Appendix G Traffic and Parking Report

LINSCOTT
LAW &
GREENSPAN
engineers

TRAFFIC & PARKING IMPACT STUDY

HARVARD-WESTLAKE SCHOOL

PARKING IMPROVEMENT PLAN

City of Los Angeles, California
October 30, 2012

Prepared for:

Harvard-Westlake School
3700 Coldwater Canyon Avenue
Studio City, California 91604

LLG Ref. 1-08-3744-2

REGISTERED PROFESSIONAL ENGINEER
DAVID S. SHENDER
C 45324
EXP 9-30-14
CIVIL
STATE OF CALIFORNIA

Prepared by:
Corinna M. Gutierrez
Transportation Engineer I

Under the Supervision of:
David S. Shender, P.E.
Principal

Linscott, Law & Greenspan, Engineers

20931 Burbank Blvd.
Suite C
Woodland Hills, CA 91367

818.835.8648 T
818.835.8649 F

www.llgengineers.com

TABLE OF CONTENTS

SECTION PAGE

Executive Summary ..... **v**

1.0 Introduction **1**
1.1 Study Area 3

2.0 Project Description **4**
2.1 Site Location 4
2.2 Existing Project Site 4
2.3 Proposed Project Description 6
2.4 Roadway Dedication and Project Roadway Improvement Features 6
2.5 Voluntary Roadway Improvements 9
2.6 Construction Programming 10
2.6.1 Construction Schedule 10
2.6.2 Construction Assumptions 10

3.0 Site Access and Circulation **11**
3.1 Vehicular Site Access 11
3.1.1 Existing Site Access 11
3.1.2 Proposed Project Site Access 11
3.2 Pedestrian Access 12

4.0 Project Parking **13**
4.1 City of Los Angeles Code Parking Requirements 13
4.2 Proposed Parking Supply 13

5.0 Existing Street System **14**
5.1 Regional Highway System 14
5.2 Study Intersections 14
5.3 Roadway Descriptions 14
5.4 Public Bus Transit Services 16

6.0 Traffic Counts **19**
6.1 Intersection Manual Traffic Counts 19
6.2 On-Street Parking Utilization 24

7.0 Cumulative Development Projects **26**
7.1 Related Projects 26
7.2 Ambient Traffic Growth Factor 31

8.0 Traffic Forecasting Methodology **32**
8.1 Traffic Generation 32
8.1.1 Construction Traffic Generation 32
8.1.2 Project Occupancy Traffic Generation 35

TABLE OF CONTENTS *(continued)*

SECTION PAGE

8.0 Traffic Forecasting Methodology (continued) 32
8.2 Traffic Distribution and Assignment 35
8.2.1 Construction Traffic Distribution and Assignment 35
8.2.2 Project-Related Localized Distribution Shift and Assignment 37

9.0 Traffic Impact Analysis Methodology 43
9.1 Impact Criteria and Thresholds 43
9.2 LADOT ATSAC/ATCS 43
9.3 Traffic Impact Analysis Scenarios 44
9.3.1 Construction Traffic Impact Analysis Scenarios 44
9.3.2 Project Occupancy Traffic Impact Analysis Scenarios 45

10.0 Construction Traffic Analysis 46
10.1 Existing Conditions 46
10.1.1 Existing Conditions 46
10.1.2 Existing With Construction Traffic Conditions 46
10.2 Future Conditions 46
10.2.1 Future Cumulative Baseline Conditions 46
10.2.2 Future Cumulative With Construction Traffic Conditions 50

11.0 Project Occupancy Traffic Analysis 55
11.1 Existing Conditions 55
11.1.1 Existing Conditions 55
11.1.2 Existing With Project Occupancy Traffic Conditions 55
11.2 Future Conditions 55
11.2.1 Future Cumulative Baseline Conditions 55
11.2.2 Future Cumulative With Project Occupancy Traffic Conditions 58

12.0 Street Segment Analysis 61
12.1 Existing Conditions 61
12.2 Future Conditions 61

13.0 Summary of Effects of Project-Related Roadway Improvements 63
13.1 Effects of Harvard-Westlake Improvements 63
13.2 Conclusion 64

14.0 Congestion Management Program Traffic Impact Assessment 65
14.1 Intersections 65
14.2 Freeways 66
14.3 Transit Impact Review 66

15.0 Conclusions 68

LIST OF FIGURES

SECTION—FIGURE #		PAGE
1–1	Vicinity Map	2
2–1	Campus Map	5
2–2	Project Site Plan – Ground Level	7
5–1	Existing Lane Configurations	15
5–2	Existing Public Transit Routes	18
6–1	Existing Traffic Volumes – Commuter AM Peak Hour	21
6–2	Existing Traffic Volumes – Commuter PM Peak Hour	22
6–3	Existing Traffic Volumes – School AM and PM Peak Hours	23
7–1	Location of Related Projects	28
7–2	Related Projects Traffic Volumes – Commuter AM Peak Hour	29
7–3	Related Projects Traffic Volumes – Commuter PM Peak Hour	30
8–1	Construction Trip Distribution	38
8–2	Construction Traffic Volumes – Commuter AM and PM Peak Hours	39
8–3	Net Project Occupancy Shifted Traffic Volumes – School AM Peak Hour	41
8–4	Net Project Occupancy Shifted Traffic Volumes – School PM Peak Hour	42
10–1	Existing With Construction Traffic Volumes – Commuter AM Peak Hour	48
10–2	Existing With Construction Traffic Volumes – Commuter PM Peak Hour	49
10–3	Future Cumulative Baseline Traffic Volumes – Commuter AM Peak Hour	51
10–4	Future Cumulative Baseline Traffic Volumes – Commuter PM Peak Hour	52
10–5	Future With Construction Traffic Volumes – Commuter AM Peak Hour	53
10–6	Future With Construction Traffic Volumes – Commuter PM Peak Hour	54
11–1	Existing With Project Occupancy Traffic Volumes – School AM and PM Peak Hours	57
11–2	Future Cumulative Baseline Traffic Volumes – School AM and PM Peak Hours	59
11–3	Future Cumulative With Project Occupancy Traffic Volumes – School AM and PM Peak Hours	60

LIST OF TABLES

SECTION—TABLE #		PAGE
5–1	Existing Transit Routes	17
6–1	Existing Traffic Volumes – Commuter Peak Hours	20
6–2	Existing Traffic Volumes – School Peak Hours	20
6–3	Summary of On-Street Parking	25
7–1	Related Projects List and Trip Generation	27
8–1	Construction Trip Generation	36
9–1	City of Los Angeles Intersection Impact Threshold Criteria	43
10–1	Summary of Volume to Capacity Ratios and Levels of Service – Construction Traffic	47
11–1	Summary of Volume to Capacity Ratios and Levels of Service – Project Occupancy	56
12–1	Summary of Street Segment Levels of Service – Project Occupancy	62

APPENDICES

APPENDIX	
A.	Manual Traffic Count Data
B.	Project Occupancy Localized Distribution Shift and Assignment Figures
C.	CMA and Levels of Service Explanation
	CMA Data Worksheets – AM and PM Peak Hours
D.	HCS Data Worksheets

EXECUTIVE SUMMARY

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed Harvard-Westlake School Parking Improvement Plan. The project would develop a parking structure and rooftop athletic practice field immediately across the street from the existing Harvard-Westlake Campus. In full compliance with all applicable City and other regulatory requirements, the traffic report concludes that the project would not cause any potentially significant impacts at the five studied intersections.

These findings by the traffic report were based on a number of conservative assumptions (as detailed throughout the report). In addition, the project includes a number of improvements that will enhance access to and from the proposed parking structure as well as the existing campus. Finally, the project will provide increased on-site parking supply for the Harvard-Westlake Campus for school use, as well as for typical school-related activities outside regular school hours, essentially eliminating the need for school-related vehicles to park on-street, either on Coldwater Canyon Avenue or in the residential neighborhood near the campus.

The traffic analysis follows City of Los Angeles traffic study guidelines and is consistent with traffic assessment guidelines set forth in the *2010 Los Angeles County Congestion Management Program*. This traffic analysis evaluates potential project and construction-related impacts at 5 key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Los Angeles Department of Transportation staff. This traffic analysis also evaluates the potential impact of the proposed project within the context of cumulative impact of all ongoing developments (10 related projects) in the area. In addition, a review was conducted of Los Angeles County Metropolitan Transportation Authority intersection and freeway monitoring stations to determine if a Congestion Management Program transportation impact assessment is required for the proposed project.

Harvard-Westlake owns property on the east and west sides of Coldwater Canyon Avenue, approximately 1/3 of a mile south of Ventura Boulevard and 1.3 miles north of Mulholland Drive. The existing Harvard-Westlake Campus is located at 3700 Coldwater Canyon Avenue, on the east side of Coldwater Canyon Avenue. The site of the proposed Harvard-Westlake parking structure ("project site") is located at 3701 Coldwater Canyon Avenue, on the west side of Coldwater Canyon Avenue, immediately across the street from the Harvard-Westlake Campus. The proposed project would entail the development of a three-story parking structure consisting of 750 parking spaces and an athletic practice field to serve as an accessory use to the existing school. The proposed project also consists of the construction of a pedestrian bridge crossing Coldwater Canyon Avenue that will connect the proposed parking structure to the existing campus. No increase in student enrollment or faculty is proposed as part of the proposed project. Occupancy of the proposed project is anticipated in the year 2016.

A total of 568 parking spaces are currently provided on the existing Harvard-Westlake Campus. Although the school complies with and exceeds the required parking supply of 436 spaces, it was still noted that the existing supply of parking was insufficient to accommodate existing parking

demand during regular school days, as well as in conjunction with school-related activities that occur outside regular school hours such as football games. As a result, it was observed that school-related vehicles regularly park on-street on Coldwater Canyon Avenue, as well as in the residential neighborhood nearby. Following completion of the proposed parking structure, 1,126 parking spaces will be provided on the Harvard-Westlake Campus.

Vehicular access to the existing Harvard-Westlake Campus is provided via three project driveways located along Coldwater Canyon Avenue: the northerly driveway on the north end of the campus property, the middle driveway at the Harvard-Westlake Main Entrance ("Harvard-Westlake Driveway") which is controlled by a traffic signal, and the southerly driveway at Hacienda Drive at the southern end of the campus property. Vehicular access to the proposed project site will be provided via two driveways on the west side of Coldwater Canyon Avenue: the northerly project driveway and the southerly project driveway. As part of the proposed project, it is proposed that the existing Harvard-Westlake driveway be relocated slightly to the south (by approximately 37 feet) along Coldwater Canyon Avenue in order to align with the proposed northerly project driveway. Similar to the existing Harvard-Westlake driveway, the proposed relocated intersection with the northerly project driveway will be controlled by a traffic signal, with new traffic signal equipment provided based on LADOT requirements.

The site of the proposed parking structure is located along the west side of Coldwater Canyon Avenue. Provisions in the Municipal Code require the City to consider half-street dedications and improvements for roadways adjacent to development sites in accordance with adopted standards in the Transportation Element of the General Plan. Coldwater Canyon is designated as a Secondary Highway in the Transportation Element of the City of Los Angeles General Plan. The proposed project includes the dedication on the west side of Coldwater Canyon Avenue along the school's property frontage by 15 feet to provide the City's standard half right-of-way dimension for Secondary Highways as measured from the roadway centerline. Specifically, the widening will allow for the installation of a separate northbound left-turn lane into the northerly project driveway, a southbound right-turn lane into each of the project driveways, and finally an additional southbound through lane on Coldwater Canyon Avenue to provide additional capacity for southbound traffic and minimize potential delay and loss of green-time to non-School related vehicles on Coldwater Canyon Avenue. At the intersection of Coldwater Canyon Avenue and the proposed project's northerly driveway opposite the relocated Harvard-Westlake driveway, new traffic signal equipment will be provided, including left-turn phasing for northbound and southbound Coldwater Canyon Avenue traffic, and LADOT's ATSAC/ATCS equipment with connection to the Coldwater Canyon Avenue intersection at Ventura Boulevard.

In addition to the project roadway improvement features described above, the project proposes the implementation of an additional and voluntary roadway improvement in the vicinity of the project site to further enhance traffic circulation along Coldwater Canyon Avenue. This voluntary improvement includes the modification of the roadway striping on Coldwater Canyon Avenue between Ventura Boulevard and the northerly edge of the project side so as to provide two southbound lanes. In the segment of Coldwater Canyon Avenue between Ventura Boulevard and Van Noord Avenue, the right southbound lane would be available as a through

travel lane during the weekday morning commute period from 7:00 AM to 10:00 AM, and a parking lane during all other hours. The two southbound through lanes on southbound Coldwater Canyon Avenue would connect with the two southbound through lanes proposed to be provided adjacent to the project site. Although not required by City of Los Angeles traffic study guidelines, a street segment analysis was prepared using the Highway Capacity Manual (HCM) methodology for the segment of Coldwater Canyon Avenue between Ventura Boulevard and the Harvard-Westlake driveway in order to demonstrate the substantial benefit that the additional southbound lane would provide to traffic flow during the weekday morning commute peak hours of traffic by providing two southbound lanes during this period.

It is assumed that excavation would occur on the project site during the first year of construction and would require the removal of approximately 135,000 cubic yards of material from the site. After the initial phase of excavation, final grading and structure construction would begin on the site. Based on the review and mapping of the construction phases of the project, it is determined that the peak construction activity and the corresponding highest number of vehicle/truck trips will occur during the construction grading and material export phase of the project. Thus, the greatest potential for impact on the adjacent street system would occur during this peak condition. Excavation of the proposed project site is forecast to generate 240 PCE (passenger car equivalent) vehicle trips per day (120 inbound trips and 120 outbound trips) during the peak construction grading and material export phases at the site. During the weekday commuter AM peak hour and the weekday commuter PM peak hour, it is estimated that approximately 22 PCE vehicle trips would be generated during each of these hours.

Application of the City's threshold criteria to the "Existing with Construction" and "Future with Construction" scenarios indicate that none of the five study intersections are anticipated to be significantly impacted by construction traffic related to the proposed project during the weekday conditions. Incremental but not significant impacts are noted at each of the study intersections.

A traffic analysis for the intersection of Coldwater Canyon Avenue and the relocated Harvard-Westlake driveway/northerly project driveway was also conducted for the proposed project following completion and occupancy of the parking structure. However, since no changes in student enrollment at Harvard-Westlake are anticipated as part of the proposed project, no new vehicle trips to and from the site are expected to be generated. Instead, a localized distribution shift and traffic assignment was conducted for school-related traffic volumes following completion of the proposed project. This traffic assignment is based on the shift of the majority of school-related traffic due to the project features of the proposed project.

Application of the City's threshold criteria to the "Existing With Project Occupancy" and "Future with Project Occupancy" scenarios indicate that the study intersection is not anticipated to be significantly impacted by the shifted school-related traffic related to the proposed project during the weekday conditions. Incremental but not significant impacts are noted at the study intersection.

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. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program*, County of Los Angeles Metropolitan Transportation Authority. It is concluded that the project will not result in significant traffic impacts at designated monitoring locations on the CMP highway system, including on the nearby U.S. 101 (Ventura) Freeway. Also, in compliance with the CMP, the project is not anticipated to cause a significant impact to local public transit services.

