depart prior to the afternoon pick-up period. Therefore, while there can be many instances where not all 119 pre-school students are present, all 119 students have been assumed to be on-site for analysis purposes.

It is anticipated that the adaptive re-use of the existing buildings at 1114 22nd Street by the Chalk Pre-School facility will commence in year 2015. The site plan for the proposed project is illustrated in ***Figure 2-1***. A discussion of the project's site access and general pre-school traffic procedures is provided in Section 3.0 herein.



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MAP SOURCE: STUDIO 90NE2 ARCHITECTURE

FIGURE 2-1
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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2.3 Project Parking

This section summarizes the review of the parking requirements for the proposed project according to the City of Manhattan Beach Municipal Code requirements and the planned project parking supply. It is anticipated that the proposed project will provide Code required parking as determined by the City of Manhattan Beach.

2.3.1 *City of Manhattan Beach Code Parking Requirements*

The City of Manhattan Beach off-street parking requirements for general daycare facilities are set forth in Section 10.34.060, *Off-Street Parking and Loading Spaces Required*, of the Municipal Code. Through application of the Municipal Code parking regulations, the following parking requirement would be calculated for the proposed project:

- Daycare, General – One (1.0) space per seven (7) children; maximum enrollment based on maximum occupancy load.

Based on project description information provided by the project applicant and strict application of Code to the maximum enrollment of 119 children, a total of 17 spaces would be required for the project site as summarized below:

- General Daycare Facility: 119 children x 1.0 space/7.0 children = 17 spaces
  Total City Code Required Project Parking = 17 spaces

2.3.2 *Proposed Project Parking Supply*

As indicated in *Figure 2-1*, surface parking will be provided within the project site in a surface parking lot fronting Cedar Avenue between the two buildings. A total of 17 parking spaces is planned to be provided within the project site, with approximately 11 standard spaces, five (5) compact spaces, and one (1) handicap accessible space. As the proposed on-site parking supply totals 17 spaces, the proposed Chalk Pre-School Manhattan Beach project would provide the number of required spaces under the provisions of the Municipal Code.

3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the Chalk Pre-School Manhattan Beach project is displayed in *Figure 2-1*. A description of the proposed site access and circulation scheme is provided in the following subsections.

3.1 Vehicular Project Site Access

Vehicular access to the site is currently provided via a total of three existing site driveways: two driveways on Cedar Avenue along the easterly property frontage and one driveway on 22nd Street along the northerly property frontage. The existing 22nd Street driveway and the northerly Cedar Avenue driveway will both be closed pursuant to City standards with new concrete curb, gutter and sidewalk. The existing southerly Cedar Avenue driveway will be slightly relocated and retained. A description of the project site driveway for the Chalk Pre-School Manhattan Beach project is provided in the following paragraph.

- *Proposed Cedar Avenue Project Driveway*:

  The Cedar Avenue project driveway is an existing driveway that will be slightly relocated and retained. This project driveway is located along the west side of Cedar Avenue near the southeasterly property frontage and is planned to accommodate full access (i.e., right-turn and left-turn ingress and egress turning movements). The Cedar Avenue project driveway will provide access to the on-site surface parking lot.

3.2 General Pre-School Traffic Procedures

The project site and vicinity were reviewed to identify the preferred drop-off and pick-up circulation scheme to accommodate access for pre-school drop-off and pick-up operations. As part of the proposed project, a circulation scheme will be utilized by pre-school parents/guardians in which drop-off/pick-up operations will be conducted in the proposed surface parking lot. The goal is to better accommodate parents/guardians dropping-off and picking-up pre-school students, while at the same time providing a safe environment for the students. Listed below is a summary of the recommendations regarding the Chalk Pre-School Manhattan Beach project's general traffic operations:

- School staff will be directed to arrive at the on-site parking lot prior to commencement of student drop-off operations and park within designated spaces.
- One to two staff members, or volunteers, will be positioned within the site parking lot to direct traffic operations during the morning drop-off and afternoon pick-up peak periods. The staff will be positioned to clearly observe parent/guardian drop-off and pick-up operations and assist in the unloading and loading operations. Staff may also direct parents/guardians into and out of the available parking spaces.
- Parents and guardians would be able to park their vehicles on-site for short-term parking and then can escort their pre-school child/children to the appropriate building entrance. Based on

information provided by Chalk representatives through experience with other operational Chalk pre-school facilities, the average drop-off time for each child is roughly six (6) minutes. As such, each parking space could accommodate 10 drop-offs per hour.

- School-related vehicles (e.g., parents/guardians dropping off students, etc.) will also be directed to travel to the site via Sepulveda Boulevard, Cedar Avenue, and 22nd Street so as to result in a greater disbursement of trips.
- Upon entering the project site, parents and guardians will be encouraged to have their student(s) ready to exit and enter the vehicle safely and efficiently.
- The parking lot gate will remain open during student drop-off and pick-up times.
- School-related vehicles will be directed to not park, drop-off, or pick-up students anywhere along 22nd Street or Cedar Avenue.
- It is recommended that staff, or volunteers, wear safety gear including reflective vests, hats and gloves at all times when performing traffic control operations within the parking lot.
- It is recommended that a Traffic Management Plan (TMP) be maintained that details the above operational protocol for faculty, staff, students and parents/guardians. The TMP should include information on parking operations, site access and circulation, and pre-school student drop-off/pick-up operations. The goal of maintaining and re-enforcing the TMP is to facilitate site access and circulation to/from the site, minimize impacts to the neighborhood surrounding the site, and efficiently manage parking facilities provided on the site.
- It is also recommended that the parking and student drop-off/pick-up operations contained in the TMP be included in Chalk pre-school policies. These school policies should be communicated to faculty, staff, students and parents/guardians at the beginning of the school year and be reinforced throughout the school year.

3.3 Pedestrian Access

The proposed project site has been designed to encourage pedestrian activity and walking as a transportation mode[3]. As indicated in *Figure 2-1*, pedestrian walkways are planned throughout the site, as well as connected to the adjacent sidewalks, in a manner that promotes walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are five basic requirements that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The five primary characteristics of walkability are as follows:

[3] For example, refer to http://www.walkscore.com/, which generates a walkability score of approximately 63 (Somewhat Walkable – most errands can be accomplished on foot) out of 100 for the project site. Walk Score calculates the walkability of an address by locating nearby stores, restaurants, schools, parks, etc. Walk Score measures how easy it is to live a car-lite lifestyle—not how pretty the area is for walking.

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.

- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site plan and pedestrian walkways indicates that these five primary characteristics are accommodated as part of the proposed project. The project site is adjacent to and accessible from nearby residential neighborhoods and retail, restaurant and other commercial land use opportunities along the Sepulveda Boulevard corridor. The pedestrian walkways within the site will be appropriately landscaped and adorned to provide a friendly walking environment. Additionally, the walkways and connections with the external environment will be well lit.

Pedestrian project access to the site will be provided along the Cedar Avenue and 22nd Street property frontages and via new walkways. Pedestrian circulation around the periphery of the project site will be accommodated by the public sidewalks with planned walkway connections to the site's building entrances.

4.0 EXISTING STREET SYSTEM

4.1 Study Intersections

Immediate access to the project site is provided via Cedar Avenue and 22nd Street. The following six study intersections were selected for analysis in consultation with City staff in order to determine potential impacts related to the proposed project:

1. Sepulveda Boulevard/Marine Avenue
2. Sepulveda Boulevard/22nd Street[a]
3. Sepulveda Boulevard/18th Street
4. Cedar Avenue/Marine Avenue
5. Cedar Avenue/22nd Street[b]
6. Meadows Avenue/Marine Avenue

[a] Two-way stop-sign controlled intersection.
[b] All-way stop-sign controlled intersection.

Four of the study intersections are presently controlled by traffic signals, while the remaining two study intersections are currently stop-sign controlled (No. 2, Sepulveda Boulevard/22nd Street and No. 5, Cedar Avenue/22nd Street). The existing roadway configurations and intersection controls at the six study intersections are displayed in ***Figure 4-1***.

4.2 Study Street Segments

The following two study street segment locations were identified for analysis by City staff for inclusion into the street segment analysis:

1. 22nd Street between Sepulveda Boulevard and Cedar Avenue
2. Cedar Avenue between 22nd Street and 21st Avenue

The existing travel lanes and posted speed limits on the study street segments are discussed further in Section 4.4 herein.

4.3 Roadway Classifications

The City of Manhattan Beach utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

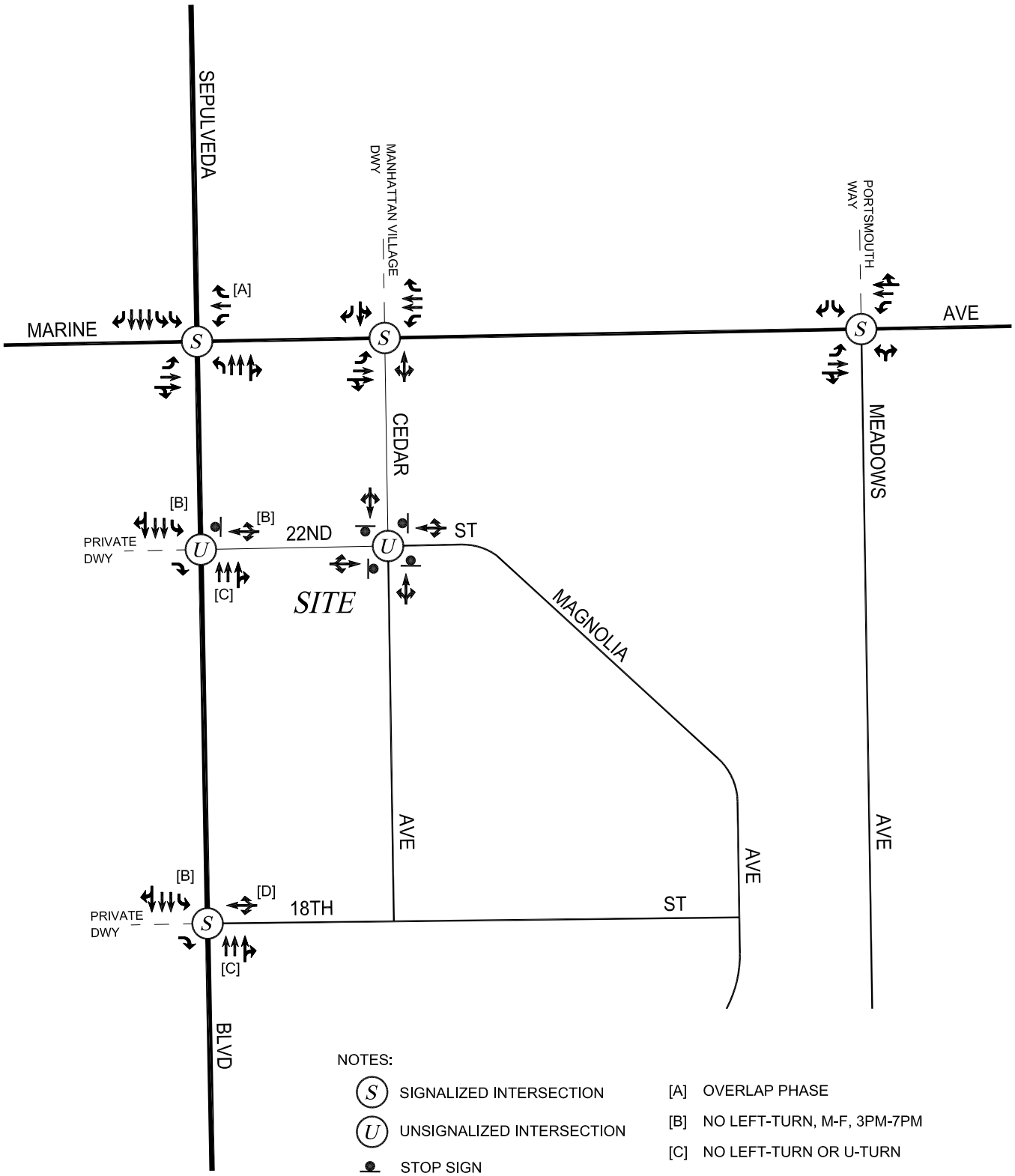

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FIGURE 4-1
EXISTING STREET SYSTEM

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

4.4 Roadway Descriptions

A brief description of the important roadways in the project site vicinity is provided in the following paragraphs.

Sepulveda Boulevard (State Route 1) is a north-south oriented roadway that is located one block west of the project site and provides connection to the I-105 Freeway to the north and Artesia Boulevard (SR-91) to the south. Sepulveda Boulevard is classified as the only Regional Arterial in the City of Manhattan Beach General Plan Infrastructure Element. Three to four through travel lanes are provided in each direction on Sepulveda Boulevard and separate left-turn lanes are provided at major signalized intersections, including dual southbound left-turn lanes at the Marine Avenue intersection. Sepulveda Boulevard is posted for a 35 miles per hour speed limit near the project site.

Cedar Avenue is a short north-south oriented roadway that borders the project site to the east and extends from Marine Avenue to the north to 18th Street to the south. Cedar Avenue is classified as a Local street in the Infrastructure Element of the City of Manhattan Beach General Plan. One through travel lane is provided in each direction on Cedar Avenue in the project vicinity. Cedar Avenue is posted for a 25 miles per hour speed limit in the project vicinity.

Meadows Avenue is a north-south oriented roadway located east of the project site. Meadows Avenue is classified as a Major Local in the City of Manhattan Beach General Plan. Meadows

Avenue provides one through travel lane in each direction south of Marine Avenue. Meadows Avenue is posted for a 25 miles per hour speed limit in the project vicinity.

Marine Avenue is an east-west oriented roadway that is located north of the project site. Marine Avenue is classified as a Minor Arterial and Residential Collector, east and west of Sepulveda Boulevard, respectively, in the Infrastructure Element of the City of Manhattan Beach General Plan. Marine Avenue extends across the City of Manhattan Beach and provides two lanes in each direction in the project vicinity. Marine Avenue provides left-turn lanes at major intersections, including Sepulveda Boulevard, Cedar Avenue and Meadows Avenue. Marine Avenue is posted for a speed limit of 35 and 25 miles per hour, east and west of Sepulveda Boulevard, respectively.

22nd Street is an east-west oriented roadway that is borders the project site to the north. 22nd Street is classified as a Local street in the City's General Plan Infrastructure Element. One through travel lane is provided in each direction along the project frontage. At its intersection with Sepulveda Boulevard, 22nd Street is stop-sign controlled and westbound left-turns are prohibited from 22nd Street to Sepulveda Boulevard during the weekday afternoon peak period between 3:00 PM and 7:00 PM. The intersection of 22nd Street and Cedar Avenue functions as an all-way stop-sign controlled intersection adjacent to the project site. There is no posted speed limit on 22nd Street in the project vicinity, thus it is assumed to be a prima facie speed limit of 25 miles per hour.

18th Street is an east-west discontinuous roadway located south of the project site. 18th Street is a Local street that provides one through travel lane in each direction in the project vicinity. The segment of 18th Street in the project vicinity extends between Sepulveda Boulevard and Magnolia Avenue. No right-turns on red are permitted on 18th Street at its intersection with Sepulveda Boulevard. There is no posted speed limit on 18th Street in the project vicinity, thus it is assumed to be a prima facie speed limit of 25 miles per hour.

4.5 Existing Public Bus Transit Service

Public bus transit service within the Chalk Pre-School Manhattan Beach project study area is also currently provided by the Los Angeles County Metropolitan Transportation Authority. A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 4-1***. The existing public transit routes in the Chalk Pre-School Manhattan Beach project site vicinity are illustrated in ***Figure 4-2***.

Table 4-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES DURING PEAK HOUR		
			DIR	AM	PM
Metro 232	Long Beach to LAX via Wilmington, Harbor City, Torrance, Redondo Beach, Hermosa Beach, Manhattan Beach, El Segundo	Sepulveda Boulevard	NB SB	4 4	3 4
			Total	8	7

[1] Source: Los Angeles County Metropolitan Transportation Authority (Metro) website, 2014.

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MAP SOURCE: METRO WEBSITE, 2014

PROJECT SITE

FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

5.0 TRAFFIC COUNTS

5.1 Manual Intersection Traffic Counts

New manual counts of vehicular turning movements were conducted at each of the study intersections during the weekday morning (AM) and afternoon (PM) commuter periods to determine the peak hour traffic volumes. The manual counts were conducted by a traffic count subconsultant (City Traffic Counters) at study intersections from 7:00 to 9:00 AM to determine the AM peak commuter hour, and from 4:00 to 6:00 PM to determine the PM peak commuter hour. In conjunction with the manual turning movement vehicle counts, a count of bicycle and pedestrian volumes were collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. Traffic volumes at the study intersections show the morning and afternoon peak periods typically associated with peak commuter hours in the metropolitan area.

The existing weekday AM and PM peak commuter period manual counts of turning vehicles at the study intersections are summarized in ***Table 5-1***. The existing traffic volumes at the study intersections during the weekday AM and PM peak commuter hours are shown in ***Figures 5-1*** and ***5-2***, respectively. For each study intersection, the highest one-hour total traffic volumes (i.e., four consecutive 15-minute time intervals) traversing through the intersection during the 7:00 to 9:00 AM and 4:00 to 6:00 PM time periods were selected so as to determine the respective AM and PM peak hour traffic volumes for each study intersection. For purposes of the traffic impact analysis, this common traffic engineering practice ensures that a more conservative (i.e., worst case) assessment of existing operating conditions be attained for each study intersection. Therefore, the traffic volumes shown in *Figures 5-1* and *5-2* for the study intersections do not necessarily reflect the same exact one hour time period during the morning and/or afternoon peak commuter conditions (i.e., one intersection's peak hour may have occurred between 7:30 and 8:30 AM, while another intersection's peak hour may have occurred between 7:45 and 8:45 AM). Summary data worksheets of the manual traffic counts of the study intersections are contained in ***Appendix A***.

5.2 Automatic 24-Hour Machine Traffic Counts

Automatic 24-hour machine traffic counts of the two study street segments were conducted by a traffic subconsultant, City Traffic Counters. As noted above, the automatic 24-hour machine traffic counts were conducted when local schools were in session and in conjunction with the manual intersection traffic counts. Copies of the 24-hour machine traffic counts for the study street segment locations are also contained in *Appendix A*.

Table 5-1
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Sepulveda Boulevard/ Marine Avenue	06/10/2014	NB	7:45	2,655	4:30	1,578
			SB		1,152		2,406
			EB		444		407
			WB		717		614
2	Sepulveda Boulevard/ 22nd Street	06/10/2014	NB	7:45	2,646	4:00	1,726
			SB		1,006		2,320
			EB		0		0
			WB		11		21
3	Sepulveda Boulevard/ 18th Street	06/10/2014	NB	7:45	2,629	4:15	1,591
			SB		1,034		2,354
			EB		13		5
			WB		55		72
4	Cedar Avenue/ Marine Avenue	06/10/2014	NB	8:00	126	5:00	93
			SB		174		576
			EB		456		612
			WB		951		644
5	Cedar Avenue/ 22nd Street	06/10/2014	NB	7:45	71	4:15	74
			SB		104		125
			EB		30		60
			WB		49		28
6	Meadows Avenue/ Marine Avenue	06/10/2014	NB	7:45	264	5:00	60
			SB		25		15
			EB		567		848
			WB		740		705

[1] Counts conducted by City Traffic Counters

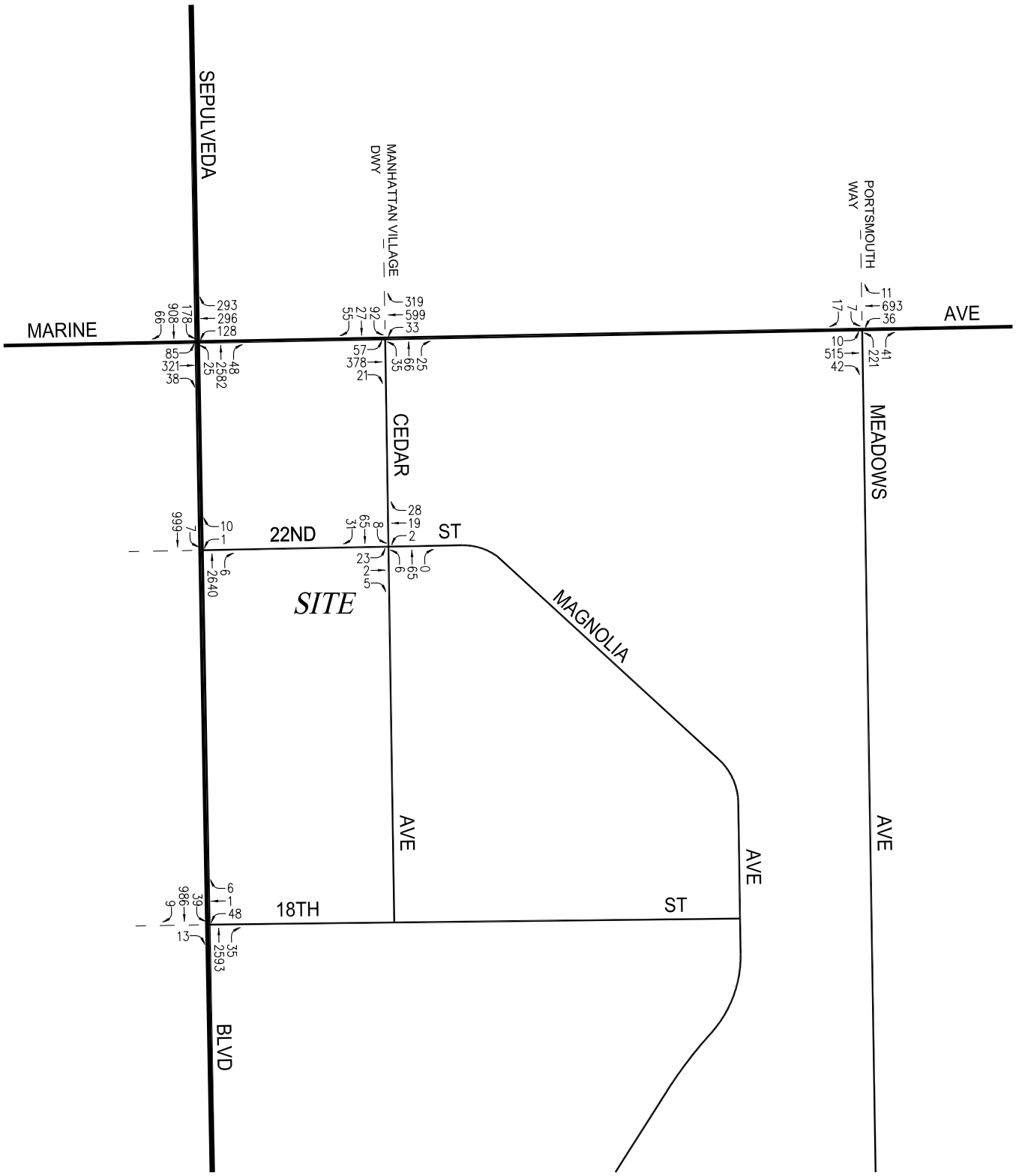

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FIGURE 5-1
EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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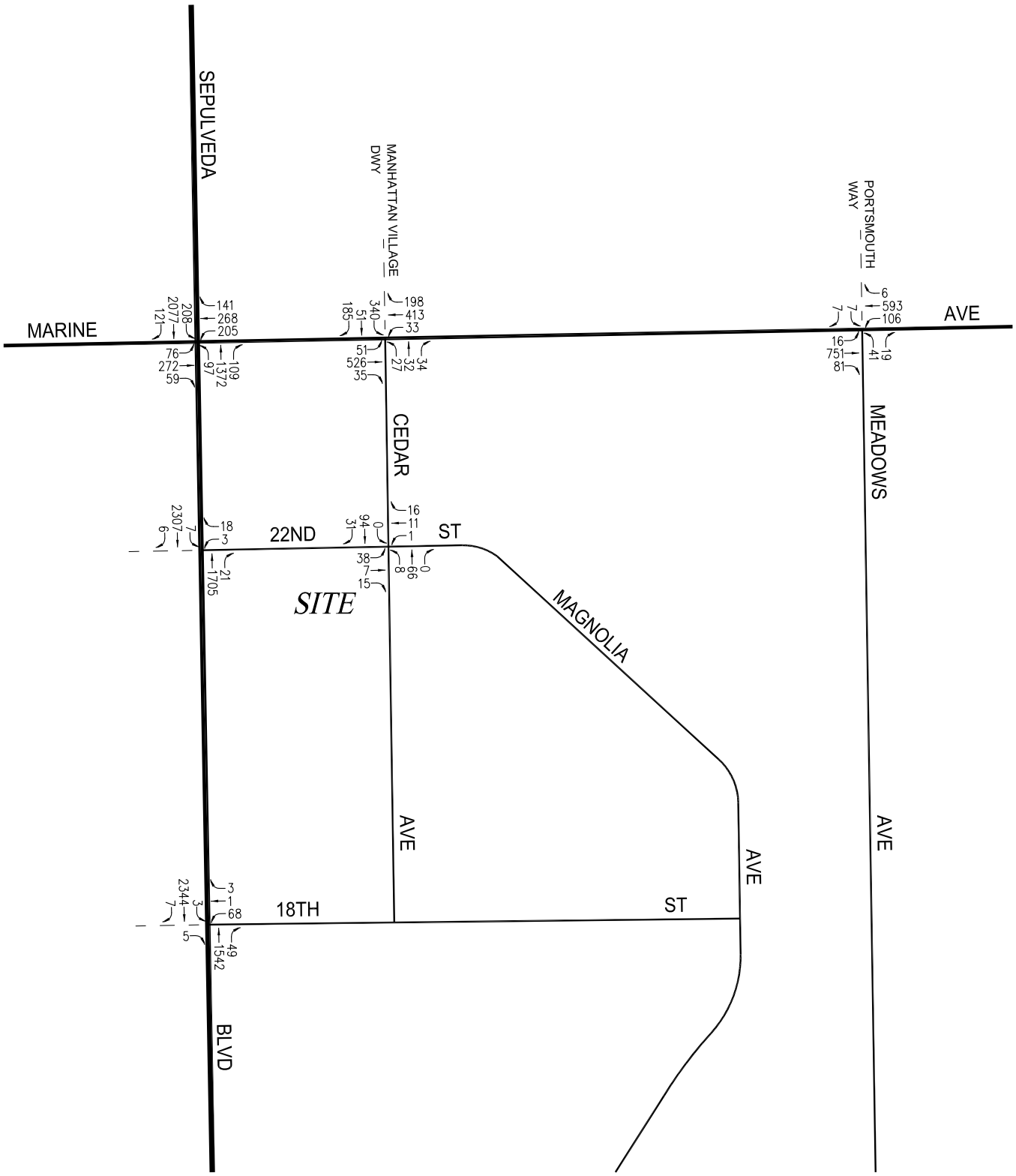

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FIGURE 5-2
EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

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CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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6.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in CEQA Guidelines for purposes of developing the forecast.

6.1 Cumulative Growth

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the Cities of Manhattan Beach, El Segundo and Hermosa Beach. The list of related projects in the project site area and a brief description for each of the ten (10) related projects is presented in ***Table 6–1***. The location of the related projects is shown in ***Figure 6–1***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[4]. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 6-1*. As shown in *Table 6-1*, the related projects are expected to generate a combined total of 18,310 daily trips during a typical weekday, 1,209 trips (858 inbound trips and 351 outbound trips) during the weekday AM peak hour, and 1,567 trips (665 inbound trips and 902 outbound trips) during the weekday PM peak hour. The anticipated

[4] Institute of Transportation Engineers *Trip Generation Manual*, 9th Edition, 2012, Washington, D.C..

Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL
City of Manhattan Beach												
M1	Approved	213 Manhattan Beach Boulevard	Retail	3,371 GLSF	[3]	144	2	1	3	6	7	13
			Office	3,073 GSF	[4]	34	4	1	5	1	4	5
M2	Approved	1133 Artesia Boulevard	Grocery Store	12,000 GSF	[5]	1,227	25	16	41	58	56	114
M3	Proposed	1000 North Sepulveda Boulevard	Medical Office	23,050 GSF	[6]	833	43	12	55	23	59	82
			Pharmacy	665 GSF	[7]	60	1	1	2	3	3	6
			Coffee Shop	1,715 GSF	[8]	1,860	95	91	186	35	35	70
			(Less Existing Restaurant)	(5,400) GSF	[9]	(687)	(32)	(26)	(58)	(32)	(21)	(53)
M4	Approved	865 Manhattan Beach Boulevard	Office	15,000 GSF	[4]	165	20	3	23	4	18	22
M5	Approved	Manhattan Village Shopping Center 3200-3600 North Sepulveda Boulevard	Shopping Center	697,000 GLSF	[10]	463	1	3	4	26	(42)	(16)
City of El Segundo												
S1	Under Construction	820-850 South Sepulveda Boulevard	Shopping Center	71,343 GLSF	[3]	3,046	42	26	68	127	138	265
			Restaurant	25,627 GSF	[9]	3,258	152	125	277	151	101	252
			Office	27,338 GSF	[4]	302	38	5	43	7	34	41
S2	Under Construction	2355-2383 Utah Avenue	Office	203,591 GSF	[4]	2,246	280	38	318	52	251	303
City of Hermosa Beach												
H1	Proposed	2101 Pacific Coast Highway	Office	10,124 GSF	[4]	112	14	2	16	3	12	15
H2	Proposed	Skechers Hermosa Beach 2851-2901, 3001 East Pacific Coast Highway	Corporate Headquarters	200 Employees	[11]	497	83	1	84	3	31	34
H3	Proposed	2420 Pacific Coast Highway	Retail	100,000 GLSF	[3]	4,270	60	36	96	178	193	371
			Restaurant	3,000 GSF	[9]	381	18	14	32	18	12	30
			Office	9,000 GSF	[4]	99	12	2	14	2	11	13
TOTAL						18,310	858	351	1,209	665	902	1,567

[1] Source: City of Manhattan Beach Community Development Department, City of El Segundo Planning Division, and City of Hermosa Beach Community Development Department. Trip generation for the related projects are based on ITE "Trip Generation Manual", 9th Edition, 2012 (as referenced in the Project Data Source column).
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[4] ITE Land Use Code 710 (Office Building) trip generation average rates.
[5] ITE Land Use Code 850 (Supermarket) trip generation average rates.
[6] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[7] ITE Land Use Code 880 (Pharmacy/Drugstore without Drive-Through Window) trip generation average rates.
[8] ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window) trip generation average rates. Daily trip rate not available; daily trips calculated based on the assumption that the AM peak hour trips represent 10% of the daily trips.
[9] ITE Land Use Code 932 (High-Turnover (Sit-Down) Restaurant) trip generation average rates.
[10] Source: "Traffic Study for Manhattan Village Shopping Center", Components I + II + III Total New Trips, prepared by Gibson Transportation Consulting, Inc., May 2012.
[11] Source: "Skechers Hermosa Beach Project Draft Traffic Impact Study", LLG Engineers, June 2014.

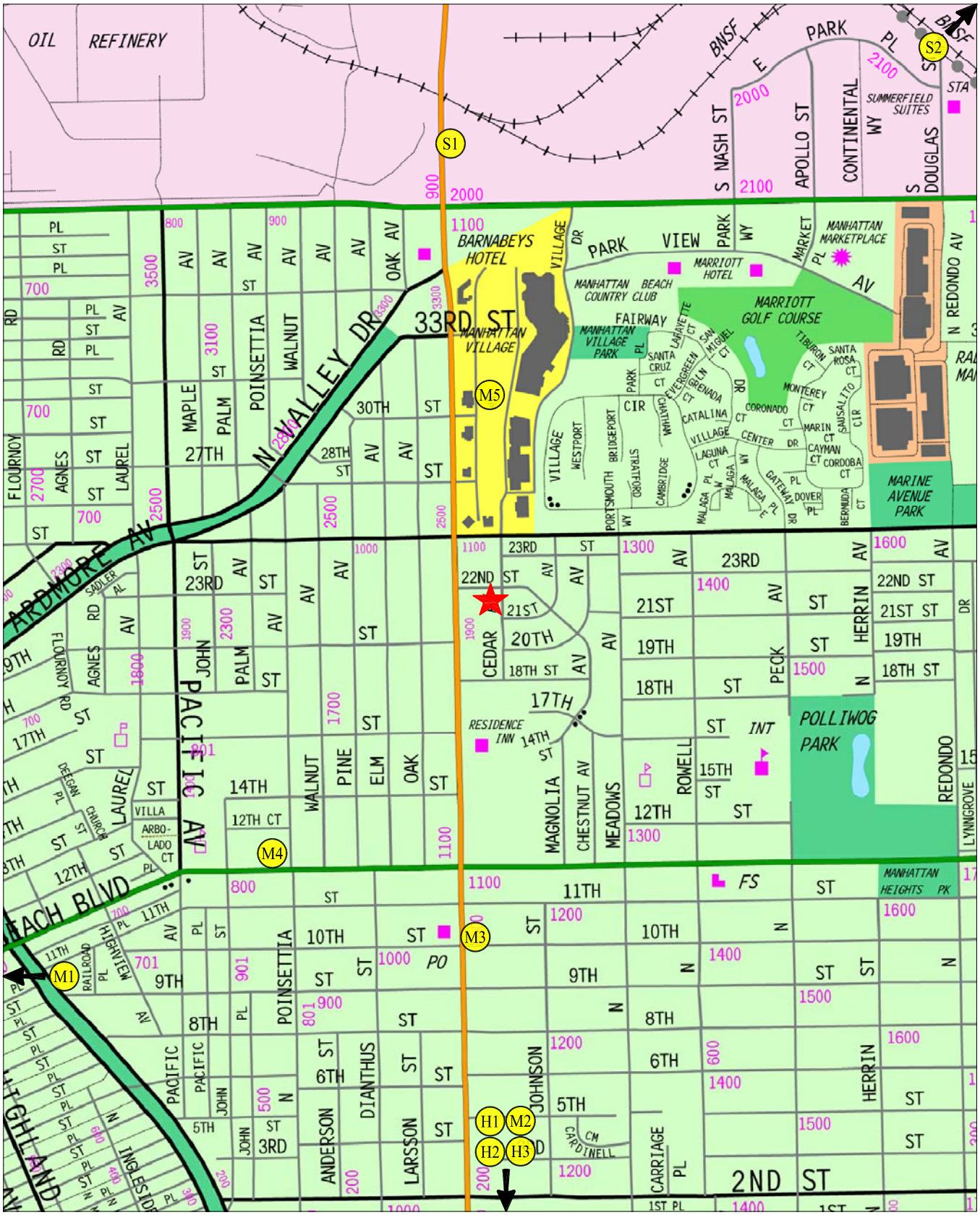

FIGURE 6-1
LOCATION OF RELATED PROJECTS

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distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours is displayed in ***Figures 6-2*** and ***6-3***, respectively.