TRAFFIC & PARKING IMPACT STUDY

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

City of Los Angeles, California
October 30, 2012

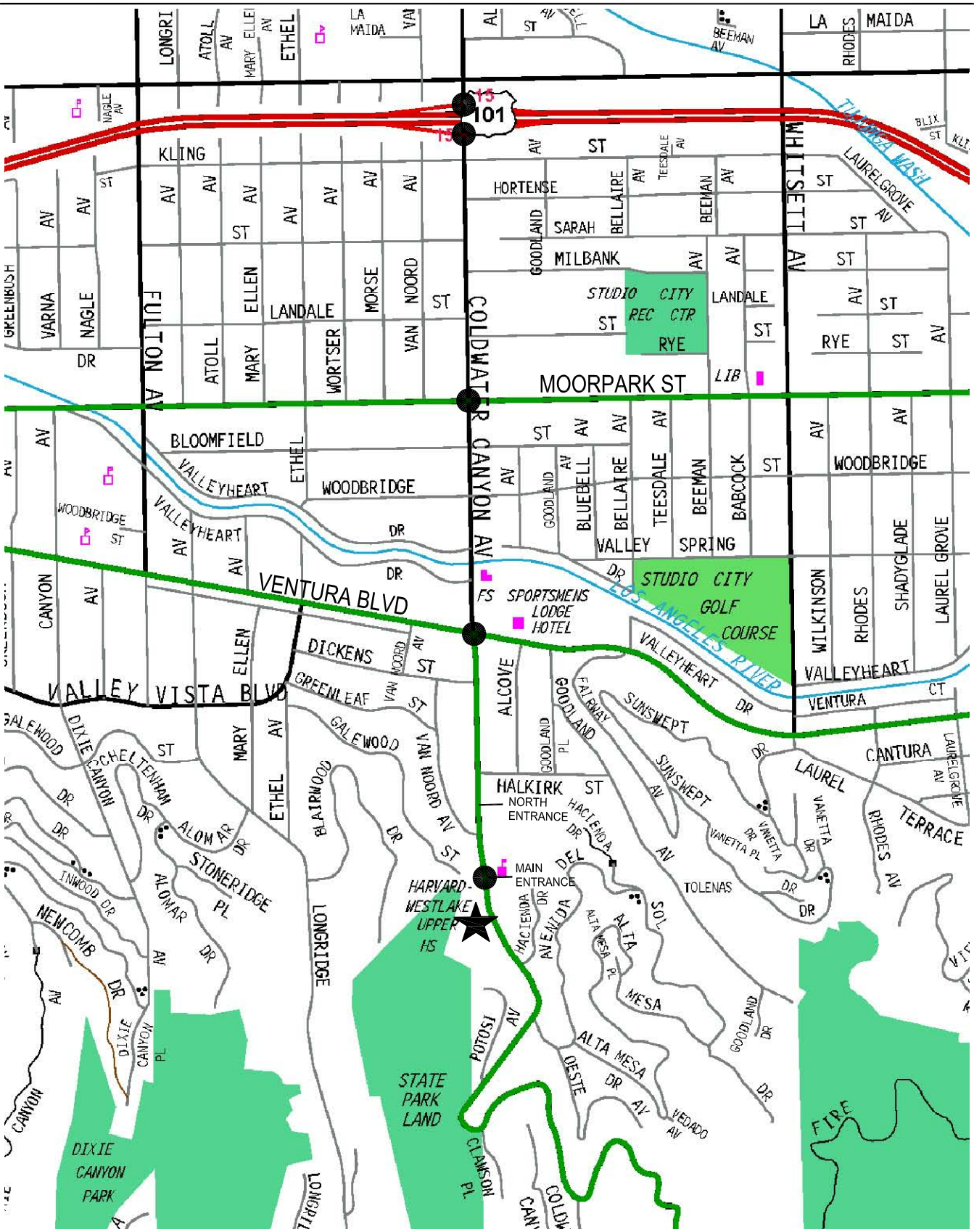
1.0 INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic and parking impacts of the proposed Harvard-Westlake School Parking Improvement Plan. The project applicant seeks to obtain entitlements to develop a parking structure and rooftop athletic practice field at 3701 Coldwater Canyon Avenue in the Studio City area of the City of Los Angeles, California. The proposed project is located in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Plan area of the City of Los Angeles. The proposed project site is located on the west side of Coldwater Canyon Avenue, south of Ventura Boulevard and directly across from the existing Harvard-Westlake Campus which is bounded by Halkirk Street to the north and Hacienda Drive to the south. The project site location and general vicinity are shown in ***Figure 1–1***.

The traffic analysis follows City of Los Angeles traffic study guidelines[1] and is consistent with traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program[2]. This traffic analysis evaluates potential project-related impacts at five key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Los Angeles Department of Transportation (LADOT) staff. The Critical Movement Analysis method was used to determine Volume-to-Capacity ratios and corresponding Levels of Service for all five study intersections. A review also was conducted of Los Angeles County Metropolitan Transportation Authority freeway and intersection monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed project.

This study (i) presents existing traffic volumes, (ii) includes existing traffic volumes with the forecast net new traffic volumes from the proposed project and associated construction traffic, (iii) recommends mitigation measures, where necessary, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future traffic volumes with the proposed project and associated construction traffic, (vi) determines future forecast with project-related and construction-related impacts, and (vii) recommends mitigation measures, where necessary.

[1] *Traffic Study Policies and Procedures*, City of Los Angeles Department of Transportation, May 2012.
[2] *2010 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, 2010.



N

NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

★ PROJECT SITE

● STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f1-1.dwg 10/16/2012 09:56:14 gutierrez llg exhibits.ctb

1.1 Study Area

Based on coordination with LADOT staff, five study intersections have been identified for evaluation during the weekday morning and afternoon peak hours. The five study intersections provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 3.0.

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 (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, existing Harvard-Westlake peak hour vehicle trip generation, the anticipated distribution of project and construction vehicular trips and existing intersection/corridor operations.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The Harvard-Westlake property is located on the east and west sides of Coldwater Canyon Avenue, approximately 1/3 of a mile south of Ventura Boulevard and 1.3 miles north of Mulholland Drive, in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Plan area of the City of Los Angeles, California. The existing Harvard-Westlake Campus is located at 3700 Coldwater Canyon Avenue on the east side of Coldwater Canyon Avenue and is generally bounded by Halkirk Street to the north, Coldwater Canyon Avenue to the west, and Hacienda Drive to the south. The site of the proposed Harvard-Westlake parking structure is located at 3701 Coldwater Canyon Avenue, on the west side of Coldwater Canyon Avenue, directly across from the existing Harvard-Westlake Campus. The project site location and general vicinity are shown in *Figure 1-1*. A campus map of the proposed project site and the existing Harvard-Westlake Campus is illustrated in ***Figure 2-1.***

2.2 Existing Project Site

Harvard-Westlake is an independent co-educational college preparatory grade school for students in grades 7 through 12. Harvard-Westlake teaches students in grades 10 through 12 with a current student enrollment of 876 students. Vehicular access to the existing campus is presently provided via three driveways located on the east side of Coldwater Canyon Avenue. The three existing driveways consist of the northerly driveway on the north end of the campus property, the middle driveway at the Harvard-Westlake Main Entrance ("Harvard-Westlake Driveway") which is controlled by a traffic signal, and the southerly driveway at Hacienda Drive at the southern end of the campus property. The three existing driveways along Coldwater Canyon Avenue all currently accommodate full access (i.e. left-turn and right-turn ingress and egress movements), although only one driveway is controlled by a traffic signal.

A total of 568 parking spaces are currently provided on the existing Harvard-Westlake Campus. As documented in a following section, the existing supply of parking is insufficient to accommodate existing parking demand during regular school days, as well as in conjunction with school-related activities that occur outside regular school hours such as football games. Thus, it is noted that school-related vehicles regularly park on-street along Coldwater Canyon Avenue, as well as in the residential neighborhood near the campus.

Harvard-Westlake has a school bus program, utilizing eight school buses to transport students to and from campus. Currently, due to insufficient space on-site, students currently board and alight from the school buses along the east side of Coldwater Canyon Avenue, north and south of the existing Harvard-Westlake driveway, potentially in conflict with vehicular traffic entering and exiting campus during drop-off and pick-up periods.

The 5.5-acre project site on the west side of Coldwater Canyon Avenue is currently owned by Harvard-Westlake and is primarily unimproved. Vehicular access to the project site is presently provided via two partially-paved driveways located on the west side of Coldwater Canyon Avenue, south of the existing Harvard-Westlake driveway and north of Hacienda Drive.

N

NOT TO SCALE

MAP SOURCE: GOOGLE EARTH

FIGURE 2-1
CAMPUS MAP

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f2-1.dwg 10/16/2012 10:01:07 gutierrez llg exhibits color.ctb

2.3 Proposed Project Description

The project applicant seeks to obtain entitlements to develop a new three-story parking structure consisting of 750 parking spaces and an athletic practice field to serve as an accessory use to the existing school. The proposed parking structure will be utilized by faculty/staff, students, and visitors to the school. The proposed project also consists of the construction of a pedestrian bridge crossing Coldwater Canyon Avenue that will connect the proposed parking structure to the existing campus. No increase in student enrollment or faculty is proposed as part of the proposed project.

Vehicular access to the proposed project site will be provided via two driveways on the west side Coldwater Canyon Avenue. The northerly project driveway is planned to provide primary access to the proposed parking structure. As part of the proposed project, the existing Harvard-Westlake driveway will be relocated slightly to the south (by approximately 37 feet) along Coldwater Canyon Avenue in order to align with the proposed northerly project driveway. Similar to the existing Harvard-Westlake Driveway intersection, the proposed relocated intersection which will include the northerly project driveway will be controlled by a traffic signal, with new traffic signal equipment provided based on LADOT requirements. The southerly project driveway will provide secondary access to the parking structure. It is noted that the proposed parking structure would be used for parking purposes only, with no student drop-off and pick-up operations permitted on the project site. All student drop-offs and pick-ups will continue to be accommodated on the main campus, although in a slightly modified configuration to allow for a safer and more efficient operation for motorists and pedestrians. Further discussion of the proposed project site access and circulation scheme is provided in Section 3.0. The ground floor site plan for the proposed project is illustrated in ***Figure 2-2***.

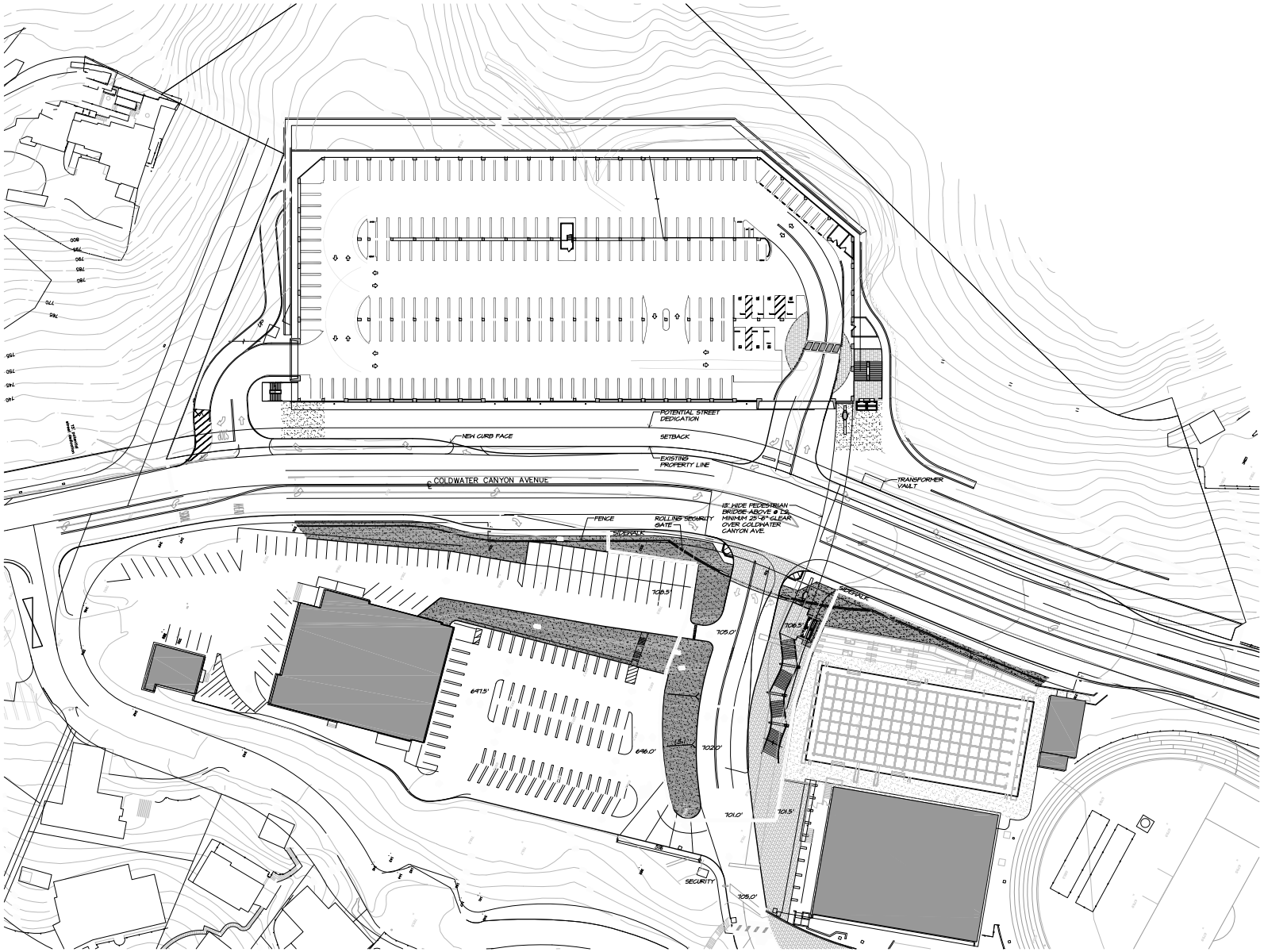
The proposed project would provide the following:

- Increased on-site parking supply for the Harvard-Westlake Campus for regular school use, as well as for typical school-related activities outside of regular school hours such as football games, essentially eliminating the need for school-related vehicles to park on-street, either on Coldwater Canyon Avenue or in the nearby residential neighborhood; and

- Opportunities to provide enhanced and safer vehicular and pedestrian circulation on the main campus, including the relocation of the school bus drop-off/pick-up operations on-site from Coldwater Canyon Avenue.

2.4 Roadway Dedication and Project Roadway Improvement Features

The site of the proposed parking structure is located along the west side of Coldwater Canyon Avenue. Provisions in the Municipal Code require the City to consider half-street dedications and improvements for roadways adjacent to development sites in accordance with adopted standards in the Transportation Element of the General Plan. Coldwater Canyon Avenue is designated as a Secondary Highway in the Transportation Element of the City of Los Angeles General Plan. The standard cross-section for a Secondary Highway is a 70-foot roadway on a



SOURCE:INNOVATIVE DESIGN GROUP

NOT TO SCALE

FIGURE 2-2
PROJECT SITE PLAN

GROUND LEVEL

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

90-foot right-of-way (or a 35-foot half roadway on a 45-foot half right-of-way as measured from the centerline).

Review of City as-built plans show an existing half roadway width of 24 feet and a half right-of-way width of 30 feet along the west side of Coldwater Canyon Avenue adjacent to the project site. Therefore, the proposed project includes the dedication on the west side of Coldwater Canyon Avenue along the school's property frontage by 15 feet to provide the City's standard half right-of-way dimension for Secondary Highways as measured from the roadway centerline. On the southbound Coldwater Canyon Avenue approaches to the two driveways proposed to serve the parking structure, the widening of 11 feet is proposed to provide the minimum 35-foot half-street dimension. The roadway widening is proposed at the driveway approaches so as to allow for the striping of separate right-turn lanes for each intersection. Specifically, the widening will allow for a separate 300-foot long northbound left-turn lane and a 200-foot long southbound right-turn lane at the northerly signalized intersection. A separate 100-foot southbound right-turn lane will also be provided at the southerly driveway. Two southbound through lanes on Coldwater Canyon Avenue will also be installed to provide additional capacity for southbound traffic and minimize potential delay and loss of green-time to non-School related vehicles on Coldwater Canyon Avenue.

In summary, the following Coldwater Canyon Avenue project roadway improvement features are proposed in conjunction with the project:

- Provide one northbound through lane and two southbound through lanes on Coldwater Canyon Avenue along the project frontage (i.e., addition of one southbound through lane);

- At the intersection of Coldwater Canyon Avenue and the proposed project's northerly driveway opposite the relocated Harvard-Westlake driveway, provide:

    - Northbound: One left-turn lane, one through lane and one right-turn lane;

    - Southbound: One left-turn lane, two through lanes and one right-turn lane;

    - Eastbound: One left-turn lane and one optional through/right-turn lane; and

    - Westbound: One left-turn lane and one optional through/right-turn lane;

- Also at the intersection of Coldwater Canyon Avenue and the proposed project's northerly driveway opposite the relocated Harvard-Westlake driveway, provide new traffic signal equipment, including left-turn phasing for northbound and southbound Coldwater Canyon Avenue traffic, and LADOT's ATSAC/ATCS equipment with connection to the Coldwater Canyon Avenue intersection at Ventura Boulevard;

- At the intersection of Coldwater Canyon Avenue and the proposed project's southerly driveway, provide:

- Northbound: One through lane (i.e., no left-turns from northbound Coldwater Canyon Avenue to the southerly driveway will be permitted);

- Southbound: Two through lanes and one right-turn lane; and

- Eastbound: One optional left-turn/right-lane (controlled by a stop sign, with no left-turns permitted weekdays 7:00 a.m. – 7:00 p.m.).

To enhance safety for students and others using the project site, no pedestrian crossings will be provided at the street level. Accordingly, a sidewalk is not recommended along the west side of Coldwater Canyon Avenue so as to further discourage the possibility of student drop-off or pick-ups from occurring along the west side of Coldwater Canyon Avenue. The project will appropriately landscape the strip of public right-of-way between the westerly curbline and westerly property line. Additionally, no crosswalks are recommended across Coldwater Canyon Avenue adjacent to the project site, including at the signalized intersection with the project's northerly driveway across from the Harvard-Westlake driveway. As previously noted, a pedestrian bridge is proposed connecting the proposed parking structure with the Harvard-Westlake Campus.

The proposed Coldwater Canyon Avenue roadway improvements proposed along the proposed project site are illustrated in *Figure 2-2*.

2.5 Voluntary Roadway Improvements

In addition to the project roadway improvement features described above, the project proposes the implementation of additional and voluntary roadway improvements in the vicinity of the project site to further enhance traffic circulation along Coldwater Canyon Avenue. These improvements are not required to be implemented as part of the project; however, if approved by LADOT, Harvard-Westlake has stated that it would construct these voluntary improvements in conjunction with construction of the proposed project. These voluntary improvements are as follows:

- Modify the roadway striping on Coldwater Canyon Avenue between Ventura Boulevard and the northerly edge of the project site so as to provide two southbound lanes. Thus, this segment of Coldwater Canyon Avenue would provide one northbound lane, one center two-way left-turn lane, and two southbound lanes. In the segment between Ventura Boulevard and Van Noord Avenue, the right southbound lane would be available as a through travel lane during the weekday morning commute period (e.g., through signage such as No Stopping 7:00 a.m. – 10:00 a.m.), and a parking lane during all other hours. The two southbound through lanes on southbound Coldwater Canyon Avenue would connect with the two southbound through lanes proposed to be provided adjacent to the project site.