6.2 Ambient Traffic Growth

Horizon year, background traffic growth estimates also have been calculated by using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area, as well as account for typical 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 (1.0%) per year. The ambient growth factor was based on review of the background traffic growth estimates for the South Bay/LAX area (RSA 18) published in the *2010 Congestion Management Program for Los Angeles County*, which indicate that existing traffic volumes would be expected to increase at an annual rate of less than one percent (approximately 0.26% per year) between years 2010 and 2020. However, a one percent (1.0%) ambient traffic growth factor has been employed in this analysis in order to provide a conservative, worst case forecast of future traffic volumes in the area. Application of the ambient traffic growth factor to existing Year 2014 traffic volumes results in a one percent (1.0%) increase in existing traffic volumes to horizon Year 2015. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

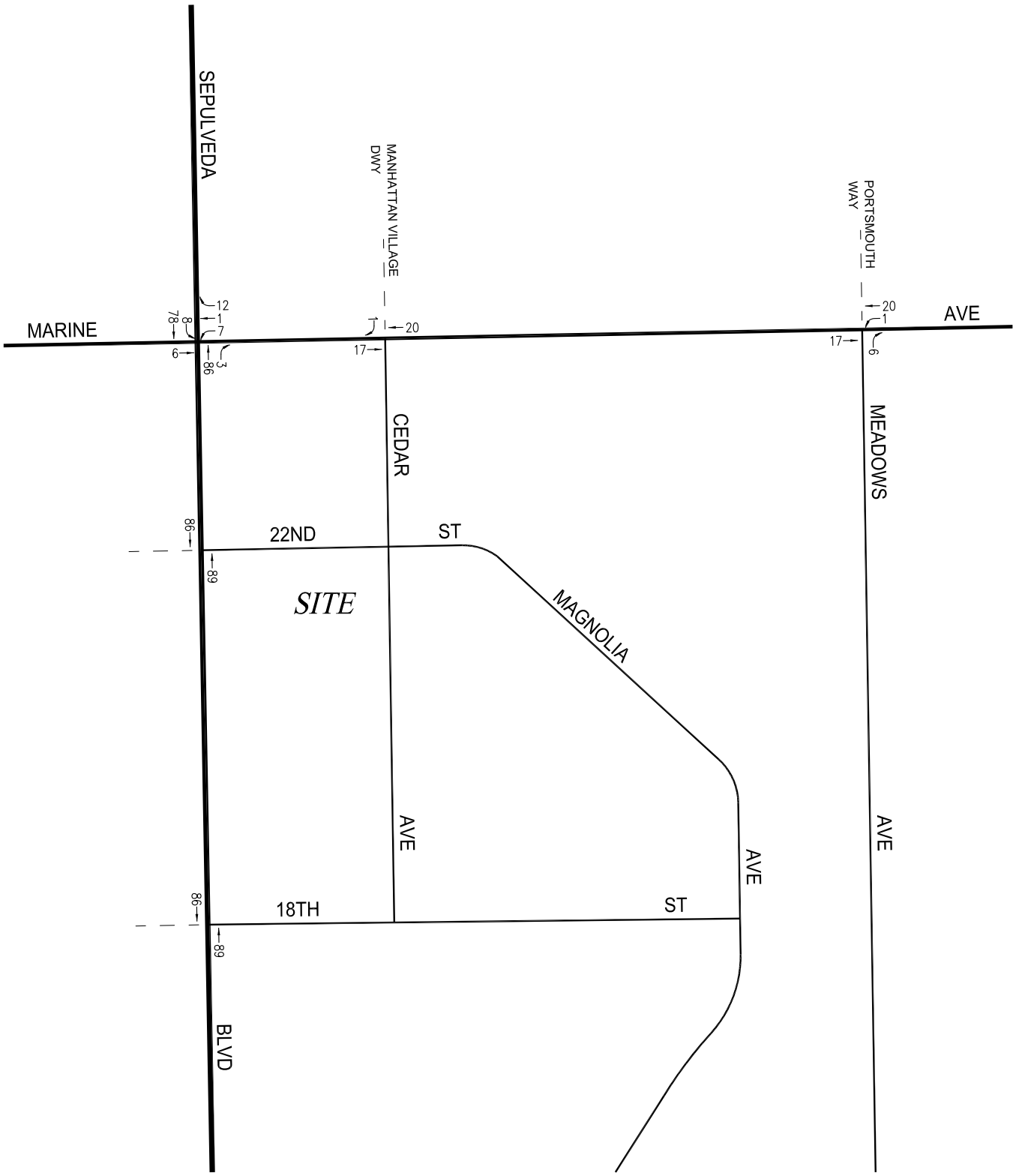

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FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

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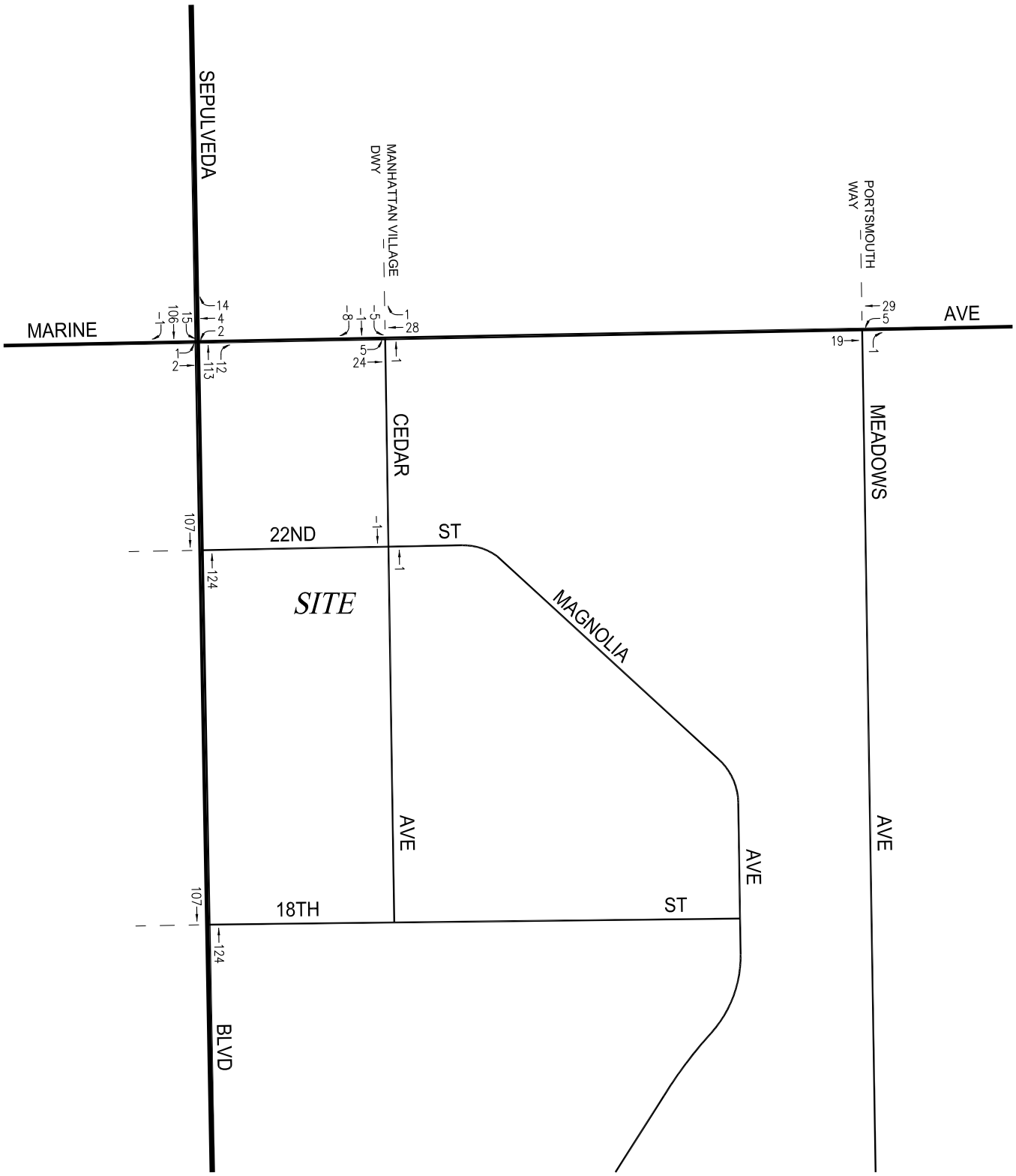

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FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

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CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Chalk Pre-School Manhattan Beach project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes 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 trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated 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 proposed project is isolated by comparing operational (i.e., Level of Service) conditions at the selected key intersections using existing and 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 and the significance of the project's impacts identified.

7.1 Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Trip generation rates provided in the ITE *Trip Generation Manual*, 9th Edition publication were utilized to forecast project-related trips. The ITE document contains trip rates for a variety of land uses which have been derived based on traffic counts conducted at existing sites throughout California and the United States (i.e., trip rates for the day care center land use category are based on traffic counts conducted at existing day care centers). Trip generation forecasts for the proposed land use and existing uses to be removed are summarized in the following paragraphs.

7.1.1 *Proposed Project Trip Generation*

Traffic volumes expected to be generated by the proposed project were based upon rates per number of students. Specifically, the daily, AM and PM peak hour traffic volumes expected to be generated by the proposed project were forecast based on ITE Land Use Code 565 (Day Care Center) trip generation average rates. As mentioned previously, while it is recognized that there can be many instances where not all 119 pre-school students are present, all 119 students have been assumed to be on-site and included in the project trip generation forecasts.

The traffic generation forecast for the proposed project is summarized in ***Table 7-1***. As presented in *Table 7-1*, the proposed project is expected to generate 95 vehicle trips (50 inbound trips and 45 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate 96 vehicle trips (45 inbound trips and 51 outbound trips). Over a 24-hour weekday period, the proposed project is forecast to generate 522 daily trip ends during a typical weekday (261 inbound trips and 261 outbound trips).

7.1.2 *Existing Trip Generation*

Traffic volumes generated by the existing site uses also were forecast for the weekday AM and PM peak hours, and over a 24-hour weekday period, using trip generation rates in the ITE *Trip Generation Manual* publication. Specifically, the daily, AM and PM peak hour traffic volumes expected to be generated by the existing uses were forecast based on ITE Land Use Code 820 (Shopping Center) trip generation average rates.

Table 7-1 also provides a summary of the existing use trip generation (i.e., to be applied as a credit/reduction). The existing project site is determined to generate an average of 8 vehicle trips during the weekday AM peak hour (i.e., 5 inbound and 3 outbound trips) and 31 vehicle trips during the PM peak hour (i.e., 15 inbound and 16 outbound trips).

7.1.3 *Project Trip Generation Summary*

The traffic generation forecast for the proposed project is summarized in *Table 7-1*. The trip generation forecast for the proposed project was submitted for review and approval by City staff. As presented in *Table 7-1*, the proposed project is expected to generate a net increase of 87 vehicle trips (45 inbound trips and 42 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to generate a net increase of 65 vehicle trips (30 inbound trips and 35 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 170 daily trip ends during a typical weekday (85 inbound trips and 85 outbound trips).

7.2 Project Trip Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Sepulveda Boulevard, Marine Avenue etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing site parcel access ingress/egress schemes;
- Ingress/egress scheme planned for the proposed project; and

Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project								
Day Care Center [3]	119 Students	522	50	45	95	45	51	96
Subtotal Proposed		**522**	**50**	**45**	**95**	**45**	**51**	**96**
Less Existing								
Retail [4]	(8,232) GLSF	(352)	(5)	(3)	(8)	(15)	(16)	(31)
Subtotal Existing		**(352)**	**(5)**	**(3)**	**(8)**	**(15)**	**(16)**	**(31)**
NET INCREASE		**170**	**45**	**42**	**87**	**30**	**35**	**65**

[1] Source: ITE "Trip Generation Manual", 9th Edition, 2012.

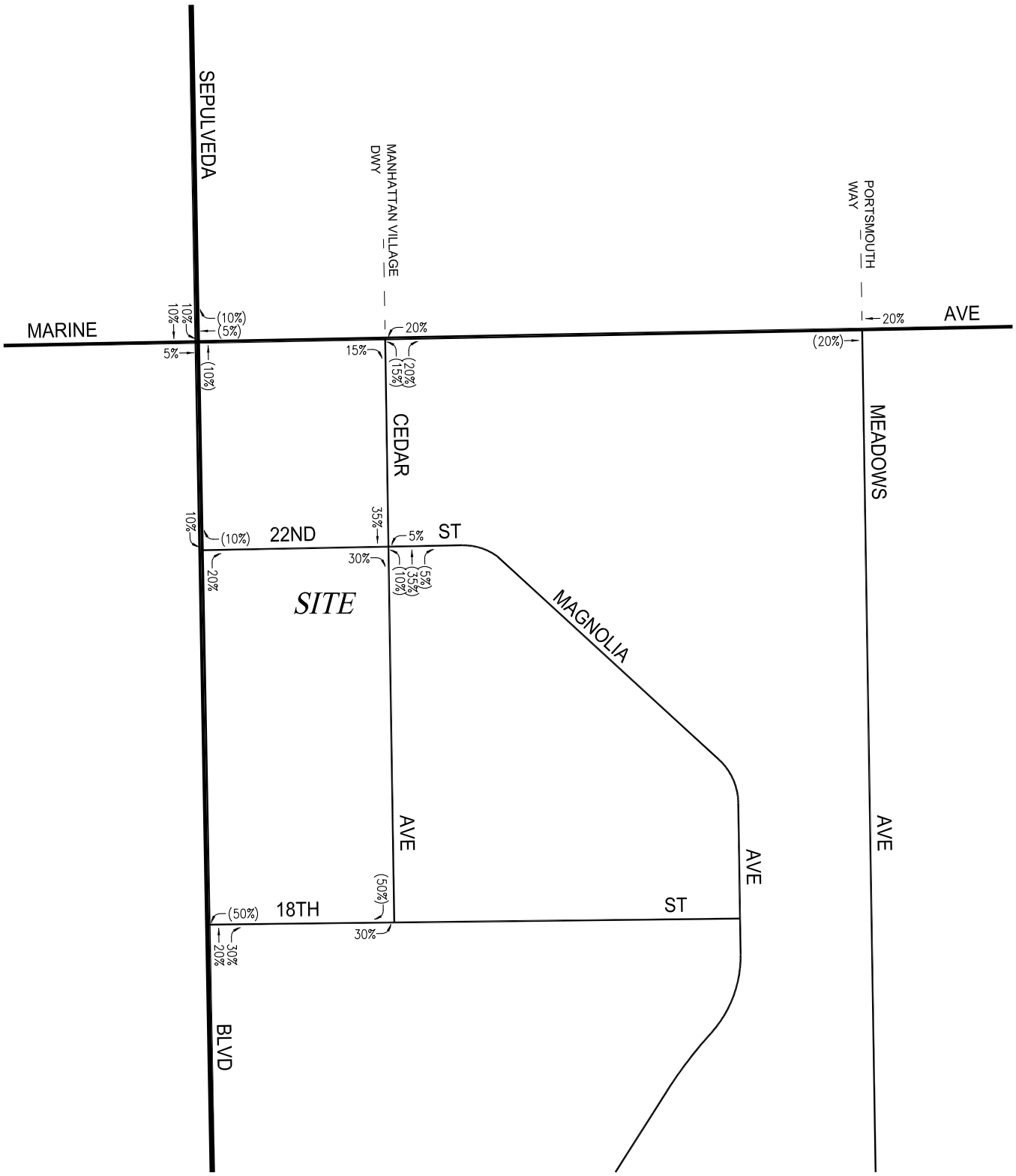
[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 565 (Day Care Center) trip generation average rates.
- Daily Trip Rate: 4.38 trips/student; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.80 trips/student; 53% inbound/47% outbound
- PM Peak Hour Trip Rate: 0.81 trips/student; 47% inbound/53% outbound

[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 42.7 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.96 trips/1,000 SF of floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.71 trips/1,000 SF of floor area; 48% inbound/52% outbound

- Input from the City's consultant Traffic Engineer.

The project traffic distribution percentages at the study intersections for the weekday AM and PM peak hours are illustrated in ***Figures 7-1*** and ***7-2***, respectively. The existing uses trip distribution percentages at the study intersections for the weekday AM and PM peak hours are contained in ***Appendix B*** (refer to *Appendix Figures B-1* and *B-2*). The forecast net new project traffic volumes at the study intersections for the weekday AM and PM peak hours are displayed in ***Figures 7-3*** and ***7-4***, respectively. The net new project traffic volume assignments presented in *Figures 7-3* and *7-4* reflect the project traffic distribution characteristics shown in *Figures 7-1 and 7-2* as well as the existing traffic distribution shown in *Appendix B* and the project and existing uses traffic generation forecast presented in *Table 7-1*.



XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

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FIGURE 7-1
PROJECT TRIP DISTRIBUTION
WEEKDAY AM PEAK HOUR

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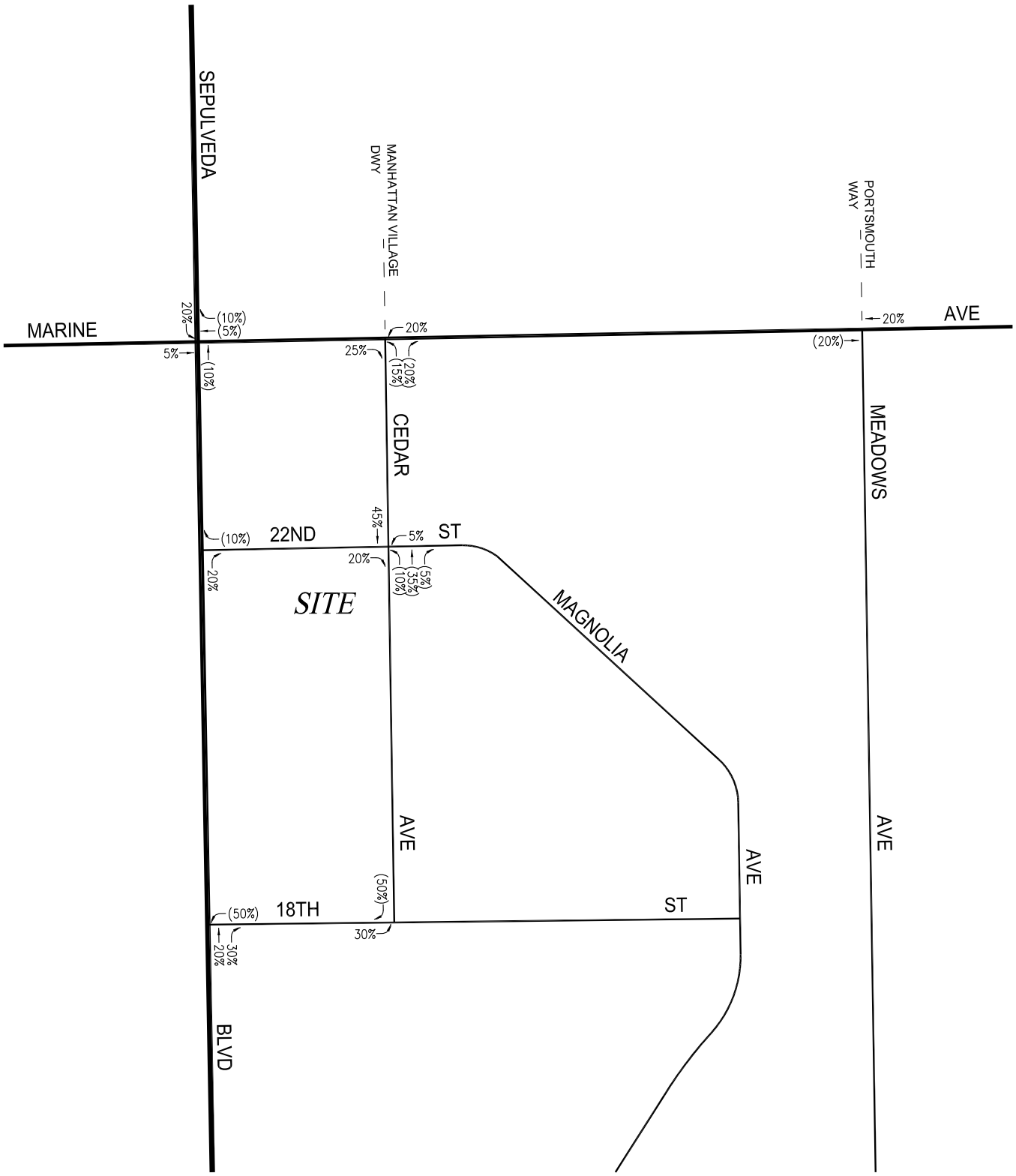

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

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FIGURE 7-2
PROJECT TRIP DISTRIBUTION
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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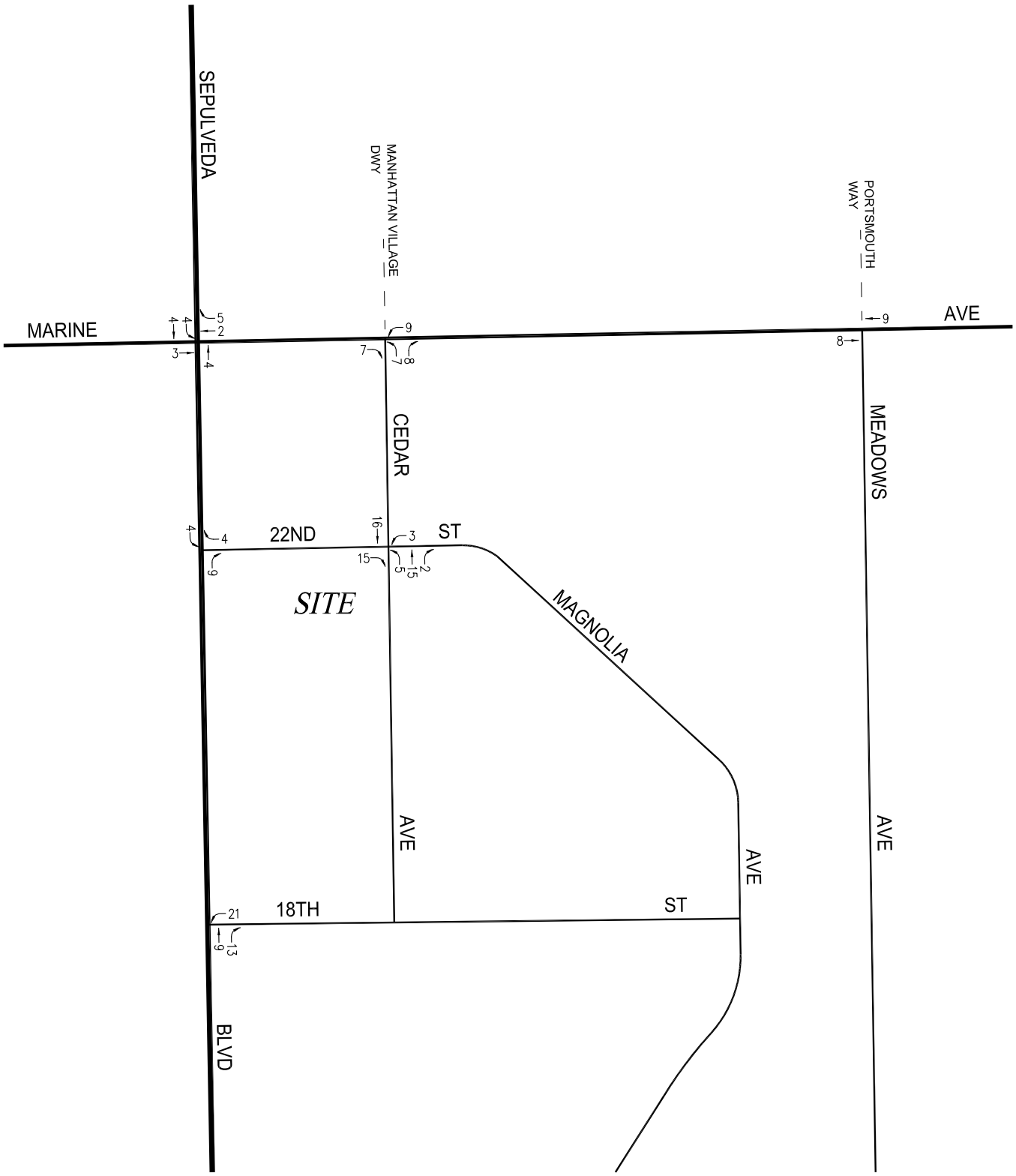

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FIGURE 7-3
NET PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

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CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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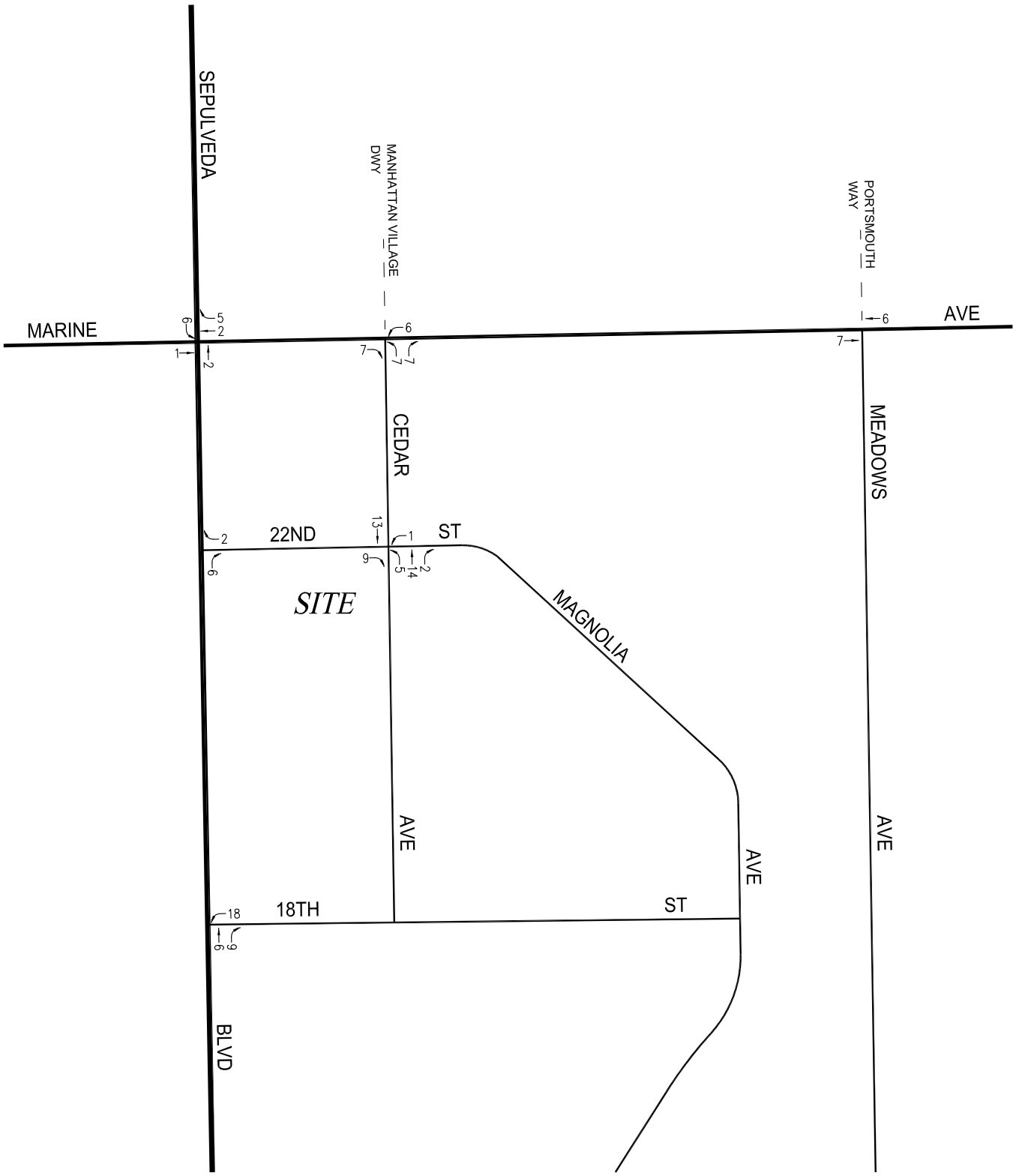

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FIGURE 7-4
NET PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

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8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

8.1 Study Intersections

8.1.1 *Intersection Analysis Methodology*

The six study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis which determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in ***Appendix C***.

The AM and PM peak hour operating conditions for the study intersections were evaluated using the ICU methodology for signalized intersections and the methodology outlined in Chapter 19 of the *HCM2010 Highway Capacity Manual* (HCM2010) for stop-controlled intersections. This methodology estimates the average control delay for each of the subject movements and determines the level of service for each constrained movement. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall average control delay is measured in seconds per vehicle. A description of the HCM method and corresponding Level of Service is also provided in *Appendix C*.

8.1.2 *City of Manhattan Beach Intersection Impact Criteria and Thresholds*

The relative impact of the added project traffic volumes generated by the proposed Chalk Pre-School Manhattan Beach project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the six key study intersections, without, then with, the proposed project. The significance of the potential project impacts at each key intersection was then evaluated using the traffic impact criteria employed in previous analyses for projects in the City of Manhattan Beach. Per the City of Manhattan Beach policy, the significance of the potential impacts of project generated traffic at each study intersection was identified using criteria consistent with the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority. A significant transportation impact is determined based on a change in the calculated *v/c* ratio of two percent (0.02) or more due to project-related traffic for an intersection operating at LOS F or worse (*v/c* > 1.00).

8.2 Intersection Capacity Utilization Methods of Analysis

8.2.1 *Signalized Intersections*

In conformance with the City of Manhattan Beach and Los Angeles County Congestion Management Program requirements, existing weekday AM and PM peak hour operating conditions for the signalized study intersections were evaluated using the ICU method. The ICU methodology is intended for signalized intersection analyses and estimates the *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 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 8-1***. A description of the ICU method and corresponding Level of Service is provided in *Appendix C*.

TABLE 8-1
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.

Pursuant to Los Angeles 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 a dual left-turn capacity of 2,880 vph. Additionally, a clearance adjustment factor of 0.10 was added to each Level of Service (LOS) calculation. 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.

8.2.2 *Unsignalized Intersections*

The *Highway Capacity Manual 2010* (HCM2010) methodology outlined in Chapter 19 for unsignalized/two-way stop-controlled study intersections was utilized for the analysis of the unsignalized intersections. The TWSC methodology estimates the average control delay for each

minor-street movement (or shared movement) as well as major-street left-turns and determines the LOS for each constrained movement. It should be noted that LOS is not defined for the overall TWSC intersection because major-street movements with no delays typically result in a weighted average delay that is extremely low. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The average control delay is measured in seconds per vehicle, and includes delay due to deceleration to a stop at the back of the queue from free-flow speed, move-up time within the queue, stopped delay at the front of the queue, and delay due to acceleration back to free-flow speed. A description of the HCM method and corresponding Level of Service is also provided in *Appendix C*. The six qualitative categories of Level of Service have been defined along with the corresponding HCM control delay value range, as shown in ***Table 8-2***.

TABLE 8-2
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Highway Capacity Manual Delay Value (sec/veh)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 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

8.3 Traffic Impact Analysis Scenarios

Pursuant to City of Manhattan Beach and Los Angeles County Congestion Management Program requirements, Level of Service calculations have been prepared for the following scenarios for the study intersections:

(a) Existing (Year 2014) conditions.

(b) Condition (a) with completion and occupancy of the project.

(c) Condition (b) with implementation of project mitigation measures where necessary.

(d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through Year 2015 and with completion and occupancy of the related projects (i.e., future Year 2015 pre-project conditions)

(e) Condition (d) with completion and occupancy of the project (i.e., future Year 2015 with project conditions).

(f) Condition (e) with implementation of project mitigation measures where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

8.4 Study Street Segments

8.4.1 *Street Segment Analysis Methodology*

Based on coordination with City of Manhattan Beach staff, street segment level of service analyses were prepared for two roadway segments located in the immediate project vicinity. Automatic 24-hour machine traffic counts were conducted at the two street segment locations in June 2014. The weekday AM peak hour and PM peak hour volumes were then determined based on the automatic 24-hour machine traffic counts. Copies of the 24-hour machine traffic counts are contained in *Appendix A*.

8.4.2 *Street Segment Impact Criteria and Thresholds*

The City of Manhattan Beach does not have specific impact criteria and thresholds applicable to roadway segments. Pursuant to coordination with the City contract Traffic Engineer, the significance of the potential impacts of project-generated net new traffic at the study street segments was identified using the two-lane roadway criteria set forth in the Los Angeles County Department of Public Works' *Traffic Impact Analysis Report Guidelines* document. Total capacity (PCPH) is based on existing roadway directional split pursuant to the County's traffic study guidelines. However, please note that the PCPH capacity used in this analysis is one-half (i.e., 50%) of the County's identified capacities in order to better reflect the type of roadways, adjoining land uses, and other local roadway network characteristics (e.g., residential driveways, on-street parking, etc.) in order to provide a conservative analysis. Accordingly, a transportation impact on a roadway shall be deemed significant based on a percentage increase in passenger cars per hour (PCPH) by the project as shown in ***Table 8-3***.

TABLE 8-3
RECOMMENDED CITY OF MANHATTAN BEACH
ROADWAY SEGMENT IMPACT THRESHOLD CRITERIA

Directional Split	Total Capacity (PCPH) [a]	Percentage Increase in Passenger Cars Per Hour (PCPH) by Project		
		Pre-Project LOS		
		C	D	E/F
50/50	1,400	4	2	1
60/40	1,325	4	2	1
70/30	1,250	4	2	1
80/20	1,150	4	2	1
90/10	1,050	4	2	1
100/0	1,000	4	2	1

[a] Total capacity (pcph) based on 50 percent of the values established by Los Angeles County.

9.0 TRAFFIC ANALYSIS

The traffic impact analysis prepared for the study intersections using the ICU and HCM methodology and application of the City of Manhattan Beach significant traffic impact criteria is summarized in ***Table 9-1***. The ICU data worksheets for the analyzed intersections are contained in *Appendix C*.

9.1 Study Intersections

9.1.1 *Existing Conditions*

As indicated in column [1] of *Table 9-1*, four of the six study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours under existing conditions. The following study intersections are currently operating at LOS E or F during the peak hour(s) shown below under existing conditions:

- Int. No. 1: Sepulveda Blvd./Marine Ave. AM Peak Hour: *v/c*=0.948, LOS E
- Int. No. 2: Sepulveda Blvd./22nd St. AM Peak Hour: 98.0 sec. of delay, LOS F
  PM Peak Hour: 57.6 sec. of delay, LOS F

As previously mentioned, the existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-2*, respectively.

9.1.2 *Existing With Project Conditions*

As shown in column [2] of *Table 9–1,* application of the City's threshold criteria to the "Existing Plus Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the six study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 9-1*** and ***9-2***, respectively.

9.1.3 *Future Pre-Project Conditions*

The future year 2015 pre-project conditions were forecast based on the addition of traffic generated by the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios and delay values at the study intersections appropriately reflect the addition of traffic generated by the related projects listed in *Table 6-1* and growth in ambient traffic.

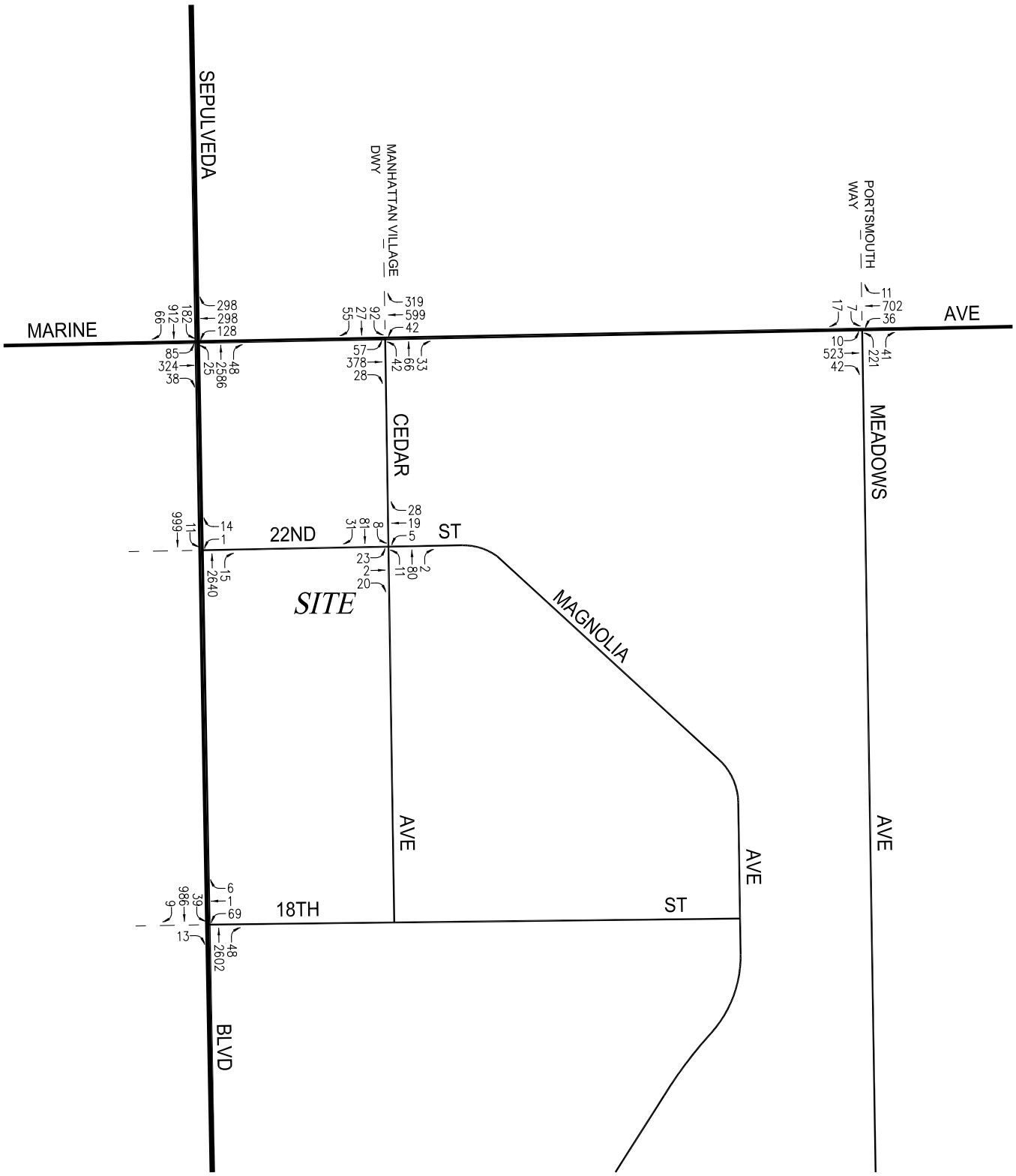
As indicated in column [3] of *Table 9-1*, four of the six study intersections are anticipated to operate at LOS D or better during the weekday AM and PM peak hours under future pre-project conditions. The following study intersections are expected to operate at LOS E or F during the peak hour(s) shown below under future pre-project conditions:

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2014 EXISTING V/C or Delay	[1] LOS [b]	[2] YEAR 2014 EXISTING PLUS PROJECT V/C or Delay	[2] LOS [b]	[2] CHANGE DELAY or V/C [(2)-(1)]	[2] SIGNIF. IMPACT [c]	[3] YEAR 2015 FUTURE PRE-PROJECT W/ AG & REL. PROJECTS V/C or Delay	[3] LOS [b]	[4] YEAR 2015 FUTURE WITH PROPOSED PROJECT V/C or Delay	[4] LOS [b]	[4] CHANGE V/C or Delay [(4)-(3)]	[4] SIGNIF. IMPACT [c]
1	Sepulveda Boulevard/	AM	0.948	E	0.951	E	0.003	NO	0.978	E	0.982	E	0.004	NO
	Marine Avenue	PM	0.825	D	0.825	D	0.000	NO	0.856	D	0.856	D	0.000	NO
2	Sepulveda Boulevard/	AM	98.0	F	111.4	F	0.006	NO	125.1	F	133.3	F	0.007	NO
	22nd Street [a]	PM	57.6	F	55.4	F	0.001	NO	78.6	F	74.4	F	0.001	NO
			0.663		0.669				0.687		0.694			
			0.595		0.596				0.622		0.623			
3	Sepulveda Boulevard/	AM	0.710	C	0.728	C	0.018	NO	0.735	C	0.753	C	0.018	NO
	18th Street	PM	0.635	B	0.647	B	0.012	NO	0.663	B	0.674	B	0.011	NO
4	Cedar Avenue/	AM	0.471	A	0.481	A	0.010	NO	0.475	A	0.484	A	0.009	NO
	Marine Avenue	PM	0.567	A	0.581	A	0.014	NO	0.576	A	0.591	A	0.015	NO
5	Cedar Avenue/	AM	7.7	A	8.0	A	0.015	NO	7.8	A	8.0	A	0.015	NO
	22nd Street [a]	PM	7.7	A	7.9	A	0.015	NO	7.8	A	7.9	A	0.014	NO
			0.214		0.229				0.215		0.230			
			0.224		0.239				0.225		0.239			
6	Meadows Avenue/	AM	0.496	A	0.498	A	0.002	NO	0.510	A	0.512	A	0.002	NO
	Marine Avenue	PM	0.468	A	0.470	A	0.002	NO	0.481	A	0.484	A	0.003	NO

[a] Unsignalized intersection
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections
[c] According to the City of Manhattan Beach threshold of significance, a transportation impact at an intersection shall be deemed significant in accordance with the following:

Final *v/c*	LOS	Project Related Increase in *v/c*
> 1.000	F	equal to or greater than 0.02



NOT TO SCALE

FIGURE 9-1
EXISTING WITH PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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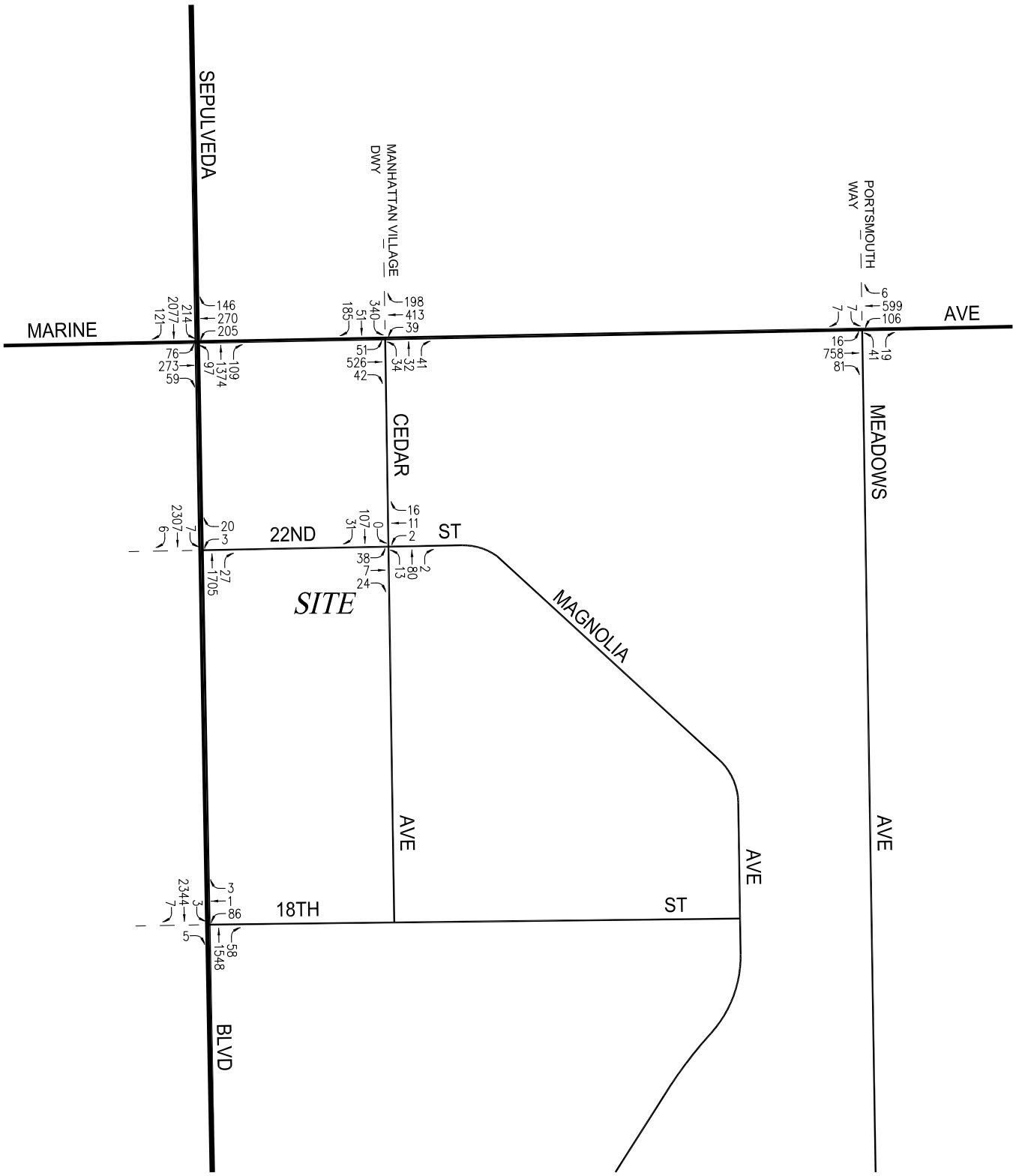

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FIGURE 9-2
EXISTING WITH PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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- Int. No. 1: Sepulveda Blvd./Marine Ave. AM Peak Hour: *v/c*=0.978, LOS E
- Int. No. 2: Sepulveda Blvd./22nd St. AM Peak Hour: 125.1 sec. of delay, LOS F
  PM Peak Hour: 78.6 sec. of delay, LOS F

The future pre-project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in ***Figures 9-3*** and ***9-4***, respectively.

9.1.4 *Future With Project Conditions*

As shown in column [4] of *Table 9-1,* application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the proposed project is not expected to create significant impacts at any of the six study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in ***Figures 9-5*** and ***9-6***, respectively.

9.2 Study Street Segments Analysis

9.2.1 *Existing and Existing With Project Conditions*

The existing and forecast existing with project traffic volumes at the street segment study locations are summarized in ***Table 9-2***. The directional traffic splits for each study street segment based on existing traffic count data as well as the corresponding total peak hour roadway capacities are also displayed. As presented in column [1] of *Table 9-2*, both study street segments are presently operating at LOS A during the weekday AM peak hour and PM peak hour under existing conditions. As shown in column [2] of *Table 9-2*, both study street segments are expected to continue operating at LOS A during the weekday AM peak hour and PM peak hour with the addition of project traffic. Application of the County's two-lane roadway threshold criteria for street segment analysis with capacity reductions, indicates that the proposed project is not anticipated to significantly impact the analyzed street segments. Incremental, but less than significant impacts are noted at the study street segments under existing conditions, as presented in *Table 9-2*. Thus, no mitigation measures are required or recommended.

9.2.2 *Future Pre-Project and Future With Project Conditions*

The forecast traffic conditions at the analyzed street segments for future pre-project (i.e., existing traffic volumes, ambient traffic growth and related projects traffic volumes) and future with project analysis scenarios are summarized in ***Table 9-3***. The directional traffic splits for each study street segment based on existing traffic count data as well as the corresponding total peak hour roadway capacities are also displayed. As presented in column [1] of *Table 9-3*, both study street segments are expected to continue operating at LOS A during the weekday AM peak hour and PM peak hour under the future pre-project conditions. As shown in column [2] of *Table 9-3*, both study street

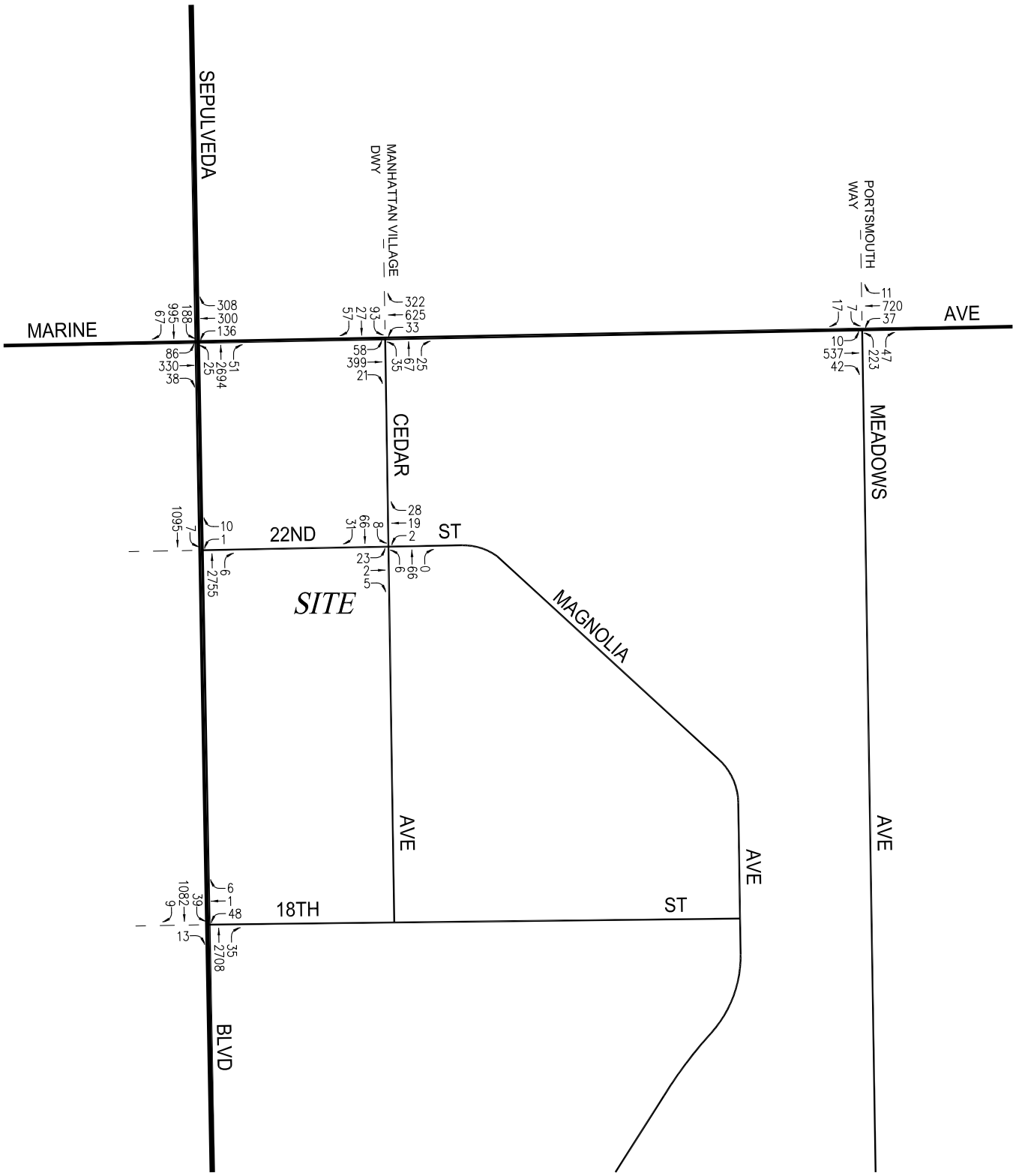

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FIGURE 9-3
FUTURE PRE-PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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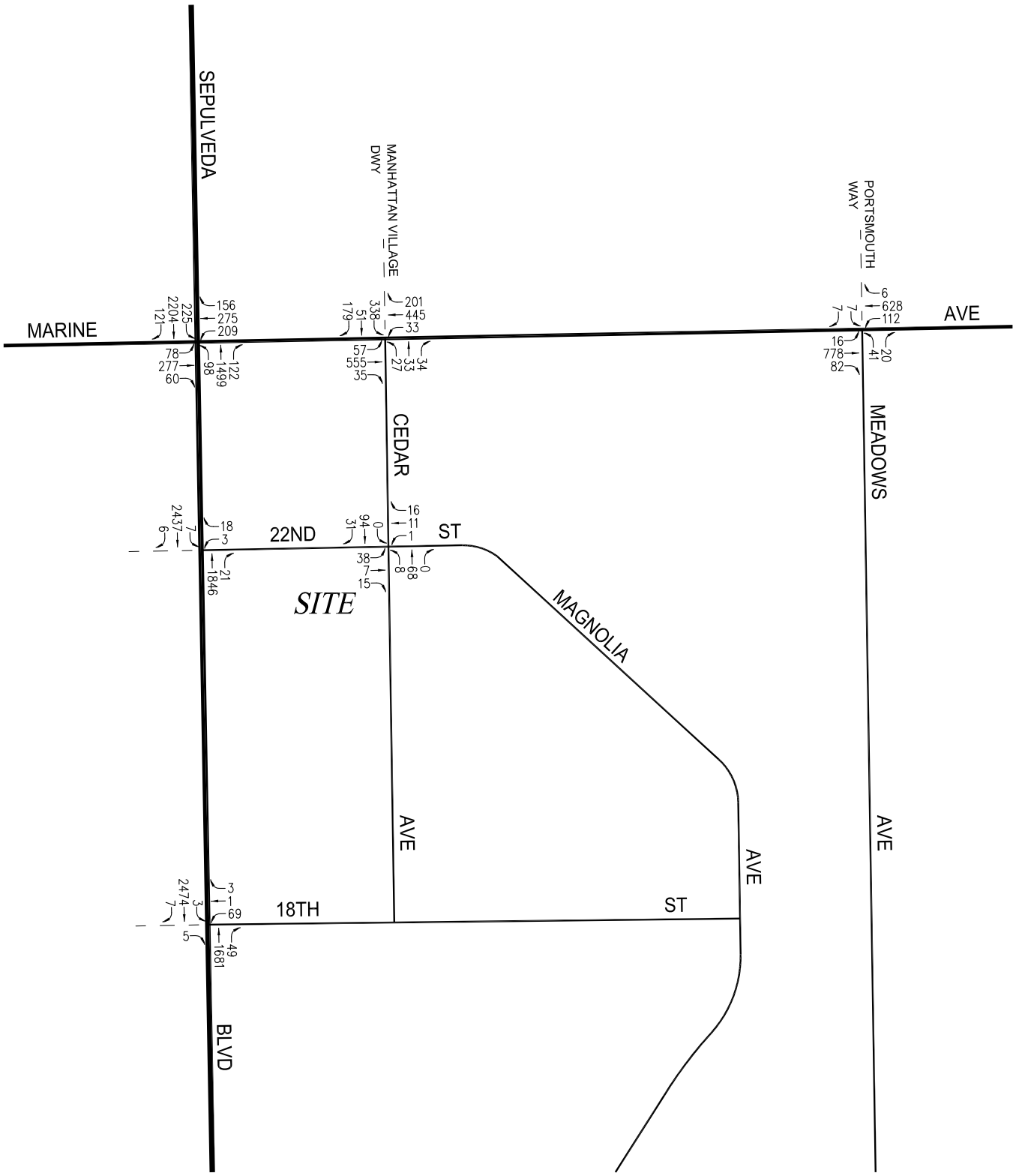

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FIGURE 9-4
FUTURE PRE-PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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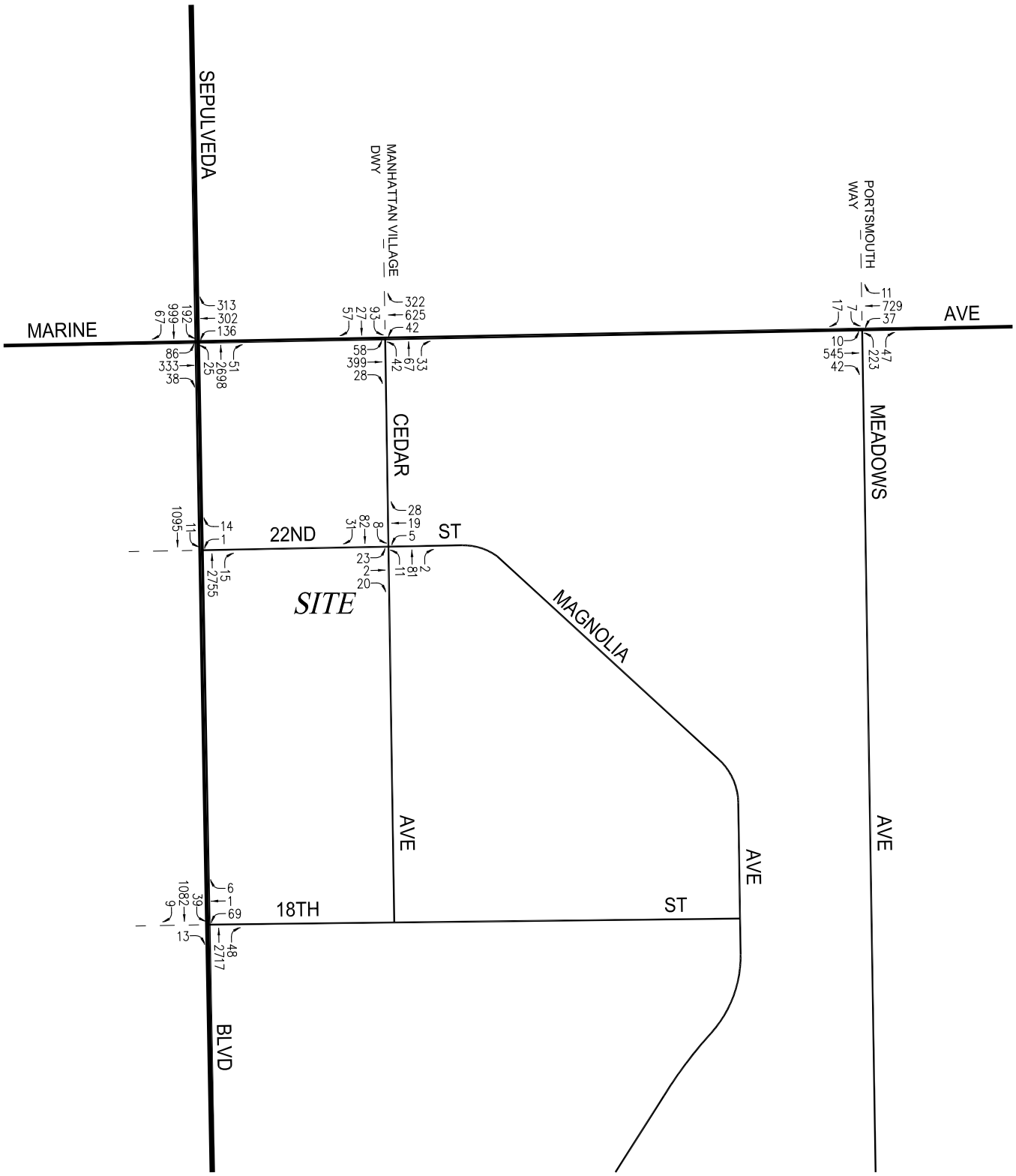

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FIGURE 9-5
FUTURE WITH PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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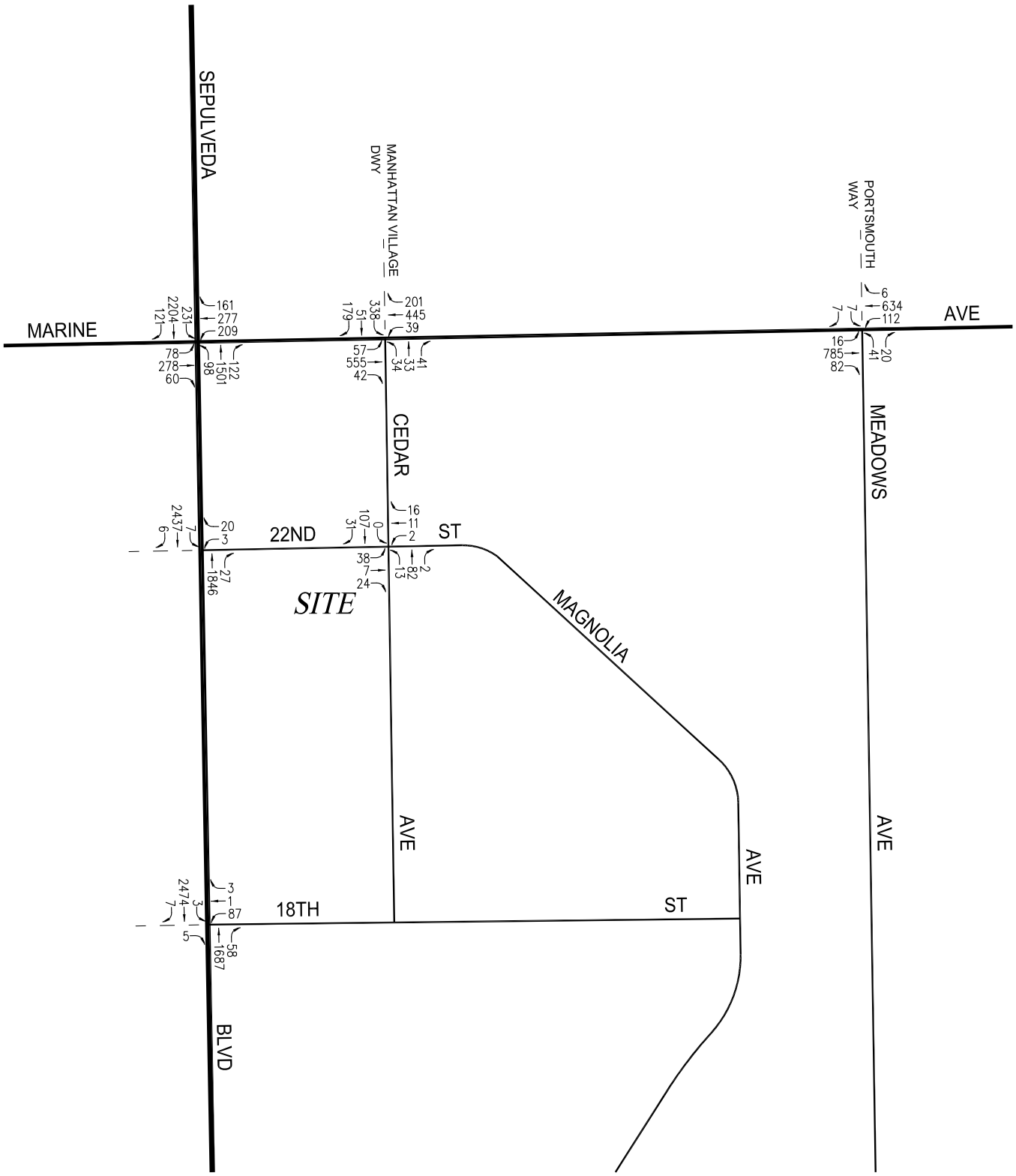

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FIGURE 9-6
FUTURE WITH PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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Table 9-2
EXISTING AND EXISTING WITH PROJECT ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

NO.	ROADWAY SEGMENT	PEAK HOUR	DIRECT-IONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	(1) EXISTING CONDITIONS			(2) EXISTING WITH PROJECT TRAFFIC CONDITIONS					
					PEAK HOUR VOL [c]	V/C	LOS	PROJ. VOL. [d]	PEAK HOUR VOL [e]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [f]
1	22nd Street	AM	60 / 40	1,325	69	0.052	A	17	86	0.065	A	24.6%	NO
	Between Sepulveda Boulevard and	PM	70 / 30	1,250	86	0.069	A	8	94	0.075	A	9.3%	NO
	Cedar Avenue												
2	Cedar Avenue	AM	70 / 30	1,250	189	0.151	A	34	223	0.178	A	18.0%	NO
	Between 22nd Street and	PM	60 / 40	1,325	242	0.183	A	27	269	0.203	A	11.2%	NO
	21st Avenue												

Note: PCPH = Passenger Cars Per Hour

[a] Directional split of the roadway based on existing traffic count data.

[b] Total capacity, in passenger cars per hour (PCPH), based on existing roadway directional split per County of Los Angeles Department of Public Works' Traffic Impact Analysis Report Guidelines, January 1, 1997.

[c] 24-hour machine counts conducted by City Traffic Counters in June 2014.

[d] Represents net new project trips based on the project trip generation and trip distribution for the proposed project.

[e] Derived by combining the existing traffic volumes and the proposed project volumes.

[f] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines", January 1, 1997, Page 6: an impact is considered significant if the project related increase in Passenger Cars Per Hour (PCPH) equals or exceeds the thresholds shown below. It should be noted that the typical LA County two-lane roadway capacities have been reduced by half (50%) for purposes of this roadway segment analysis. Refer to report text for further discussion.

		Percentages Increase in PCPH by Project Pre-project LOS		
Directional Split	Total Capacity (PCPH)	C	D	E/F
50/50	1,400	4	2	1
60/40	1,325	4	2	1
70/30	1,250	4	2	1
80/20	1,150	4	2	1
90/10	1,050	4	2	1
100/0	1,000	4	2	1

Table 9-3
YEAR 2015 CONDITIONS ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

NO.	ROADWAY SEGMENT	PEAK HOUR	DIRECT-IONAL SPLIT [a]	TOTAL CAPACITY (PCPH) [b]	(1) FUTURE (2015) PRE-PROJECT			(2) FUTURE (2015) WITH PROJECT					
					PEAK HOUR VOL [c]	V/C	LOS	PROJ. VOL. [d]	PEAK HOUR VOL [e]	V/C	LOS	PCPH PERCENT INCREASE	SIG. IMPACT YES/NO [f]
1	22nd Street	AM	60 / 40	1,325	70	0.053	A	17	87	0.065	A	24.4%	NO
	Between Sepulveda Boulevard and	PM	70 / 30	1,250	87	0.069	A	8	95	0.076	A	9.2%	NO
	Cedar Avenue												
2	Cedar Avenue	AM	70 / 30	1,250	191	0.153	A	34	225	0.180	A	17.8%	NO
	Between 22nd Street and	PM	60 / 40	1,325	244	0.184	A	27	271	0.205	A	11.0%	NO
	21st Avenue												

Note: PCPH = Passenger Cars Per Hour

[a] Directional split of the roadway based on existing traffic count data.

[b] Total capacity, in passenger cars per hour (PCPH), based on existing roadway directional split per County of Los Angeles Department of Public Works' Traffic Impact Analysis Report Guidelines, January 1, 1997.

[c] 24-hour machine counts conducted by City Traffic Counters in June 2014. An ambient growth rate of 1.0% per year was applied to derive the year 2015 traffic volumes.

[d] Represents net new project trips based on the project trip generation and trip distribution for the proposed project.

[e] Derived by combining the year 2015 traffic volumes and the proposed project volumes.

[f] According to the County of Los Angeles Department of Public Works' "Traffic Impact Analysis Report Guidelines", January 1, 1997, Page 6: an impact is considered significant if the project related increase in Passenger Cars Per Hour (PCPH) equals or exceeds the thresholds shown below. It should be noted that the typical LA County two-lane roadway capacities have been reduced by half (50%) for purposes of this roadway segment analysis. Refer to report text for further discussion.

		Percentages Increase in PCPH by Project Pre-project LOS		
Directional Split	Total Capacity (PCPH)	C	D	E/F
50/50	1,400	4	2	1
60/40	1,325	4	2	1
70/30	1,250	4	2	1
80/20	1,150	4	2	1
90/10	1,050	4	2	1
100/0	1,000	4	2	1

segments are expected to continue operating at LOS A during the weekday AM peak hour and PM peak hour in the future conditions with the addition of project traffic. Application of the County's two-lane roadway threshold criteria for street segment analysis indicates that the proposed project is not anticipated to significantly impact the analyzed street segments. Incremental, but less than significant impacts are noted at the study street segments under future with project conditions, as presented in *Table 9-3*. Thus, no mitigation measures are required or recommended.

10.0 TRANSPORTATION IMPROVEMENT MEASURES

The following sections provide an overview of transportation improvement measures that are anticipated to address impacts to the local roadway network associated with the proposed project. It is important to note that the traffic analysis has been based on a conservative approach with respect to the analysis of potential project-related impacts.

10.1 Study Intersections

As summarized in Subsections 9.1.2 (Existing With Project Conditions) and 9.1.4 (Future With Project Conditions) herein, application of the City's threshold criteria to the with proposed project scenarios indicates that the proposed project is not expected to create significant impacts at any of the six study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections.

10.2 Street Segment Improvement Measures

As summarized in Subsection 9.2 (Study Street Segment Analysis) herein, application of the City's threshold criteria to the with proposed project scenarios indicates that the proposed project is not expected to result in any significant traffic impacts at the two study street segments under existing with project or future with project conditions. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study street segment locations.

11.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program for Los Angeles County, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, July 2010.

11.1 Intersections

The following CMP intersection monitoring locations in the project vicinity have been identified:

CMP Station	Intersection
No. 110	Sepulveda Boulevard/Rosecrans Avenue
No. 22	Pacific Coast Highway/Artesia Boulevard-Gould Avenue

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak hours. The proposed project will not add 50 or more trips during either the AM or PM weekday peak hours (i.e., of adjacent street traffic) at the above CMP monitoring intersections in the project vicinity, which is stated in the CMP manual as the threshold criteria for a traffic impact assessment. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

11.2 Freeways

No CMP freeway monitoring locations are located in the project vicinity. Further, the CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project will not add 150 or more trips (in either direction), during either the AM or PM weekday peak hours to the CMP freeway monitoring location, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

11.3 Transit Impact Review

As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. Existing transit service is provided in the vicinity of the proposed Chalk Pre-School Manhattan Beach project.

The project trip generation, as shown in *Table 7-1*, 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 transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for five transit trips during both the weekday AM and PM peak hours. Over a 24-hour period, the proposed project is forecast to generate demand for 26 daily transit trips. The calculations are as follows:

- AM Peak Hour = 95 × 1.4 × 0.035 = 5 Transit Trips
- PM Peak Hour = 96 × 1.4 × 0.035 = 5 Transit Trip
- Daily Trips = 522 × 1.4 × 0.035 = 26 Transit Trips

As shown in *Table 4-1*, one bus transit line is provided adjacent to or in close proximity to the project site. As outlined in *Table 4-1* under the "No. of Buses During Peak Hour" column, the transit line provides service for an average (i.e., an average of the directional number of buses during the peak hours) of approximately eight buses during the AM peak hour and seven buses during the PM peak hour. Therefore, based on the above calculated peak hour transit trips, this would correspond to less than one transit rider per bus. Thus, given the low number of generated transit trips per bus, no impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

12.0 SUMMARY OF FINDINGS AND CONCLUSIONS

This traffic impact study has been prepared to identify and evaluate the potential impacts of traffic generated by the proposed Chalk Pre-School Manhattan Beach project. The proposed project consists of the renovation and re-use of existing buildings on-site for a private pre-school operation of up to 119 children. Completion and occupancy of the proposed project is planned to be by the year 2015.

In order to evaluate the potential impacts due to the proposed project, six intersections and two street segment locations were identified for evaluation in consultation with the City staff to determine changes in traffic operations following occupancy and operation of the project. The proposed project is expected to generate 87 net new vehicle trips (45 inbound trips and 42 outbound trips) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate 65 net new vehicle trips (30 inbound trips and 35 outbound trips). Over a 24-hour period, the proposed project is forecast to generate approximately 170 net new daily trip ends during a typical weekday (approximately 85 inbound trips and 85 outbound trips).