Although not required by City of Los Angeles traffic study guidelines, a street segment analysis was prepared using the Highway Capacity Manual (HCM) methodology for the segment of

Coldwater Canyon Avenue between Ventura Boulevard and the Harvard-Westlake driveway in order to demonstrate the substantial benefit that the additional southbound lane would provide to traffic flow during the weekday morning commute peak hours of traffic by providing two southbound lanes during this period. The discussion of the Coldwater Canyon Avenue street segment analysis is provided in a following section.

2.6 Construction Programming

A description of the anticipated construction-related activities, both overall as well as during each phase of construction of the proposed project, was obtained from the Applicant. The description also included construction worker trips, on-site equipment operation as well as off-site truck traffic generation. The following sections summarize in greater detail the anticipated construction schedule and construction assumptions.

2.6.1 *Construction Schedule*

It is assumed that excavation would occur on the project site during the first year of construction. It is also assumed that following completion of the initial phase of excavation, final grading and structure construction would begin on the site. It is estimated that the excavation would require the removal of approximately 135,000 cubic yards of material from the site. It is anticipated that the equipment staging area and construction worker parking during the initial phases of construction grading, as well as after the start of construction, will occur on the project site.

Based on the review and mapping of these construction phases, it has been determined that the peak construction activity and the corresponding highest number of vehicle/truck trips will occur during the construction grading and material export phase. Thus, the greatest potential for impact on the adjacent street system would occur during this peak condition.

2.6.2 *Construction Assumptions*

The type and number of on-site equipment needs associated with each phase of construction have also been determined based on information provided by the Applicant and the environmental consultant. The following truck trips were estimated for each of the construction phases: 1) construction grading and material export: 30-50 trucks trips per day and 2) final grading and structure construction: 18-22 trucks trips per day. In addition, the following construction worker estimates were estimated for each of the construction phases: 1) construction grading and material export: 16-20 workers and 2) final grading and structure construction: 35-45 workers. As previously stated, the estimated export associated with the excavation phase is estimated at 135,000 cubic yards of material.

3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the Harvard-Westlake School Parking Improvement Plan is displayed in *Figure 2-2*. A description of the existing and proposed project site access and circulation scheme is provided in the following subsections.

3.1 Vehicular Site Access

3.1.1 *Existing Site Access*

Vehicular access to the existing campus is presently provided via three driveways located on the east side Coldwater Canyon Avenue. Descriptions of the existing driveways are provided in the following paragraphs:

- *North Entrance Driveway:*
  The North Entrance driveway is located on the east side of Coldwater Canyon Avenue at the northwest corner of the Harvard-Westlake Campus. The North Entrance driveway presently accommodates a majority of student pick-ups/drop-offs as well as access to faculty parking. The North Entrance driveway currently provides full vehicular access (i.e., left-turn and right-turn ingress and egress movements).

- *Harvard-Westlake Driveway:*
  The Harvard-Westlake driveway is located on the east side of Coldwater Canyon Avenue at the main entrance to the Harvard-Westlake Campus and is controlled by a traffic signal. The Harvard-Westlake driveway presently accommodates both staff and student vehicles. The Harvard-Westlake driveway currently provides full vehicular access (i.e., left-turn and right-turn ingress and egress movements).

- *Hacienda Drive Driveway:*
  The Hacienda Drive driveway is located on the east side of Coldwater Canyon Avenue at Hacienda Drive at the south end of the Harvard-Westlake Campus. The Hacienda Drive driveway presently accommodates student vehicles and provides access to the main campus. In addition, the Hacienda Drive driveway provides access to the parking lot immediately south of Hacienda Drive and north of St. Michael's and All Angels Episcopal Church ("South Lot"), which currently serves as student parking during school hours. The Hacienda Drive driveway currently provides full vehicular access (i.e., left-turn and right-turn ingress and egress movements).

Vehicular access to the proposed project site is presently provided via two partially-paved driveways on the west side of Coldwater Canyon Avenue, south of the existing Harvard-Westlake driveway and north of Hacienda Drive.

3.1.2 *Proposed Project Site Access*

The proposed project site access scheme is displayed in *Figure 2-2.* Vehicular access to the proposed project site will be provided via two driveways located along the west side of

Coldwater Canyon Avenue. Descriptions of the proposed project site driveways are provided in the following paragraphs:

- *Northerly Project Driveway:*
  The northerly project driveway will be located on the west side of Coldwater Canyon Avenue at the northeast corner of the proposed project site. The northerly project driveway will be located directly across from the Harvard-Westlake driveway following the relocation of the existing traffic signal. The northerly project driveway will provide primary access into the proposed parking structure and will accommodate full vehicular access (i.e., left-turn and right-turn ingress and egress movements).

- *Southerly Project Driveway:*
  The southerly project driveway will be located on the west side of Coldwater Canyon Avenue at the southeast corner of the proposed project site. The southerly project driveway will provide secondary access to the proposed parking structure and will accommodate limited vehicular access (i.e., right-turn ingress and right-turn egress movements, with left-turn egress permitted outside of the weekday period 7:00 a.m. – 7:00 p.m.).

3.2 Pedestrian Access

As part of the proposed project, the Applicant proposes to construct a new pedestrian bridge crossing Coldwater Canyon Avenue, connecting the proposed parking structure to the main campus. The location of the proposed pedestrian bridge is illustrated in *Figure 2-2*. The proposed pedestrian bridge would allow for safe crossing between the parking structure and the main campus without stopping vehicles traveling north and south along Coldwater Canyon Avenue. The pedestrian bridge would measure 163 feet long and 13 feet wide and would provide a minimum clearance of 25-feet and 6-inches above Coldwater Canyon Avenue. Connection to the pedestrian bridge will be provided at Level 2 of the proposed parking structure and a bridge landing on the existing main campus. As previously noted, due to safety reasons and the danger of speeding vehicles currently traveling along Coldwater Canyon Avenue, no pedestrian access to the project site will be provided from the street. Pedestrians can access the existing main campus from the parking structure, and vice versa, only via the proposed pedestrian bridge crossing Coldwater Canyon Avenue.

4.0 PROJECT PARKING

This section summarizes the review of the proposed project's parking requirements according to the City of Los Angeles Municipal Code requirements and of the planned project parking supply. It should be noted that Code parking for any development project is ultimately determined by the City of Los Angeles Department of Building and Safety at the time that a project applicant submit building plan to the Department. It is anticipated that the proposed project will provide Code required parking as determined by the City of Los Angeles Department of Building and Safety prior to issuance of a building permit for the project.

4.1 City of Los Angeles Code Parking Requirements

In accordance with City of Los Angeles Planning Department Deputy Advisory Agency parking requirements, 436 parking spaces[3] are currently required for the existing Harvard-Westlake Campus. As no increase in student enrollment is proposed as part of the proposed project, Harvard-Westlake must continue to provide a minimum of 436 parking spaces.

4.2 Proposed Parking Supply

A total of 568 parking spaces are currently provided on the existing Harvard-Westlake Campus. This total parking supply includes parking on the main campus as well as on the South Lot. As part of the proposed project, a total of 192 parking spaces will be removed, which includes 89 spaces from the main campus parking lot and 103 spaces from the South Lot. The South Lot will instead be utilized as a bus drop-off and pick-up staging area during school hours and as an overflow parking lot for special events on-site. With the construction of the proposed parking structure, an additional 750 parking spaces are planned to be provided. Thus, following the construction of the proposed project, 1,126 parking spaces will be provided on-site on the Harvard-Westlake Campus.

As part of the parking supply, the project must also provide a minimum of 15 handicap accessible spaces. This complies with the American with Disabilities Act requirements of a minimum of two percent (2%) of the on-site parking supply as handicap spaces for parking facilities with 501 to 1,000 spaces, with one in every eight handicap spaces being van accessible.

[3] Per City of Los Angeles Department of City Planning, Case No. ZA-1992-0579-PAD.

5.0 EXISTING STREET SYSTEM

5.1 Regional Highway System

Regional access to the project site is provided by the U.S. 101 (Ventura) Freeway as shown in *Figure 1-1*. A brief description of the U.S. 101 Freeway is provided in the following paragraph.

U.S. 101 (Ventura) Freeway is a major north-south freeway that extends across northern and southern California. In the project vicinity, five main travel lanes are provided in each direction on the U.S. 101 Freeway. Both northbound and southbound ramps are provided on the U.S. 101 Freeway at Coldwater Canyon Avenue, which are located approximately one mile north of the project site.

5.2 Study Intersections

Immediate access to the project site is provided by Coldwater Canyon Avenue. The following study intersections were selected in consultation with LADOT staff for analysis of potential impacts due to the proposed project (the jurisdiction in which each study intersection is located is identified in parentheses):

1. Coldwater Canyon Avenue/US-101 Freeway Northbound Ramps (City of Los Angeles/Caltrans)

2. Coldwater Canyon Avenue/US-101 Freeway Southbound Ramps (City of Los Angeles/Caltrans)

3. Coldwater Canyon Avenue/Moorpark Street (City of Los Angeles)

4. Coldwater Canyon Avenue/Ventura Boulevard (City of Los Angeles)

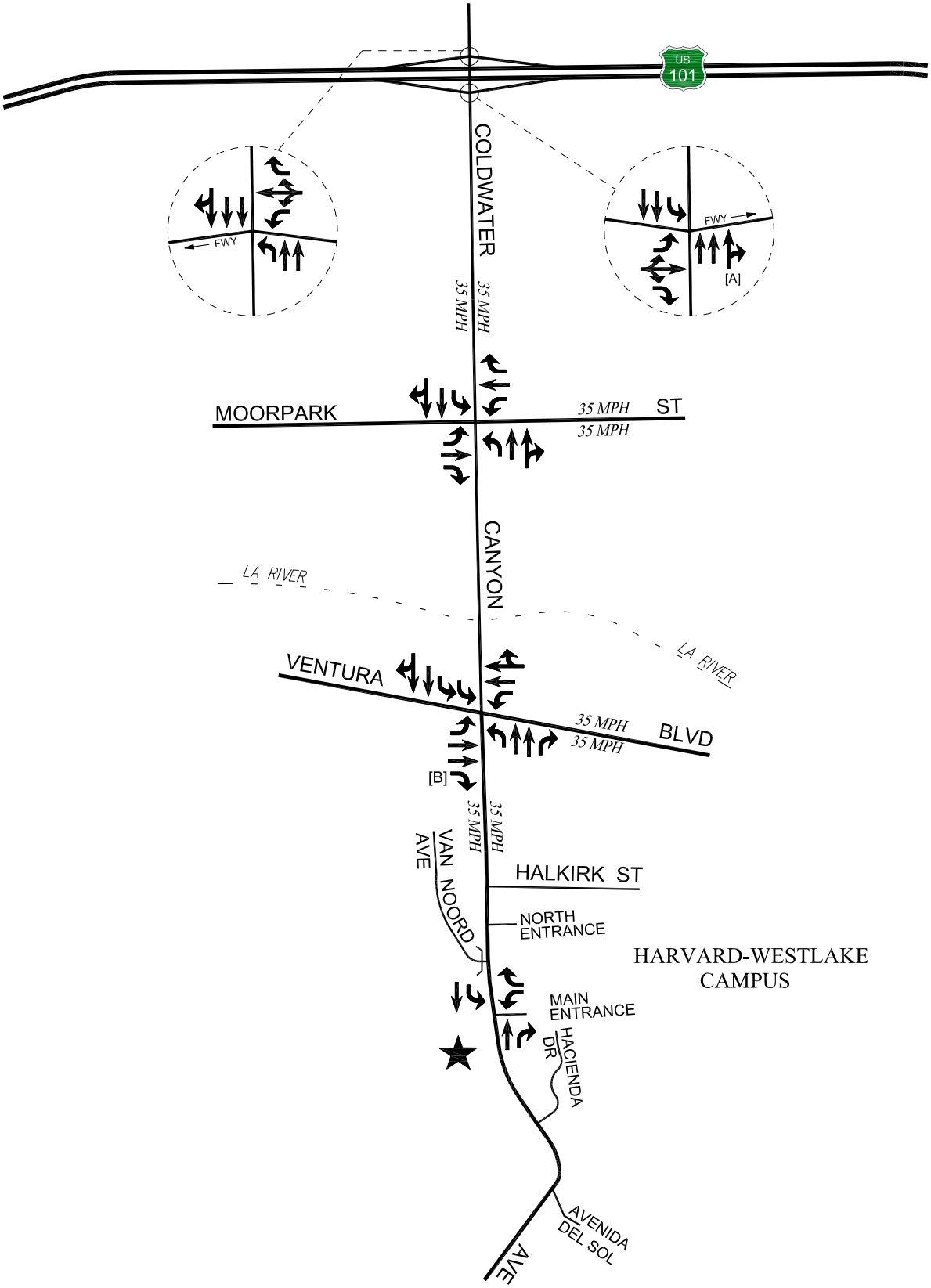
5. Coldwater Canyon Avenue/Harvard-Westlake Driveway (City of Los Angeles)

All five study intersections selected for analysis are presently controlled by traffic signals. The existing lane configurations at the study intersections are displayed in ***Figure 5–1.***

5.3 Roadway Descriptions

Brief descriptions of the important roadways in the project site vicinity are provided in the following paragraphs:

Coldwater Canyon Avenue is a north-south oriented roadway that borders the proposed project site to the east and the existing Harvard-Westlake Campus to the west. Coldwater Canyon Avenue is classified as a Secondary Highway in the City of Los Angeles General Plan Transportation Element. Two through travel lanes are provided in each direction on Coldwater Canyon Avenue north of Ventura Boulevard. One travel lane is provided in each direction on Coldwater Canyon Avenue south of Dickens Street. Separate exclusive left-turn lanes are provided on Coldwater Canyon Avenue at major intersections in the project study area.



N

NOT TO SCALE

★ PROJECT SITE

[A] NO RIGHT-TURN ON RED, 7A - 9A

[B] FUNCTIONAL RIGHT-TURN ONLY LANE

FIGURE 5-1
EXISTING LANE CONFIGURATIONS

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f5-1.dwg 10/16/2012 10:07:47 gutierrez llg exhibits color.ctb

Coldwater Canyon Avenue is posted for a 35 miles per hour speed limit north of Hacienda Drive and a 30 miles per hour speed limit south of Hacienda Drive, except adjacent to Harvard-Westlake Campus where a School Zone 25 miles per hour speed limit is posted.

Moorpark Street is an east-west oriented roadway that is located north of the project site. Moorpark Street is designated as a Secondary Highway in the City of Los Angeles General Plan Transportation Element. One through travel lane is generally provided in each direction on Moorpark Street in the project vicinity. Separate exclusive left-turn lanes are provided on Moorpark Street at major intersections in the project study area. Moorpark Street is posted for a 35 miles per hour speed limit in the project vicinity.

Ventura Boulevard is an east-west oriented roadway that is located north of the project site. Ventura Boulevard is designated as a Major Highway Class II in the City of Los Angeles General Plan Transportation Element. Two through travel lanes are provided in each direction on Ventura Boulevard near the project site. Separate exclusive left-turn lanes are provided on Ventura Boulevard at major intersections in the project study area. Ventura Boulevard is posted for a 35 miles per hour speed limit in the project vicinity.

Halkirk Street is an east-west oriented roadway that is located north of the project site. Halkirk Street is designated as a Local Street in the local Community Plan. One through travel lane is generally provided in each direction on Halkirk Street. Street intersections on Halkirk Street are currently stop-controlled in the project vicinity. There is no posted speed limit on Halkirk Street, thus it is assumed to be a prima-facie speed limit of 25 miles per hour.

Hacienda Drive is an east-west oriented roadway that is located immediately south of the project site. Hacienda Drive is designated as a Private Street. One through travel lane is generally provided in each direction on Hacienda Drive. Street intersections on Hacienda Drive are currently stop-controlled in the project vicinity. There is no posted speed limit on Hacienda Drive, thus it is assumed to be a prima-facie speed limit of 25 miles per hour.

Avenida del Sol is an east-west oriented roadway that is located just south of the project site. Avenida del Sol is designated as a Local Street in the local Community Plan. One through travel lane is generally provided in each direction on Avenida del Sol. Street intersections are currently stop-controlled in the project vicinity. There is no posted speed limit on Avenida del Sol, thus it is assumed to be a prima-facie speed limit of 25 miles per hour.

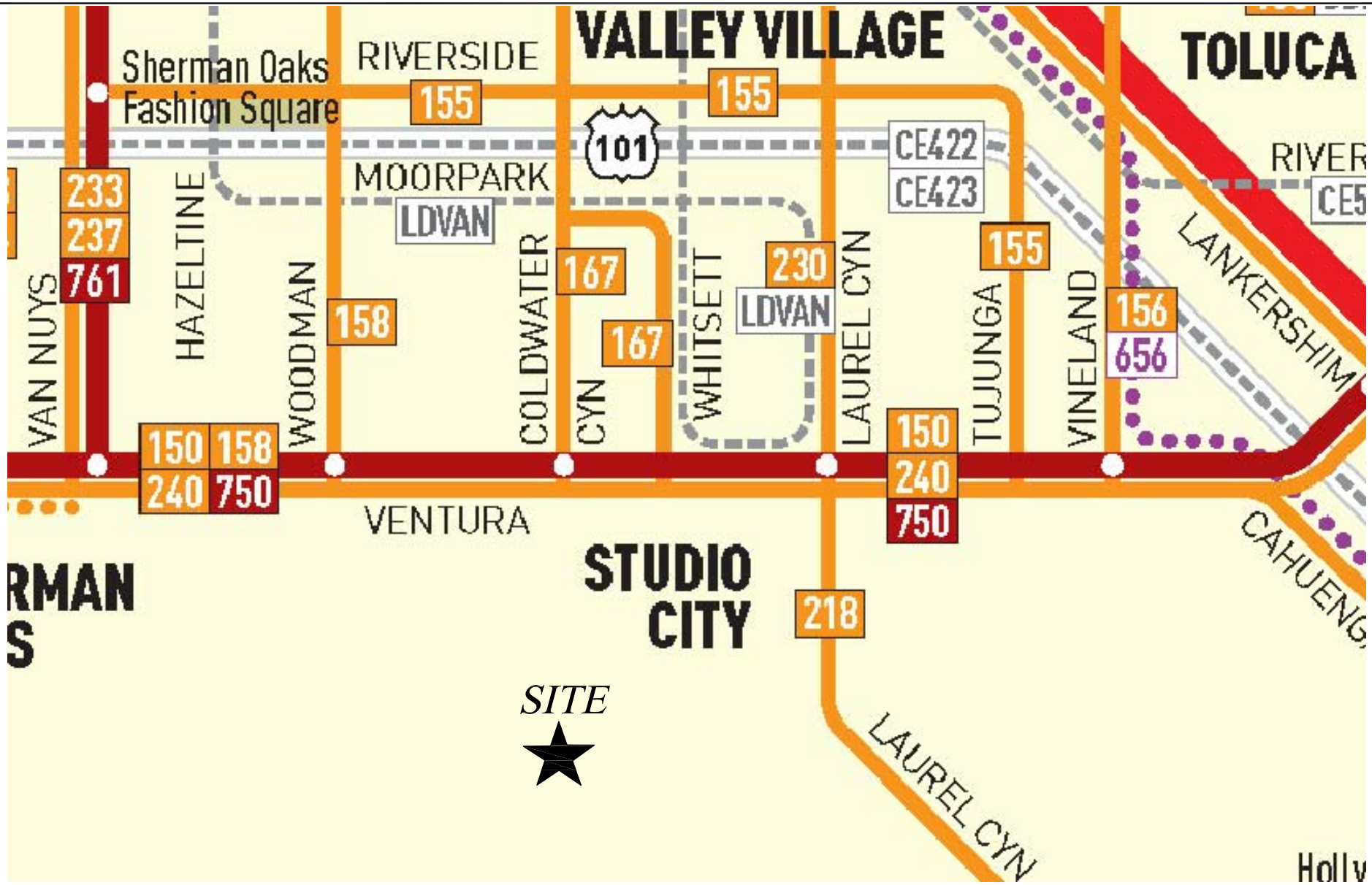
5.4 Public Bus Transit Services

Public bus transit service in the project study area is currently provided by the Los Angeles County Metropolitan Transportation Authority (Metro) and the Los Angeles Department of Transportation (LADOT). A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 5–1***. The existing public transit routes provided within the project site vicinity are illustrated in ***Figure 5–2***.

Table 5-1
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES DURING PEAK HOUR		
			DIR	AM	PM
Metro 150/240	Universal City to Canoga Park (via Studio City, Sherman Oaks, Encino, Tarzana, Reseda, Northridge, Woodland Hills, and Canoga Park)	Ventura Boulevard	EB WB	4 5	6 5
Metro 167	Chatsworth to Studio City (via Northridge, North Hills, Panorama City, and North Hollywood)	Coldwater Canyon, Whitsett Avenue, Ventura Boulevard, Moorpark Street	EB WB	1 2	2 1
Metro Rapid 750	Universal City to Warner Center (via Sherman Oaks and Tarzana)	Ventura Boulevard	EB WB	5 10	5 5
LADOT DASH Van Nuys/Studio City	Van Nuys to Studio City (via Sherman Oaks)	Moorpark Street	EB WB	2 2	2 2
			Total	31	28

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) and Los Angeles Department of Transportation (LADOT) websites, February 2012.



NOT TO SCALE

SOURCE: METROPOLITIAN TRANSPORTATION AUTHORITY

★ PROJECT SITE

FIGURE 5-2
EXISTING PUBLIC TRANSIT ROUTES

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

6.0 TRAFFIC COUNTS

6.1 Intersection Manual Traffic Counts

Manual traffic counts of vehicular turning movements were conducted at each of the study intersections during the weekday morning and afternoon commuter periods to determine the peak hour traffic volumes. The manual traffic counts at the study intersections were conducted from 7:00 AM to 10:00 AM to determine the AM peak commuter hour and from 3:00 PM to 6:00 PM to determine the PM peak commuter hours. Traffic volumes at the study intersections show the typical peak periods between 7:00 AM to 10:00 AM and 3:00 PM to 6:00 PM generally associated with the peak morning and afternoon commuter time periods.

Manual traffic counts of vehicular turning movements were also conducted at the existing Harvard-Westlake Campus driveways during the weekday morning and afternoon commuter periods, as well as for an additional hour from 2:00PM to 3:00PM in conjunction with typical PM peak departure patterns at the Harvard-Westlake Campus to determine the school peak hour traffic volumes. It should be noted that while school-related traffic volumes at the existing project driveways showed the AM peak hour to be similar for both the commuter and school peak hours, school-related traffic volumes during the afternoon peak hour did not directly coincide with the highest peak of commuter afternoon traffic volumes along Coldwater Canyon Avenue. Rather, traffic volumes at the existing project driveways show the typical school peak periods between 7:00 AM to 9:00 AM and 2:00 PM to 4:00 PM generally associated with the peak arrival and departure patterns of the school.

The weekday commuter AM and PM peak period manual counts of vehicle movements at the study intersections are summarized in ***Table 6–1***. As shown on *Table 6-1*, the traffic counts were conducted in January 2011, which was prior to the current City Trunk Line construction project on Coldwater Canyon Avenue by the Department of Water and Power (thus, there were no travel lane constrictions on Coldwater Canyon Avenue at the time of the intersection traffic counts). In addition, for purposes of this analysis, the existing traffic volumes were increased by a factor of 2% in order to reflect 2012 conditions. The existing traffic volumes at the study intersections during the weekday commuter AM and PM peak hours are shown in ***Figures 6-1*** and ***6-2***, respectively. Similarly, the weekday school AM and PM peak period manual counts of vehicle movements are summarized in ***Table 6-2.*** The existing traffic volumes at the study intersections during the weekday school AM and PM peak hours are shown in ***Figure 6-3***. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix A***.

Table 6-1
EXISTING TRAFFIC VOLUMES [1]
Commuter Peak Hours

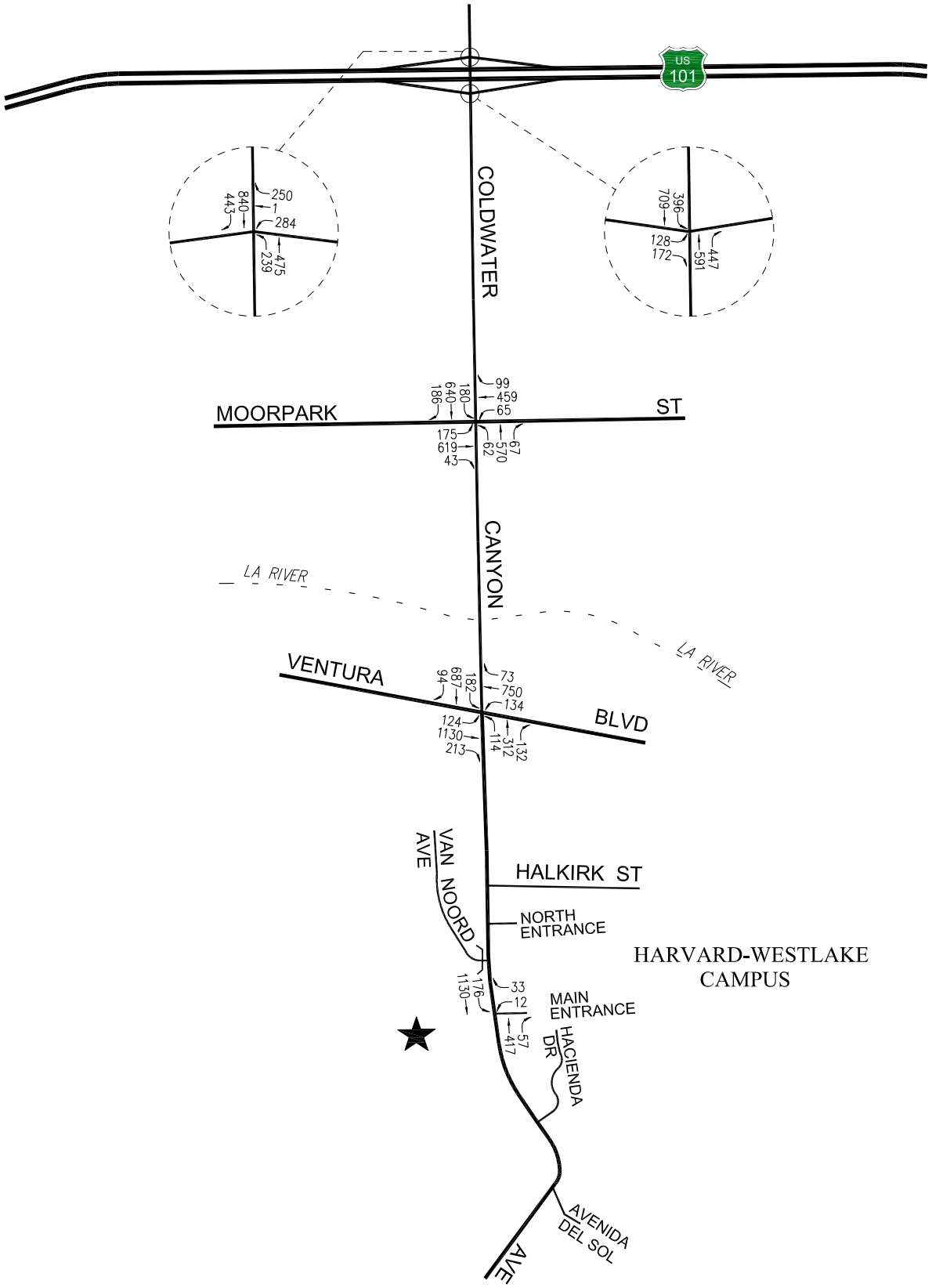
16-Oct-2012

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Coldwater Canyon Avenue/ US-101 Freeway NB Ramps	01/27/2011	NB SB EB WB	7:30	714 1,283 0 534	5:00	1,641 888 0 588
2	Coldwater Canyon Avenue/ US-101 Freeway SB Ramps	01/27/2011	NB SB EB WB	7:45	1,037 1,105 300 0	5:00	1,719 1,000 689 0
3	Coldwater Canyon Avenue/ Moorpark Street	01/27/2011	NB SB EB WB	8:00	700 1,005 837 623	5:00	1,469 1,010 712 804
4	Coldwater Canyon Avenue/ Ventura Boulevard	01/27/2011	NB SB EB WB	7:45	558 963 1,468 957	4:45	1,393 878 1,483 1,560
5	Coldwater Canyon Avenue/ Harvard-Westlake Driveway	01/27/2011	NB SB EB WB	7:15	474 1,307 0 45	5:00	1,311 767 0 117

Table 6-2
EXISTING TRAFFIC VOLUMES [1]
School Peak Hours

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
5	Coldwater Canyon Avenue/ Harvard-Westlake Driveway	01/27/2011	NB SB EB WB	7:15	474 1,306 0 45	2:45	1,244 742 0 131

[1] Counts conducted by The Traffic Solution.



N

NOT TO SCALE

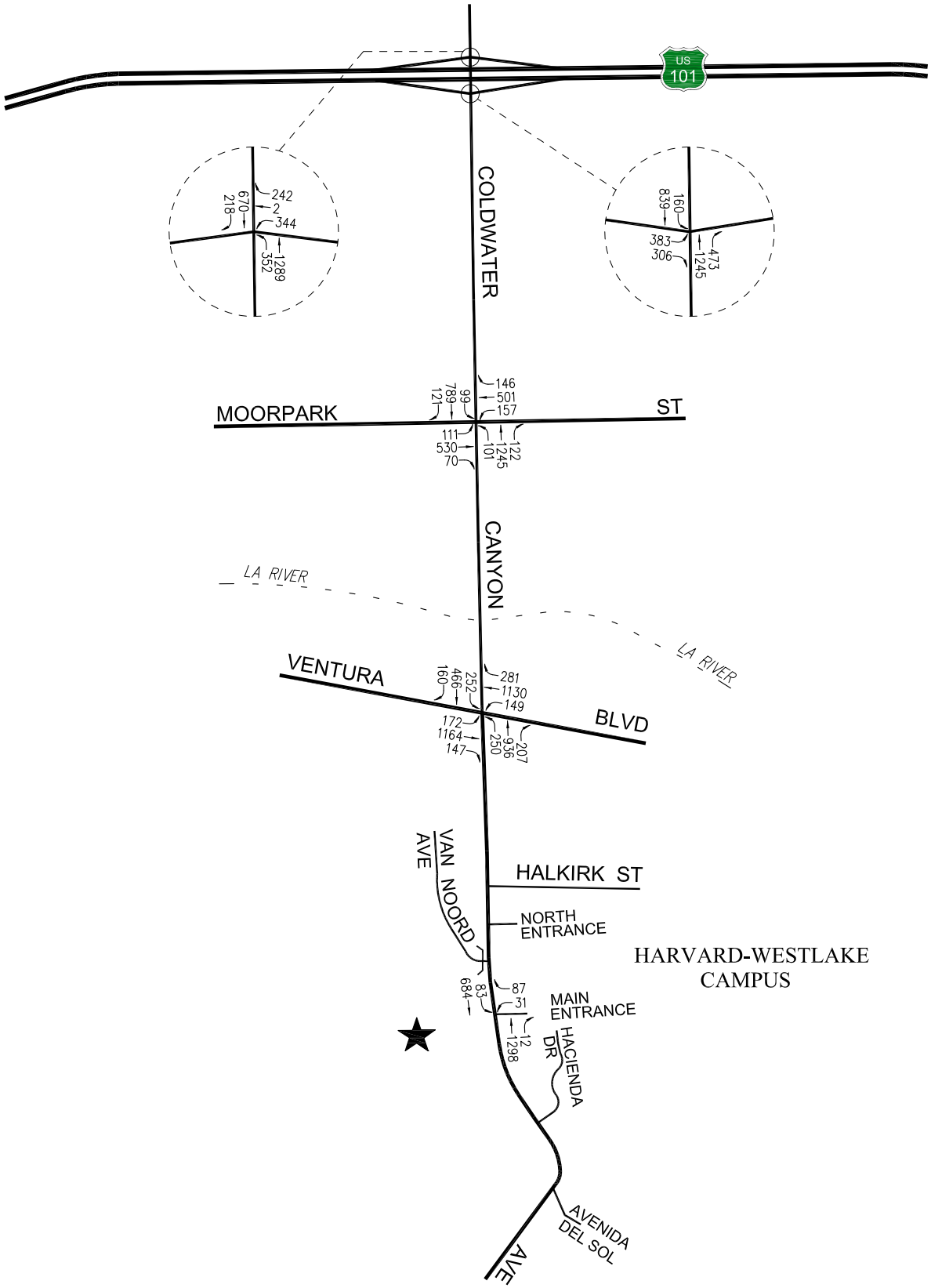
PROJECT SITE

FIGURE 6-1
EXISTING TRAFFIC VOLUMES
COMMUTER AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f6-1.dwg 10/16/2012 11:02:14 gutierrez llg exhibits color.ctb



N

NOT TO SCALE

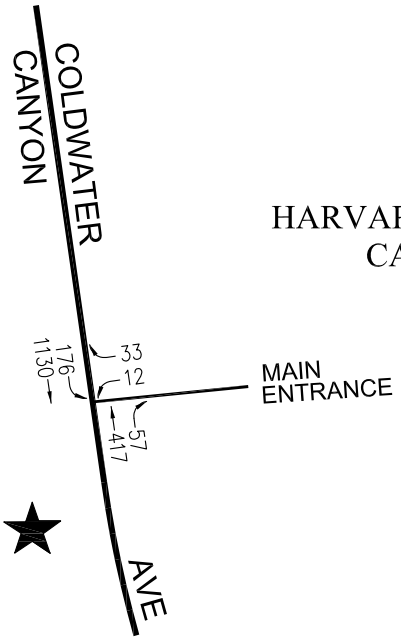
PROJECT SITE

FIGURE 6-2
EXISTING TRAFFIC VOLUMES
COMMUTER PM PEAK HOUR

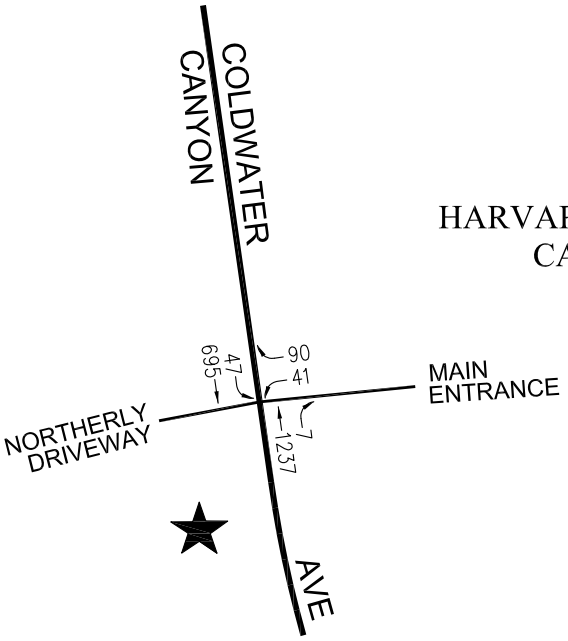
LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f6-2.dwg 10/16/2012 11:02:51 gutierrez llg exhibits color.ctb



SCHOOL AM PEAK HOUR (7:15 AM - 8:15 AM)



SCHOOL PM PEAK HOUR (2:45 PM - 3:45 PM)

N
NOT TO SCALE

PROJECT SITE

FIGURE 6-3
EXISTING TRAFFIC VOLUMES
SCHOOL AM AND PM PEAK HOURS
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f6-3.dwg 10/16/2012 11:04:05 gutierrez llg exhibits color.ctb

6.2 On-Street Parking Utilization

On-street parking utilization counts were also conducted for a selected number of residential street segments located north of the Harvard-Westlake Campus, as well as along Coldwater Canyon Avenue where some students are known to park during school hours. The number of occupied parking spaces was noted for each on-street parking segment during each observation period. The parking accumulation surveys were conducted on Thursday, January 27, 2011 from 7:00 to 10:00 AM and from 2:00 to 6:00 PM.