It is concluded that the proposed project is not expected to result in significant traffic impacts at any of the study intersections for existing with project and future with project conditions. Incremental, but less than significant impacts are noted at the study intersections. Therefore, no traffic mitigation measures are required or recommended for the study intersections.

The results of the Los Angeles CMP indicated that the proposed Chalk Pre-School Manhattan Beach project will not adversely affect any CMP arterial monitoring intersections or freeway monitoring locations, as well as nearby transit operations. Therefore, no improvements/mitigation measures are required of this project.

The proposed parking supply is expected to meet City of Manhattan Beach Code parking requirements. General pre-school traffic procedures are recommended in addition to a Traffic Management Plan, which should be maintained and included as part of the formal school policies. These school policies should be communicated to faculty, staff, students and parents/guardians at the beginning of the school year and be reinforced throughout the school year.

APPENDIX A

MANUAL INTERSECTION TRAFFIC COUNT DATA
24-HOUR AUTOMATIC STREET SEGMENT TRAFFIC COUNT DATA

CITY TRAFFIC COUNTERS

626.991.7522

www.ctcounters.com

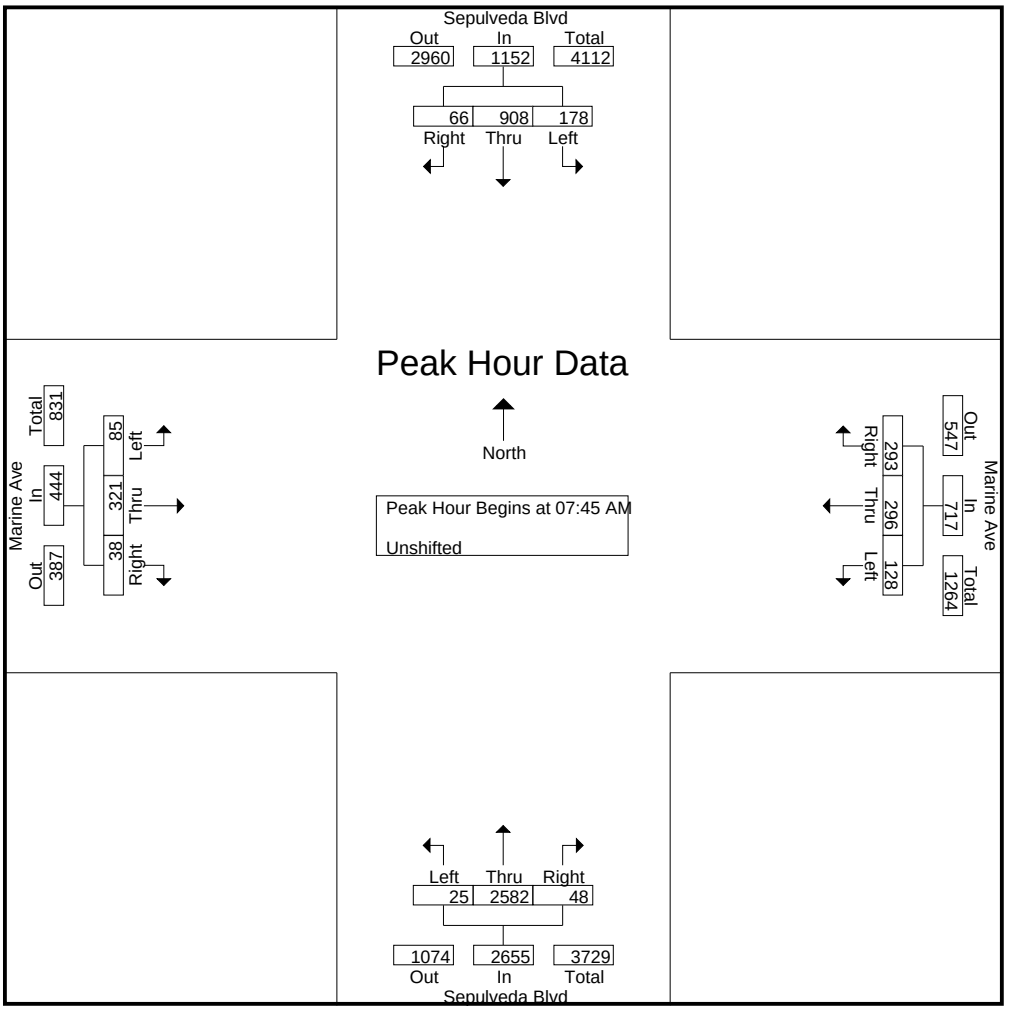
File Name : Sep_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Unshifted

	Sepulveda Blvd Southbound			Marine Ave Westbound			Sepulveda Blvd Northbound			Marine Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	17	164	5	14	34	65	4	402	9	28	34	5	781
07:15 AM	25	167	13	26	44	65	6	462	8	42	37	7	902
07:30 AM	40	229	4	28	49	48	2	510	12	19	51	8	1000
07:45 AM	42	286	2	38	66	66	5	679	5	13	98	4	1304
Total	124	846	24	106	193	244	17	2053	34	102	220	24	3987
08:00 AM	65	225	28	30	89	72	1	605	15	21	88	11	1250
08:15 AM	33	162	22	32	69	81	10	670	17	25	60	14	1195
08:30 AM	38	235	14	28	72	74	9	628	11	26	75	9	1219
08:45 AM	32	289	17	44	76	87	10	579	16	28	57	12	1247
Total	168	911	81	134	306	314	30	2482	59	100	280	46	4911
04:00 PM	33	452	25	37	52	42	20	340	28	22	36	15	1102
04:15 PM	50	570	34	43	58	31	19	341	31	14	70	15	1276
04:30 PM	49	566	33	52	76	43	22	329	28	22	82	12	1314
04:45 PM	56	522	34	50	61	31	24	370	28	19	46	14	1255
Total	188	2110	126	182	247	147	85	1380	115	77	234	56	4947
05:00 PM	47	432	25	55	71	38	24	310	26	22	75	23	1148
05:15 PM	56	557	29	48	60	29	27	363	27	13	69	10	1288
05:30 PM	57	460	26	65	74	44	20	298	23	28	68	11	1174
05:45 PM	34	545	27	44	86	43	20	349	31	14	65	12	1270
Total	194	1994	107	212	291	154	91	1320	107	77	277	56	4880
Grand Total	674	5861	338	634	1037	859	223	7235	315	356	1011	182	18725
Apprch %	9.8	85.3	4.9	25.1	41	34	2.9	93.1	4.1	23	65.3	11.7	
Total %	3.6	31.3	1.8	3.4	5.5	4.6	1.2	38.6	1.7	1.9	5.4	1	

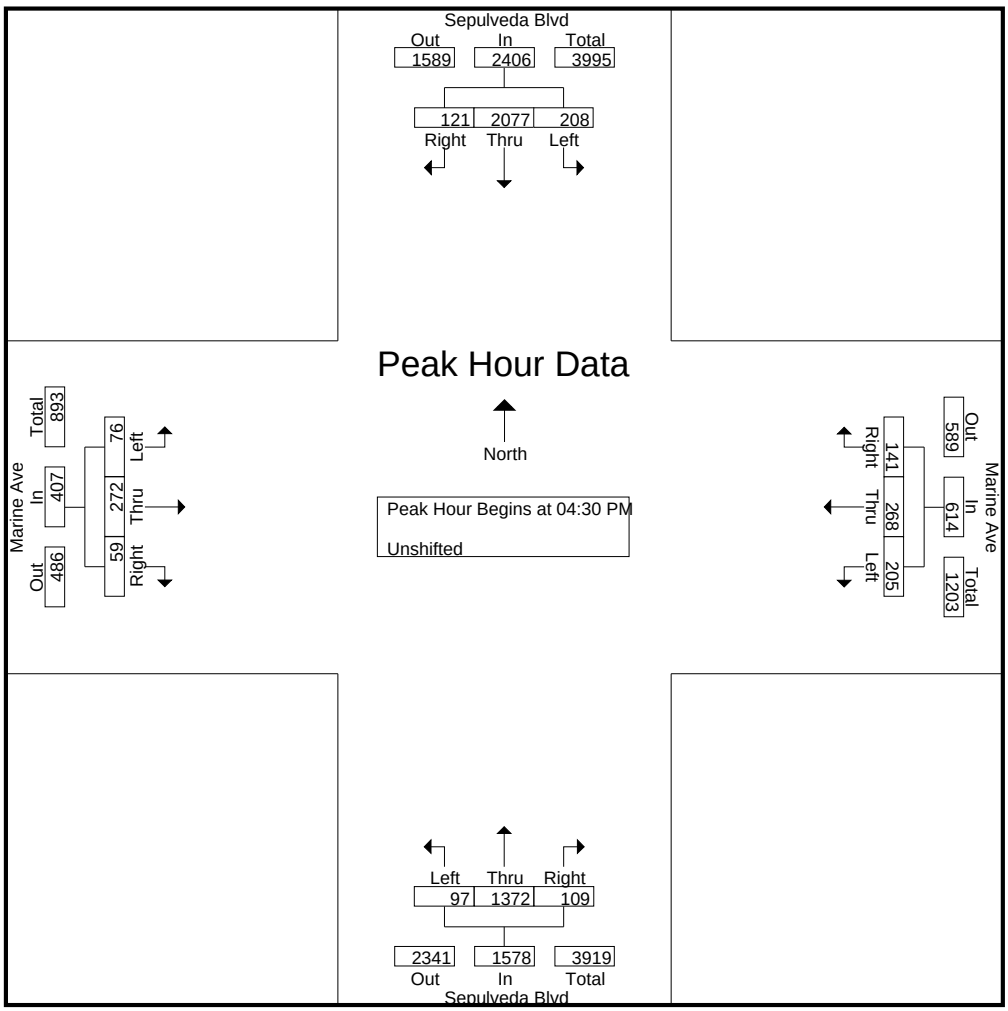
File Name : Sep_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Sepulveda Blvd Southbound				Marine Ave Westbound				Sepulveda Blvd Northbound				Marine Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	42	**286**	2	**330**	**38**	66	66	170	5	**679**	5	689	13	**98**	4	115	**1304**
08:00 AM	**65**	225	**28**	318	30	**89**	72	**191**	1	605	15	621	21	88	11	**120**	1250
08:15 AM	33	162	22	217	32	69	**81**	182	**10**	670	**17**	**697**	25	60	**14**	99	1195
08:30 AM	38	235	14	287	28	72	74	174	9	628	11	648	**26**	75	9	110	1219
Total Volume	178	908	66	1152	128	296	293	717	25	2582	48	2655	85	321	38	444	4968
% App. Total	15.5	78.8	5.7		17.9	41.3	40.9		0.9	97.3	1.8		19.1	72.3	8.6		
PHF	.685	.794	.589	.873	.842	.831	.904	.938	.625	.951	.706	.952	.817	.819	.679	.925	.952



File Name : Sep_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Sepulveda Blvd Southbound				Marine Ave Westbound				Sepulveda Blvd Northbound				Marine Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	49	**566**	33	**648**	52	**76**	**43**	**171**	22	329	**28**	379	**22**	**82**	12	116	**1314**
04:45 PM	**56**	522	**34**	612	50	61	31	142	24	**370**	28	**422**	19	46	14	79	1255
05:00 PM	47	432	25	504	**55**	71	38	164	24	310	26	360	22	75	**23**	**120**	1148
05:15 PM	56	557	29	642	48	60	29	137	**27**	363	27	417	13	69	10	92	1288
Total Volume	208	2077	121	2406	205	268	141	614	97	1372	109	1578	76	272	59	407	5005
% App. Total	8.6	86.3	5		33.4	43.6	23		6.1	86.9	6.9		18.7	66.8	14.5		
PHF	.929	.917	.890	.928	.932	.882	.820	.898	.898	.927	.973	.935	.864	.829	.641	.848	.952



CITY TRAFFIC COUNTERS

626.991.7522

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File Name : Sep_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Bank 1

	Sepulveda Blvd Southbound		Marine Ave Westbound		Sepulveda Blvd Northbound		Marine Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:15 AM	0	0	0	4	0	2	0	0	6
07:30 AM	1	1	0	0	0	0	0	1	3
07:45 AM	1	0	0	2	0	5	0	1	9
Total	2	1	0	6	0	7	0	2	18
08:00 AM	1	1	1	0	0	0	0	1	4
08:15 AM	0	0	0	1	0	3	1	0	5
08:30 AM	0	2	0	2	0	2	0	1	7
08:45 AM	0	5	0	0	0	0	0	3	8
Total	1	8	1	3	0	5	1	5	24
04:00 PM	0	0	1	0	0	2	0	1	4
04:15 PM	0	0	0	0	1	0	0	1	2
04:30 PM	1	0	0	0	0	0	0	1	2
04:45 PM	0	4	0	1	1	1	1	1	9
Total	1	4	1	1	2	3	1	4	17
05:00 PM	0	2	0	0	3	2	0	2	9
05:15 PM	0	1	0	1	0	7	0	1	10
05:30 PM	2	1	0	0	1	3	0	0	7
05:45 PM	2	1	0	1	0	0	0	0	4
Total	4	5	0	2	4	12	0	3	30
Grand Total	8	18	2	12	6	27	2	14	89
Apprch %	30.8	69.2	14.3	85.7	18.2	81.8	12.5	87.5	
Total %	9	20.2	2.2	13.5	6.7	30.3	2.2	15.7	

File Name : Sep_Marine_BP
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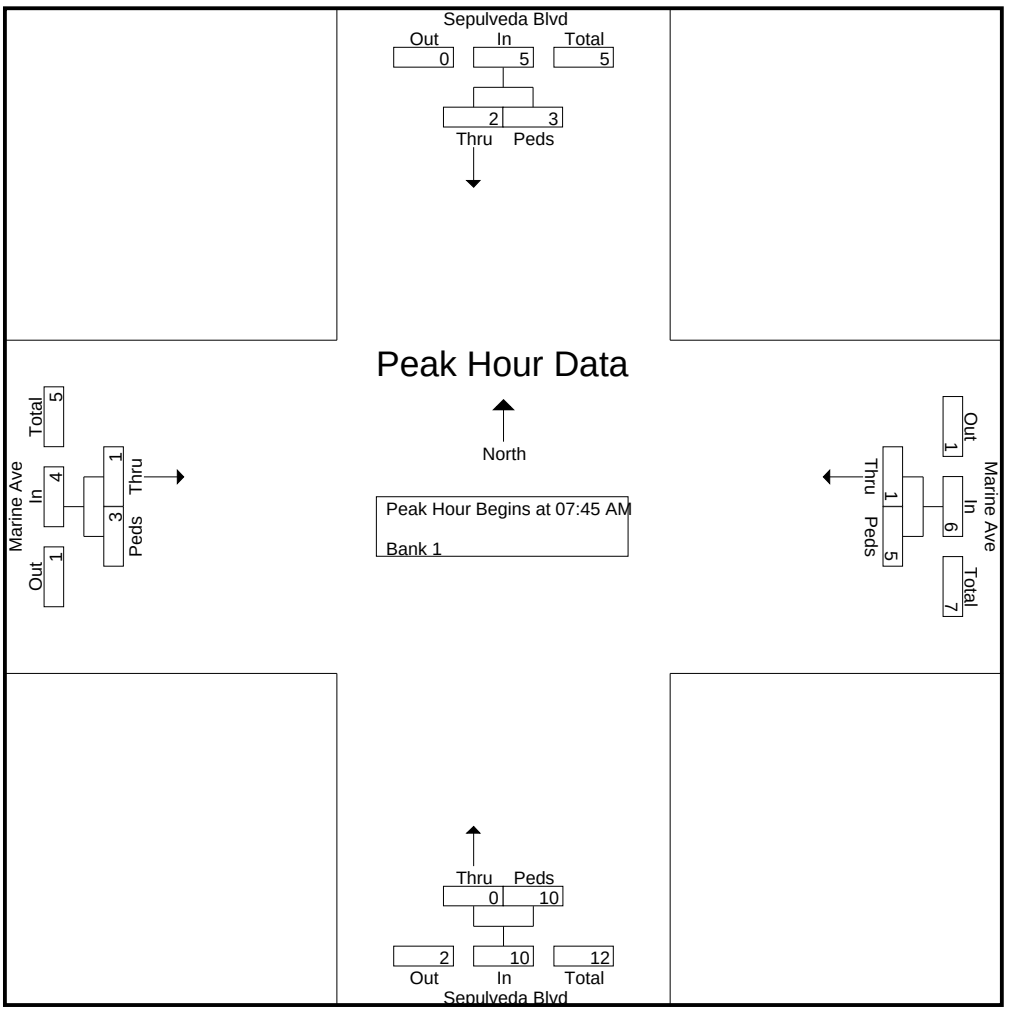
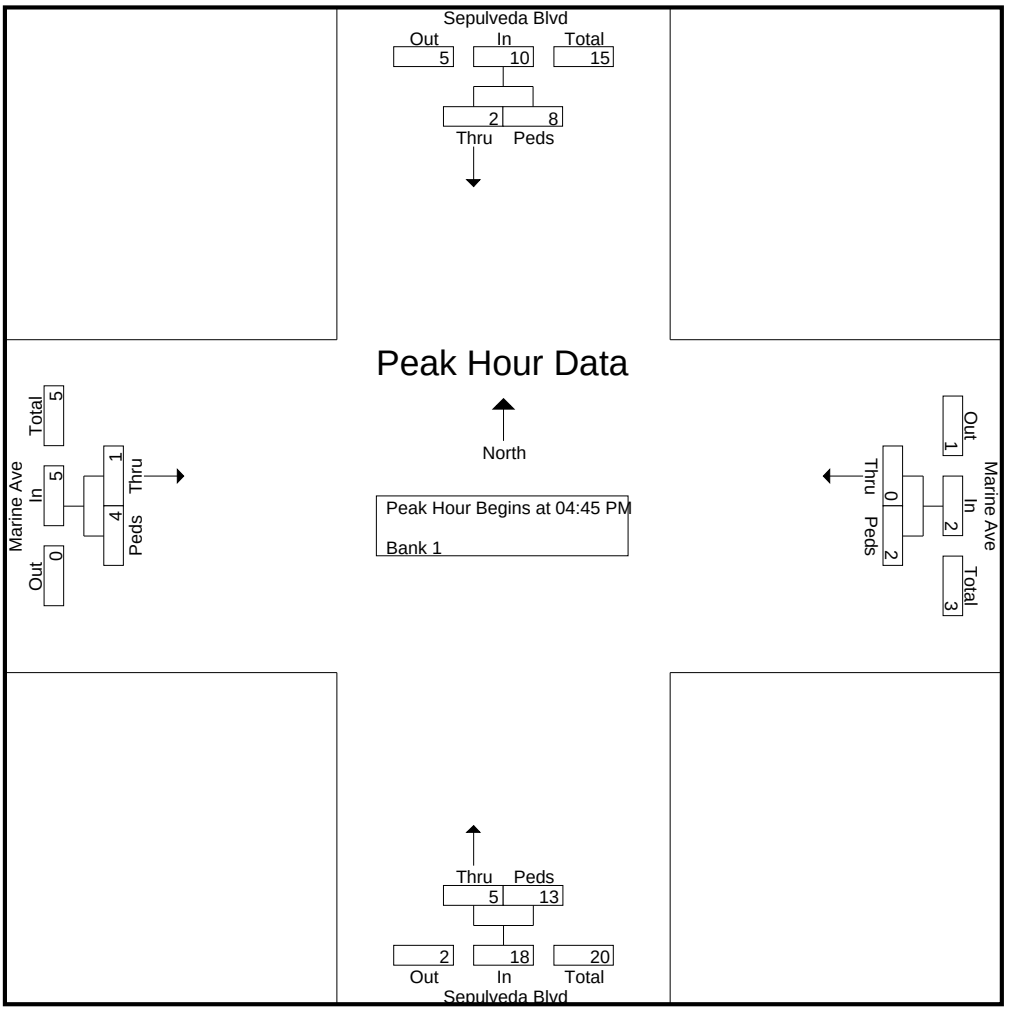
	Sepulveda Blvd Southbound			Marine Ave Westbound			Sepulveda Blvd Northbound			Marine Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**1**	0	1	0	**2**	**2**	0	**5**	**5**	0	**1**	**1**	**9**
08:00 AM	1	1	**2**	**1**	0	1	0	0	0	0	1	1	4
08:15 AM	0	0	0	0	1	1	0	3	3	**1**	0	1	5
08:30 AM	0	**2**	2	0	2	2	0	2	2	0	1	1	7
Total Volume	2	3	5	1	5	6	0	10	10	1	3	4	25
% App. Total	40	60		16.7	83.3		0	100		25	75		
PHF	.500	.375	.625	.250	.625	.750	.000	.500	.500	.250	.750	1.00	.694



File Name : Sep_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Sepulveda Blvd Southbound			Marine Ave Westbound			Sepulveda Blvd Northbound			Marine Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	0	**4**	**4**	0	**1**	**1**	1	1	2	**1**	1	**2**	9
05:00 PM	0	2	2	0	0	0	**3**	2	5	0	**2**	2	9
05:15 PM	0	1	1	0	1	1	0	**7**	**7**	0	1	1	**10**
05:30 PM	**2**	1	3	0	0	0	1	3	4	0	0	0	7
Total Volume	2	8	10	0	2	2	5	13	18	1	4	5	35
% App. Total	20	80		0	100		27.8	72.2		20	80		
PHF	.250	.500	.625	.000	.500	.500	.417	.464	.643	.250	.500	.625	.875



CITY TRAFFIC COUNTERS

626.991.7522

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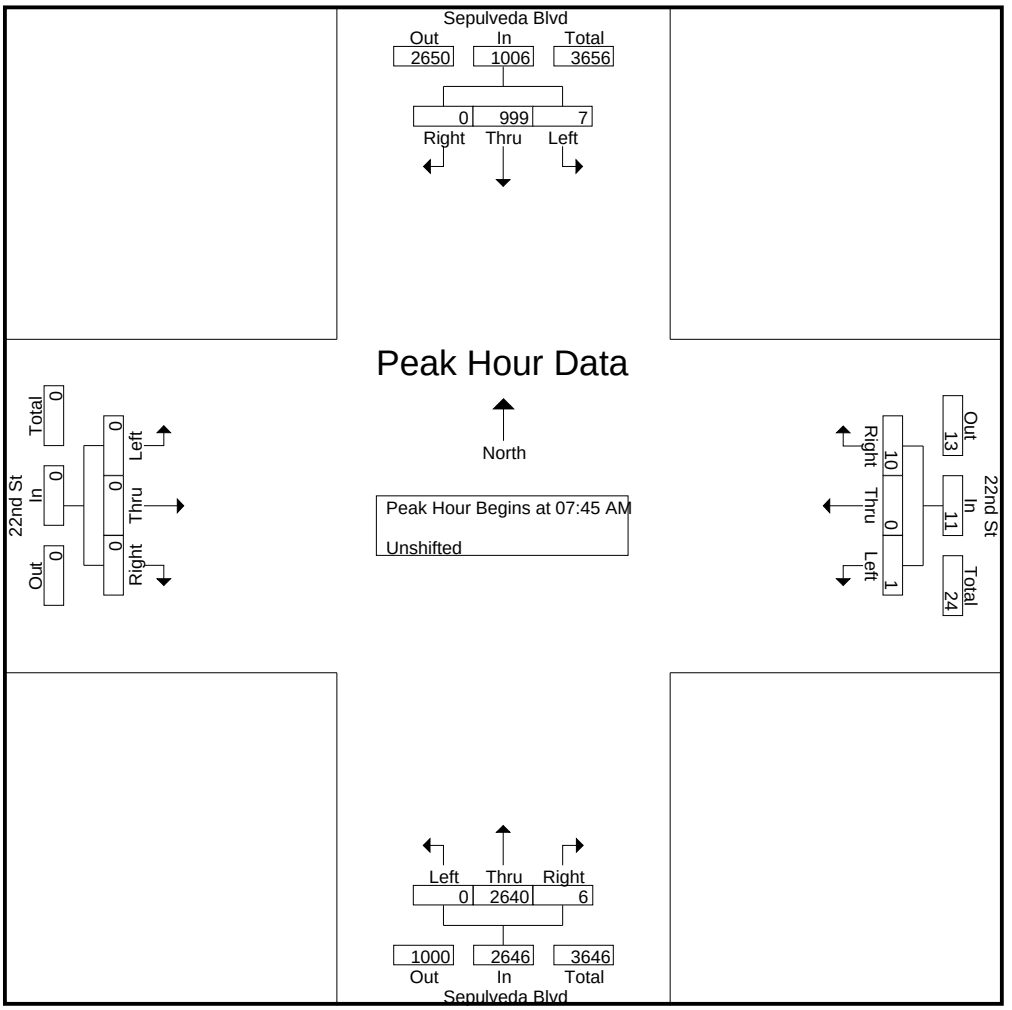
File Name : Sep_22nd
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Unshifted

	Sepulveda Blvd Southbound			22nd St Westbound			Sepulveda Blvd Northbound			22nd St Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	173	1	0	0	1	0	392	0	0	0	0	568
07:15 AM	0	180	0	0	0	5	0	470	1	0	0	0	656
07:30 AM	0	230	1	0	0	0	0	526	1	0	0	0	758
07:45 AM	2	275	0	0	0	3	0	667	3	0	0	0	950
Total	3	858	2	0	0	9	0	2055	5	0	0	0	2932
08:00 AM	2	233	0	0	0	0	0	612	1	0	0	0	848
08:15 AM	0	188	0	0	0	2	0	691	1	0	0	0	882
08:30 AM	3	303	0	1	0	5	0	670	1	0	0	0	983
08:45 AM	6	299	0	0	0	3	0	588	3	0	0	0	899
Total	11	1023	0	1	0	10	0	2561	6	0	0	0	3612
04:00 PM	2	511	1	3	0	5	0	443	6	0	0	0	971
04:15 PM	1	619	0	0	0	7	0	388	4	0	0	0	1019
04:30 PM	1	589	5	0	0	2	0	411	3	0	0	0	1011
04:45 PM	3	588	0	0	0	4	0	463	8	0	0	0	1066
Total	7	2307	6	3	0	18	0	1705	21	0	0	0	4067
05:00 PM	1	540	0	0	0	0	0	405	6	0	0	0	952
05:15 PM	0	599	0	2	0	2	0	422	9	0	0	0	1034
05:30 PM	0	521	0	0	1	1	0	332	3	0	0	0	858
05:45 PM	1	601	0	2	1	3	0	415	5	0	0	0	1028
Total	2	2261	0	4	2	6	0	1574	23	0	0	0	3872
Grand Total	23	6449	8	8	2	43	0	7895	55	0	0	0	14483
Apprch %	0.4	99.5	0.1	15.1	3.8	81.1	0	99.3	0.7	0	0	0	
Total %	0.2	44.5	0.1	0.1	0	0.3	0	54.5	0.4	0	0	0	

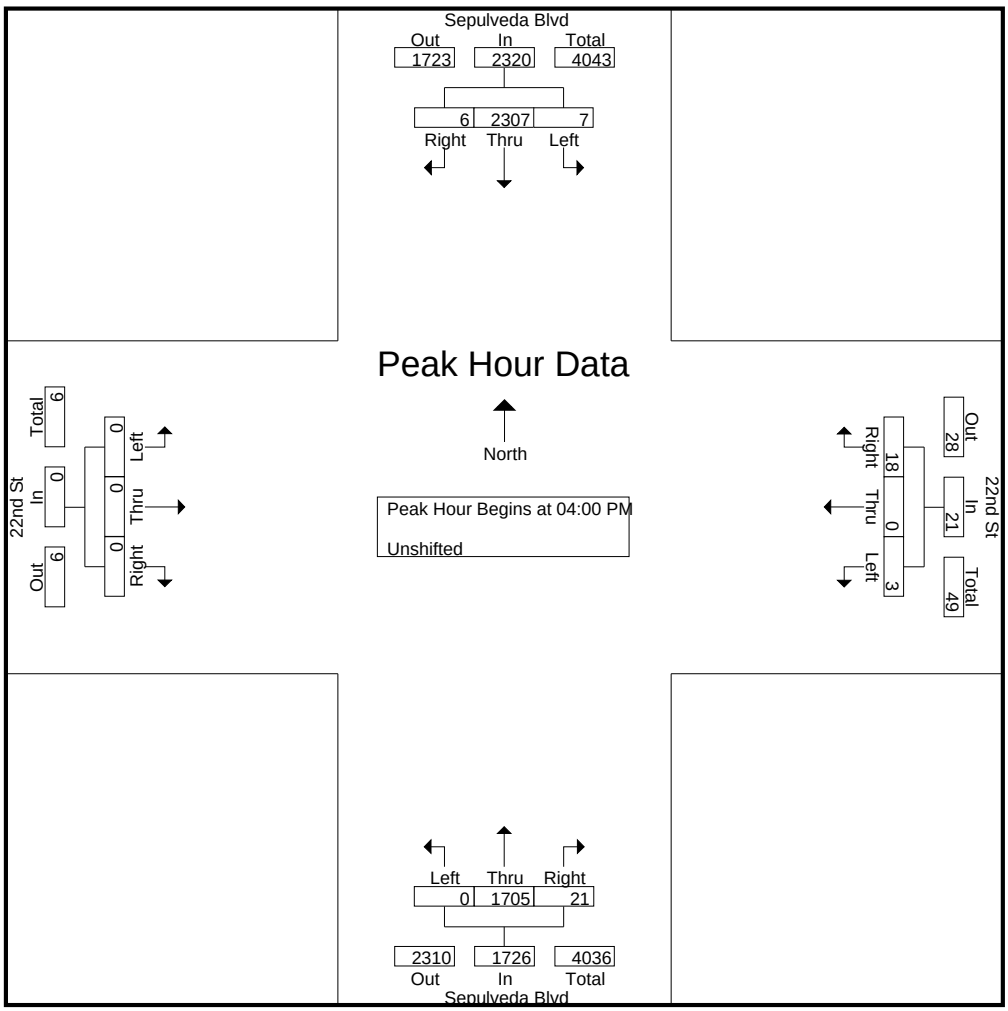
File Name : Sep_22nd
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Sepulveda Blvd Southbound				22nd St Westbound				Sepulveda Blvd Northbound				22nd St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	275	0	277	0	0	3	3	0	667	**3**	670	0	0	0	0	950
08:00 AM	2	233	0	235	0	0	0	0	0	612	1	613	0	0	0	0	848
08:15 AM	0	188	0	188	0	0	2	2	0	**691**	1	**692**	0	0	0	0	882
08:30 AM	**3**	**303**	0	**306**	**1**	0	**5**	**6**	0	670	1	671	0	0	0	0	**983**
Total Volume	7	999	0	1006	1	0	10	11	0	2640	6	2646	0	0	0	0	3663
% App. Total	0.7	99.3	0		9.1	0	90.9		0	99.8	0.2		0	0	0		
PHF	.583	.824	.000	.822	.250	.000	.500	.458	.000	.955	.500	.956	.000	.000	.000	.000	.932



File Name : Sep_22nd
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Sepulveda Blvd Southbound				22nd St Westbound				Sepulveda Blvd Northbound				22nd St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	2	511	1	514	**3**	0	5	**8**	0	443	6	449	0	0	0	0	971
04:15 PM	1	**619**	0	**620**	0	0	**7**	7	0	388	4	392	0	0	0	0	1019
04:30 PM	1	589	**5**	595	0	0	2	2	0	411	3	414	0	0	0	0	1011
04:45 PM	**3**	588	0	591	0	0	4	4	0	**463**	**8**	**471**	0	0	0	0	**1066**
Total Volume	7	2307	6	2320	3	0	18	21	0	1705	21	1726	0	0	0	0	4067
% App. Total	0.3	99.4	0.3		14.3	0	85.7		0	98.8	1.2		0	0	0		
PHF	.583	.932	.300	.935	.250	.000	.643	.656	.000	.921	.656	.916	.000	.000	.000	.000	.954



CITY TRAFFIC COUNTERS

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File Name : sep_22nd_bp
Site Code : 00000000
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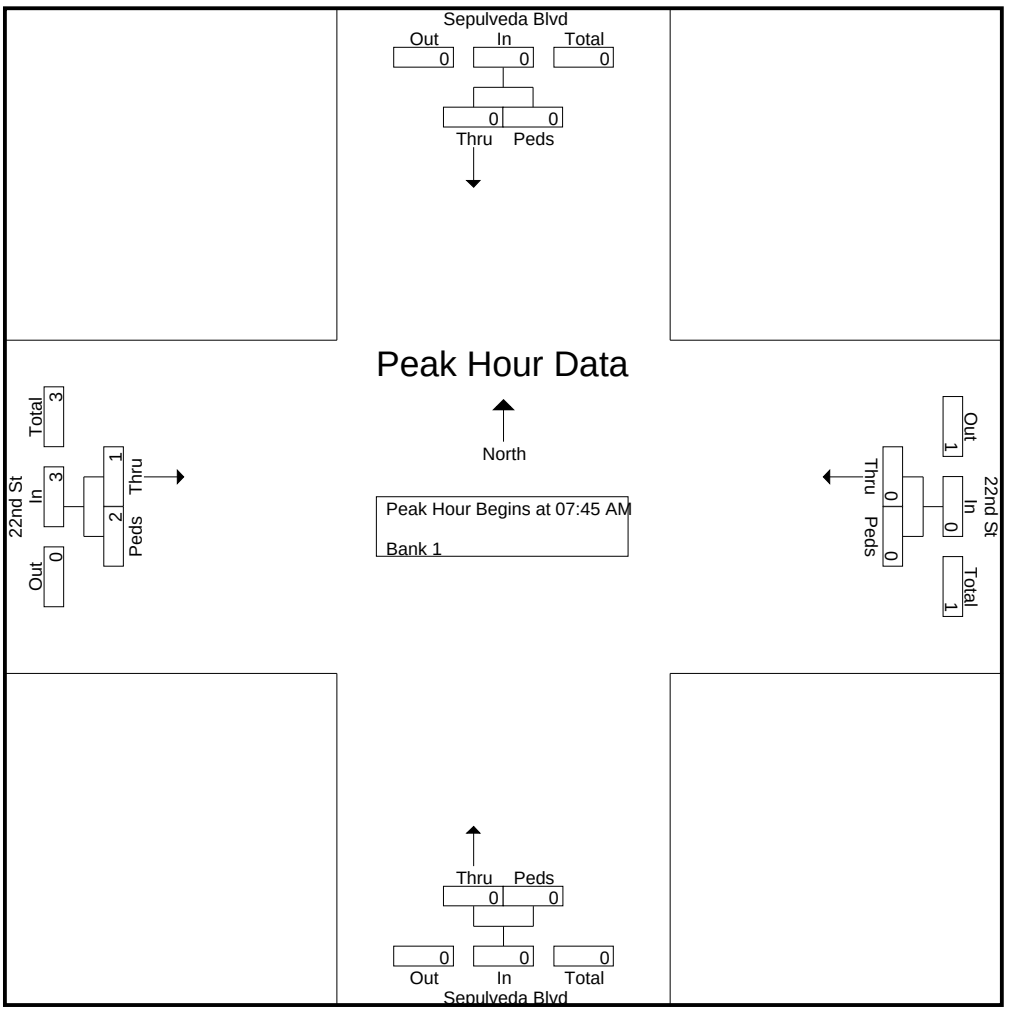
Groups Printed- Bank 1