A summary of the existing weekday on-street parking utilization counts is provided in ***Table 6-3***. This detailed summary of the existing weekday on-street parking counts provides the hourly parking utilization observed for each segment. As shown in *Table 6-3*, the existing weekday peak parking demand for on-street parking near the main campus occurred at 9:00 AM when 109 vehicles were observed.

Table 6-3
SUMMARY OF ON-STREET PARKING [1]
Thursday, January 27, 2011

Coldwater Canyon Avenue									
	TIME OF OBSERVATION								
	7:00 AM	8:00 AM	9:00 AM	10:00 AM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
ROADWAY SEGMENT	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked
Coldwater Canyon Avenue									
East Side between North & Main Entrance	6	23	22	23	17	5	3	5	4
East Side between Main & Hacienda Entrance	4	18	18	17	11	5	6	4	6
TOTAL VEHICLES PARKED	**10**	**41**	**40**	**40**	**28**	**10**	**9**	**9**	**10**

Adjacent Residential Neighborhood									
	TIME OF OBSERVATION								
	7:00 AM	8:00 AM	9:00 AM	10:00 AM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
ROADWAY SEGMENT	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked	No. Vehicles Parked
Halkirk St. between Coldwater Canyon Ave. & Alcove Ave.									
North Side	2	5	7	7	7	5	3	3	2
South Side	2	3	4	2	3	0	0	0	0
Halkirk St. between Alcove Ave. & Goodland Pl.									
North Side	1	6	6	8	4	2	0	0	0
South Side	2	5	4	4	6	4	1	0	2
Halkirk St. between Goodland Pl. & Goodland Ave.									
North Side	2	3	4	2	3	3	2	2	2
South Side	5	5	4	4	3	2	3	2	2
Alcove Ave. north of Halkirk St.									
East Side	1	4	4	5	4	2	3	2	2
West Side	1	2	3	3	4	2	1	0	0
Goodland Pl. north of Halkirk St.									
East Side	5	6	6	4	8	6	5	5	5
West Side	5	5	3	1	6	5	6	8	7
Goodland Ave. north of Halkirk St.									
East Side	0	1	2	1	3	4	0	0	0
West Side	4	4	5	3	4	3	3	3	2
Goodland Ave. south of Halkirk St.									
East Side	6	8	8	8	8	8	6	6	6
West Side	5	7	9	9	3	3	6	7	7
TOTAL VEHICLES PARKED	**41**	**64**	**69**	**61**	**66**	**49**	**39**	**38**	**37**

[1] Parking counts conducted by The Traffic Solution.

7.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-project conditions was prepared in accordance with 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 projects 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 reductions 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 projects 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 the CEQA Guidelines for purposes of developing the forecast.

7.1 Related Projects

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 City of Los Angeles Departments of Transportation and Planning. The list of related projects in the project site area is presented in ***Table 7-1***. The location of the related projects is shown in ***Figure 7-1***.

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 commuter AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 7-1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in ***Figures 7-2*** and ***7-3***, respectively.

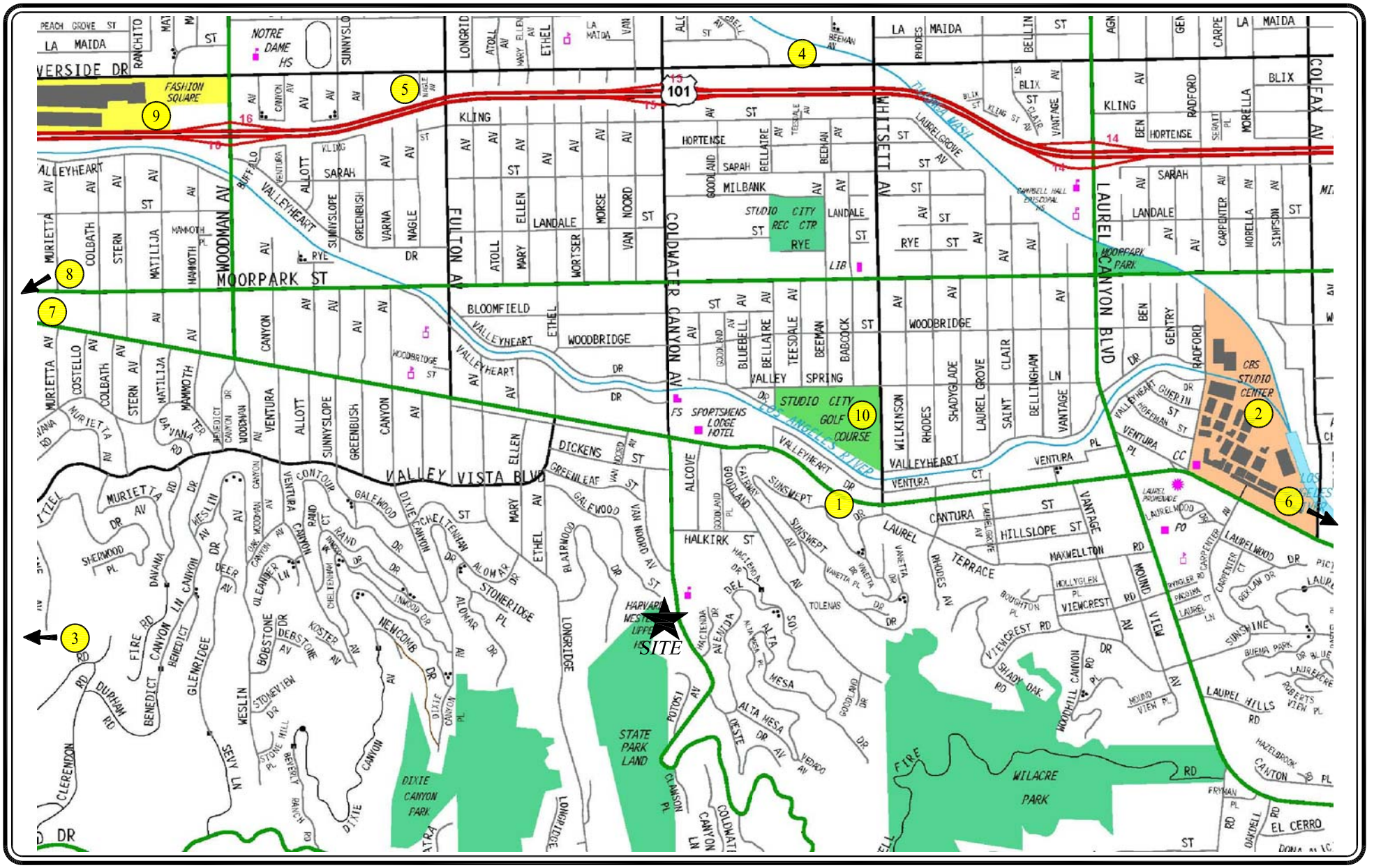
As previously noted, the City's Department of Water and Power (DWP) is currently installing a new subsurface Trunk Line pipe (City Trunk Line South – Unit 5) on Coldwater Canyon Avenue between Moorpark Street and Avenida Del Sol (i.e., south of the Harvard-Westlake Campus).

[4] *Trip Generation*, Institute of Transportation Engineers, 8th Edition, 2008.

Table 7-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	ADDRESS/ LOCATION	LAND USE DATA		DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				LAND-USE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL
City of Los Angeles												
1	Proposed	VEN-2010-020	12548 Ventura Boulevard	Apartment	62 DU	412	6	26	32	25	13	38
				Retail	10,747 GLSF	476	8	6	14	13	16	29
				Other	1,925 GSF	245	11	11	22	12	9	21
				Existing Retail	(3,000) GLSF	(133)	(2)	(2)	(4)	(4)	(4)	(8)
2	Proposed	CBS Radford Studios	4200 Radford Avenue	Master Plan Expansion	161,885 GSF	1,634	102	13	115	42	70	112
3	Proposed	Buckley School	3900 Stansbury Avenue	Private School (K-12)	80 Students	329	42	33	75	22	25	47
4	Under Construction	Sherman Village SFV-2006-130	12629 Riverside Drive	Condominium	260 DU	1,850	28	112	140	111	60	171
				TV programme production		(230)	(44)	(8)	(52)	(18)	(24)	(42)
5	Approved	Merdinian Evangelical School SFV-2006-044	13330 Riverside Drive	Private High School	383 Seats	856	191	100	291	11	17	28
6	Inactive	VEN-2004-008	11617 Ventura Boulevard	Apartment	391 DU	2,628	40	159	199	157	85	242
				Less Existing Office	(7,793) GSF	(86)	(11)	(1)	(12)	(2)	(10)	(12)
				Less Existing Retail	(12,663) GLSF	(465)	7	11	18	(19)	(13)	(32)
7	Under Construction	Ralphs Supermarket VEN-2009-014	14049 Ventura Boulevard	Supermarket Expansion [3]	27,389 GLSF	2,800	54	35	89	146	140	286
8	Under Construction	Camino Real Mixed-Use Project VEN-2004-005	14121 Ventura Boulevard	Condominium	88 DU	516	7	32	39	31	15	46
				Retail (Less 10% Pass-by)	6,000 GLSF	239	4	3	7	6	8	14
				Fast-Food without Drive-Through (Less 50% Pass-by)	3,500 GSF	1,253	46	31	77	24	23	47
9	Inactive	Westfield Sherman Oaks Fashion Square [4] SFV-2005-278	14006 Riverside Drive	Retail	220,000 GLSF	4,964	58	37	95	229	247	476
10	Proposed	Studio City Senior Living Center Project [5] SFV-2011-08	4141 Whitsett Avenue	Senior Housing	200 DU	624	0	59	59	37	1	38
				Golf Driving Range	21 Tees							
				Golf Course	9 Holes							
				Golf Driving Range	(24) Tees							
				Golf Course	(9) Holes							
				Tennis Courts	(16) Courts							
TOTAL						17,912	547	657	1,204	823	678	1,501

[1] Source: City of Los Angeles Department of Transportation Related Projects List, except as noted below. Trip generation for the related projects are based on ITE "Trip Generation", 8th Edition, 2008.
[2] Trips are one-way traffic movements, entering or leaving.
[3] Daily trips based on ITE Land Use Code 850 (Supermarket) trip generation average rates.
[4] Source: "Traffic Impact, Parking, and Site Access Study for the Westfield Fashion Square Expansion Project", prepared by LLG Engineers, August 2008.
[5] Source: "Traffic Impact Study for the Studio City Senior Living Center Project", prepared by LLG Engineers, February 2012.



N

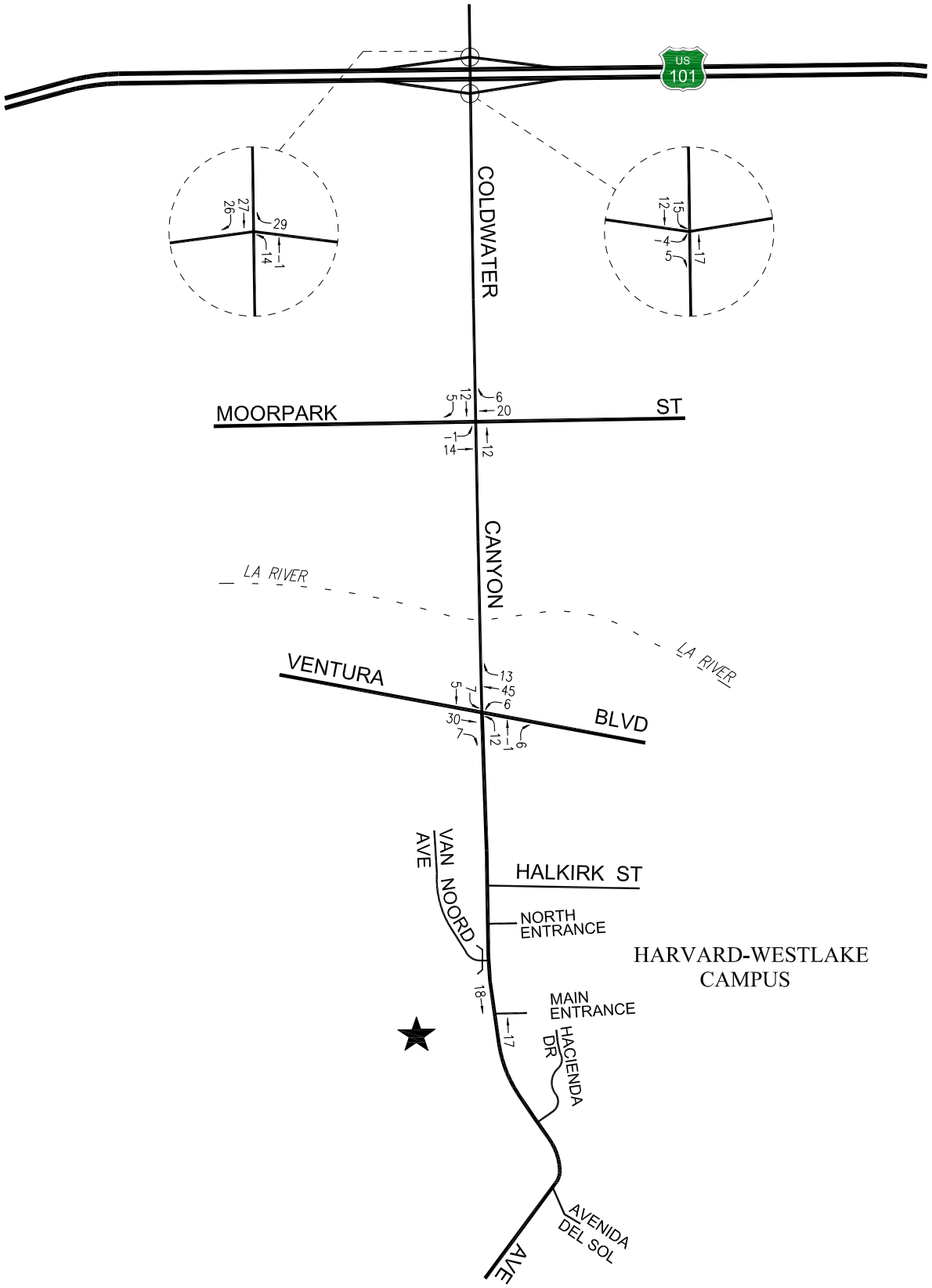
NOT TO SCALE

★ PROJECT SITE

FIGURE 7-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN



N

NOT TO SCALE

★ PROJECT SITE

FIGURE 7-2

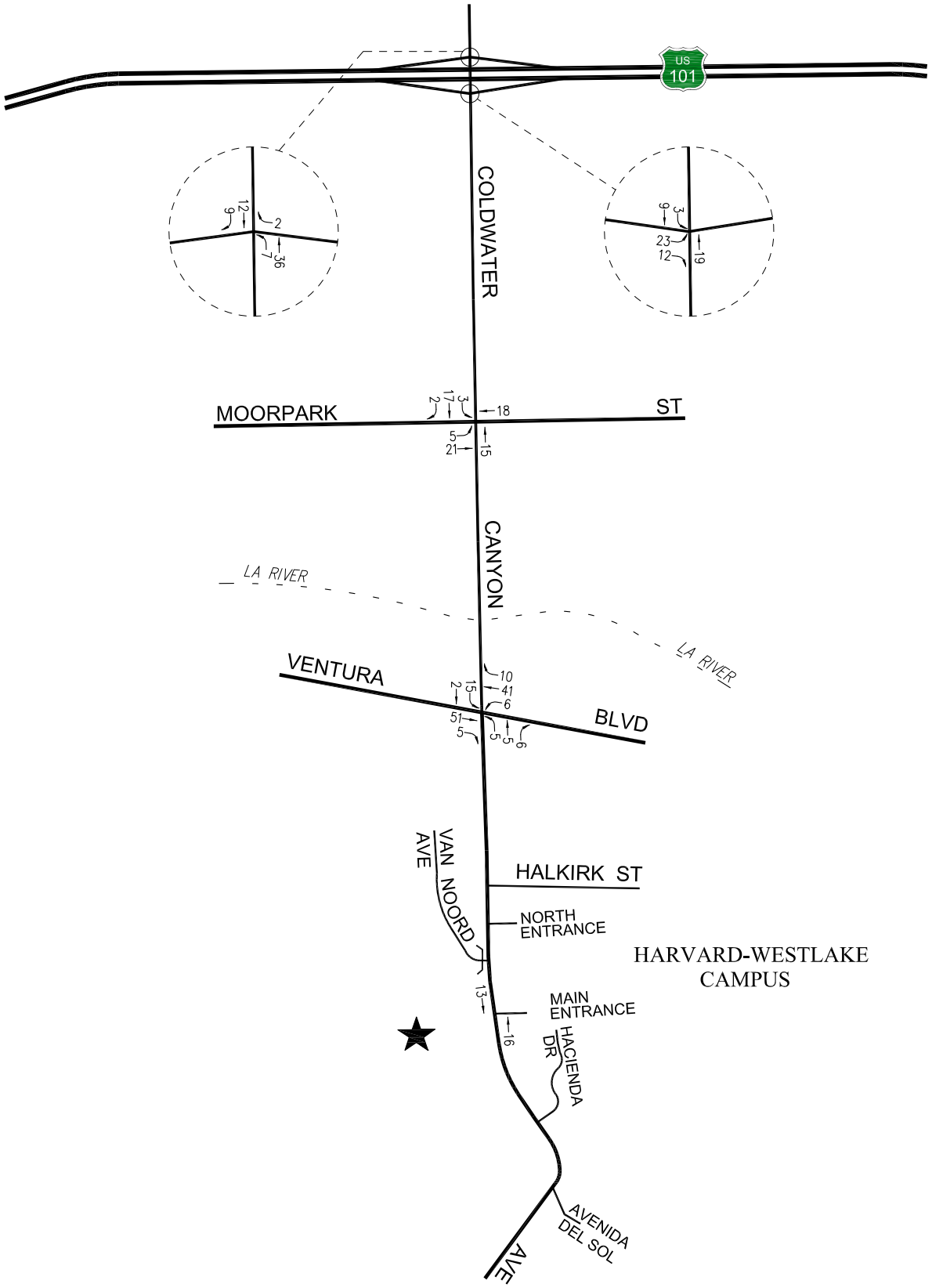
RELATED PROJECTS TRAFFIC VOLUMES

COMMUTER AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f7-2.dwg 10/16/2012 11:04:59 gutierrez llg exhibits color.ctb



N

NOT TO SCALE

PROJECT SITE

FIGURE 7-3

RELATED PROJECTS TRAFFIC VOLUMES

COMMUTER PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f7-3.dwg 10/16/2012 11:05:35 gutierrez llg exhibits color.ctb

The DWP construction project has resulted in portions of the Coldwater Canyon Avenue pavement closed to traffic and/or street parking, occasionally including the segment adjacent to the school campus. According to the DWP, construction of the Trunk Line pipe is scheduled to be completed in late 2015. Harvard-Westlake has indicated that construction of the proposed parking structure project would not commence until elements of the DWP-related work on its Trunk Line project was completed such that it would not impede the movement of project-related construction traffic to and from the project site.

7.2 Ambient Traffic Growth Factor

In order to account for unknown related projects not included in this analysis, the existing traffic volumes were increased at an annual rate of 2.0 percent (2.0%) per year to the year 2016 (i.e., the anticipated year of project build-out). The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* (the "CMP manual") and determined in consultation with LADOT staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the San Fernando Valley area, it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2010 and 2020. Thus, application of an annual 2.0% growth factor allows for a conservative, worst case forecast of future traffic volumes in the area. 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.

8.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the Harvard-Westlake Parking Improvement Plan, 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. Trip generation was considered for both the period during construction of the project, as well as following completion and occupancy of the project. A trip generation forecast was prepared for the construction traffic related to the development of the proposed project. Following completion of the project, since no changes in student enrollment at Harvard-Westlake are anticipated as part of the proposed project, a trip generation forecast was not required as the project will not generate new vehicle trips to and from the site. The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes, or in this case, the inbound and outbound construction 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 the construction 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. In addition to the traffic assignment of project construction traffic, a localized distribution shift and traffic assignment was conducted for school-related traffic volumes following completion of the proposed project. This traffic assignment is based on the shift of the majority of school-related traffic due to the project features of the proposed project.

With the forecasting process complete and the construction and project traffic assignments developed, the impact of the construction phases related to the proposed project as well as the project features of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using expected future traffic volumes without and with 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.

8.1 Traffic Generation

8.1.1 *Construction Traffic Generation*

Construction Grading and Material Export Phase

Construction workers are expected to typically arrive at the project site before 7:00 AM and most will depart before 4:00 PM or after 6:00PM. Thus, these construction work trips would occur outside of the peak hour of traffic on the local street system. For example, as shown in *Table 6-1*, the peak hour of traffic at the study intersections in the vicinity of the project site begins between 7:15 and 8:00 AM during the morning commuter period, and begins between 4:45 and

5:00 PM during the afternoon commuter period. However, in order to conduct a more conservative analysis, it was assumed that approximately ten percent of the total daily construction worker trips would occur during the commuter peak hours.

Based on information received from the Applicant, it is anticipated that approximately 20 construction workers will be on-site during the construction grading and material export phase of the proposed project and would remain on-site throughout the day. It is also assumed that each construction worker would take their own vehicle to the construction site. Therefore, it is estimated that approximately 40 vehicle trips per day (i.e., 20 inbound trips and 20 outbound trips) would be generated by the construction workers during the construction grading and material export phase at the project site. During peak hours, it is estimated that ten percent of the workers would arrive during the AM peak hour (i.e., 2 workers) and ten percent of the workers would depart during the PM peak hour.

It is assumed that heavy construction equipment would be located on-site during grading activities and would not travel to and from the project site on a daily basis. However, truck trips would be generated during the construction grading and material export period, so as to remove material (from excavation) from the project site. It is anticipated that with respect to these excavation (haul) trucks, trucks would be stationed at a designated location until called up by the on-site dispatcher for the export of excavated soils. From the queue, trucks would proceed directly to the jobsite. Furthermore, trucks are expected to exit the site onto Coldwater Canyon Avenue, proceed to the Southbound US-101 (Ventura) Freeway, and carry the export material to a receptor site located within 35 miles of the project site.

The project applicant anticipates that trucks with a capacity of 20 cubic yards of material per truck carrying 14 cubic yards of material would be used during the export period. During the peak of the construction grading and material export phase, up to 100 truck trips per day (i.e., 50 inbound trips and 50 outbound trips) are anticipated. To conservatively estimate the equivalent number of vehicles associated with the trucks, a passenger car equivalency factor of 2.0 truck trips was utilized based on standard traffic engineering practice. The use of the 2.0 passenger car equivalent (PCE) in the forecast of construction-related traffic is very conservative ("worst case") as the *Highway Capacity Manual 2010*[5] recommends a lower PCE factor of 1.5 for roadways similar in design to Coldwater Canyon Avenue. Therefore, conservatively assuming 100 truck trips, it is estimated that trucks would generate approximately 200 passenger car equivalent vehicle trips (i.e., 100 PCE inbound trips and 100 PCE outbound trips) on a daily basis. Of the 200 PCE daily vehicle trips, it is estimated that approximately 10 truck trips (5 inbound trips and 5 outbound trips) would occur during the weekday commuter AM peak hour and the weekday commuter PM peak hour, assuming ten percent of the daily truck trips occur during the peak hours.

Taken together, the construction worker vehicles and haul trucks are forecast to generate 240 PCE vehicle trips per day (i.e., 120 inbound trips and 120 outbound trips) during the construction

[5] *Highway Capacity Manual 2010*, Transportation Research Board of the National Academy of Sciences, December 2010.

grading and material export phase at the site. During the weekday commuter AM peak hour and the weekday commuter PM peak hour, it is estimated that approximately 22 PCE vehicle trips would be generated during each of these peak hours.

Final Grading and Structure Construction Phase

As mentioned above, construction workers are expected to typically arrive at the project site before 7:00 AM and most will depart before 4:00 PM or after 6:00 PM. Thus, these construction work trips would occur outside of the peak hour of traffic on the local street system. However, in order to conduct a more conservative analysis, it was assumed that approximately ten percent of the total daily construction worker trips would occur during the commuter peak hours.

Based on information received from the Applicant, it is anticipated that approximately 45 construction workers will be on-site during the final grading and structure construction phase of the proposed project and would remain on-site throughout the day. It is also assumed that each construction worker would take their own vehicle to the construction site. Therefore, it is estimated that approximately 90 vehicle trips per day (i.e., 45 inbound trips and 45 outbound trips) would be generated by the construction workers during the final grading and structure construction phase at the project site. During peak hours, it is estimated that ten percent of the workers would arrive during the AM peak hour (i.e., 5 workers) and ten percent of the workers would depart during the PM peak hour.

In addition to construction worker vehicles, additional trips may be generated by miscellaneous trucks traveling to and from the project site. These trucks may consist of larger vehicles delivering equipment and/or construction materials to the project site, or smaller pick-up trucks or four-wheel drive vehicles used by construction supervisors and/or City inspectors. During peak construction phases, it is estimated that approximately 44 trips per day would be made by miscellaneous trucks. To conservatively estimate the equivalent number of vehicles associated with the trucks, a passenger car equivalency factor of 2.0 truck trips was utilized based on standard traffic engineering practice. As previously noted, the use of the 2.0 passenger car equivalent (PCE) in the forecast of construction-related traffic is very conservative ("worst case") as the *Highway Capacity Manual 2010* recommends a lower PCE factor of 1.5 for roadways similar in design to Coldwater Canyon Avenue. Therefore, conservatively assuming 44 daily truck trips, it is estimated that trucks would generate approximately 88 passenger car equivalent vehicle trips (i.e., 44 PCE inbound trips and 44 PCE outbound trips) on a daily basis. Of the 88 PCE daily vehicle trips, it is estimated that approximately 8 PCE vehicle trips (4 inbound trips and 4 outbound trips) would occur during the weekday commuter AM peak hour and the weekday commuter PM peak hour, assuming ten percent of the daily truck trips occur during the peak hours.

Taken together, the construction worker vehicles and miscellaneous trucks are forecast to generate 178 PCE vehicle trips per day (i.e., 89 inbound trips and 89 outbound trips) during the final grading and structure construction phase at the site. During the weekday commuter AM

peak hour and the weekday commuter PM peak hour, it is estimated that approximately 13 PCE vehicle trips would be generated during each of these peak hours.

The construction trip generation forecasts for both the construction grading/material export and final grading/structure construction phases of the proposed project are summarized in ***Table 8-1***. As presented in *Table 8-1*, activities related to the construction grading and material export phase would generate a higher number of PCE vehicle trips as compared to the construction grading and structure construction phase. Thus, the greatest potential for impact on the adjacent street system would occur during the construction grading and material export phase.

8.1.2 *Project Occupancy Traffic Generation*

The proposed project consists of the construction of a parking structure with an auxiliary practice field and a pedestrian bridge connecting the new parking structure to the main campus. No increase in student enrollment or faculty is proposed as part of the project. Therefore, the project will not generate new vehicle trips to the study area. Some localized shifts in existing trips are expected, which are described in a following section.

8.2 Traffic Distribution and Assignment

8.2.1 *Construction Traffic Distribution and Assignment*

Construction traffic was assigned to the local roadway system based on a traffic distribution pattern that reflects existing traffic movements, characteristics of the surrounding roadway system, and nearby employment and residential areas. Construction traffic volumes both entering and exiting the project 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. U.S. 101 Freeway, Coldwater Canyon Avenue, Ventura Boulevard, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the project site during all construction phases of the proposed project;
- The location of existing and proposed parking areas for both construction machinery and construction worker vehicles;
- The location of potential haul sites; and
- Input from LADOT staff

Table 8-1
CONSTRUCTION TRIP GENERATION [1]

16-Oct-12

PHASE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Construction Grading and Material Export Phase							
Construction Workers [3]	40	2	0	2	0	2	2
Trucks	100	5	5	10	5	5	10
PCE (2.0) Adjusted [4]	200	10	10	20	10	10	20
Phase Subtotal (PCE Adjusted)	**240**	**12**	**10**	**22**	**10**	**12**	**22**
Final Grading and Structure Construction Phase							
Construction Workers [3]	90	5	0	5	0	5	5
Trucks	44	2	2	4	2	2	4
PCE (2.0) Adjusted [4]	88	4	4	8	4	4	8
Phase Subtotal (PCE Adjusted)	**178**	**9**	**4**	**13**	**4**	**9**	**13**

[1] Source: Harvard-Westlake School.
[2] Trips are one-way traffic movements, entering or leaving.
[3] Of the peak daily trip generation associated with construction workers, it is estimated that approximately 10% of the total construction worker trips would occur during both the weekday commuter AM and PM peak hours.
[4] A Passenger Car Equivalent (PCE) factor of 2.0 was applied to all trucks based on standard traffic engineering practice to conservatively estimate the equivalent number of vehicles associated with the trucks.

The construction traffic distribution percentages at the study intersections are illustrated in ***Figure 8–1***. The forecast weekday commuter AM and PM peak hour construction traffic volumes at the study intersections associated with the proposed project are displayed in ***Figure 8–2***. The traffic volume assignments presented in *Figure 8-2* reflects the traffic distribution characteristics shown in *Figure 8-1* and the construction traffic generation forecast presented in *Table 8-1*.

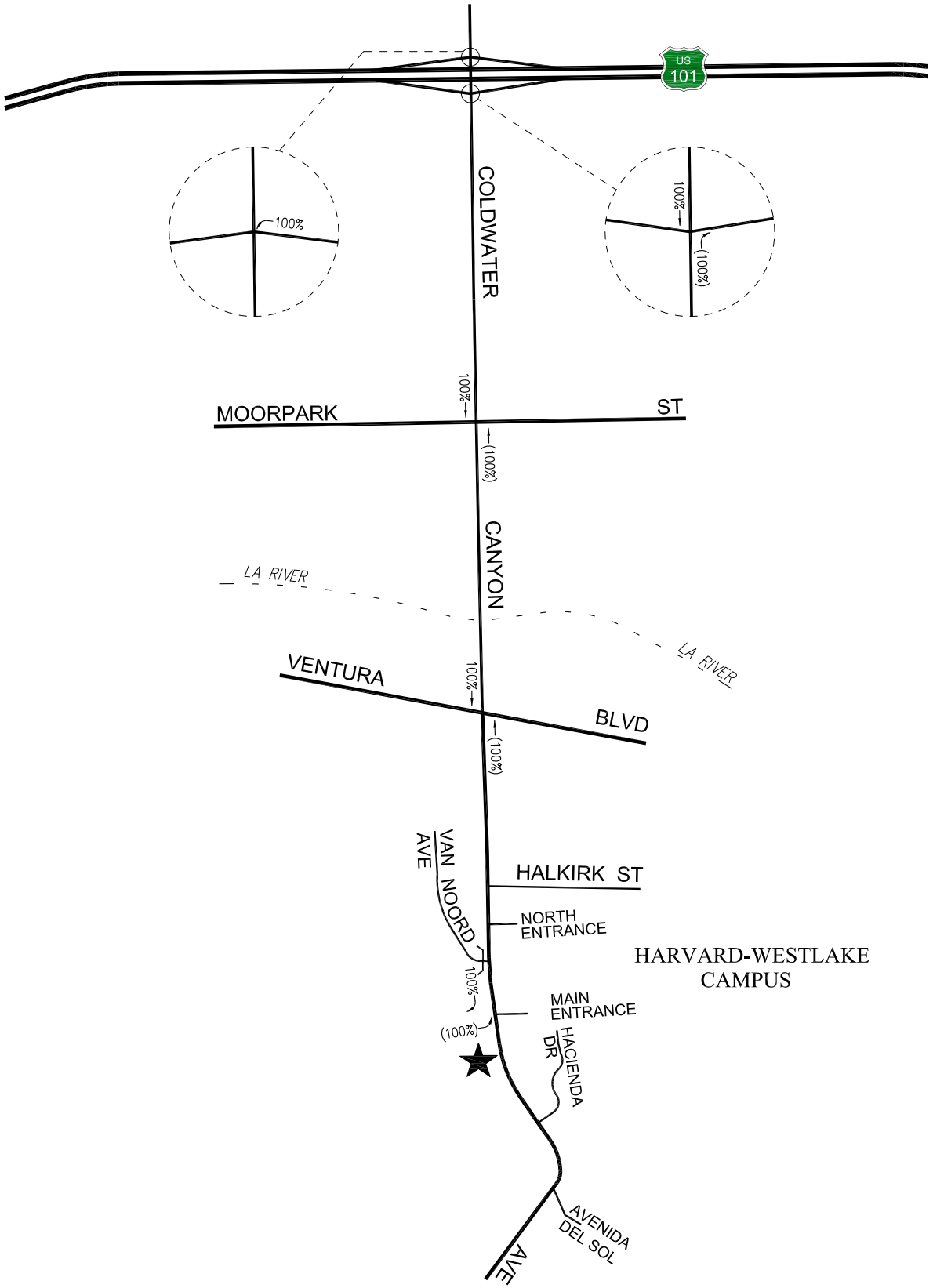
8.2.2 *Project-Related Localized Distribution Shift and Assignment*

The peak hour traffic volumes that would be anticipated to enter and exit the project parking structure were forecast based on the existing traffic counts conducted at all of the school driveways during the school peak hours. In conducting the localized project trip distribution shift it was assumed that vehicles approaching the site would continue to do so in a manner similar to existing conditions (e.g., a vehicle that currently approaches the site from the north and turns left from Coldwater Canyon Avenue into the main campus would in the future turn right into the proposed parking structure). As previously noted, the proposed parking structure is intended to accommodate parking for all students (whether currently parking on the main campus or on-street) as well as parking for some faculty, staff and visitors. Student drop-offs and pick-ups will continue to be accommodated on the main campus; no student drop-offs and pick-ups will be permitted within the proposed parking structure or on Coldwater Canyon Avenue. Additionally, student drop-offs and pick-ups related to the Harvard-Westlake school buses will be shifted from Coldwater Canyon Avenue to occur on the main campus.