	Sepulveda Blvd Southbound		22nd St Westbound		Sepulveda Blvd Northbound		22nd St Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	2	2
08:00 AM	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	1	0	1
08:30 AM	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	1	2	3
04:00 PM	0	0	0	0	0	0	0	1	1
04:15 PM	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	5	1	6
Total	0	1	0	0	0	0	5	2	8
05:00 PM	0	0	0	0	0	0	0	2	2
05:15 PM	0	0	0	0	0	0	0	1	1
05:45 PM	0	1	0	0	0	0	0	2	3
Total	0	1	0	0	0	0	0	5	6
Grand Total	0	2	0	0	0	0	6	11	19
Apprch %	0	100	0	0	0	0	35.3	64.7	
Total %	0	10.5	0	0	0	0	31.6	57.9	

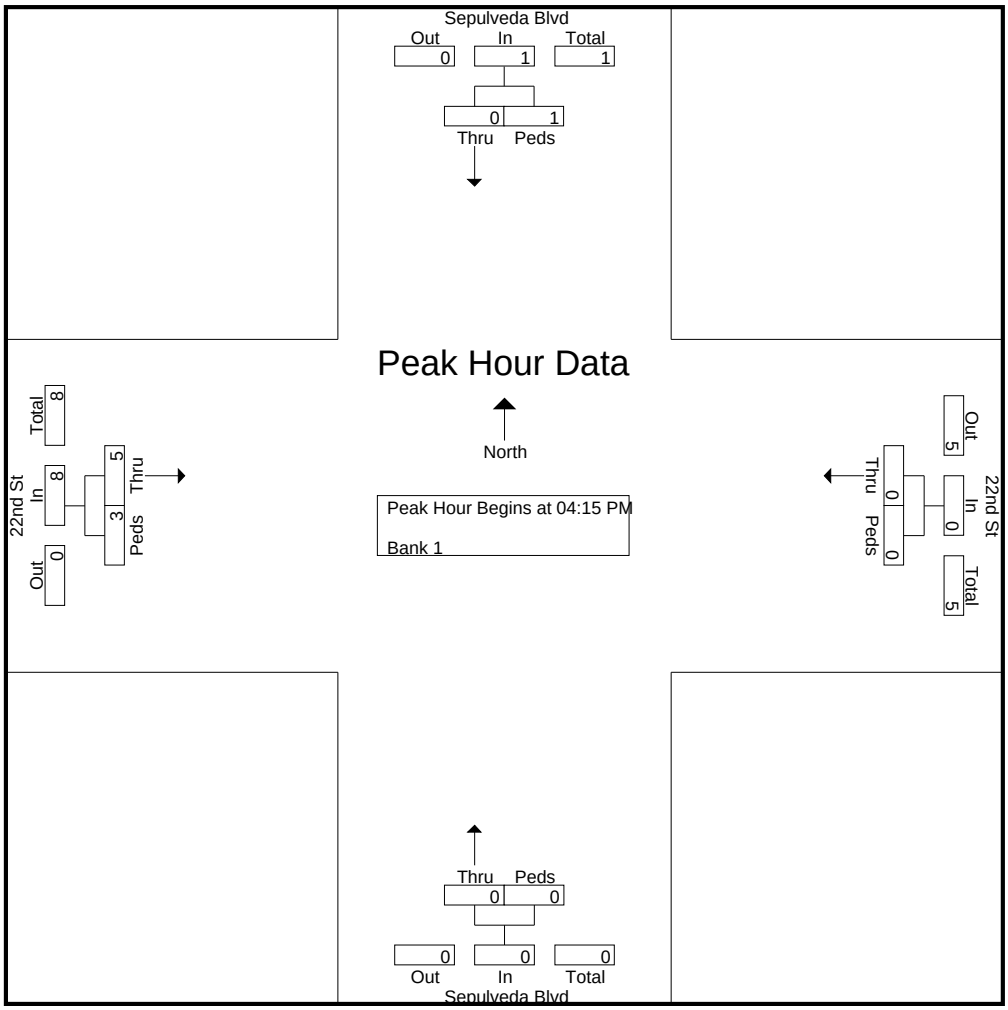
File Name : sep_22nd_bp
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Sepulveda Blvd Southbound			22nd St Westbound			Sepulveda Blvd Northbound			22nd St Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**1**
08:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	1	2	3	3
% App. Total	0	0		0	0		0	0		33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.500	.750	.750



File Name : sep_22nd_bp
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Sepulveda Blvd Southbound			22nd St Westbound			Sepulveda Blvd Northbound			22nd St Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	**1**	**1**	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	**5**	1	**6**	**6**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	**2**	2	2
Total Volume	0	1	1	0	0	0	0	0	0	5	3	8	9
% App. Total	0	100		0	0		0	0		62.5	37.5		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250	.375	.333	.375



CITY TRAFFIC COUNTERS

626.991.7522

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File Name : Sep_18th
Site Code : 00000000
Start Date : 6/10/2014
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Groups Printed- Unshifted

	Sepulveda Blvd Southbound			18th St Westbound			Sepulveda Blvd Northbound			18th St Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	2	191	2	3	0	2	0	384	3	0	0	7	594
07:15 AM	2	214	2	6	0	2	1	460	2	0	0	4	693
07:30 AM	4	248	2	3	0	0	0	533	6	0	0	1	797
07:45 AM	17	269	2	3	0	2	0	660	3	0	0	2	958
Total	25	922	8	15	0	6	1	2037	14	0	0	14	3042
08:00 AM	11	234	2	26	1	1	1	617	15	0	0	3	911
08:15 AM	7	200	3	3	0	3	0	683	11	0	0	4	914
08:30 AM	4	283	2	16	0	0	0	633	6	0	0	4	948
08:45 AM	4	277	0	15	1	1	1	581	5	0	0	2	887
Total	26	994	7	60	2	5	2	2514	37	0	0	13	3660
04:00 PM	1	524	0	18	0	1	0	412	13	0	0	4	973
04:15 PM	0	613	1	11	1	0	0	376	12	0	0	2	1016
04:30 PM	1	615	3	16	0	0	0	366	6	0	0	1	1008
04:45 PM	1	553	1	18	0	2	0	423	16	0	0	1	1015
Total	3	2305	5	63	1	3	0	1577	47	0	0	8	4012
05:00 PM	1	563	2	23	0	1	0	377	15	0	0	1	983
05:15 PM	0	562	5	16	0	2	0	401	18	0	0	5	1009
05:30 PM	2	546	5	16	0	0	0	394	8	0	0	8	979
05:45 PM	0	579	4	28	0	4	0	392	10	0	0	6	1023
Total	3	2250	16	83	0	7	0	1564	51	0	0	20	3994
Grand Total	57	6471	36	221	3	21	3	7692	149	0	0	55	14708
Apprch %	0.9	98.6	0.5	90.2	1.2	8.6	0	98.1	1.9	0	0	100	
Total %	0.4	44	0.2	1.5	0	0.1	0	52.3	1	0	0	0.4	

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Site Code : 00000000
Start Date : 6/10/2014
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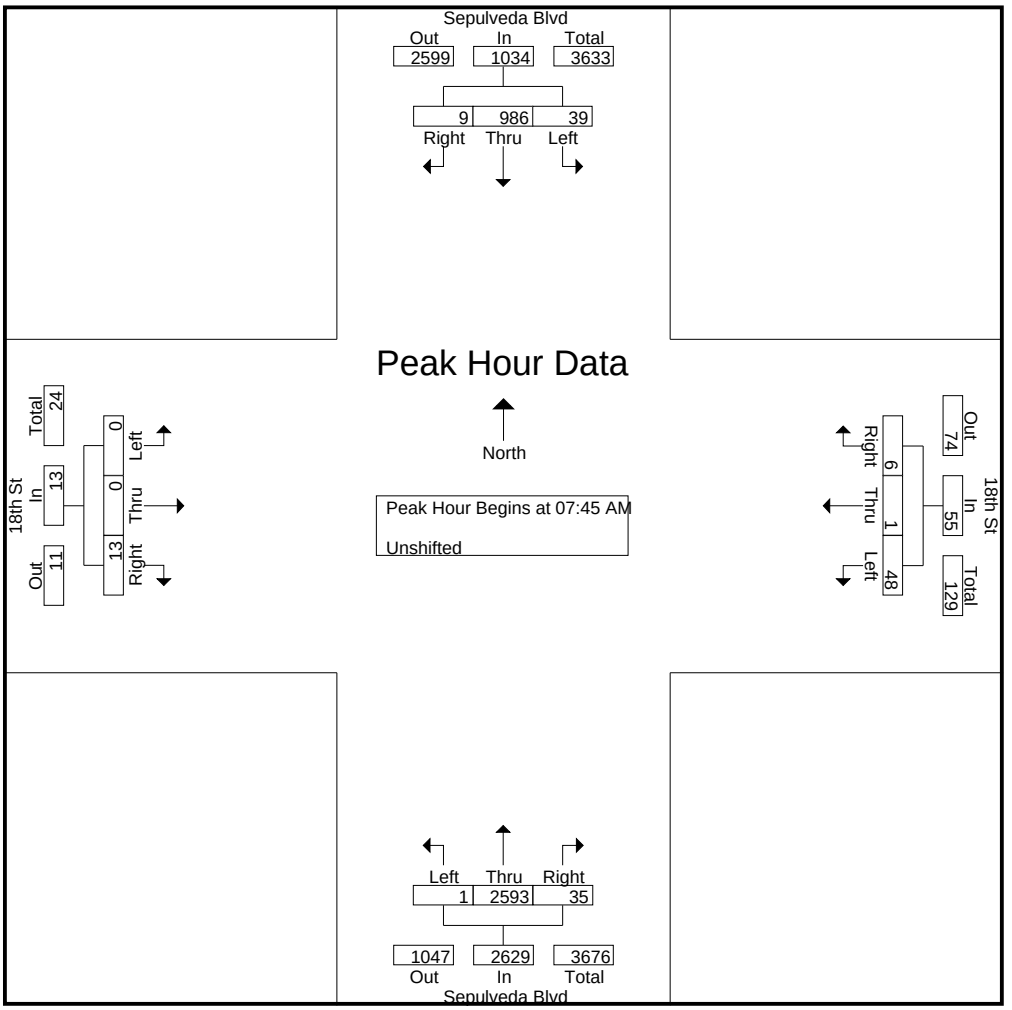
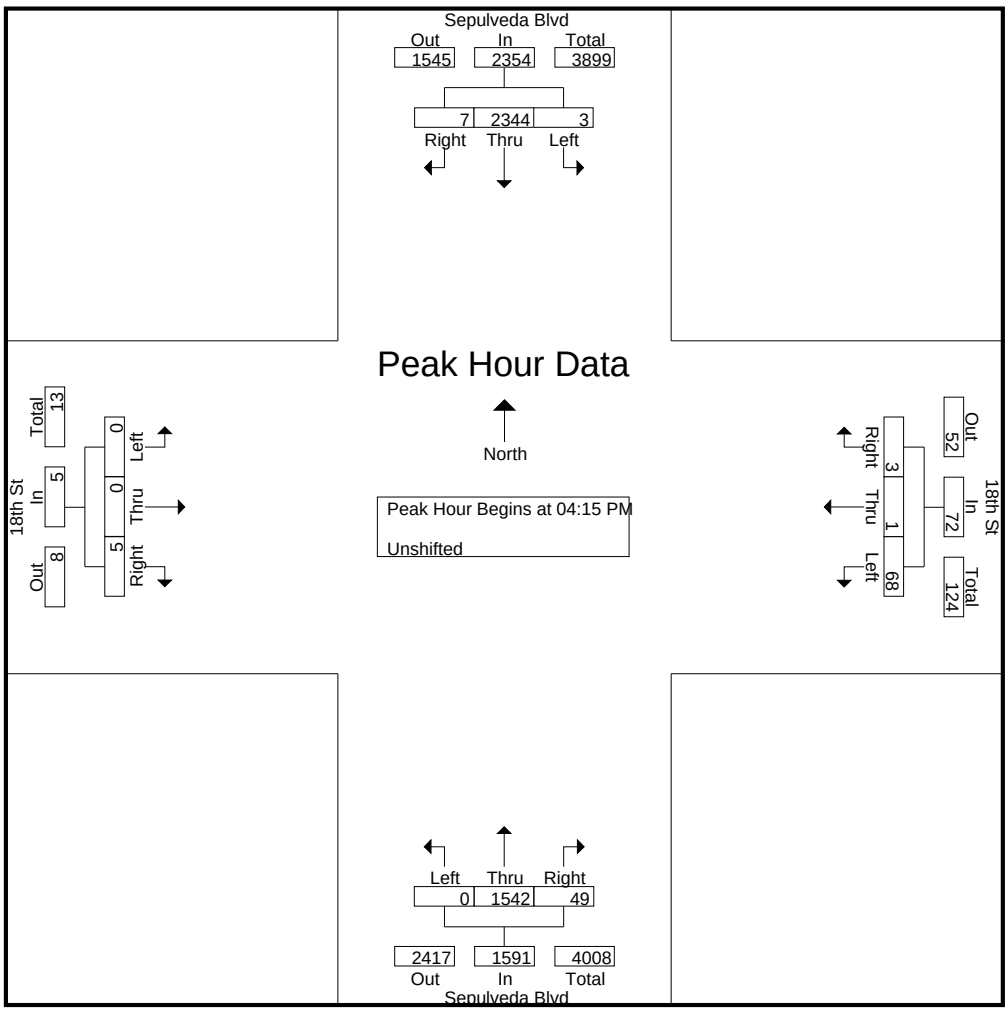
	Sepulveda Blvd Southbound				18th St Westbound				Sepulveda Blvd Northbound				18th St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**17**	269	2	288	3	0	2	5	0	660	3	663	0	0	2	2	**958**
08:00 AM	11	234	2	247	**26**	**1**	1	**28**	**1**	617	**15**	633	0	0	3	3	911
08:15 AM	7	200	**3**	210	3	0	**3**	6	0	**683**	11	**694**	0	0	**4**	**4**	914
08:30 AM	4	**283**	2	**289**	16	0	0	16	0	633	6	639	0	0	4	4	948
Total Volume	39	986	9	1034	48	1	6	55	1	2593	35	2629	0	0	13	13	3731
% App. Total	3.8	95.4	0.9		87.3	1.8	10.9		0	98.6	1.3		0	0	100		
PHF	.574	.871	.750	.894	.462	.250	.500	.491	.250	.949	.583	.947	.000	.000	.813	.813	.974



File Name : Sep_18th
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Sepulveda Blvd Southbound				18th St Westbound				Sepulveda Blvd Northbound				18th St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	613	1	614	11	**1**	0	12	0	376	12	388	0	0	**2**	**2**	**1016**
04:30 PM	**1**	**615**	**3**	**619**	16	0	0	16	0	366	6	372	0	0	1	1	1008
04:45 PM	1	553	1	555	18	0	**2**	20	0	**423**	**16**	**439**	0	0	1	1	1015
05:00 PM	1	563	2	566	**23**	0	1	**24**	0	377	15	392	0	0	1	1	983
Total Volume	3	2344	7	2354	68	1	3	72	0	1542	49	1591	0	0	5	5	4022
% App. Total	0.1	99.6	0.3		94.4	1.4	4.2		0	96.9	3.1		0	0	100		
PHF	.750	.953	.583	.951	.739	.250	.375	.750	.000	.911	.766	.906	.000	.000	.625	.625	.990



CITY TRAFFIC COUNTERS

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File Name : Sep_18th_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Bank 1

	Sepulveda Blvd Southbound		18th St Westbound		Sepulveda Blvd Northbound		18th St Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	4	0	2	0	1	0	1	8
07:15 AM	0	0	0	3	0	5	0	4	12
07:30 AM	0	2	0	9	0	0	0	4	15
07:45 AM	0	4	1	2	0	0	0	2	9
Total	0	10	1	16	0	6	0	11	44
08:00 AM	0	2	0	0	0	4	0	1	7
08:15 AM	0	0	0	4	0	5	0	3	12
08:30 AM	0	2	0	5	0	3	0	1	11
08:45 AM	0	0	0	2	0	2	0	2	6
Total	0	4	0	11	0	14	0	7	36
04:00 PM	0	4	0	0	0	2	0	2	8
04:15 PM	0	1	0	0	0	1	0	1	3
04:30 PM	0	0	0	0	0	1	0	2	3
04:45 PM	0	2	0	0	0	1	0	2	5
Total	0	7	0	0	0	5	0	7	19
05:00 PM	0	3	0	1	0	1	0	2	7
05:15 PM	0	0	0	1	0	5	0	3	9
05:30 PM	0	1	0	0	0	2	0	0	3
05:45 PM	0	0	0	0	0	2	0	0	2
Total	0	4	0	2	0	10	0	5	21
Grand Total	0	25	1	29	0	35	0	30	120
Apprch %	0	100	3.3	96.7	0	100	0	100	
Total %	0	20.8	0.8	24.2	0	29.2	0	25	

File Name : Sep_18th_BP
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Start Date : 6/10/2014
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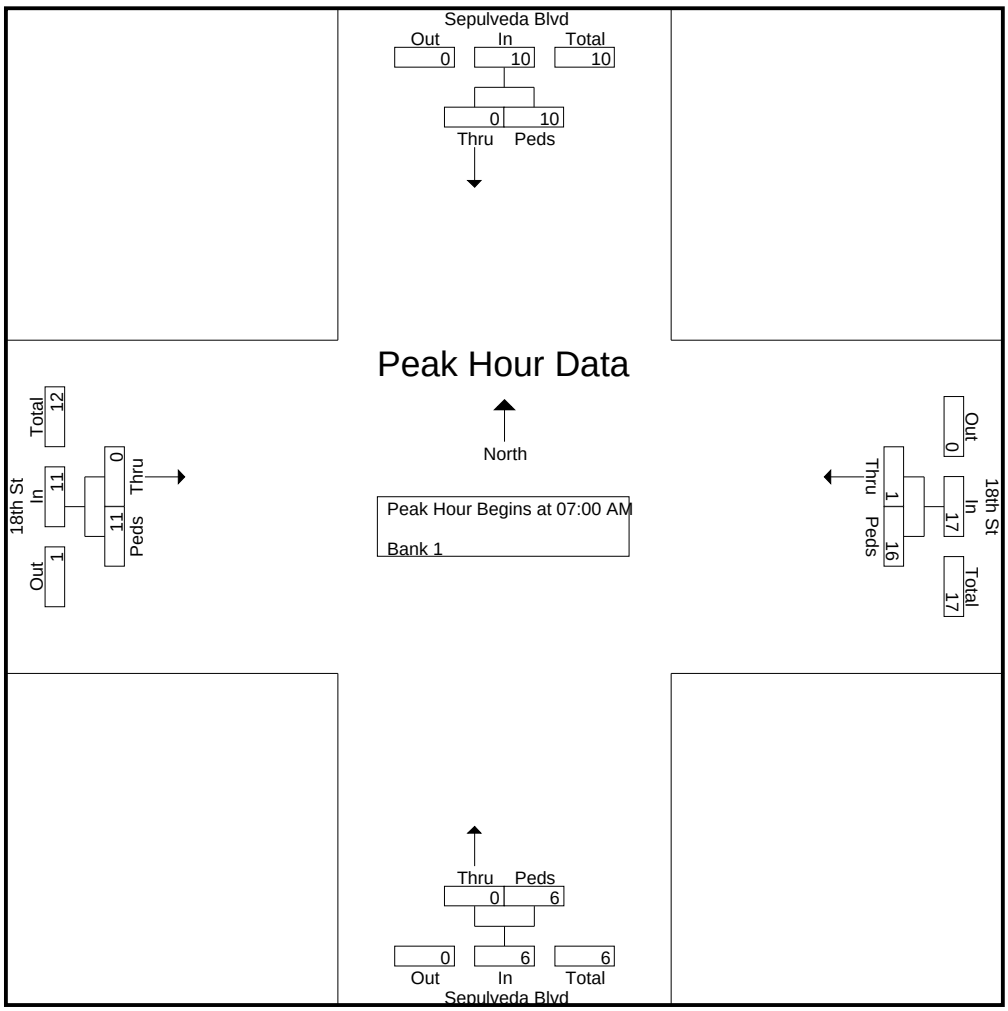
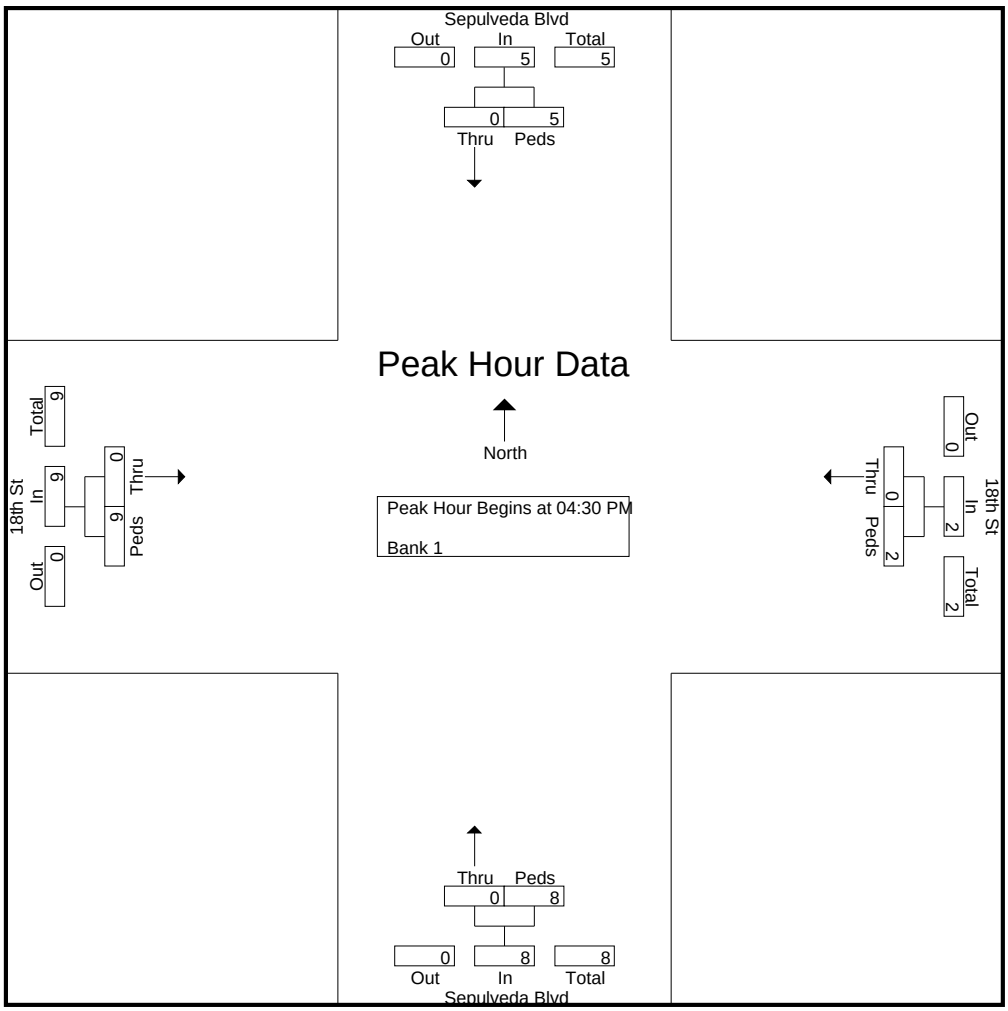
	Sepulveda Blvd Southbound			18th St Westbound			Sepulveda Blvd Northbound			18th St Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	0	**4**	**4**	0	2	2	0	1	1	0	1	1	8
07:15 AM	0	0	0	0	3	3	0	**5**	**5**	0	**4**	**4**	12
07:30 AM	0	2	2	0	**9**	**9**	0	0	0	0	4	4	**15**
07:45 AM	0	4	4	**1**	2	3	0	0	0	0	2	2	9
Total Volume	0	10	10	1	16	17	0	6	6	0	11	11	44
% App. Total	0	100		5.9	94.1		0	100		0	100		
PHF	.000	.625	.625	.250	.444	.472	.000	.300	.300	.000	.688	.688	.733



File Name : Sep_18th_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Sepulveda Blvd Southbound			18th St Westbound			Sepulveda Blvd Northbound			18th St Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	0	0	0	0	0	0	1	1	0	2	2	3
04:45 PM	0	2	2	0	0	0	0	1	1	0	2	2	5
05:00 PM	0	**3**	**3**	0	**1**	**1**	0	1	1	0	2	2	7
05:15 PM	0	0	0	0	1	1	0	**5**	**5**	0	**3**	**3**	**9**
Total Volume	0	5	5	0	2	2	0	8	8	0	9	9	24
% App. Total	0	100		0	100		0	100		0	100		
PHF	.000	.417	.417	.000	.500	.500	.000	.400	.400	.000	.750	.750	.667



CITY TRAFFIC COUNTERS

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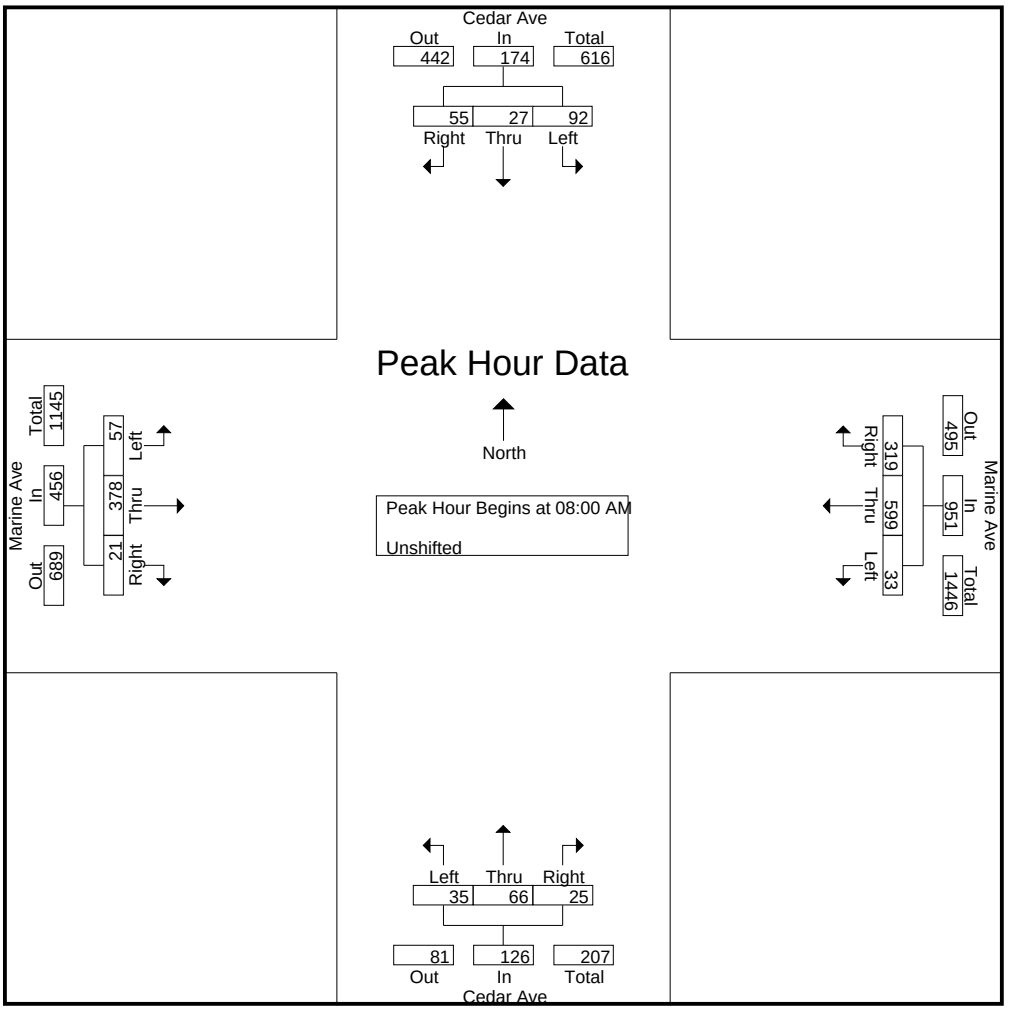
File Name : Cedar_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Unshifted

	Cedar Ave Southbound			Marine Ave Westbound			Cedar Ave Northbound			Marine Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	11	4	7	8	99	41	4	11	1	2	56	1	245
07:15 AM	10	5	9	6	113	51	2	4	4	6	65	6	281
07:30 AM	13	5	13	8	117	51	4	7	7	11	75	4	315
07:45 AM	15	5	5	6	152	59	3	11	9	6	155	3	429
Total	49	19	34	28	481	202	13	33	21	25	351	14	1270
08:00 AM	19	8	13	5	174	72	9	17	13	11	122	6	469
08:15 AM	22	5	9	11	137	74	6	19	6	18	90	4	401
08:30 AM	25	8	14	11	139	85	11	10	1	10	81	7	402
08:45 AM	26	6	19	6	149	88	9	20	5	18	85	4	435
Total	92	27	55	33	599	319	35	66	25	57	378	21	1707
04:00 PM	71	9	31	6	79	62	8	8	5	14	74	3	370
04:15 PM	72	13	51	10	87	60	2	7	8	15	132	14	471
04:30 PM	69	11	39	6	99	58	9	11	12	14	120	8	456
04:45 PM	77	21	41	4	109	80	2	9	10	15	107	11	486
Total	289	54	162	26	374	260	21	35	35	58	433	36	1783
05:00 PM	83	9	41	7	85	51	9	6	6	13	139	7	456
05:15 PM	84	15	54	3	84	53	7	11	9	17	131	10	478
05:30 PM	75	20	40	9	124	53	5	9	11	14	126	4	490
05:45 PM	98	7	50	14	120	41	6	6	8	7	130	14	501
Total	340	51	185	33	413	198	27	32	34	51	526	35	1925
Grand Total	770	151	436	120	1867	979	96	166	115	191	1688	106	6685
Apprch %	56.7	11.1	32.1	4	62.9	33	25.5	44	30.5	9.6	85	5.3	
Total %	11.5	2.3	6.5	1.8	27.9	14.6	1.4	2.5	1.7	2.9	25.3	1.6	

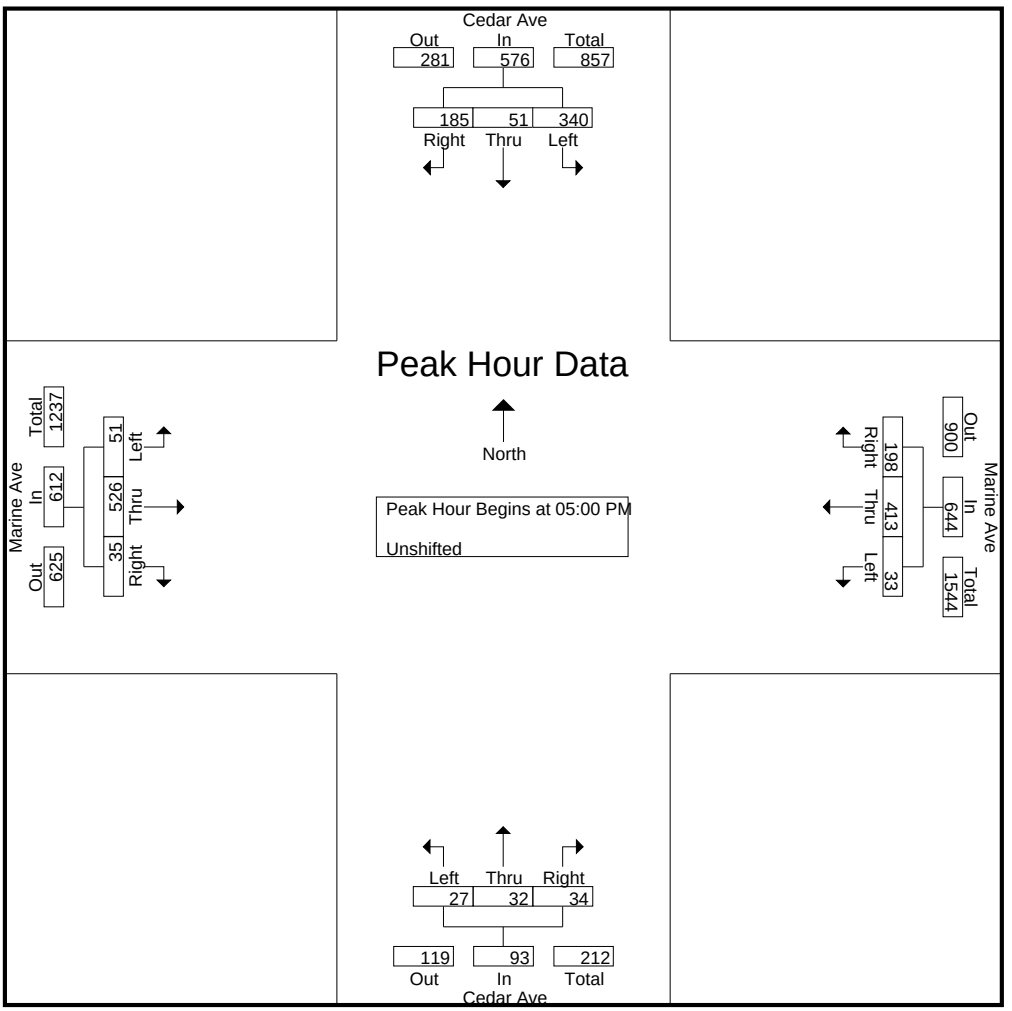
File Name : Cedar_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Cedar Ave Southbound				Marine Ave Westbound				Cedar Ave Northbound				Marine Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	19	**8**	13	40	5	**174**	72	**251**	9	17	**13**	**39**	11	**122**	6	**139**	**469**
08:15 AM	22	5	9	36	**11**	137	74	222	6	19	6	31	**18**	90	4	112	401
08:30 AM	25	8	14	47	11	139	85	235	**11**	10	1	22	10	81	**7**	98	402
08:45 AM	**26**	6	**19**	**51**	6	149	**88**	243	9	**20**	5	34	18	85	4	107	435
Total Volume	92	27	55	174	33	599	319	951	35	66	25	126	57	378	21	456	1707
% App. Total	52.9	15.5	31.6		3.5	63	33.5		27.8	52.4	19.8		12.5	82.9	4.6		
PHF	.885	.844	.724	.853	.750	.861	.906	.947	.795	.825	.481	.808	.792	.775	.750	.820	.910



File Name : Cedar_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Cedar Ave Southbound				Marine Ave Westbound				Cedar Ave Northbound				Marine Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	83	9	41	133	7	85	51	143	**9**	6	6	21	13	**139**	7	**159**	456
05:15 PM	84	15	**54**	153	3	84	**53**	140	7	**11**	9	**27**	**17**	131	10	158	478
05:30 PM	75	**20**	40	135	9	**124**	53	**186**	5	9	**11**	25	14	126	4	144	490
05:45 PM	**98**	7	50	**155**	**14**	120	41	175	6	6	8	20	7	130	**14**	151	**501**
Total Volume	340	51	185	576	33	413	198	644	27	32	34	93	51	526	35	612	1925
% App. Total	59	8.9	32.1		5.1	64.1	30.7		29	34.4	36.6		8.3	85.9	5.7		
PHF	.867	.638	.856	.929	.589	.833	.934	.866	.750	.727	.773	.861	.750	.946	.625	.962	.961



CITY TRAFFIC COUNTERS

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File Name : Cedar_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Bank 1