Accordingly, the vehicular turning movement volumes at the northerly parking structure driveway were forecast based on the conservative assumption that during the school AM peak hour, nearly all of the existing school-related vehicles associated with student parking, as well as some faculty/staff parkers either turning into the main campus or utilizing on-street parking on Coldwater Canyon Avenue or the adjacent residential neighborhood would instead utilize the proposed northerly driveway into the parking structure. As for the PM peak hour, it was assumed that all vehicles exiting the parking structure onto northbound Coldwater Canyon Avenue would do so from the northerly parking structure driveway. For vehicles exiting the structure onto southbound Coldwater Canyon Avenue, it was assumed that the majority of vehicles (i.e., approximately 75 percent) would exit the parking structure from the southerly parking structure driveway and that the remaining 25 percent of southbound vehicles would exit the parking structure from the northerly parking structure driveway.

There were several factors considered in preparing the localized project trip distribution shift. First, as previously noted, student drop-off/pick-up at the school will continue to take place on the main campus via the North Entrance and Main Entrance driveways and will not be moved to the proposed parking structure. Thus, no distribution shifts were made for vehicles assumed to be dropping-off/picking-up students during both the AM and PM school peak hours.

Second, parking will continue to be provided in the main campus parking lot. However, student parking currently provided at the South Lot located immediately south of Hacienda Drive, as well as student parking currently provided at the parking lot located immediately north of



N

NOT TO SCALE

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

★ PROJECT SITE

FIGURE 8-1

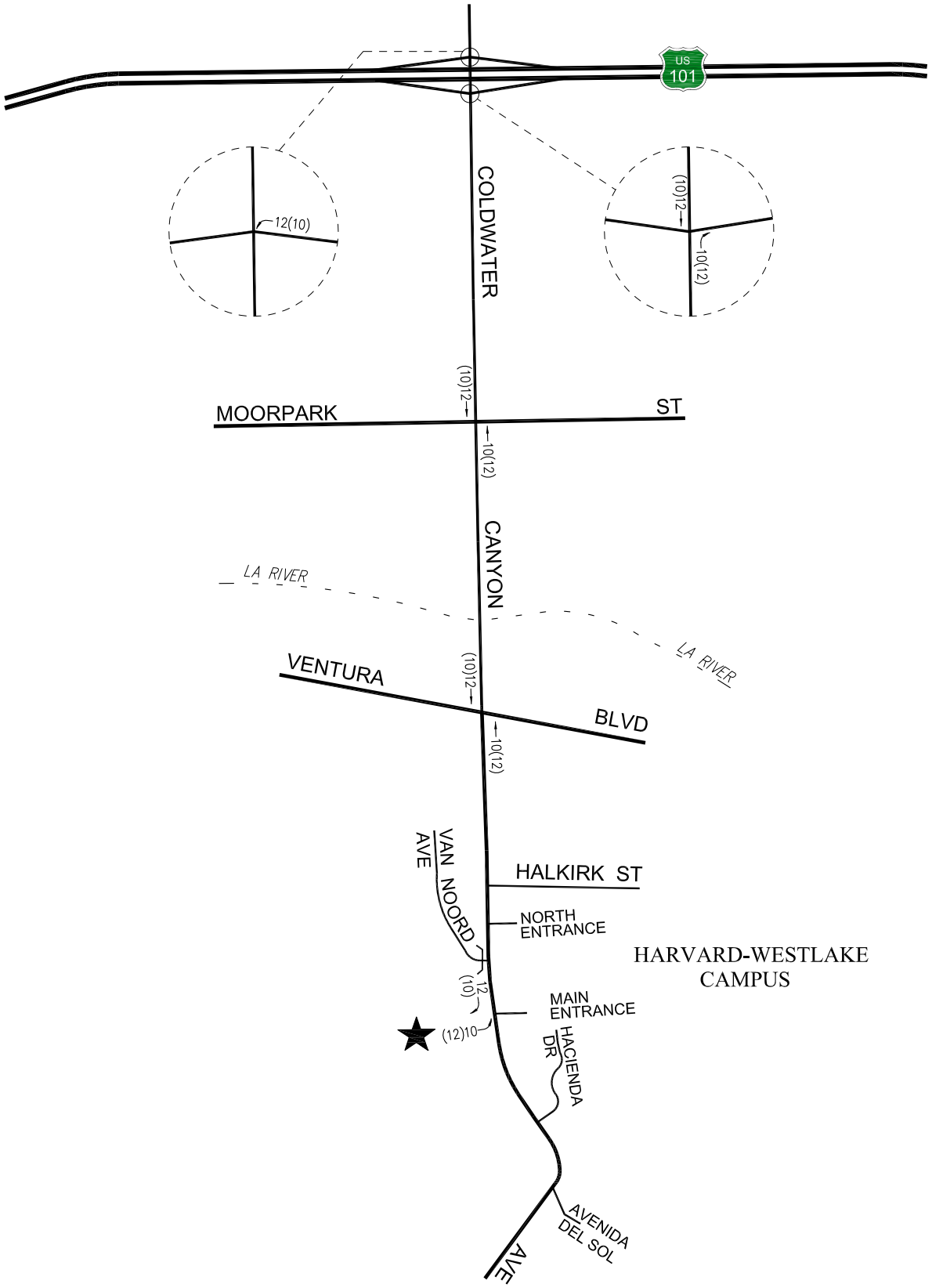
CONSTRUCTION TRIP DISTRIBUTION

CONSTRUCTION GRADING AND MATERIAL EXPORT PHASE

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

o:\3744-2\dwg\f8-1 (phase 1).dwg 10/16/2012 11:06:07 gutierrez llg exhibits color.ctb



N

NOT TO SCALE

XX = AM TRAFFIC VOLUMES
(XX) = PM TRAFFIC VOLUMES

PROJECT SITE

FIGURE 8-2

CONSTRUCTION TRAFFIC VOLUMES

COMMUTER AM AND PM PEAK HOURS

LINSCOTT, LAW & GREENSPAN, engineers

HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

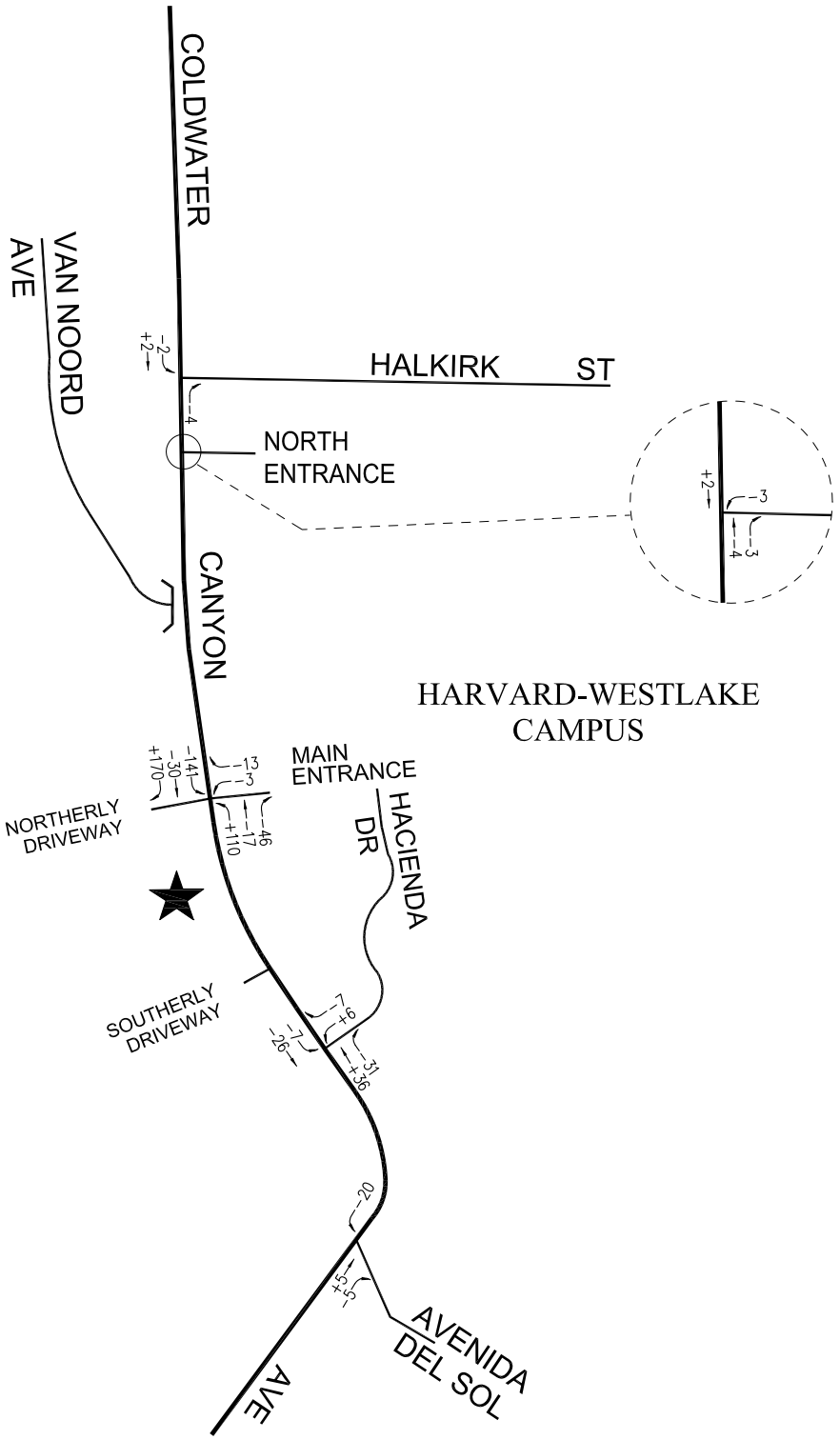
o:\3744-2\dwg\f8-2.dwg 10/16/2012 11:07:14 gutierrez llg exhibits color.ctb

Avenida del Sol ("Upper St. Michael's Lot") is assumed to be shifted to the new parking structure following project build-out. Access to the main campus parking lot is currently provided via the Harvard-Westlake driveway and the Hacienda Drive driveway. Access to the South Lot is provided solely via the Hacienda Drive driveway. Based on the total parking supply of existing spaces to remain in the main campus parking lot plus the proposed spaces in the future parking structure, it was estimated that approximately 20 percent of the existing turning movements into the main campus parking lot would continue to utilize the Main Entrance and Hacienda Drive driveways to access the main campus parking lot. The remaining 80 percent of vehicles at said driveways were shifted to the future northerly parking structure driveway.

As previously mentioned, the South Lot located immediately south of Hacienda Drive will no longer be available for student parking following project build-out. Instead, the South Lot will be utilized for school bus drop-off/pick-up and school bus turnaround and will serve as overflow parking for school-related special events. As a result, school bus activities will no longer be taking place along the east side of Coldwater Canyon Avenue. Based on information from the Applicant, it was assumed that two buses arrive at the campus from the north (i.e., traveling southbound on Coldwater Canyon from the U.S. 101 Freeway) and six buses arrive at the campus from the south (i.e., traveling northbound on Coldwater Canyon Avenue). Hence, bus traffic was shifted accordingly to the Hacienda Drive driveway from Coldwater Canyon Avenue.

Lastly, it should be noted that on-street parking currently permitted along the east side of Coldwater Canyon Avenue between the North Entrance driveway and the Hacienda Drive driveway will be removed as part of the proposed project. Thus, vehicles that currently park on-street on Coldwater Canyon Avenue were shifted accordingly to instead park in the proposed parking structure. In addition, it was noted during field observations that some students park in the adjacent residential neighborhood located north of existing Harvard-Westlake Campus during school hours. To account for this, parking utilization counts were conducted in these adjacent residential neighborhoods to determine the approximate number of school-related vehicles that currently park there. As seen in *Table 6-3*, on-street parking in the adjacent residential neighborhood increased from 41 parked vehicles at 7:00 a.m. to 69 parked vehicles at 9:00 a.m. Assuming the increased parking demand is related to school-related parkers, this would be approximately 28 vehicles. Therefore, based on the total amount of on-street vehicles, it was assumed that these vehicles parked in the adjacent residential neighborhood were school-related vehicles and were shifted accordingly to instead park in the proposed parking structure.

The shifted net project traffic volumes at the study intersections for the weekday school AM and PM peak hours are displayed in ***Figures 8-3*** and ***8-4***, respectively. The breakdown of the shifts of project traffic volumes by specific location and/or population can be found in ***Appendix B***.



N

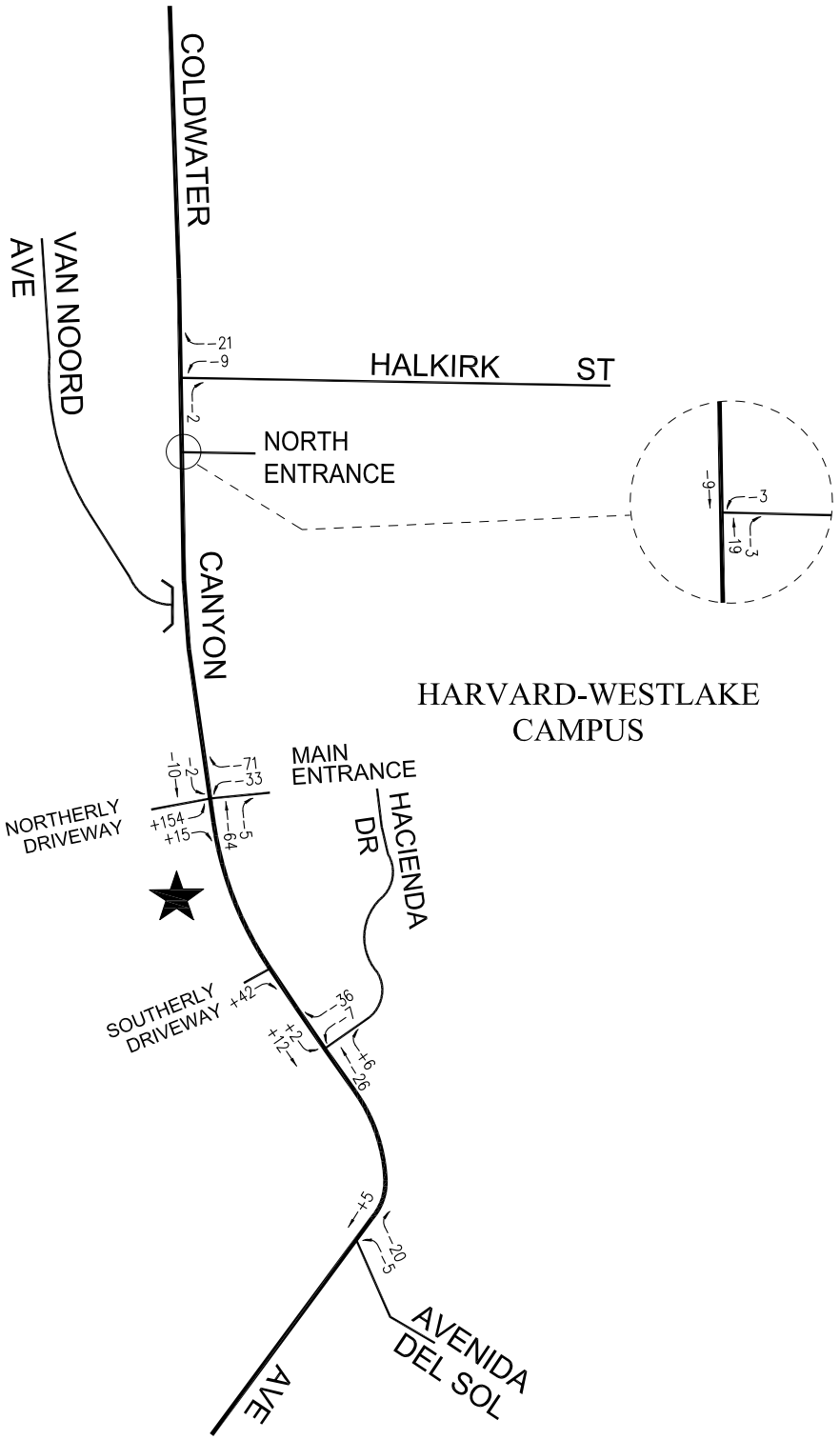
NOT TO SCALE

★ PROJECT SITE

FIGURE 8-3
NET PROJECT OCCUPANCY SHIFTED TRAFFIC VOLUMES
SCHOOL AM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f8-3.dwg 10/16/2012 11:07:57 gutierrez llg exhibits color.ctb



NOT TO SCALE

★ PROJECT SITE

FIGURE 8-4
NET PROJECT OCCUPANCY SHIFTED TRAFFIC VOLUMES
SCHOOL PM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f8-4.dwg 10/16/2012 11:08:33 gutierrez llg exhibits color.ctb

9.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis that 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 CMA method and corresponding Level of Service is provided in ***Appendix C***.