	Cedar Ave Southbound		Marine Ave Westbound		Cedar Ave Northbound		Marine Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	0	1	1	0	0	0	2	4
07:30 AM	0	0	0	0	0	0	0	2	2
07:45 AM	1	1	0	0	0	1	0	2	5
Total	1	1	1	1	0	1	0	6	11
08:00 AM	1	0	0	0	0	0	0	2	3
08:15 AM	0	1	0	1	0	1	0	1	4
08:30 AM	0	0	0	1	0	0	0	2	3
08:45 AM	0	0	0	0	0	0	0	3	3
Total	1	1	0	2	0	1	0	8	13
04:00 PM	0	0	0	1	0	0	0	1	2
04:15 PM	2	1	1	1	1	0	0	1	7
04:30 PM	1	1	0	0	0	0	0	0	2
04:45 PM	0	0	0	2	0	2	0	2	6
Total	3	2	1	4	1	2	0	4	17
05:00 PM	1	0	1	0	1	3	0	0	6
05:15 PM	0	1	0	1	0	0	0	3	5
05:30 PM	1	0	1	0	0	0	0	2	4
05:45 PM	0	0	0	1	0	0	0	1	2
Total	2	1	2	2	1	3	0	6	17
Grand Total	7	5	4	9	2	7	0	24	58
Apprch %	58.3	41.7	30.8	69.2	22.2	77.8	0	100	
Total %	12.1	8.6	6.9	15.5	3.4	12.1	0	41.4	

File Name : Cedar_Marine_BP
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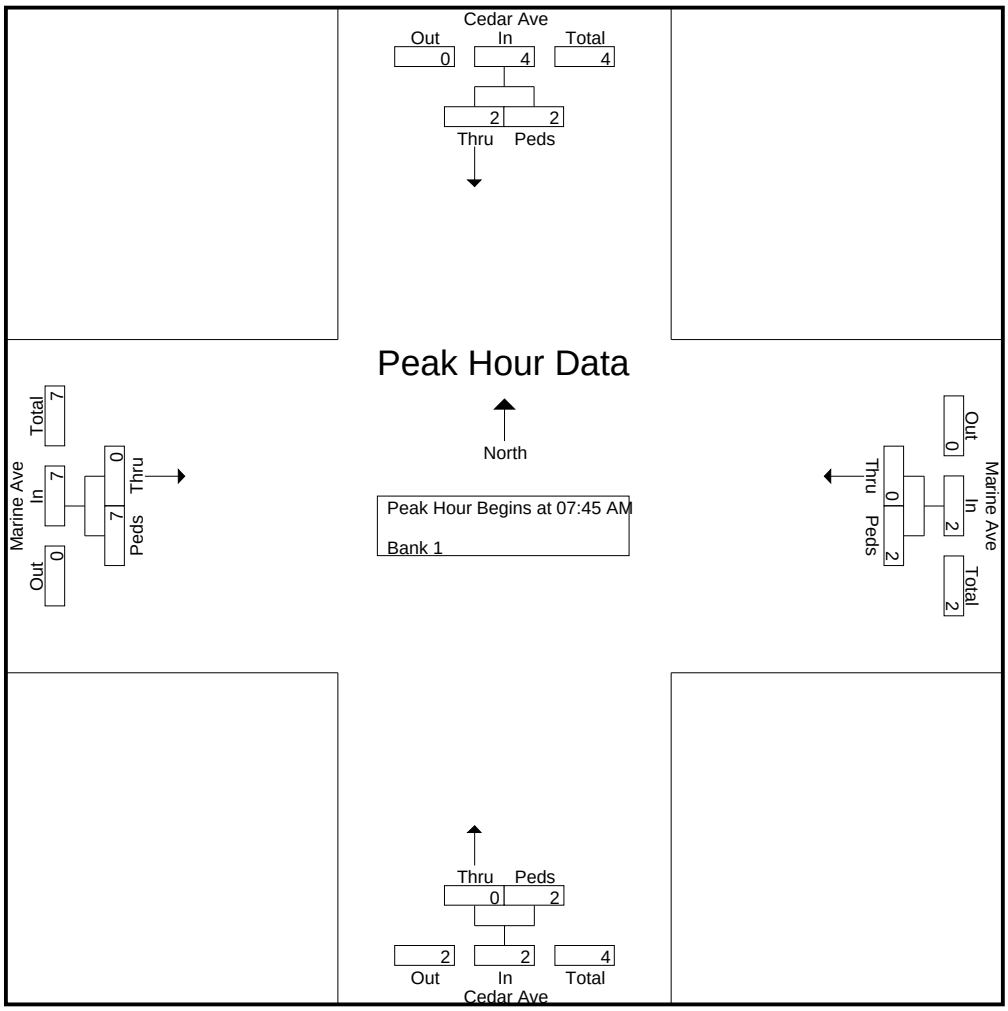
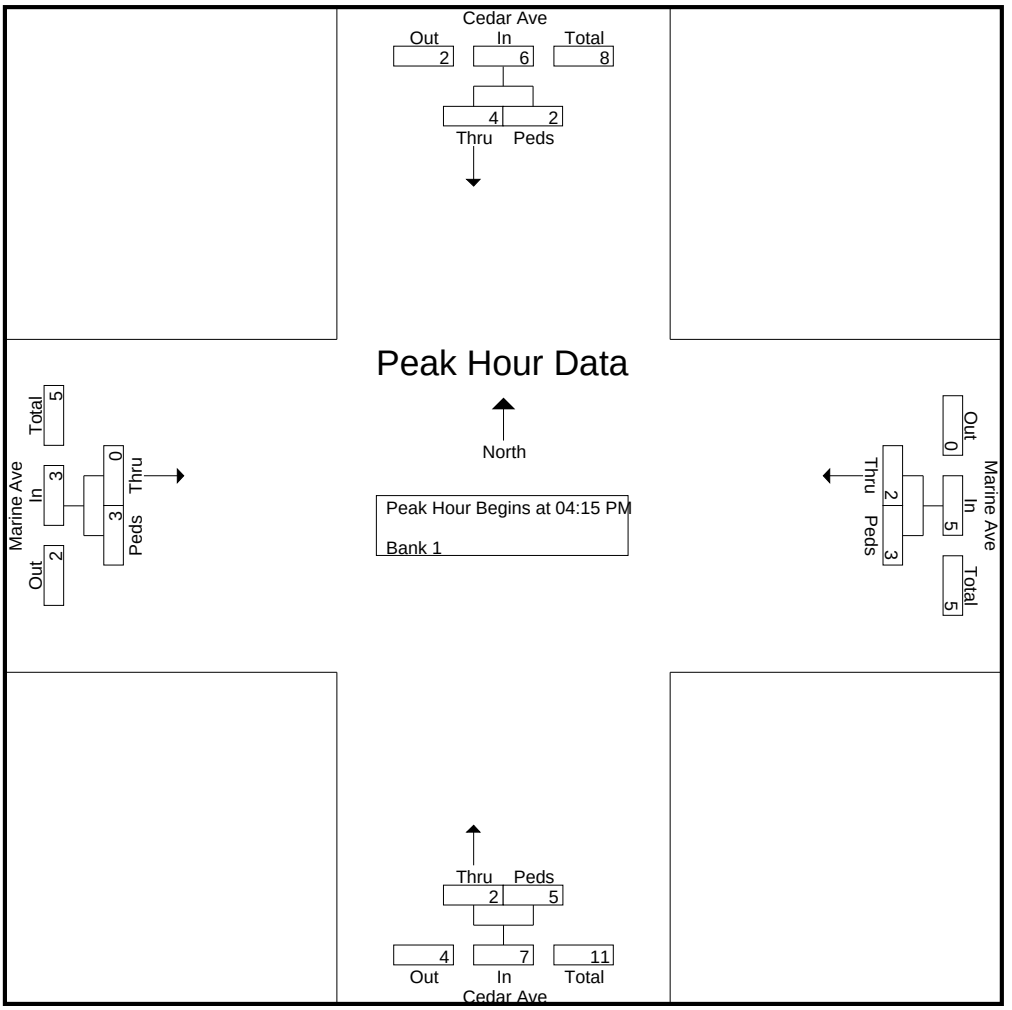
Start Date : 6/10/2014
Page No : 2

	Cedar Ave Southbound			Marine Ave Westbound			Cedar Ave Northbound			Marine Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**1**	**1**	**2**	0	0	0	0	**1**	**1**	0	**2**	**2**	**5**
08:00 AM	1	0	1	0	0	0	0	0	0	0	2	2	3
08:15 AM	0	1	1	0	**1**	**1**	0	1	1	0	1	1	4
08:30 AM	0	0	0	0	1	1	0	0	0	0	2	2	3
Total Volume	2	2	4	0	2	2	0	2	2	0	7	7	15
% App. Total	50	50		0	100		0	100		0	100		
PHF	.500	.500	.500	.000	.500	.500	.000	.500	.500	.000	.875	.875	.750



File Name : Cedar_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Cedar Ave Southbound			Marine Ave Westbound			Cedar Ave Northbound			Marine Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**2**	**1**	**3**	**1**	1	**2**	**1**	0	1	0	1	1	**7**
04:30 PM	1	1	2	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	**2**	2	0	2	2	0	**2**	**2**	6
05:00 PM	1	0	1	1	0	1	1	**3**	**4**	0	0	0	6
Total Volume	4	2	6	2	3	5	2	5	7	0	3	3	21
% App. Total	66.7	33.3		40	60		28.6	71.4		0	100		
PHF	.500	.500	.500	.500	.375	.625	.500	.417	.438	.000	.375	.375	.750



CITY TRAFFIC COUNTERS

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File Name : Cedar_22nd
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Unshifted

	Cedar Ave Southbound			22nd St Westbound			Cedar Ave Northbound			22nd St Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	1	5	1	2	1	3	1	5	0	2	0	1	22
07:15 AM	2	8	1	1	3	5	1	6	0	0	0	0	27
07:30 AM	0	11	5	0	3	6	3	9	0	2	2	0	41
07:45 AM	2	16	6	0	4	3	1	17	0	6	1	1	57
Total	5	40	13	3	11	17	6	37	0	10	3	2	147
08:00 AM	3	14	6	2	6	11	3	21	0	7	0	2	75
08:15 AM	3	22	10	0	5	8	0	15	0	6	0	0	69
08:30 AM	0	13	9	0	4	6	2	12	0	4	1	2	53
08:45 AM	1	13	6	0	2	6	2	9	0	5	2	2	48
Total	7	62	31	2	17	31	7	57	0	22	3	6	245
04:00 PM	0	18	8	0	0	1	1	15	0	4	1	5	53
04:15 PM	0	22	10	0	3	4	4	14	0	7	3	4	71
04:30 PM	0	23	4	0	3	5	2	18	0	12	1	2	70
04:45 PM	0	26	9	1	4	2	1	18	0	8	2	3	74
Total	0	89	31	1	10	12	8	65	0	31	7	14	268
05:00 PM	0	23	8	0	1	5	1	16	0	11	1	6	72
05:15 PM	0	22	7	1	2	2	3	18	0	9	2	3	69
05:30 PM	0	26	5	0	0	5	1	16	0	5	1	7	66
05:45 PM	0	21	9	0	2	2	1	11	0	7	0	4	57
Total	0	92	29	1	5	14	6	61	0	32	4	20	264
Grand Total	12	283	104	7	43	74	27	220	0	95	17	42	924
Apprch %	3	70.9	26.1	5.6	34.7	59.7	10.9	89.1	0	61.7	11	27.3	
Total %	1.3	30.6	11.3	0.8	4.7	8	2.9	23.8	0	10.3	1.8	4.5	

File Name : Cedar_22nd
Site Code : 00000000
Start Date : 6/10/2014
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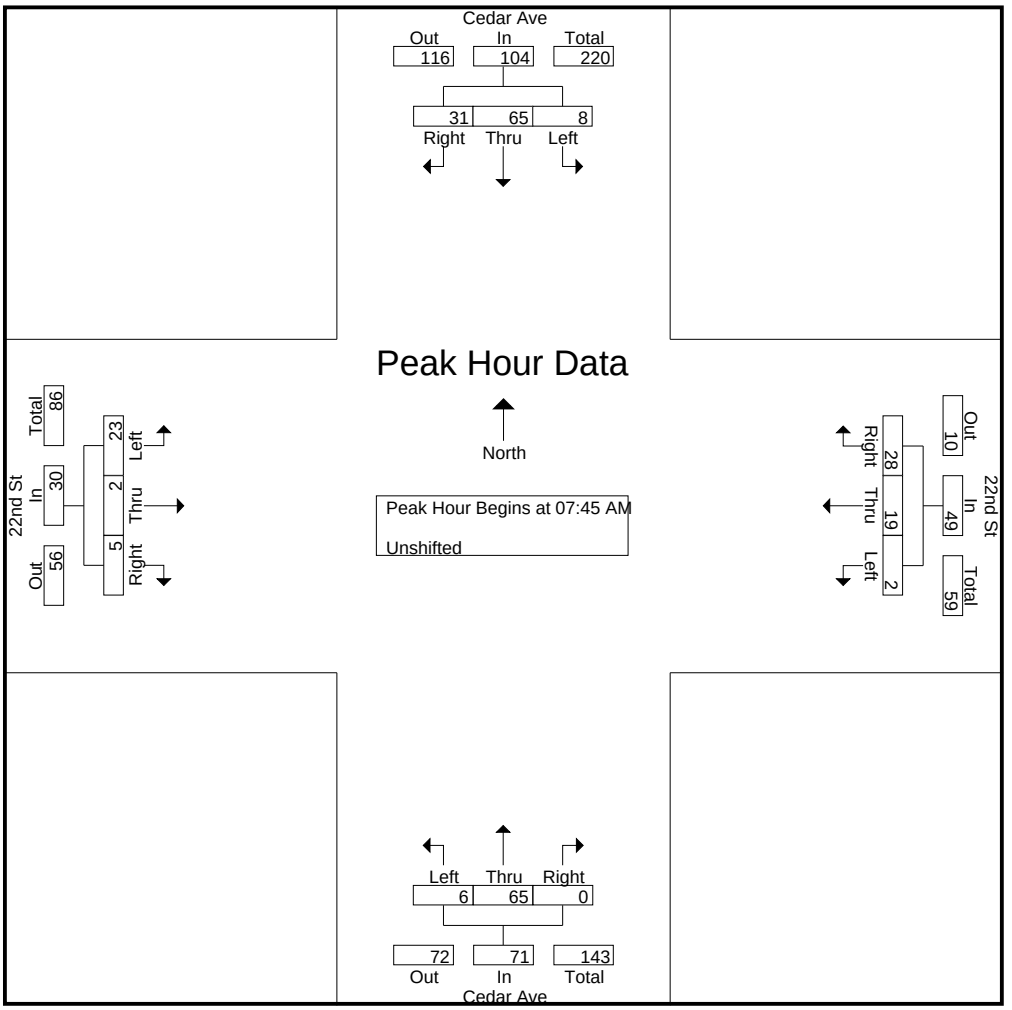
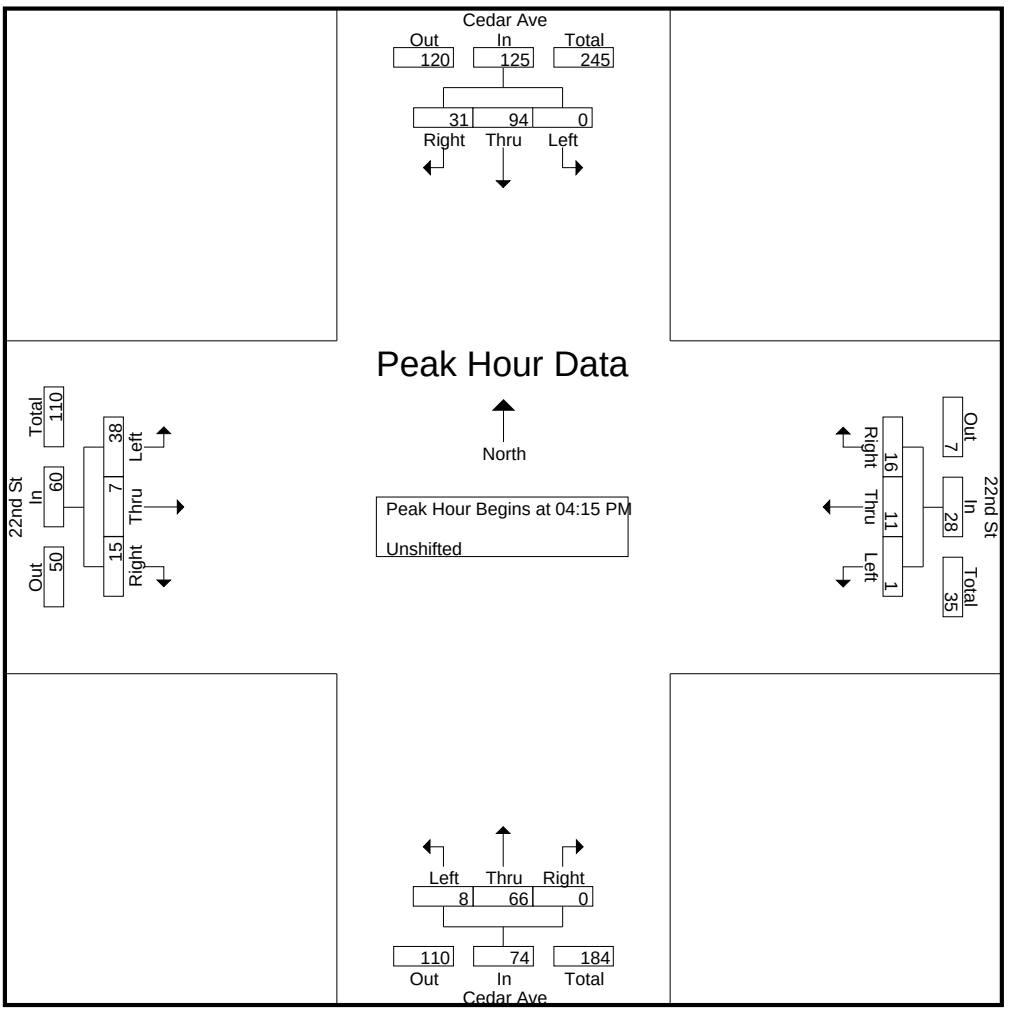
	Cedar Ave Southbound				22nd St Westbound				Cedar Ave Northbound				22nd St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	16	6	24	0	4	3	7	1	17	0	18	6	**1**	1	8	57
08:00 AM	**3**	14	6	23	**2**	**6**	**11**	**19**	**3**	**21**	0	**24**	**7**	0	**2**	**9**	**75**
08:15 AM	3	**22**	**10**	**35**	0	5	8	13	0	15	0	15	6	0	0	6	69
08:30 AM	0	13	9	22	0	4	6	10	2	12	0	14	4	1	2	7	53
Total Volume	8	65	31	104	2	19	28	49	6	65	0	71	23	2	5	30	254
% App. Total	7.7	62.5	29.8		4.1	38.8	57.1		8.5	91.5	0		76.7	6.7	16.7		
PHF	.667	.739	.775	.743	.250	.792	.636	.645	.500	.774	.000	.740	.821	.500	.625	.833	.847



File Name : Cedar_22nd
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Cedar Ave Southbound				22nd St Westbound				Cedar Ave Northbound				22nd St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	22	**10**	32	0	3	4	7	**4**	14	0	18	7	**3**	4	14	71
04:30 PM	0	23	4	27	0	3	**5**	**8**	2	**18**	0	**20**	**12**	1	2	15	70
04:45 PM	0	**26**	9	**35**	**1**	**4**	2	7	1	18	0	19	8	2	3	13	**74**
05:00 PM	0	23	8	31	0	1	5	6	1	16	0	17	11	1	**6**	**18**	72
Total Volume	0	94	31	125	1	11	16	28	8	66	0	74	38	7	15	60	287
% App. Total	0	75.2	24.8		3.6	39.3	57.1		10.8	89.2	0		63.3	11.7	25		
PHF	.000	.904	.775	.893	.250	.688	.800	.875	.500	.917	.000	.925	.792	.583	.625	.833	.970



CITY TRAFFIC COUNTERS

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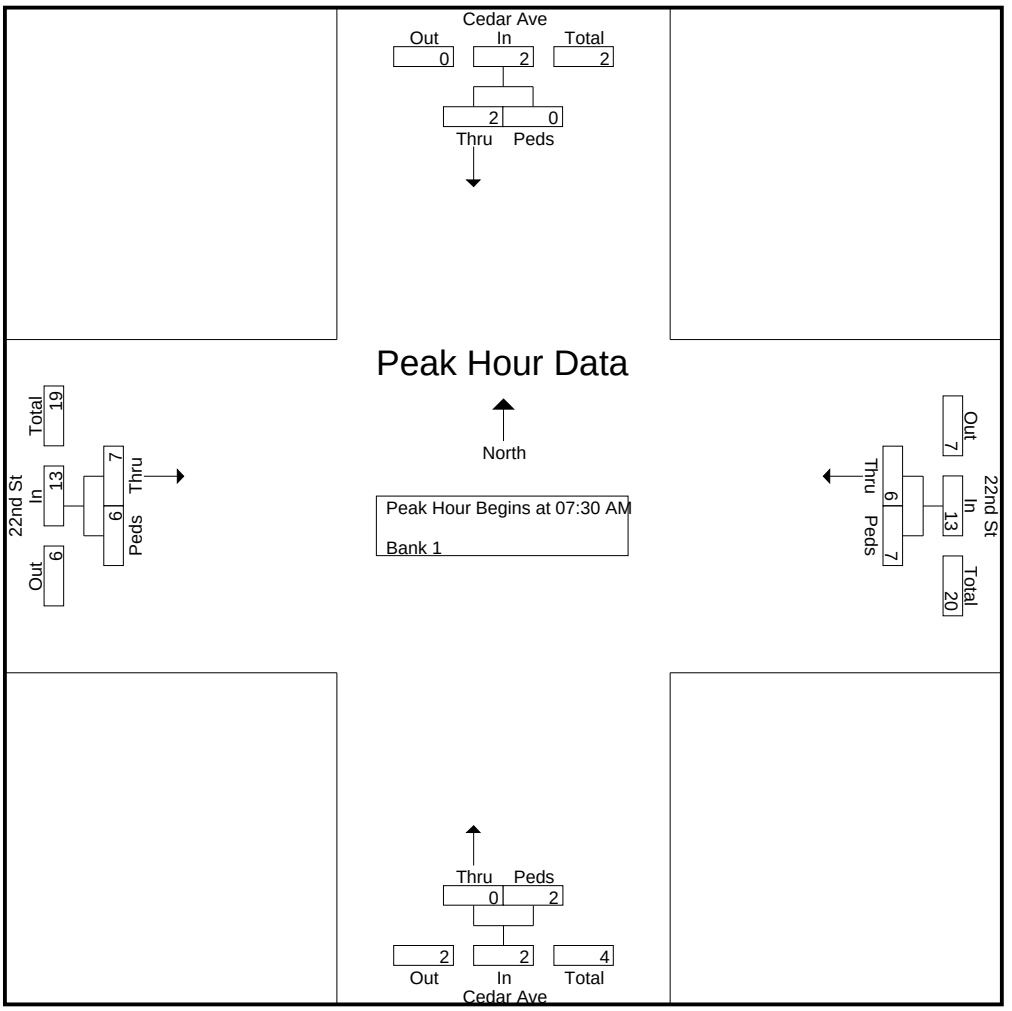
File Name : Cedar_22nd_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Bank 1

	Cedar Ave Southbound		22nd St Westbound		Cedar Ave Northbound		22nd St Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	1	0	1	1	0	1	1	1	6
07:30 AM	2	0	1	0	0	2	0	1	6
07:45 AM	0	0	3	4	0	0	4	3	14
Total	3	0	5	5	0	3	5	5	26
08:00 AM	0	0	0	1	0	0	1	0	2
08:15 AM	0	0	2	2	0	0	2	2	8
08:30 AM	0	0	2	0	0	0	0	2	4
08:45 AM	0	1	0	1	1	0	1	0	4
Total	0	1	4	4	1	0	4	4	18
04:00 PM	1	1	0	1	1	1	1	0	6
04:15 PM	0	0	1	2	0	0	2	1	6
04:30 PM	0	1	1	0	1	0	0	1	4
04:45 PM	0	0	0	3	0	0	3	0	6
Total	1	2	2	6	2	1	6	2	22
05:15 PM	4	0	0	0	0	4	0	0	8
05:30 PM	3	0	5	2	0	3	2	5	20
05:45 PM	0	0	0	4	0	0	4	0	8
Total	7	0	5	6	0	7	6	5	36
Grand Total	11	3	16	21	3	11	21	16	102
Apprch %	78.6	21.4	43.2	56.8	21.4	78.6	56.8	43.2	
Total %	10.8	2.9	15.7	20.6	2.9	10.8	20.6	15.7	

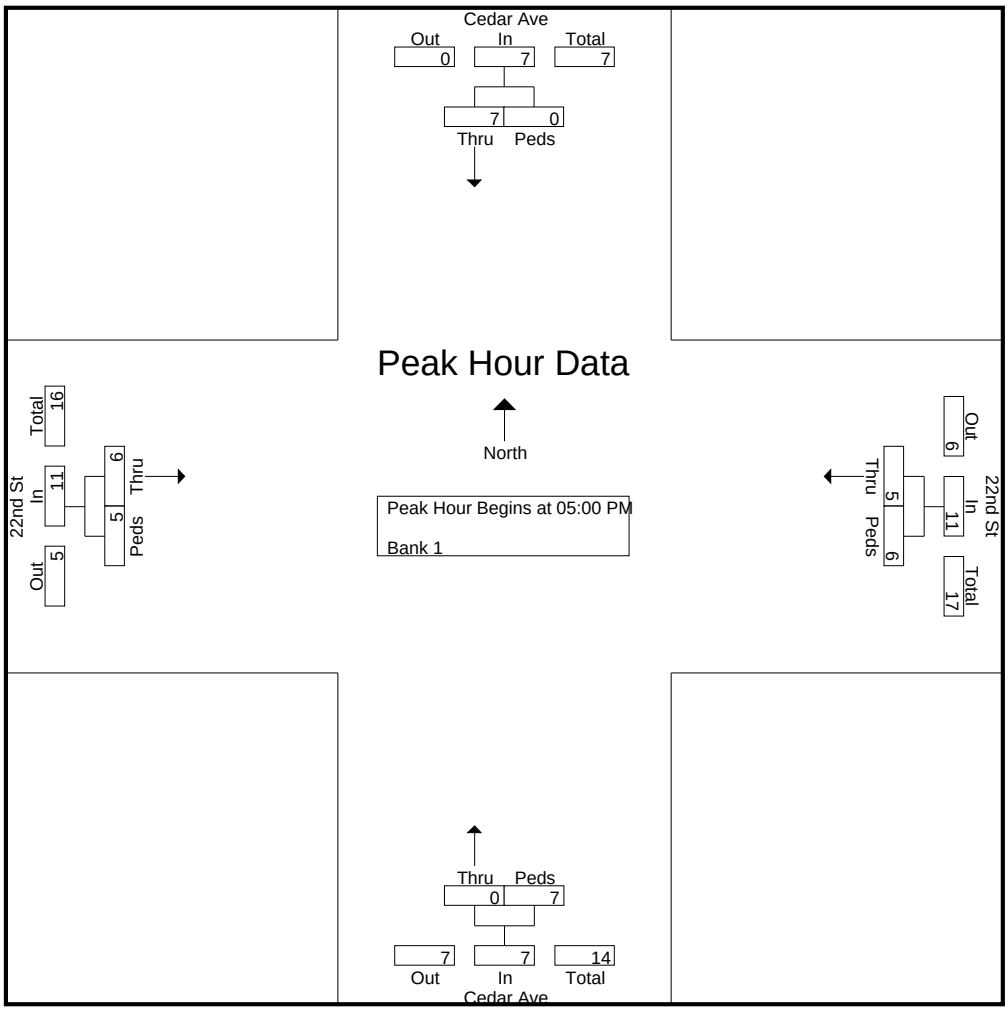
File Name : Cedar_22nd_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Cedar Ave Southbound			22nd St Westbound			Cedar Ave Northbound			22nd St Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	**2**	0	**2**	1	0	1	0	**2**	**2**	0	1	1	6
07:45 AM	0	0	0	**3**	**4**	**7**	0	0	0	**4**	**3**	**7**	**14**
08:00 AM	0	0	0	0	1	1	0	0	0	1	0	1	2
08:15 AM	0	0	0	2	2	4	0	0	0	2	2	4	8
Total Volume	2	0	2	6	7	13	0	2	2	7	6	13	30
% App. Total	100	0		46.2	53.8		0	100		53.8	46.2		
PHF	.250	.000	.250	.500	.438	.464	.000	.250	.250	.438	.500	.464	.536



File Name : Cedar_22nd_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Cedar Ave Southbound			22nd St Westbound			Cedar Ave Northbound			22nd St Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	**4**	0	**4**	0	0	0	0	**4**	**4**	0	0	0	8
05:30 PM	3	0	3	**5**	2	**7**	0	3	3	2	**5**	**7**	**20**
05:45 PM	0	0	0	0	**4**	4	0	0	0	**4**	0	4	8
Total Volume	7	0	7	5	6	11	0	7	7	6	5	11	36
% App. Total	100	0		45.5	54.5		0	100		54.5	45.5		
PHF	.438	.000	.438	.250	.375	.393	.000	.438	.438	.375	.250	.393	.450



CITY TRAFFIC COUNTERS

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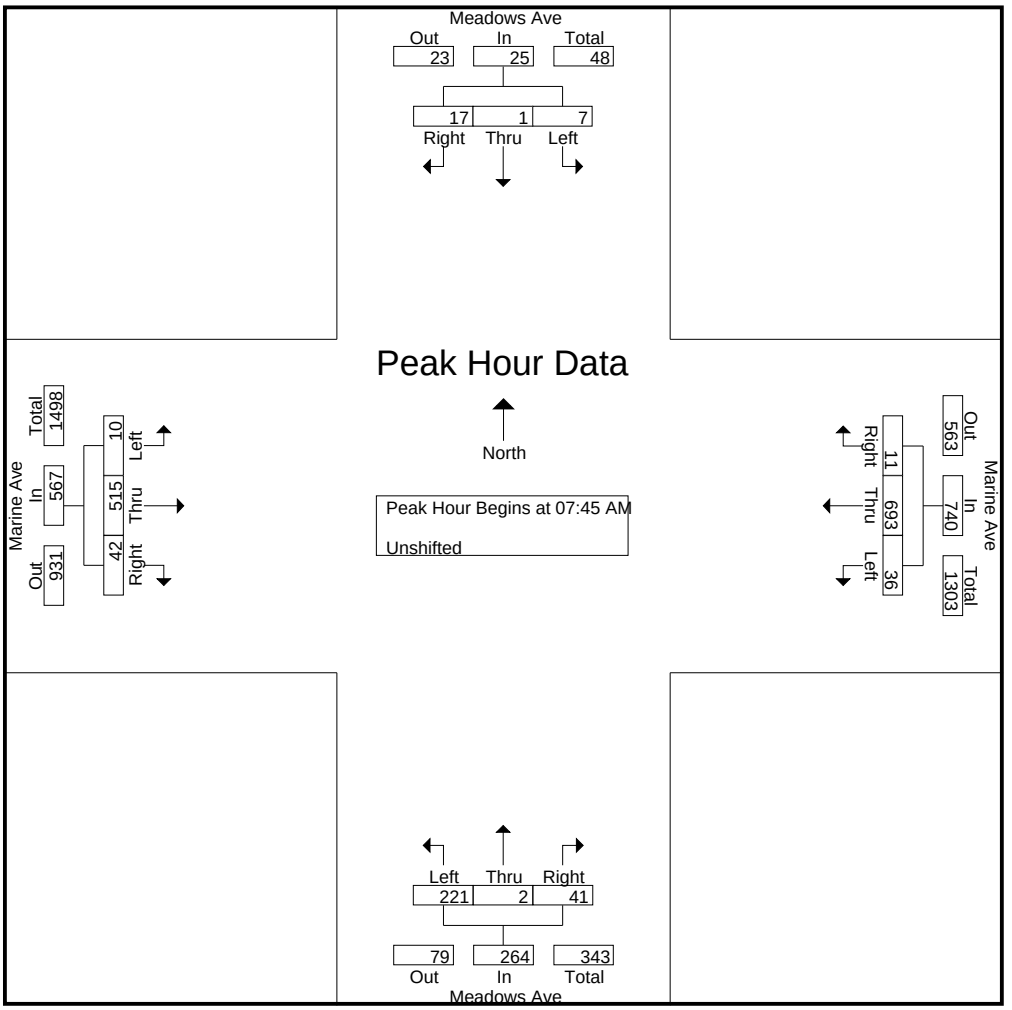
File Name : Meadows_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Unshifted

	Meadows Ave Southbound			Marine Ave Westbound			Meadows Ave Northbound			Marine Ave Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	32	2	5	4	115	11	21	1	2	4	70	6	273
07:15 AM	2	0	11	6	101	4	51	0	5	1	71	6	258
07:30 AM	3	1	7	13	137	1	23	0	23	1	89	8	306
07:45 AM	2	1	2	9	167	2	48	0	11	3	169	6	420
Total	39	4	25	32	520	18	143	1	41	9	399	26	1257
08:00 AM	2	0	2	7	199	1	55	1	11	0	152	7	437
08:15 AM	3	0	4	6	147	1	75	1	14	2	107	12	372
08:30 AM	0	0	9	14	180	7	43	0	5	5	87	17	367
08:45 AM	3	0	10	10	185	1	48	0	10	2	92	23	384
Total	8	0	25	37	711	10	221	2	40	9	438	59	1560
04:00 PM	2	0	5	14	130	6	15	0	7	4	120	11	314
04:15 PM	2	0	4	26	133	0	17	1	8	8	161	25	385
04:30 PM	2	0	0	23	151	1	16	0	4	7	164	19	387
04:45 PM	2	1	4	17	170	1	16	0	5	4	165	18	403
Total	8	1	13	80	584	8	64	1	24	23	610	73	1489
05:00 PM	1	0	1	30	125	2	18	0	4	2	204	17	404
05:15 PM	1	0	2	29	132	0	5	0	4	6	179	21	379
05:30 PM	3	1	2	22	174	3	6	0	8	4	180	18	421
05:45 PM	2	0	2	25	162	1	12	0	3	4	188	25	424
Total	7	1	7	106	593	6	41	0	19	16	751	81	1628
Grand Total	62	6	70	255	2408	42	469	4	124	57	2198	239	5934
Apprch %	44.9	4.3	50.7	9.4	89	1.6	78.6	0.7	20.8	2.3	88.1	9.6	
Total %	1	0.1	1.2	4.3	40.6	0.7	7.9	0.1	2.1	1	37	4	

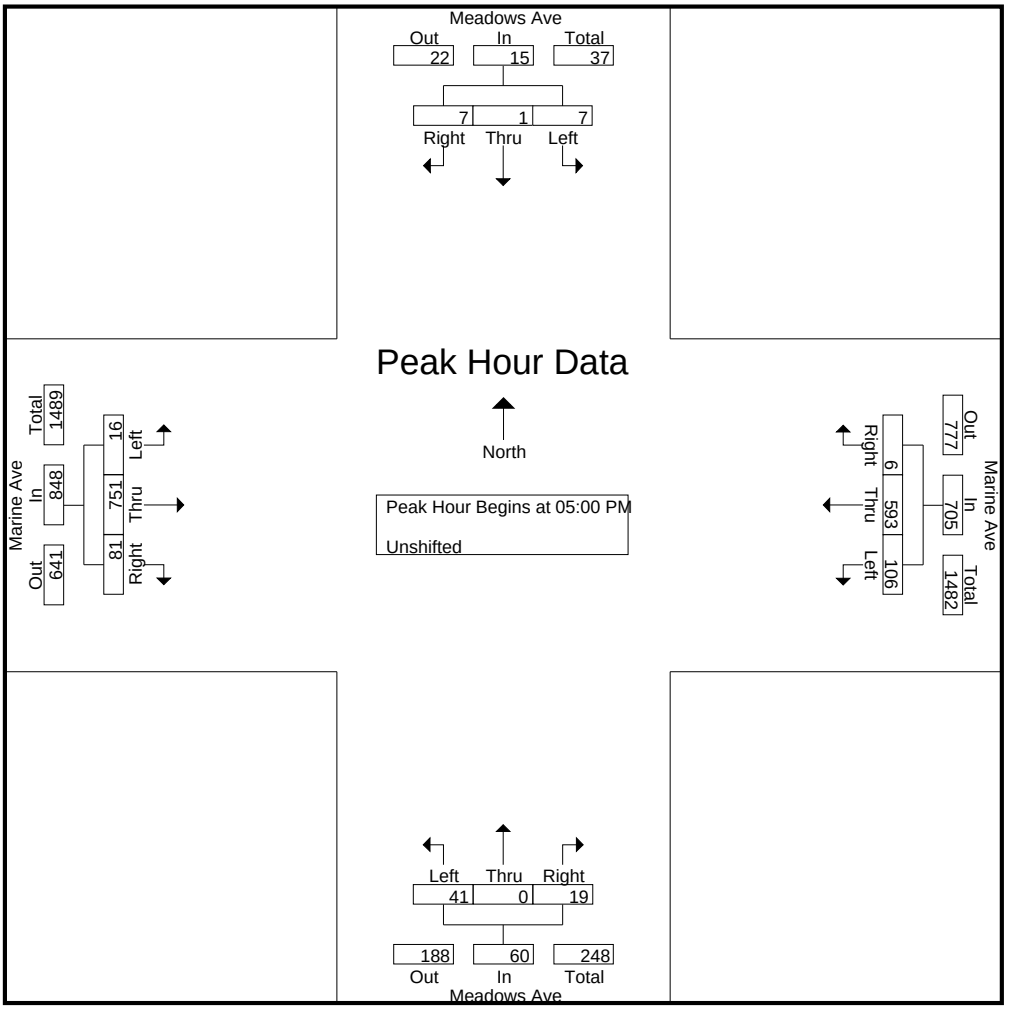
File Name : Meadows_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Meadows Ave Southbound				Marine Ave Westbound				Meadows Ave Northbound				Marine Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	2	**1**	2	5	9	167	2	178	48	0	11	59	3	**169**	6	**178**	420
08:00 AM	2	0	2	4	7	**199**	1	**207**	55	**1**	11	67	0	152	7	159	**437**
08:15 AM	**3**	0	4	7	6	147	1	154	**75**	1	**14**	**90**	2	107	12	121	372
08:30 AM	0	0	**9**	**9**	**14**	180	**7**	201	43	0	5	48	**5**	87	**17**	109	367
Total Volume	7	1	17	25	36	693	11	740	221	2	41	264	10	515	42	567	1596
% App. Total	28	4	68		4.9	93.6	1.5		83.7	0.8	15.5		1.8	90.8	7.4		
PHF	.583	.250	.472	.694	.643	.871	.393	.894	.737	.500	.732	.733	.500	.762	.618	.796	.913



File Name : Meadows_Marine
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Meadows Ave Southbound				Marine Ave Westbound				Meadows Ave Northbound				Marine Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	1	2	**30**	125	2	157	**18**	0	4	**22**	2	**204**	17	**223**	404
05:15 PM	1	0	**2**	3	29	132	0	161	5	0	4	9	**6**	179	21	206	379
05:30 PM	**3**	**1**	2	**6**	22	**174**	**3**	**199**	6	0	**8**	14	4	180	18	202	421
05:45 PM	2	0	2	4	25	162	1	188	12	0	3	15	4	188	**25**	217	**424**
Total Volume	7	1	7	15	106	593	6	705	41	0	19	60	16	751	81	848	1628
% App. Total	46.7	6.7	46.7		15	84.1	0.9		68.3	0	31.7		1.9	88.6	9.6		
PHF	.583	.250	.875	.625	.883	.852	.500	.886	.569	.000	.594	.682	.667	.920	.810	.951	.960



CITY TRAFFIC COUNTERS

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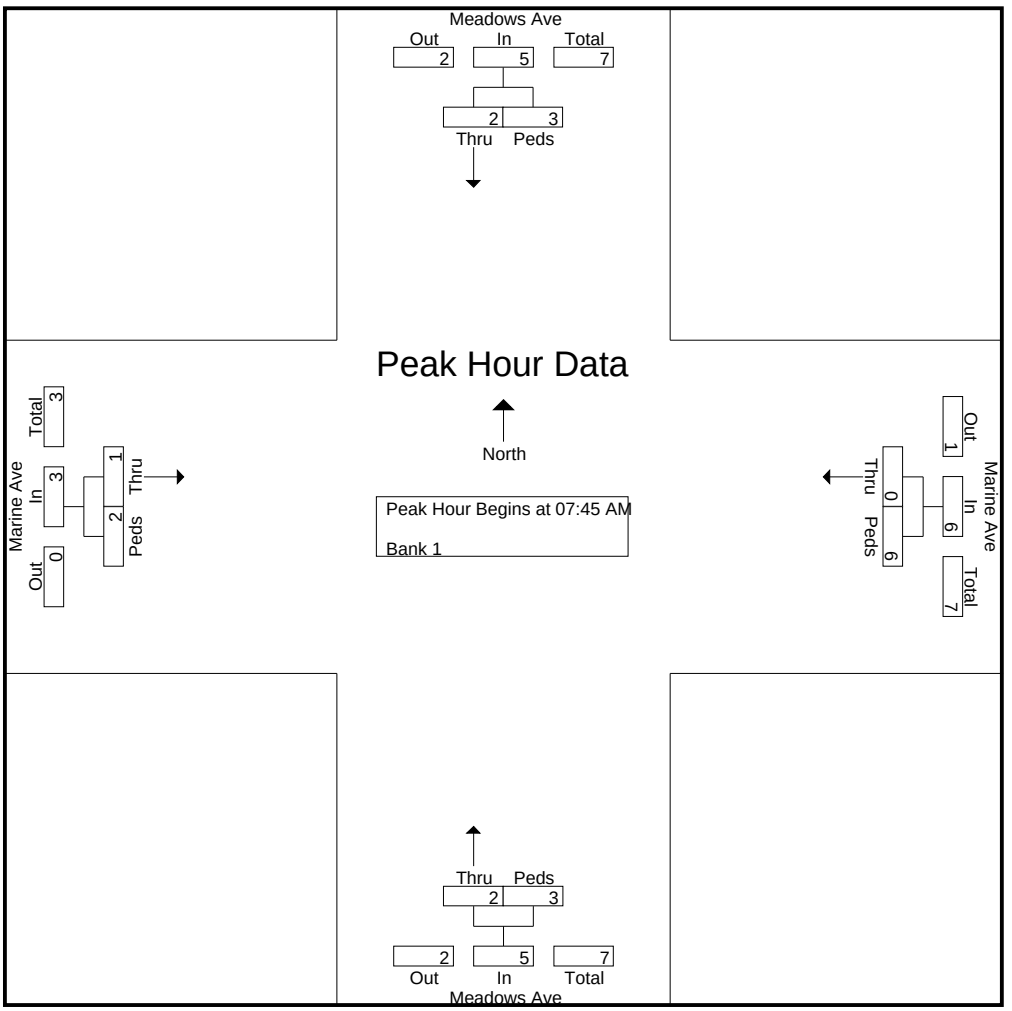
File Name : Meadows_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 1

Groups Printed- Bank 1

	Meadows Ave Southbound		Marine Ave Westbound		Meadows Ave Northbound		Marine Ave Eastbound		
Start Time	Thru	Peds	Thru	Peds	Thru	Peds	Thru	Peds	Int. Total
07:00 AM	0	1	0	0	0	0	0	0	1
07:30 AM	1	0	0	1	0	1	0	0	3
07:45 AM	1	3	0	0	0	1	1	2	8
Total	2	4	0	1	0	2	1	2	12
08:00 AM	1	0	0	0	1	0	0	0	2
08:15 AM	0	0	0	3	0	0	0	0	3
08:30 AM	0	0	0	3	1	2	0	0	6
08:45 AM	0	0	0	1	0	0	0	0	1
Total	1	0	0	7	2	2	0	0	12
04:15 PM	2	0	0	0	1	0	0	0	3
04:30 PM	1	1	0	1	0	0	0	0	3
Total	3	1	0	1	1	0	0	0	6
05:00 PM	1	2	0	3	1	1	0	0	8
05:15 PM	0	0	0	0	1	0	0	0	1
05:30 PM	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	2	3
Total	1	2	0	4	2	2	0	2	13
Grand Total	7	7	0	13	5	6	1	4	43
Apprch %	50	50	0	100	45.5	54.5	20	80	
Total %	16.3	16.3	0	30.2	11.6	14	2.3	9.3	

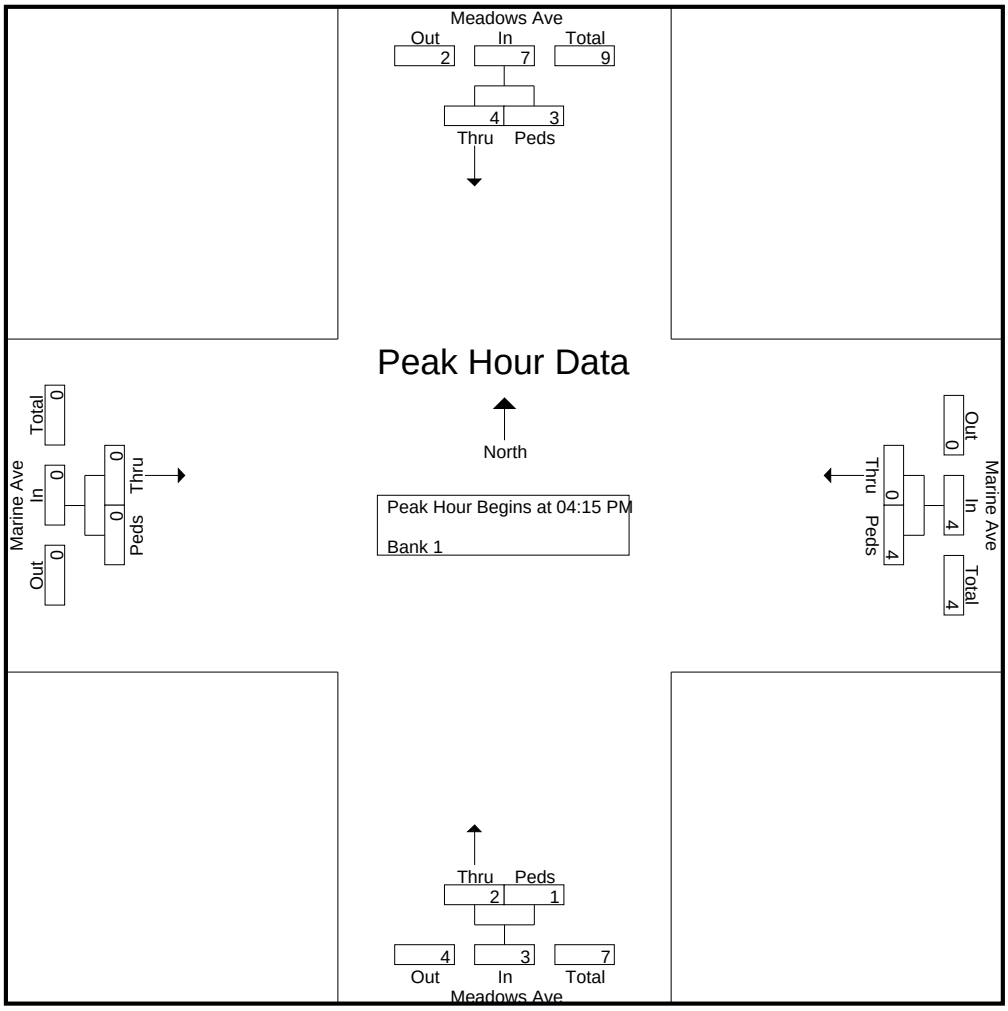
File Name : Meadows_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 2

	Meadows Ave Southbound			Marine Ave Westbound			Meadows Ave Northbound			Marine Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	**1**	**3**	**4**	0	0	0	0	1	1	**1**	**2**	**3**	**8**
08:00 AM	1	0	1	0	0	0	**1**	0	1	0	0	0	2
08:15 AM	0	0	0	0	**3**	**3**	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	3	3	1	**2**	**3**	0	0	0	6
Total Volume	2	3	5	0	6	6	2	3	5	1	2	3	19
% App. Total	40	60		0	100		40	60		33.3	66.7		
PHF	.500	.250	.313	.000	.500	.500	.500	.375	.417	.250	.250	.250	.594



File Name : Meadows_Marine_BP
Site Code : 00000000
Start Date : 6/10/2014
Page No : 3

	Meadows Ave Southbound			Marine Ave Westbound			Meadows Ave Northbound			Marine Ave Eastbound			
Start Time	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**2**	0	2	0	0	0	**1**	0	1	0	0	0	3
04:30 PM	1	1	2	0	1	1	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	**2**	**3**	0	**3**	**3**	1	**1**	**2**	0	0	0	**8**
Total Volume	4	3	7	0	4	4	2	1	3	0	0	0	14
% App. Total	57.1	42.9		0	100		66.7	33.3		0	0		
PHF	.500	.375	.583	.000	.333	.333	.500	.250	.375	.000	.000	.000	.438



CITY TRAFFIC COUNTERS
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22nd St
Bt Sepulveda & Cedar

Start	11-Jun-14	West		Hour Totals		East		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	4			2	9				
12:15		0	6			3	10				
12:30		0	5			1	10				
12:45		0	5	0	20	2	16	8	45	8	65
01:00		0	6			1	14				
01:15		1	10			1	20				
01:30		0	3			0	12				
01:45		0	6	1	25	0	12	2	58	3	83
02:00		0	8			0	12				
02:15		0	4			1	12				
02:30		1	3			4	9				
02:45		0	6	1	21	0	12	5	45	6	66
03:00		0	8			0	16				
03:15		0	6			0	20				
03:30		0	7			0	10				
03:45		0	4	0	25	0	15	0	61	0	86
04:00		0	5			0	11				
04:15		0	8			2	16				
04:30		0	6			0	12				
04:45		0	3	0	22	0	14	2	53	2	75
05:00		0	0			2	16				
05:15		2	3			2	14				
05:30		2	3			4	12				
05:45		1	7	5	13	1	11	9	53	14	66
06:00		1	1			1	8				
06:15		1	1			5	8				
06:30		3	1			4	11				
06:45		1	4	6	7	2	6	12	33	18	40
07:00		1	1			2	1				
07:15		3	1			4	10				
07:30		7	3			6	12				
07:45		6	4	17	9	5	13	17	36	34	45
08:00		5	2			10	11				
08:15		10	4			10	10				
08:30		6	3			8	7				
08:45		8	5	29	14	6	7	34	35	63	49
09:00		8	2			12	5				
09:15		4	0			16	0				
09:30		8	2			6	4				
09:45		7	0	27	4	8	2	42	11	69	15
10:00		4	3			8	4				
10:15		4	0			4	5				
10:30		2	1			9	4				
10:45		6	0	16	4	7	2	28	15	44	19
11:00		3	3			9	3				
11:15		8	0			12	3				
11:30		5	0			14	2				
11:45		6	2	22	5	8	3	43	11	65	16
Total		124	169			202	456			326	625
Percent		42.3%	57.7%			30.7%	69.3%			34.3%	65.7%
Grand Total		124	169			202	456			326	625
Percent		42.3%	57.7%			30.7%	69.3%			34.3%	65.7%

ADT ADT 951 AADT 951

CITY TRAFFIC COUNTERS
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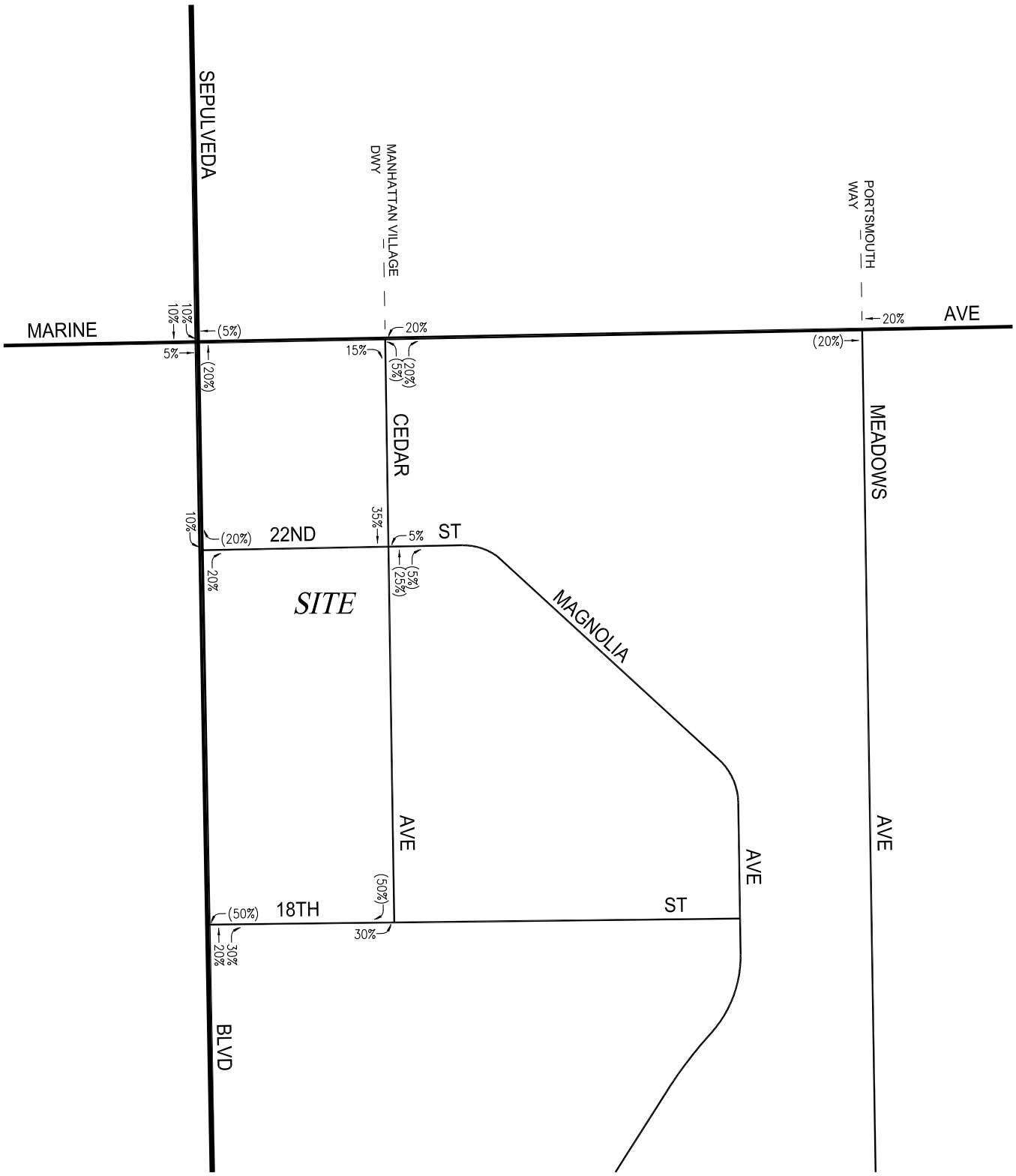
Cedar Ave
Bt 21st St & 22nd St

Start	11-Jun-14	South		Hour Totals		North		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	28			4	44				
12:15		2	19			2	32				
12:30		4	26			6	36				
12:45		2	25	9	98	4	38	16	150	25	248
01:00		0	18			0	54				
01:15		0	14			0	20				
01:30		1	22			1	40				
01:45		0	20	1	74	0	28	1	142	2	216
02:00		2	17			6	46				
02:15		0	24			0	41				
02:30		0	13			1	30				
02:45		0	16	2	70	0	24	7	141	9	211
03:00		2	26			2	37				
03:15		0	30			0	37				
03:30		1	24			1	34				
03:45		0	22	3	102	0	32	3	140	6	242
04:00		2	24			3	20				
04:15		2	24			2	21				
04:30		0	23			0	20				
04:45		0	28	4	99	0	19	5	80	9	179
05:00		0	28			0	18				
05:15		0	24			1	24				
05:30		3	31			4	18				
05:45		0	24	3	107	4	14	9	74	12	181
06:00		6	35			6	19				
06:15		4	18			7	17				
06:30		1	17			4	17				
06:45		0	21	11	91	4	22	21	75	32	166
07:00		2	22			3	10				
07:15		7	21			9	14				
07:30		5	20			14	14				
07:45		6	14	20	77	12	14	38	52	58	129
08:00		10	12			28	10				
08:15		9	8			24	14				
08:30		21	10			47	9				
08:45		18	5	58	35	32	8	131	41	189	76
09:00		12	8			35	3				
09:15		18	7			31	4				
09:30		16	7			34	8				
09:45		16	7	62	29	23	4	123	19	185	48
10:00		23	3			33	5				
10:15		14	3			24	8				
10:30		17	2			24	2				
10:45		16	7	70	15	32	4	113	19	183	34
11:00		13	2			34	1				
11:15		15	1			30	1				
11:30		17	1			32	1				
11:45		24	3	69	7	38	3	134	6	203	13
Total		312	804			601	939			913	1743
Percent		28.0%	72.0%			39.0%	61.0%			34.4%	65.6%
Grand Total		312	804			601	939			913	1743
Percent		28.0%	72.0%			39.0%	61.0%			34.4%	65.6%
ADT		ADT 2,656		AADT 2,656							

APPENDIX B

EXISTING USES TRIP DISTRIBUTION
WEEKDAY AM AND PM PEAK HOURS



NOT TO SCALE

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

APPENDIX FIGURE B-1
EXISTING USES TRIP DISTRIBUTION
AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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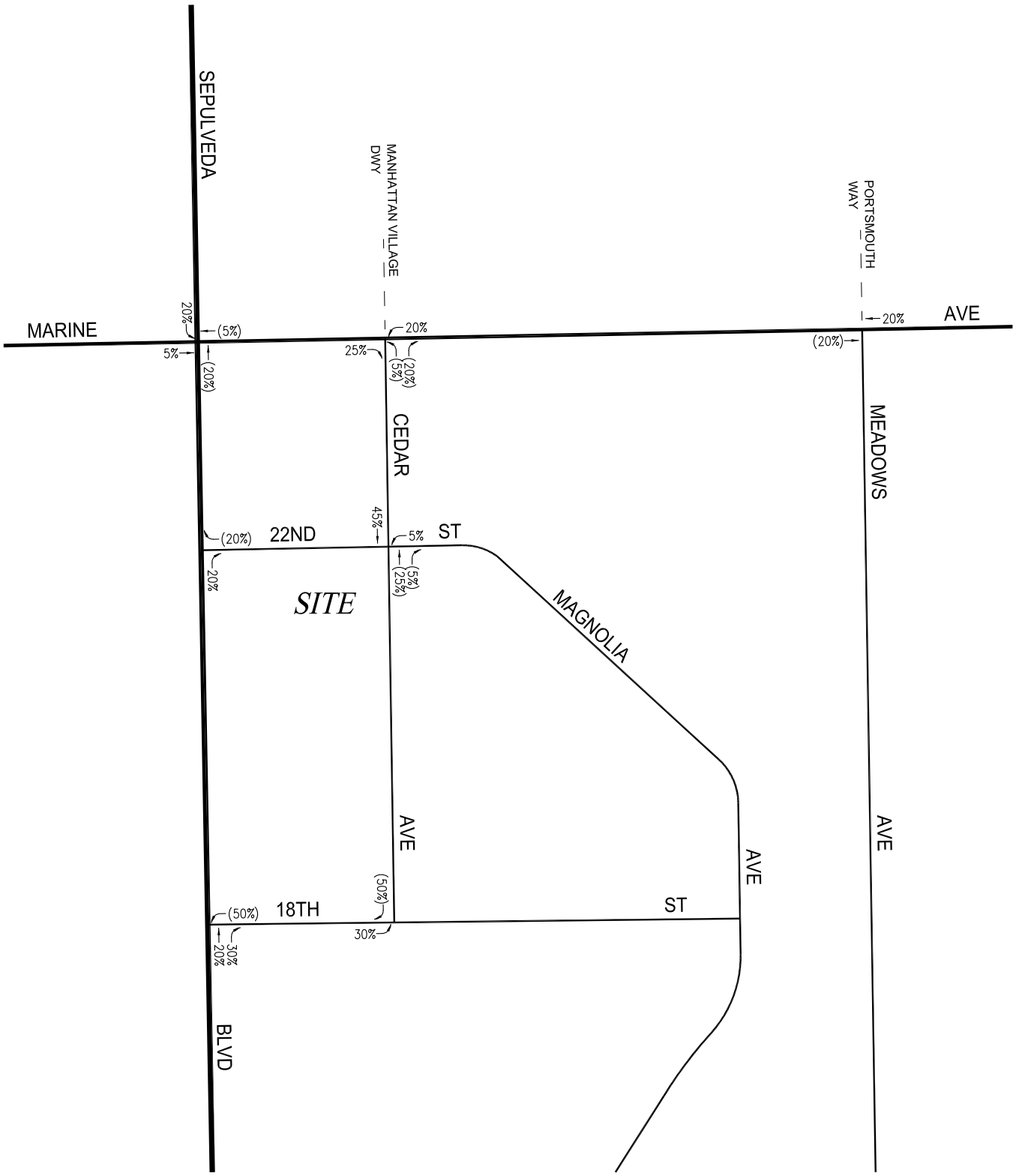

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

NOT TO SCALE

APPENDIX FIGURE B-2
EXISTING USES TRIP DISTRIBUTION
PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

CHALK PRE-SCHOOL MANHATTAN BEACH PROJECT

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APPENDIX C

ICU/HCM AND LEVELS OF SERVICE EXPLANATION

ICU/HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the current version of the *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

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INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Marine Avenue

N-S St: Sepulveda Boulevard
E-W St: Marine Avenue
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU1

Peak hr: AM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016
Nb Thru	2582	4800	0.548 *	4	2586	4800	0.549 *	0	2586	4800	0.549 *	86	2694	4800	0.572 *	4	2698	4800	0.573 *	0	2698	4800	0.573 *
Nb Right	48	0	-	0	48	0	-	0	48	0	-	3	51	0	-	0	51	0	-	0	51	0	-
Sb Left	178	2880	0.062 *	4	182	2880	0.063 *	0	182	2880	0.063 *	8	188	2880	0.065 *	4	192	2880	0.067 *	0	192	2880	0.067 *
Sb Thru	908	4800	0.189	4	912	4800	0.190	0	912	4800	0.190	78	995	4800	0.207	4	999	4800	0.208	0	999	4800	0.208
Sb Right	66	1600	0.041	0	66	1600	0.041	0	66	1600	0.041	0	67	1600	0.042	0	67	1600	0.042	0	67	1600	0.042
Eb Left	85	1600	0.053 *	0	85	1600	0.053 *	0	85	1600	0.053 *	0	86	1600	0.054 *	0	86	1600	0.054 *	0	86	1600	0.054 *
Eb Thru	321	3200	0.112	3	324	3200	0.113	0	324	3200	0.113	6	330	3200	0.115	3	333	3200	0.116	0	333	3200	0.116
Eb Right	38	0	-	0	38	0	-	0	38	0	-	0	38	0	-	0	38	0	-	0	38	0	-
Wb Left	128	1600	0.080	0	128	1600	0.080	0	128	1600	0.080	7	136	1600	0.085	0	136	1600	0.085	0	136	1600	0.085
Wb Thru	296	1600	0.185 *	2	298	1600	0.186 *	0	298	1600	0.186 *	1	300	1600	0.187 *	2	302	1600	0.189 *	0	302	1600	0.189 *
Wb Right [3	293	1600	0.121	5	298	1600	0.123	0	298	1600	0.123	12	308	1600	0.127	5	313	1600	0.129	0	313	1600	0.129
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.948				0.951				0.951				0.978				0.982				0.982
LOS			E				E				E				E				E				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

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INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Marine Avenue

N-S St: Sepulveda Boulevard
E-W St: Marine Avenue
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU1

Peak hr: PM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	97	1600	0.061 *	0	97	1600	0.061 *	0	97	1600	0.061 *	0	98	1600	0.061 *	0	98	1600	0.061 *	0	98	1600	0.061 *
Nb Thru	1372	4800	0.309	2	1374	4800	0.309	0	1374	4800	0.309	113	1499	4800	0.338	2	1501	4800	0.338	0	1501	4800	0.338
Nb Right	109	0	-	0	109	0	-	0	109	0	-	12	122	0	-	0	122	0	-	0	122	0	-
Sb Left	208	2880	0.072	6	214	2880	0.074	0	214	2880	0.074	15	225	2880	0.078	6	231	2880	0.080	0	231	2880	0.080
Sb Thru	2077	4800	0.433 *	0	2077	4800	0.433 *	0	2077	4800	0.433 *	106	2204	4800	0.459 *	0	2204	4800	0.459 *	0	2204	4800	0.459 *
Sb Right	121	1600	0.076	0	121	1600	0.076	0	121	1600	0.076	-1	121	1600	0.076	0	121	1600	0.076	0	121	1600	0.076
Eb Left	76	1600	0.048	0	76	1600	0.048	0	76	1600	0.048	1	78	1600	0.049	0	78	1600	0.049	0	78	1600	0.049
Eb Thru	272	3200	0.103 *	1	273	3200	0.104 *	0	273	3200	0.104 *	2	277	3200	0.105 *	1	278	3200	0.105 *	0	278	3200	0.105 *
Eb Right	59	0	-	0	59	0	-	0	59	0	-	0	60	0	-	0	60	0	-	0	60	0	-
Wb Left	205	1600	0.128 *	0	205	1600	0.128 *	0	205	1600	0.128 *	2	209	1600	0.131 *	0	209	1600	0.131 *	0	209	1600	0.131 *
Wb Thru	268	1600	0.168	2	270	1600	0.169	0	270	1600	0.169	4	275	1600	0.172	2	277	1600	0.173	0	277	1600	0.173
Wb Right [3	141	1600	0.016	5	146	1600	0.017	0	146	1600	0.017	14	156	1600	0.020	5	161	1600	0.021	0	161	1600	0.021
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.825				0.825				0.825				0.856				0.856				0.856
LOS			D				D				D				D				D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

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INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 22nd Street
Peak hr: AM
Annual Growth: 1.00%

N-S St: Sepulveda Boulevard
E-W St: 22nd Street
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU2

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	2640	4800	0.551 *	0	2640	4800	0.553 *	0	2640	4800	0.553 *	89	2755	4800	0.575 *	0	2755	4800	0.577 *	0	2755	4800	0.577 *
Nb Right	6	0	-	9	15	0	-	0	15	0	-	0	6	0	-	9	15	0	-	0	15	0	-
Sb Left [3]	7	1600	0.004 *	4	11	1600	0.007 *	0	11	1600	0.007 *	0	7	1600	0.004 *	4	11	1600	0.007 *	0	11	1600	0.007 *
Sb Thru	999	4800	0.208	0	999	4800	0.208	0	999	4800	0.208	86	1095	4800	0.228	0	1095	4800	0.228	0	1095	4800	0.228
Sb Right	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
Wb Left [3]	1	0	0.001	0	1	0	0.001	0	1	0	0.001	0	1	0	0.001	0	1	0	0.001	0	1	0	0.001
Wb Thru	0	1600	0.007 *	0	0	1600	0.009 *	0	0	1600	0.009 *	0	0	1600	0.007 *	0	0	1600	0.009 *	0	0	1600	0.009 *
Wb Right	10	0	-	4	14	0	-	0	14	0	-	0	10	0	-	4	14	0	-	0	14	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.663				0.669				0.669				0.687				0.694				0.694
LOS			B				B				B				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No Left-Turn, Mon-Fri 3-7 PM.

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INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 22nd Street

N-S St: Sepulveda Boulevard
E-W St: 22nd Street
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU2

Peak hr: PM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	1705	4800	0.360	0	1705	4800	0.361	0	1705	4800	0.361	124	1846	4800	0.389	0	1846	4800	0.390	0	1846	4800	0.390
Nb Right	21	0	-	6	27	0	-	0	27	0	-	0	21	0	-	6	27	0	-	0	27	0	-
Sb Left [3]	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004
Sb Thru	2307	4800	0.482 *	0	2307	4800	0.482 *	0	2307	4800	0.482 *	107	2437	4800	0.509 *	0	2437	4800	0.509 *	0	2437	4800	0.509 *
Sb Right	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-
Eb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
Wb Left [3]	3	0	0.002	0	3	0	0.002	0	3	0	0.002	0	3	0	0.002	0	3	0	0.002	0	3	0	0.002
Wb Thru	0	1600	0.013 *	0	0	1600	0.014 *	0	0	1600	0.014 *	0	0	1600	0.013 *	0	0	1600	0.015 *	0	0	1600	0.015 *
Wb Right	18	0	-	2	20	0	-	0	20	0	-	0	18	0	-	2	20	0	-	0	20	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.595				0.596				0.596				0.622				0.623				0.623
LOS			A				A				A				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No Left-Turn, Mon-Fri 3-7 PM.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Sepulveda Boulevard
E-W St: 18th Street
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU3

Sepulveda Boulevard @ 18th Street
Peak hr: AM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000
Nb Thru	2593	4800	0.548 *	9	2602	4800	0.552 *	0	2602	4800	0.552 *	89	2708	4800	0.572 *	9	2717	4800	0.576 *	0	2717	4800	0.576 *
Nb Right	35	0	-	13	48	0	-	0	48	0	-	0	35	0	-	13	48	0	-	0	48	0	-
Sb Left [3]	39	1600	0.024 *	0	39	1600	0.024 *	0	39	1600	0.024 *	0	39	1600	0.025 *	0	39	1600	0.025 *	0	39	1600	0.025 *
Sb Thru	986	4800	0.207	0	986	4800	0.207	0	986	4800	0.207	86	1082	4800	0.227	0	1082	4800	0.227	0	1082	4800	0.227
Sb Right	9	0	-	0	9	0	-	0	9	0	-	0	9	0	-	0	9	0	-	0	9	0	-
Eb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	13	1600	0.008 *	0	13	1600	0.008 *	0	13	1600	0.008 *	0	13	1600	0.008 *	0	13	1600	0.008 *	0	13	1600	0.008 *
Wb Left	48	0	0.030 *	21	69	0	0.043 *	0	69	0	0.043 *	0	48	0	0.030 *	21	69	0	0.043 *	0	69	0	0.043 *
Wb Thru	1	1600	0.034	0	1	1600	0.048	0	1	1600	0.048	0	1	1600	0.035	0	1	1600	0.048	0	1	1600	0.048
Wb Right [4	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.710				0.728				0.728				0.735				0.753				0.753
LOS			C				C				C				C				C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No Left-turn, Mon-Fri 3-7 PM.
4 No Right-turn on red.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 18th Street
Peak hr: PM
Annual Growth: 1.00%

N-S St: Sepulveda Boulevard
E-W St: 18th Street
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU3

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	1542	4800	0.331	6	1548	4800	0.335	0	1548	4800	0.335	124	1681	4800	0.361	6	1687	4800	0.364	0	1687	4800	0.364
Nb Right	49	0	-	9	58	0	-	0	58	0	-	0	49	0	-	9	58	0	-	0	58	0	-
Sb Left [3]	3	1600	0.002	0	3	1600	0.002	0	3	1600	0.002	0	3	1600	0.002	0	3	1600	0.002	0	3	1600	0.002
Sb Thru	2344	4800	0.490 *	0	2344	4800	0.490 *	0	2344	4800	0.490 *	107	2474	4800	0.517 *	0	2474	4800	0.517 *	0	2474	4800	0.517 *
Sb Right	7	0	-	0	7	0	-	0	7	0	-	0	7	0	-	0	7	0	-	0	7	0	-
Eb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *
Wb Left	68	0	0.043 *	18	86	0	0.054 *	0	86	0	0.054 *	0	69	0	0.043 *	18	87	0	0.054 *	0	87	0	0.054 *
Wb Thru	1	1600	0.045	0	1	1600	0.056	0	1	1600	0.056	0	1	1600	0.045	0	1	1600	0.057	0	1	1600	0.057
Wb Right [4	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-	0	3	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.635				0.647				0.647				0.663				0.674				0.674
LOS			B				B				B				B				B				B

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green
3 No Left-turn, Mon-Fri 3-7 PM.
4 No Right-turn on red.

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INTERSECTION CAPACITY UTILIZATION

Cedar Avenue @ Marine Avenue

N-S St: Cedar Avenue
E-W St: Marine Avenue
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU4

Peak hr: AM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	35	0	0.022	7	42	0	0.026	0	42	0	0.026	0	35	0	0.022	7	42	0	0.026	0	42	0	0.026
Nb Thru	66	1600	0.079 *	0	66	1600	0.088 *	0	66	1600	0.088 *	0	67	1600	0.080 *	0	67	1600	0.089 *	0	67	1600	0.089 *
Nb Right	25	0	-	8	33	0	-	0	33	0	-	0	25	0	-	8	33	0	-	0	33	0	-
Sb Left	92	0	0.058	0	92	0	0.058	0	92	0	0.058	0	93	0	0.058	0	93	0	0.058	0	93	0	0.058
Sb Thru	27	1600	0.074	0	27	1600	0.074	0	27	1600	0.074	0	27	1600	0.075	0	27	1600	0.075	0	27	1600	0.075
Sb Right	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	1	57	1600	0.035	0	57	1600	0.035	0	57	1600	0.035
Eb Left	57	1600	0.036 *	0	57	1600	0.036 *	0	57	1600	0.036 *	0	58	1600	0.036 *	0	58	1600	0.036 *	0	58	1600	0.036 *
Eb Thru	378	3200	0.125	0	378	3200	0.127	0	378	3200	0.127	17	399	3200	0.131	0	399	3200	0.133	0	399	3200	0.133
Eb Right	21	0	-	7	28	0	-	0	28	0	-	0	21	0	-	7	28	0	-	0	28	0	-
Wb Left	33	1600	0.021	9	42	1600	0.026	0	42	1600	0.026	0	33	1600	0.021	9	42	1600	0.026	0	42	1600	0.026
Wb Thru	599	3200	0.187	0	599	3200	0.187	0	599	3200	0.187	20	625	3200	0.195	0	625	3200	0.195	0	625	3200	0.195
Wb Right	319	1600	0.199 *	0	319	1600	0.199 *	0	319	1600	0.199 *	0	322	1600	0.201 *	0	322	1600	0.201 *	0	322	1600	0.201 *
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.471				0.481				0.481				0.475				0.484				0.484
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Cedar Avenue @ Marine Avenue

N-S St: Cedar Avenue
E-W St: Marine Avenue
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU4

Peak hr: PM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	27	0	0.017	7	34	0	0.021	0	34	0	0.021	0	27	0	0.017	7	34	0	0.021	0	34	0	0.021
Nb Thru	32	1600	0.058 *	0	32	1600	0.067 *	0	32	1600	0.067 *	1	33	1600	0.059 *	0	33	1600	0.068 *	0	33	1600	0.068 *
Nb Right	34	0	-	7	41	0	-	0	41	0	-	0	34	0	-	7	41	0	-	0	41	0	-
Sb Left	340	0	0.213 *	0	340	0	0.213 *	0	340	0	0.213 *	-5	338	0	0.212 *	0	338	0	0.212 *	0	338	0	0.212 *
Sb Thru	51	1600	0.244	0	51	1600	0.244	0	51	1600	0.244	-1	51	1600	0.243	0	51	1600	0.243	0	51	1600	0.243
Sb Right	185	1600	0.116	0	185	1600	0.116	0	185	1600	0.116	-8	179	1600	0.112	0	179	1600	0.112	0	179	1600	0.112
Eb Left	51	1600	0.032	0	51	1600	0.032	0	51	1600	0.032	5	57	1600	0.035	0	57	1600	0.035	0	57	1600	0.035
Eb Thru	526	3200	0.175 *	0	526	3200	0.178 *	0	526	3200	0.178 *	24	555	3200	0.185 *	0	555	3200	0.187 *	0	555	3200	0.187 *
Eb Right	35	0	-	7	42	0	-	0	42	0	-	0	35	0	-	7	42	0	-	0	42	0	-
Wb Left	33	1600	0.021 *	6	39	1600	0.024 *	0	39	1600	0.024 *	0	33	1600	0.021 *	6	39	1600	0.025 *	0	39	1600	0.025 *
Wb Thru	413	3200	0.129	0	413	3200	0.129	0	413	3200	0.129	28	445	3200	0.139	0	445	3200	0.139	0	445	3200	0.139
Wb Right	198	1600	0.124	0	198	1600	0.124	0	198	1600	0.124	1	201	1600	0.126	0	201	1600	0.126	0	201	1600	0.126
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.567				0.581				0.581				0.576				0.591				0.591
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Cedar Avenue @ 22nd Street

N-S St: Cedar Avenue
E-W St: 22nd Street
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU5

Peak hr: AM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	6	0	0.004 *	5	11	0	0.007 *	0	11	0	0.007 *	0	6	0	0.004 *	5	11	0	0.007 *	0	11	0	0.007 *
Nb Thru	65	1600	0.044	15	80	1600	0.058	0	80	1600	0.058	0	66	1600	0.045	15	81	1600	0.059	0	81	1600	0.059
Nb Right	0	0	-	2	2	0	-	0	2	0	-	0	0	0	-	2	2	0	-	0	2	0	-
Sb Left	8	0	0.005	0	8	0	0.005	0	8	0	0.005	0	8	0	0.005	0	8	0	0.005	0	8	0	0.005
Sb Thru	65	1600	0.065 *	16	81	1600	0.075 *	0	81	1600	0.075 *	0	66	1600	0.066 *	16	82	1600	0.076 *	0	82	1600	0.076 *
Sb Right	31	0	-	0	31	0	-	0	31	0	-	0	31	0	-	0	31	0	-	0	31	0	-
Eb Left	23	0	0.014 *	0	23	0	0.014 *	0	23	0	0.014 *	0	23	0	0.015 *	0	23	0	0.015 *	0	23	0	0.015 *
Eb Thru	2	1600	0.019	0	2	1600	0.028	0	2	1600	0.028	0	2	1600	0.019	0	2	1600	0.028	0	2	1600	0.028
Eb Right	5	0	-	15	20	0	-	0	20	0	-	0	5	0	-	15	20	0	-	0	20	0	-
Wb Left	2	0	0.001	3	5	0	0.003	0	5	0	0.003	0	2	0	0.001	3	5	0	0.003	0	5	0	0.003
Wb Thru	19	1600	0.031 *	0	19	1600	0.033 *	0	19	1600	0.033 *	0	19	1600	0.031 *	0	19	1600	0.033 *	0	19	1600	0.033 *
Wb Right	28	0	-	0	28	0	-	0	28	0	-	0	28	0	-	0	28	0	-	0	28	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.214				0.229				0.229				0.215				0.230				0.230
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

Cedar Avenue @ 22nd Street

N-S St: Cedar Avenue
E-W St: 22nd Street
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU5

Peak hr: PM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	8	0	0.005 *	5	13	0	0.008 *	0	13	0	0.008 *	0	8	0	0.005 *	5	13	0	0.008 *	0	13	0	0.008 *
Nb Thru	66	1600	0.046	14	80	1600	0.059	0	80	1600	0.059	1	68	1600	0.047	14	82	1600	0.060	0	82	1600	0.060
Nb Right	0	0	-	2	2	0	-	0	2	0	-	0	0	0	-	2	2	0	-	0	2	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	94	1600	0.078 *	13	107	1600	0.086 *	0	107	1600	0.086 *	-1	94	1600	0.078 *	13	107	1600	0.086 *	0	107	1600	0.086 *
Sb Right	31	0	-	0	31	0	-	0	31	0	-	0	31	0	-	0	31	0	-	0	31	0	-
Eb Left	38	0	0.024 *	0	38	0	0.024	0	38	0	0.024	0	38	0	0.024 *	0	38	0	0.024	0	38	0	0.024
Eb Thru	7	1600	0.038	0	7	1600	0.043 *	0	7	1600	0.043 *	0	7	1600	0.038	0	7	1600	0.044 *	0	7	1600	0.044 *
Eb Right	15	0	-	9	24	0	-	0	24	0	-	0	15	0	-	9	24	0	-	0	24	0	-
Wb Left	1	0	0.001	1	2	0	0.001 *	0	2	0	0.001 *	0	1	0	0.001	1	2	0	0.001 *	0	2	0	0.001 *
Wb Thru	11	1600	0.018 *	0	11	1600	0.018	0	11	1600	0.018	0	11	1600	0.018 *	0	11	1600	0.018	0	11	1600	0.018
Wb Right	16	0	-	0	16	0	-	0	16	0	-	0	16	0	-	0	16	0	-	0	16	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.224				0.239				0.239				0.225				0.239				0.239
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

N-S St: Meadows Avenue
E-W St: Marine Avenue
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU6

Meadows Avenue @ Marine Avenue
Peak hr: AM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	221	0	0.138	0	221	0	0.138	0	221	0	0.138	0	223	0	0.140	0	223	0	0.140	0	223	0	0.140
Nb Thru	2	1600	0.165 *	0	2	1600	0.165 *	0	2	1600	0.165 *	0	2	1600	0.170 *	0	2	1600	0.170 *	0	2	1600	0.170 *
Nb Right	41	0	-	0	41	0	-	0	41	0	-	6	47	0	-	0	47	0	-	0	47	0	-
Sb Left	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *
Sb Thru	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000
Sb Right	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011
Eb Left	10	1600	0.006 *	0	10	1600	0.006 *	0	10	1600	0.006 *	0	10	1600	0.006 *	0	10	1600	0.006 *	0	10	1600	0.006 *
Eb Thru	515	3200	0.174	8	523	3200	0.177	0	523	3200	0.177	17	537	3200	0.181	8	545	3200	0.184	0	545	3200	0.184
Eb Right	42	0	-	0	42	0	-	0	42	0	-	0	42	0	-	0	42	0	-	0	42	0	-
Wb Left	36	1600	0.023	0	36	1600	0.023	0	36	1600	0.023	1	37	1600	0.023	0	37	1600	0.023	0	37	1600	0.023
Wb Thru	693	3200	0.220 *	9	702	3200	0.223 *	0	702	3200	0.223 *	20	720	3200	0.228 *	9	729	3200	0.231 *	0	729	3200	0.231 *
Wb Right	11	0	-	0	11	0	-	0	11	0	-	0	11	0	-	0	11	0	-	0	11	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.496				0.498				0.498				0.510				0.512				0.512
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green

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INTERSECTION CAPACITY UTILIZATION

N-S St: Meadows Avenue
E-W St: Marine Avenue
Project: Chalk Pre-School Manhattan Beach Project/1-14-4083-1
File: ICU6

Meadows Avenue @ Marine Avenue
Peak hr: PM
Annual Growth: 1.00%

Date: 07/08/2014
Date of Count: 2014
Projection Year: 2015

	2014 EXIST. TRAFFIC			2014 EXISTING PLUS PROJECT				2014 EXIST. W/PROJECT + MITIGATION				2015 FUTURE WITHOUT PROJECT				2015 FUTURE WITH PROJECT				2015 FUTURE W/PROJECT + MITIGATIO			
	1	2	V/C	Added	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	41	0	0.026	0	41	0	0.026	0	41	0	0.026	0	41	0	0.026	0	41	0	0.026	0	41	0	0.026
Nb Thru	0	1600	0.038 *	0	0	1600	0.038 *	0	0	1600	0.038 *	0	0	1600	0.039 *	0	0	1600	0.039 *	0	0	1600	0.039 *
Nb Right	19	0	-	0	19	0	-	0	19	0	-	1	20	0	-	0	20	0	-	0	20	0	-
Sb Left	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *	0	7	1600	0.004 *
Sb Thru	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000	0	1	0	0.000
Sb Right	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004
Eb Left	16	1600	0.010	0	16	1600	0.010	0	16	1600	0.010	0	16	1600	0.010	0	16	1600	0.010	0	16	1600	0.010
Eb Thru	751	3200	0.260 *	7	758	3200	0.262 *	0	758	3200	0.262 *	19	778	3200	0.269 *	7	785	3200	0.271 *	0	785	3200	0.271 *
Eb Right	81	0	-	0	81	0	-	0	81	0	-	0	82	0	-	0	82	0	-	0	82	0	-
Wb Left	106	1600	0.066 *	0	106	1600	0.066 *	0	106	1600	0.066 *	5	112	1600	0.070 *	0	112	1600	0.070 *	0	112	1600	0.070 *
Wb Thru	593	3200	0.187	6	599	3200	0.189	0	599	3200	0.189	29	628	3200	0.198	6	634	3200	0.200	0	634	3200	0.200
Wb Right	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-	0	6	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.468				0.470				0.470				0.481				0.484				0.484
LOS			A				A				A				A				A				A

** Key conflicting movement as a part of ICU*
1 Counts conducted by City Traffic Counters
2 Capacity expressed in veh/hour of green

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2010, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	1	0	10	0	2640	6	7	999	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	11	0	2839	6	8	1074	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2224	3934	537	3287	3931	1423	1074	0	0	2845	0	0
Stage 1	1089	1089	-	2842	2842	-	-	-	-	-	-	-
Stage 2	1135	2845	-	445	1089	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	46	3	418	9	3	107	360	-	-	46	-	-
Stage 1	173	290	-	9	37	-	-	-	-	-	-	-
Stage 2	194	37	-	514	290	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	36	2	418	8	2	107	360	-	-	46	-	-
Mov Cap-2 Maneuver	36	2	-	8	2	-	-	-	-	-	-	-
Stage 1	173	240	-	9	37	-	-	-	-	-	-	-
Stage 2	175	37	-	425	240	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	98	0	0.7
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	360	-	-	-	50	46	-	-
HCM Lane V/C Ratio	-	-	-	-	0.237	0.164	-	-
HCM Control Delay (s)	0	-	-	0	98	98	-	-
HCM Lane LOS	A	-	-	A	F	F	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.8	0.5	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	1	0	14	0	2640	15	11	999	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	15	0	2839	16	12	1074	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2233	3953	537	3300	3945	1427	1074	0	0	2855	0	0
Stage 1	1098	1098	-	2847	2847	-	-	-	-	-	-	-
Stage 2	1135	2855	-	453	1098	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	45	3	418	9	3	107	360	-	-	45	-	-
Stage 1	170	287	-	9	37	-	-	-	-	-	-	-
Stage 2	194	37	-	508	287	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	31	2	418	7	2	107	360	-	-	45	-	-
Mov Cap-2 Maneuver	31	2	-	7	2	-	-	-	-	-	-	-
Stage 1	170	210	-	9	37	-	-	-	-	-	-	-
Stage 2	167	37	-	373	210	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	95.6	0	1.2
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	360	-	-	-	55	45	-	-
HCM Lane V/C Ratio	-	-	-	-	0.293	0.263	-	-
HCM Control Delay (s)	0	-	-	0	95.6	111.4	-	-
HCM Lane LOS	A	-	-	A	F	F	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1	0.9	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	1	0	10	0	2755	6	7	1095	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	11	0	2962	6	8	1177	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2377	4161	589	3452	4158	1484	1177	0	0	2969	0	0
Stage 1	1192	1192	-	2966	2966	-	-	-	-	-	-	-
Stage 2	1185	2969	-	486	1192	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	37	2	387	7	2	98	321	-	-	39	-	-
Stage 1	146	259	-	7	32	-	-	-	-	-	-	-
Stage 2	180	32	-	486	259	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	28	2	387	6	2	98	321	-	-	39	-	-
Mov Cap-2 Maneuver	28	2	-	6	2	-	-	-	-	-	-	-
Stage 1	146	206	-	7	32	-	-	-	-	-	-	-
Stage 2	160	32	-	386	206	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	125.1	0	0.8
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	321	-	-	-	41	39	-	-
HCM Lane V/C Ratio	-	-	-	-	0.288	0.193	-	-
HCM Control Delay (s)	0	-	-	0	125.1	118.2	-	-
HCM Lane LOS	A	-	-	A	F	F	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1	0.6	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	1	0	14	0	2755	15	11	1095	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	1	0	15	0	2962	16	12	1177	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2386	4179	589	3465	4171	1489	1177	0	0	2978	0	0
Stage 1	1201	1201	-	2970	2970	-	-	-	-	-	-	-
Stage 2	1185	2978	-	495	1201	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	36	2	387	7	2	97	321	-	-	39	-	-
Stage 1	144	256	-	7	32	-	-	-	-	-	-	-
Stage 2	180	32	-	480	256	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	23	1	387	5	1	97	321	-	-	39	-	-
Mov Cap-2 Maneuver	23	1	-	5	1	-	-	-	-	-	-	-
Stage 1	144	177	-	7	32	-	-	-	-	-	-	-
Stage 2	152	32	-	332	177	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	128.2	0	1.3
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	321	-	-	-	44	39	-	-
HCM Lane V/C Ratio	-	-	-	-	0.367	0.303	-	-
HCM Control Delay (s)	0	-	-	0	128.2	133.3	-	-
HCM Lane LOS	A	-	-	A	F	F	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.3	1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	3	0	18	0	1705	21	7	2307	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	3	0	19	0	1795	22	7	2428	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3164	4263	1217	2792	4255	908	2435	0	0	1817	0	0
Stage 1	2446	2446	-	1806	1806	-	-	-	-	-	-	-
Stage 2	718	1817	-	986	2449	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	11	2	148	20	2	239	75	-	-	155	-	-
Stage 1	18	61	-	53	129	-	-	-	-	-	-	-
Stage 2	351	128	-	240	60	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	2	148	19	2	239	75	-	-	155	-	-
Mov Cap-2 Maneuver	10	2	-	19	2	-	-	-	-	-	-	-
Stage 1	18	58	-	53	129	-	-	-	-	-	-	-
Stage 2	323	128	-	229	57	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	57.6	0	0.1
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	75	-	-	-	90	155	-	-
HCM Lane V/C Ratio	-	-	-	-	0.246	0.048	-	-
HCM Control Delay (s)	0	-	-	0	57.6	29.4	-	-
HCM Lane LOS	A	-	-	A	F	D	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	3	0	20	0	1705	27	7	2307	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	3	0	21	0	1795	28	7	2428	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3164	4269	1217	2795	4258	912	2435	0	0	1823	0	0
Stage 1	2446	2446	-	1809	1809	-	-	-	-	-	-	-
Stage 2	718	1823	-	986	2449	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	11	2	148	20	2	237	75	-	-	154	-	-
Stage 1	18	61	-	53	129	-	-	-	-	-	-	-
Stage 2	351	127	-	240	60	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	2	148	19	2	237	75	-	-	154	-	-
Mov Cap-2 Maneuver	10	2	-	19	2	-	-	-	-	-	-	-
Stage 1	18	58	-	53	129	-	-	-	-	-	-	-
Stage 2	320	127	-	229	57	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	55.4	0	0.1
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	75	-	-	-	95	154	-	-
HCM Lane V/C Ratio	-	-	-	-	0.255	0.048	-	-
HCM Control Delay (s)	0	-	-	0	55.4	29.5	-	-
HCM Lane LOS	A	-	-	A	F	D	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	3	0	18	0	1846	21	7	2437	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	3	0	19	0	1943	22	7	2565	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3360	4548	1286	2995	4540	983	2572	0	0	1965	0	0
Stage 1	2583	2583	-	1954	1954	-	-	-	-	-	-	-
Stage 2	777	1965	-	1041	2586	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	8	1	133	15	1	213	64	-	-	130	-	-
Stage 1	14	51	-	42	109	-	-	-	-	-	-	-
Stage 2	323	107	-	222	51	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	7	1	133	14	1	213	64	-	-	130	-	-
Mov Cap-2 Maneuver	7	1	-	14	1	-	-	-	-	-	-	-
Stage 1	14	48	-	42	109	-	-	-	-	-	-	-
Stage 2	294	107	-	210	48	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	78.6	0	0.1
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	64	-	-	-	70	130	-	-
HCM Lane V/C Ratio	-	-	-	-	0.316	0.057	-	-
HCM Control Delay (s)	0	-	-	0	78.6	34.4	-	-
HCM Lane LOS	A	-	-	A	F	D	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	3	0	20	0	1846	27	7	2437	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	55	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	3	0	21	0	1943	28	7	2565	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3360	4555	1286	2998	4543	986	2572	0	0	1972	0	0
Stage 1	2583	2583	-	1957	1957	-	-	-	-	-	-	-
Stage 2	777	1972	-	1041	2586	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	8	1	133	15	1	212	64	-	-	129	-	-
Stage 1	14	51	-	41	109	-	-	-	-	-	-	-
Stage 2	323	107	-	222	51	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	7	1	133	14	1	212	64	-	-	129	-	-
Mov Cap-2 Maneuver	7	1	-	14	1	-	-	-	-	-	-	-
Stage 1	14	48	-	41	109	-	-	-	-	-	-	-
Stage 2	291	107	-	210	48	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	74.4	0	0.1
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	64	-	-	-	75	129	-	-
HCM Lane V/C Ratio	-	-	-	-	0.323	0.057	-	-
HCM Control Delay (s)	0	-	-	0	74.4	34.6	-	-
HCM Lane LOS	A	-	-	A	F	D	-	-
HCM 95th %tile Q(veh)	0	-	-	-	1.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	23	2	5	0	2	19	28	0	6	65	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	2	6	0	2	22	33	0	7	76	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	7.4	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	77%	4%	8%
Vol Thru, %	92%	7%	39%	62%
Vol Right, %	0%	17%	57%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	30	49	104
LT Vol	65	2	19	65
Through Vol	0	5	28	31
RT Vol	6	23	2	8
Lane Flow Rate	84	35	58	122
Geometry Grp	1	1	1	1
Degree of Util (X)	0.098	0.044	0.065	0.136
Departure Headway (Hd)	4.205	4.498	4.088	3.994
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	842	801	881	887
Service Time	2.283	2.499	2.089	2.068
HCM Lane V/C Ratio	0.1	0.044	0.066	0.138
HCM Control Delay	7.7	7.7	7.4	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.2	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	8	65	31
Peak Hour Factor	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	9	76	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	23	2	20	0	5	19	28	0	11	80	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	2	24	0	6	22	33	0	13	94	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	7.6	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	51%	10%	7%
Vol Thru, %	86%	4%	37%	67%
Vol Right, %	2%	44%	54%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	45	52	120
LT Vol	80	2	19	81
Through Vol	2	20	28	31
RT Vol	11	23	5	8
Lane Flow Rate	109	53	61	141
Geometry Grp	1	1	1	1
Degree of Util (X)	0.129	0.065	0.072	0.16
Departure Headway (Hd)	4.354	4.389	4.241	4.074
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	821	849	865
Service Time	2.354	2.391	2.244	2.173
HCM Lane V/C Ratio	0.132	0.065	0.072	0.163
HCM Control Delay	8	7.7	7.6	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.2	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	8	81	31
Peak Hour Factor	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	9	95	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	23	2	5	0	2	19	28	0	6	66	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	2	6	0	2	22	33	0	7	78	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	7.4	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	77%	4%	8%
Vol Thru, %	92%	7%	39%	63%
Vol Right, %	0%	17%	57%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	30	49	105
LT Vol	66	2	19	66
Through Vol	0	5	28	31
RT Vol	6	23	2	8
Lane Flow Rate	85	35	58	124
Geometry Grp	1	1	1	1
Degree of Util (X)	0.099	0.044	0.066	0.137
Departure Headway (Hd)	4.206	4.502	4.092	3.997
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	841	800	880	886
Service Time	2.285	2.504	2.093	2.073
HCM Lane V/C Ratio	0.101	0.044	0.066	0.14
HCM Control Delay	7.8	7.7	7.4	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.2	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	8	66	31
Peak Hour Factor	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	9	78	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	23	2	20	0	5	19	28	0	11	81	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	2	24	0	6	22	33	0	13	95	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	7.6	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	51%	10%	7%
Vol Thru, %	86%	4%	37%	68%
Vol Right, %	2%	44%	54%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	45	52	121
LT Vol	81	2	19	82
Through Vol	2	20	28	31
RT Vol	11	23	5	8
Lane Flow Rate	111	53	61	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.131	0.065	0.072	0.161
Departure Headway (Hd)	4.354	4.395	4.248	4.076
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	820	848	864
Service Time	2.354	2.397	2.25	2.176
HCM Lane V/C Ratio	0.134	0.065	0.072	0.164
HCM Control Delay	8	7.7	7.6	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.2	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	8	82	31
Peak Hour Factor	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	9	96	36
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	38	7	15	0	1	11	16	0	8	66	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	7	15	0	1	11	16	0	8	68	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	7.3	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	63%	4%	0%
Vol Thru, %	89%	12%	39%	75%
Vol Right, %	0%	25%	57%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	60	28	125
LT Vol	66	7	11	94
Through Vol	0	15	16	31
RT Vol	8	38	1	0
Lane Flow Rate	76	62	29	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.089	0.074	0.033	0.143
Departure Headway (Hd)	4.213	4.288	4.113	4.002
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	840	821	876	887
Service Time	2.29	2.388	2.113	2.071
HCM Lane V/C Ratio	0.09	0.076	0.033	0.145
HCM Control Delay	7.7	7.7	7.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	0	94	31
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	97	32
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.7
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	38	7	24	0	2	11	16	0	13	80	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	7	25	0	2	11	16	0	13	82	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.8	7.4	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	55%	7%	0%
Vol Thru, %	84%	10%	38%	78%
Vol Right, %	2%	35%	55%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	69	29	138
LT Vol	80	7	11	107
Through Vol	2	24	16	31
RT Vol	13	38	2	0
Lane Flow Rate	98	71	30	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.087	0.035	0.16
Departure Headway (Hd)	4.234	4.394	4.223	4.05
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	833	820	852	872
Service Time	2.328	2.395	2.226	2.138
HCM Lane V/C Ratio	0.118	0.087	0.035	0.163
HCM Control Delay	7.9	7.8	7.4	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.1	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	0	107	31
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	110	32
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.9
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	38	7	15	0	1	11	16	0	8	68	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	7	15	0	1	11	16	0	8	70	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	7.3	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	63%	4%	0%
Vol Thru, %	89%	12%	39%	75%
Vol Right, %	0%	25%	57%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	60	28	125
LT Vol	68	7	11	94
Through Vol	0	15	16	31
RT Vol	8	38	1	0
Lane Flow Rate	78	62	29	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.075	0.033	0.143
Departure Headway (Hd)	4.213	4.393	4.118	4.004
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	840	820	874	885
Service Time	2.291	2.393	2.119	2.076
HCM Lane V/C Ratio	0.093	0.076	0.033	0.146
HCM Control Delay	7.7	7.7	7.3	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	0	94	31
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	97	32
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.8
HCM LOS	A

Lane

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	38	7	24	0	2	11	16	0	13	82	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	7	25	0	2	11	16	0	13	85	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.8	7.4	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	55%	7%	0%
Vol Thru, %	85%	10%	38%	78%
Vol Right, %	2%	35%	55%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	69	29	138
LT Vol	82	7	11	107
Through Vol	2	24	16	31
RT Vol	13	38	2	0
Lane Flow Rate	100	71	30	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.118	0.087	0.035	0.16
Departure Headway (Hd)	4.234	4.4	4.229	4.052
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	833	819	851	872
Service Time	2.328	2.401	2.232	2.141
HCM Lane V/C Ratio	0.12	0.087	0.035	0.163
HCM Control Delay	7.9	7.8	7.4	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.1	0.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	0	107	31
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	110	32
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.9
HCM LOS	A

Lane

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CITY OF MANHATTAN BEACH

DEPARTMENT OF COMMUNITY DEVELOPMENT

TO: Angelica Ochoa, Assistant Planner

FROM: Erik Zandvliet, Traffic Engineer

DATE: September 2, 2014

SUBJECT: **Site Plan Review-1114 22nd Street**
Traffic Engineering Comments (Revised 9-2-2014)

The following comments have been prepared to address traffic engineering concerns for the proposed chalk Preschool at 1114 22nd Street based on plans prepared by Studio 9one2Architecture dated June 1, 2014 and the Traffic Impact Study prepared by Linscott, Law and Greenspan Engineers, dated July 10, 2014.

1. The applicant shall prepare and maintain a Traffic Operations and Management Plan (TOMP) as summarized in the Traffic Impact Study to be followed by faculty, staff, students and parents/guardians. The TOMP shall include, but not be limited to, the following requirements:
    a. School staff shall be directed to arrive at the on-site parking lot prior to commencement of student drop-off operations and park within designated spaces.
    b. One to two staff members or volunteers will be positioned within the site parking lot to direct parent/guardian drop-off and pick-up operations and assist during the morning drop-off and afternoon pick-up peak periods.
    c. Staff or volunteers shall wear safety gear including reflective vests at all times when performing traffic control operations within the parking lot.
    d. Parents and guardians shall park their vehicles on-site for short-term parking and then escort their pre-school child/children to the appropriate building entrance.
    e. School-related vehicles (e.g., parents/guardians dropping off students, etc.) will also be directed to travel to the site via Sepulveda Boulevard, Cedar Avenue, and 22nd Street so as to result in a greater disbursement of trips.
    f. Upon entering the project site, parents and guardians will be encouraged to have their student(s) ready to exit and enter the vehicle safely and efficiently.
    g. The parking lot gate will remain open during student drop-off and pick-up times.
    h. School-related vehicles will be directed to not park, drop-off, or pick-up students anywhere along 22nd Street or Cedar Avenue.
    i. The TOMP should include information on parking operations, site access and circulation, and pre-school student drop-off/pick-up operations. The goal of maintaining and reinforcing the TOMP is to facilitate site access and circulation to/from the site, minimize impacts to the neighborhood surrounding the site, and efficiently manage parking facilities provided on the site.
    j. The parking and student drop-off/pick-up operations contained in the TOMP shall be included in Chalk pre-school policies. These school policies should be

EXHIBIT D
PC MTG 9-10-14

communicated to faculty, staff, students and parents/guardians at the beginning of the school year and be reinforced throughout the school year.

2. Any vehicle gates shall remain open during business hours. **(COA)**
3. All two-way driveways and approaches shall be as wide as the aisle it serves. The driveway approach must be at least 24 feet wide (W=24'), not including approach wings. **(COA and revise plans)**
4. All parking spaces shall remain unrestricted for all users during business hours. **(COA)**
5. Parking stall cross-slope shall not exceed 5%. **(COA)**
6. Doors, gates and staircases shall not swing into a vehicle aisle or public sidewalk. **(COA)**
7. Provide unobstructed triangle of sight visibility (5' x 15') adjacent to each driveway and behind the ultimate property line when exiting the parking areas without walls, columns or landscaping over 36 inches high. (MBMC 10.64.150) **(COA and shown on plans)**
8. All parking spaces adjacent to a vertical obstruction, except columns, must be at least one foot wider than a standard space. **(COA)**
9. Wheel stops are necessary for all parking spaces inside a parking lot or structure except those spaces abutting a masonry wall or protected by a 6-inch high curb. (MBMC 10.64.100D) **(COA)**
10. At least three feet is required beyond the end of an aisle to provide sufficient back-up space for vehicles in the last space of the aisle. **(COA and shown on plans)**
11. Disabled parking must comply with current standards. One or more van size spaces may be required in parking lot with sufficient height clearance. See 2013 CBC Chapter 11B, Div II and other ADA requirements. **(Revise plans)**
12. All unused driveways and undeveloped property frontages shall be reconstructed with curb, gutter and sidewalk. The existing driveway approaches shall be removed and replaced with curb, gutter and sidewalk. **(COA)**
13. Any compact spaces shall be labeled with a sign and a stencil marking at the back of each space. **(COA)**
14. All outside site lighting shall be directed away from the public right-of-way and shall minimize spill-over onto the sidewalks and street. Shields and directional lighting shall be used where necessary to prevent spillover onto adjacent properties. **(COA**)
15. Bicycle parking shall be provided at a rate of five percent (5%) of all parking spaces. (MBMC 10.64.80) **(COA)**
16. The parking lot shall be signed and marked to the satisfaction of the City Traffic Engineer. **(COA)**.

COA – Condition of Approval

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CITY OF MANHATTAN BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT

TO: See distribution below

FROM: Angela Soo, Executive Secretary
(c/o Planner TBD)

DATE: June 12, 2014

SUBJECT: **Review Request for Proposed Project at:**

1114 22ND STREET (Chalk Preschool)

**Commercial Use Permit / Environmental Assessment /
Remodel/Change Existing 8,212 sq ft single story commercial building to a 119 max child preschool /
Remove and Reconstruction of existing non-conforming parking lot to 17 space lot**

The subject application has been submitted to the Planning Division. Please review the attached material(s) and provide specific comments and/or conditions you recommend to be incorporated into the draft Resolution for the project. Conditions should be primarily those which are not otherwise addressed by a City Ordinance.

If no response is received **JUNE 25, 2014** we will conclude there are no conditions from your department.

Comments/Conditions (attach additional sheets as necessary):

APPROVED
Date 8-28-14
PUBLIC WORKS - ENGINEERING
CITY OF MANHATTAN BEACH

NO COMMENT

(Yes) / No Building Div.
(Yes) / No Fire Dept
(Yes) / No Public Works (Carl Blank)
TBD — Yes / No Engineering (Joe Parco)
TBD — Yes / No Waste Mgmnt (Anna LJ)
(Yes) / No Traffic Engr.(Erik Z)

Yes / (No) City Attorney
Yes / No Police Dept.: — TBD
___ Traffic
___ Detectives
___ Crime Prevention
___ Alcohol License (Chris Vargas)

4

CITY OF MANHATTAN BEACH
DEPARTMENT OF COMMUNITY DEVELOPMENT

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Comments/Conditions (attach additional sheets as necessary):

MW 6/19/14

Yes / No Building Div.
Yes / No Fire Dept
Yes / No Public Works (Carl Blank)
TBP — Yes / No Engineering (Joe Parco)
TBD — Yes / No Waste Mgmnt (Anna LJ)
Yes / No Traffic Engr.(Erik Z)

Yes / No City Attorney
Yes / No Police Dept.: — TBD
___Traffic
___ Detectives
___ Crime Prevention
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Comments/Conditions (attach additional sheets as necessary):

Comply with 2013 California Codes and City of Manhattan Beach Amendments.

(Yes) / No Building Div.
(Yes) / No Fire Dept
(Yes) / No Public Works (Carl Blank)
TBD — Yes / No Engineering (Joe Parco)
TBD — Yes / No Waste Mgmnt (Anna LJ)
(Yes) / No Traffic Engr.(Erik Z)

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