9.1 Impact Criteria and Thresholds

The relative impact of the added traffic volumes to be generated by the construction phases of the proposed project during the weekday commuter AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the construction traffic. Likewise, the relative impact of the shifted project traffic volumes during the school AM and PM peak hours was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of construction and project-related traffic was identified using the traffic impact criteria set forth in LADOT's *Traffic Study Policies and Procedures*, May, 2012. According to the City's published traffic study guidelines, the impact is considered significant if the construction or project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in ***Table 9–1***.

Table 9-1
CITY OF LOS ANGELES
INTERSECTION IMPACT THRESHOLD CRITERIA

Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
>0.901	E or F	equal to or greater than 0.010

The City's Sliding Scale Method requires mitigation project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

9.2 LADOT ATSAC/ATCS

The City of Los Angeles Automated Traffic Surveillance and Control (ATSAC) and Adaptive Traffic Control System (ATCS) provides computer control of traffic signals allowing automatic adjustment of signal timing plans to reflect changing traffic conditions, identification of unusual

traffic conditions caused by accidents, the ability to centrally implement special purpose short term traffic timing changes in response to incidents, and the ability to quickly identify signal equipment malfunctions. ATCS provides real time control of traffic signals and includes additional loop detectors, closed-circuit television, an upgrade in the communications links, and a new generation of traffic control software. LADOT estimates that the ATSAC system reduces critical *v/*c ratios by seven percent (0.07). The ATCS upgrade further reduces the critical *v/c* ratios by three percent (0.03) for a total of 10 percent (0.10). Four of the five signalized study intersections (i.e., all of the study intersections except Coldwater Canyon Avenue/Harvard-Westlake Driveway) are currently equipped with the ATSAC/ATCS signal upgrades as part of the LADOT Victory ATSAC/ATCS system (System No. 6). Accordingly, the Level of Service calculations reflect a 0.10 adjustment for all analysis scenarios evaluated. As previously noted, in conjunction with the project, the modified signalized intersection of Coldwater Canyon Avenue and the Harvard-Westlake Driveway (opposite the proposed northerly entrance to the parking structure) will be connected to the LADOT ATSAC/ATCS system. Thus, the 0.10 adjustment in the *v/c* ratios was incorporated at this intersection in conditions with project-related traffic.

9.3 Traffic Impact Analysis Scenarios

9.3.1 *Construction Traffic Impact Analysis Scenarios*

Pursuant to LADOT's traffic study guidelines, Level of Service calculations have been prepared for the following scenarios for the study intersections to evaluate the traffic effects related to construction of the project:

(a) Existing (2012) conditions.

(b) Condition (a) with project construction phase.

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

(d) Condition (a) plus two percent (2.0%) annual ambient traffic growth through year 2016 and with completion and occupancy of the related projects (i.e., future cumulative baseline).

(e) Condition (d) with project construction phase.

(f) Condition (e) with implementation of project construction 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.

9.3.2 *Project Occupancy Traffic Impact Analysis Scenarios*

Pursuant to LADOT's traffic study guidelines, Level of Service calculations have been prepared for the following scenarios for the study intersection to evaluate the traffic effects related to occupancy of the project:

(a) Existing (2012) 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 two percent (2.0%) annual ambient traffic growth through year 2016 and with completion and occupancy of the related projects (i.e., future cumulative baseline).

(e) Condition (d) with completion and occupancy of the project.

(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.

10.0 CONSTRUCTION TRAFFIC ANALYSIS

The construction traffic impact analysis prepared for the study intersections using the CMA methodology and application of the City of Los Angeles significant impact criteria is summarized in ***Table 10-1***. The calculation worksheets for the construction traffic analyses using the CMA methodology are contained in ***Appendix C-1***.

10.1 Existing Conditions

10.1.1 *Existing Conditions*

As indicated in column [1] of *Table 10–1*, four of the five study intersections are presently operating at LOS D or better during the weekday commuter AM and PM peak hours under existing conditions. The following study intersection is currently operating at LOS E during the peak hour as shown below under existing conditions:

- Int. No. 5: Coldwater Canyon Avenue/ Harvard-Westlake Driveway — PM Peak Hour: *v/c*=0.951, LOS E

The existing traffic volumes at the study intersections during the weekday commuter AM and PM peak hours are displayed in *Figures 6–1* and *6-2*, respectively.

10.1.2 *Existing With Construction Traffic Conditions*

As indicated in column [2] of *Table 10–1*, application of the City's threshold criteria to the "Existing With Construction" scenario indicates that the construction phase is not expected to create significant impacts at the five 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 Construction" conditions. The existing with construction traffic volumes at the study intersections during the weekday commuter AM and PM peak hours are illustrated in ***Figures 10–1*** and ***10–2***, respectively.

10.2 Future Conditions

10.2.1 *Future Cumulative Baseline Conditions*

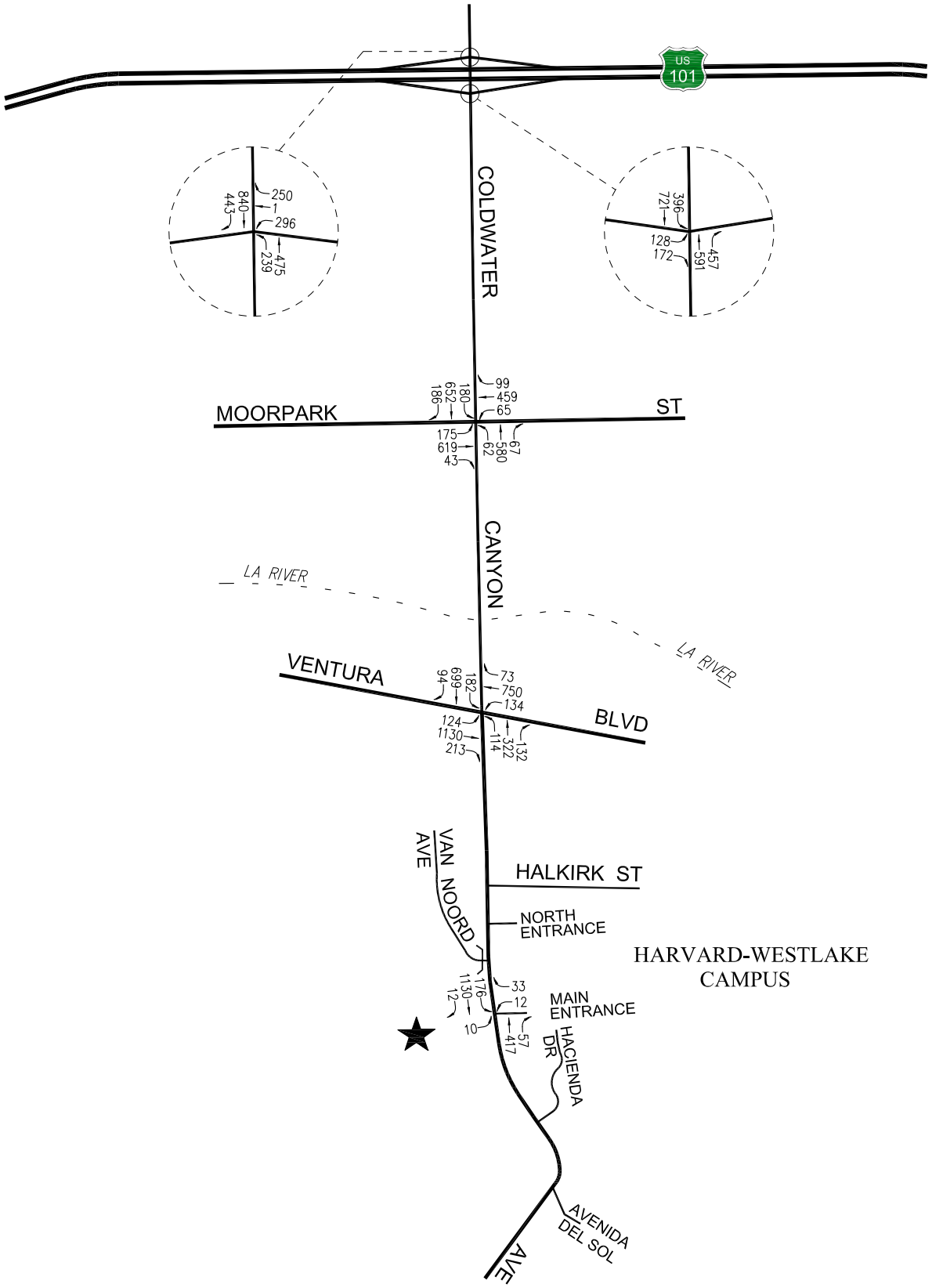
The future cumulative baseline conditions were forecast based on the addition of traffic generated by the plus completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 7-1*. As presented in column [3] of *Table 10-1*, two of the five study intersections are expected to continue operating at LOS D or better during the weekday commuter AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the future cumulative baseline conditions (No. 1, Coldwater Canyon Avenue/US-101 Freeway NB ramps, No. 2, Coldwater Canyon Avenue/US-101 Freeway SB Ramps). The following study intersections are expected to operate at LOS E or F

Table 10-1
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
AM AND PM PEAK HOURS
CONSTRUCTION TRAFFIC

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2012 EXISTING V/C	LOS	[2] YEAR 2012 EXISTING W/ CONSTR. V/C	LOS	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT	[3] YEAR 2016 FUTURE BASELINE V/C	LOS	[4] YEAR 2016 FUTURE WITH CONSTRUCTION V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT
1	Coldwater Canyon Avenue/ US-101 Freeway NB Ramps	AM	0.504	A	0.506	A	0.002	NO	0.589	A	0.592	A	0.003	NO
		PM	0.492	A	0.494	A	0.002	NO	0.552	A	0.554	A	0.002	NO
2	Coldwater Canyon Avenue/ US-101 Freeway SB Ramps	AM	0.562	A	0.569	A	0.007	NO	0.628	B	0.635	B	0.007	NO
		PM	0.576	A	0.579	A	0.003	NO	0.645	B	0.648	B	0.003	NO
3	Coldwater Canyon Avenue/ Moorpark Street	AM	0.689	B	0.692	B	0.003	NO	0.767	C	0.770	C	0.003	NO
		PM	0.880	D	0.884	D	0.004	NO	0.982	E	0.986	E	0.004	NO
4	Coldwater Canyon Avenue/ Ventura Boulevard	AM	0.776	C	0.780	C	0.004	NO	0.874	D	0.878	D	0.004	NO
		PM	0.877	D	0.882	D	0.005	NO	0.984	E	0.988	E	0.004	NO
5	Coldwater Canyon Avenue/ Harvard-Westlake Driveway	AM	0.761	C	0.776	C	0.015	NO	0.836	D	0.851	D	0.015	NO
		PM	0.951	E	0.959	E	0.008	NO	1.040	F	1.048	F	0.008	NO

(A) According to LADOT's "Traffic Study Policies and Procedures, " May 2012, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
> 0.901	E,F	equal to or greater than 0.010



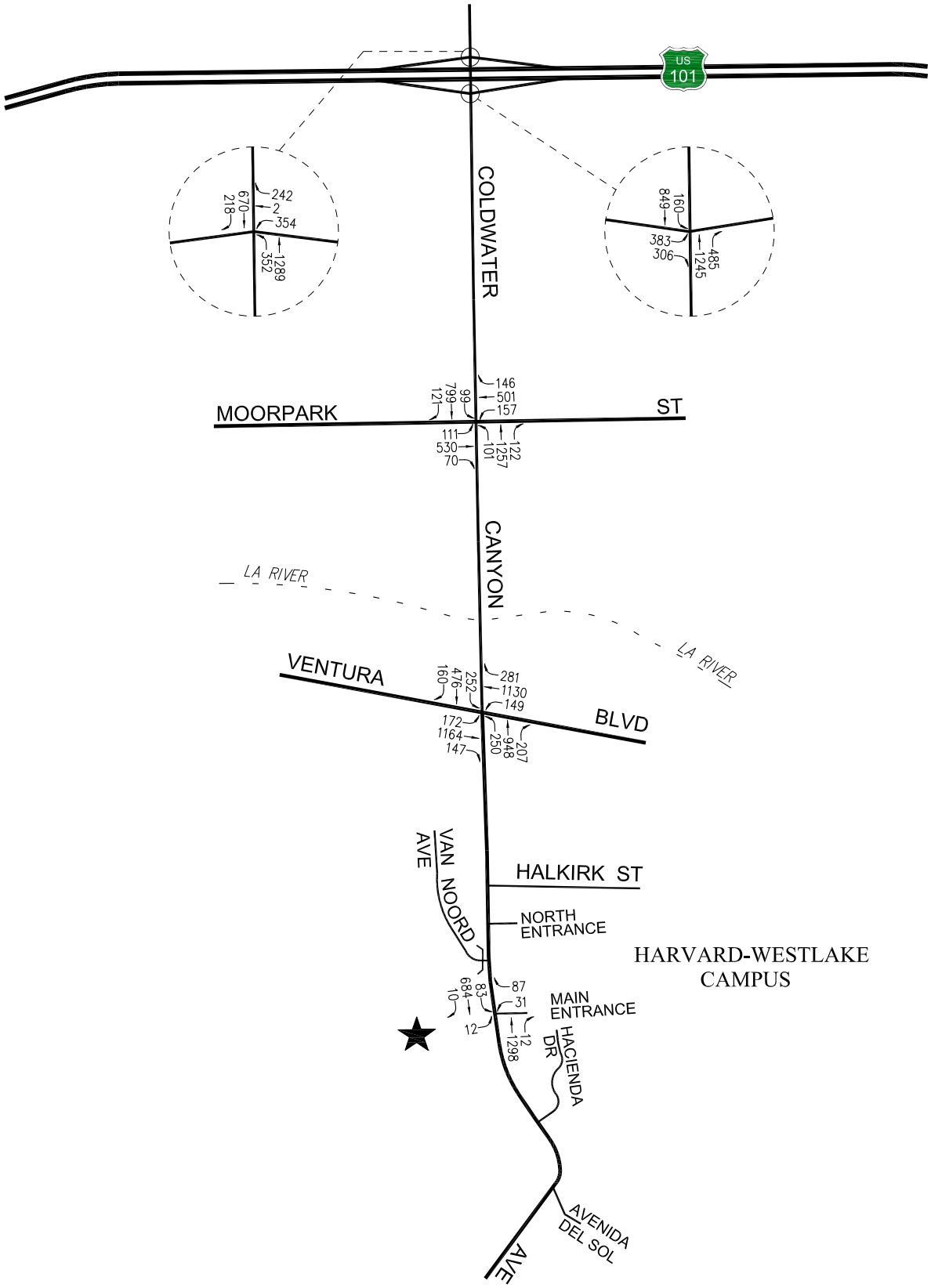
NOT TO SCALE

PROJECT SITE

FIGURE 10-1
EXISTING WITH CONSTRUCTION TRAFFIC VOLUMES
COMMUTER AM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f10-1.dwg 10/16/2012 11:09:31 gutierrez llg exhibits color.ctb



NOT TO SCALE

PROJECT SITE

FIGURE 10-2
EXISTING WITH CONSTRUCTION TRAFFIC VOLUMES
COMMUTER PM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f10-2.dwg 10/16/2012 11:10:22 gutierrez llg exhibits color.ctb

during the peak hours shown below with the addition of ambient traffic and related project traffic:

- Int. No. 3: Coldwater Canyon Avenue/ Moorpark Street — PM Peak Hour: *v/c*=0.982, LOS E
- Int. No. 4: Coldwater Canyon Avenue/ Ventura Boulevard — PM Peak Hour: *v/c*=0.984, LOS E
- Int. No. 5: Coldwater Canyon Avenue/ Harvard-Westlake Driveway — PM Peak Hour: *v/c*=1.040, LOS F

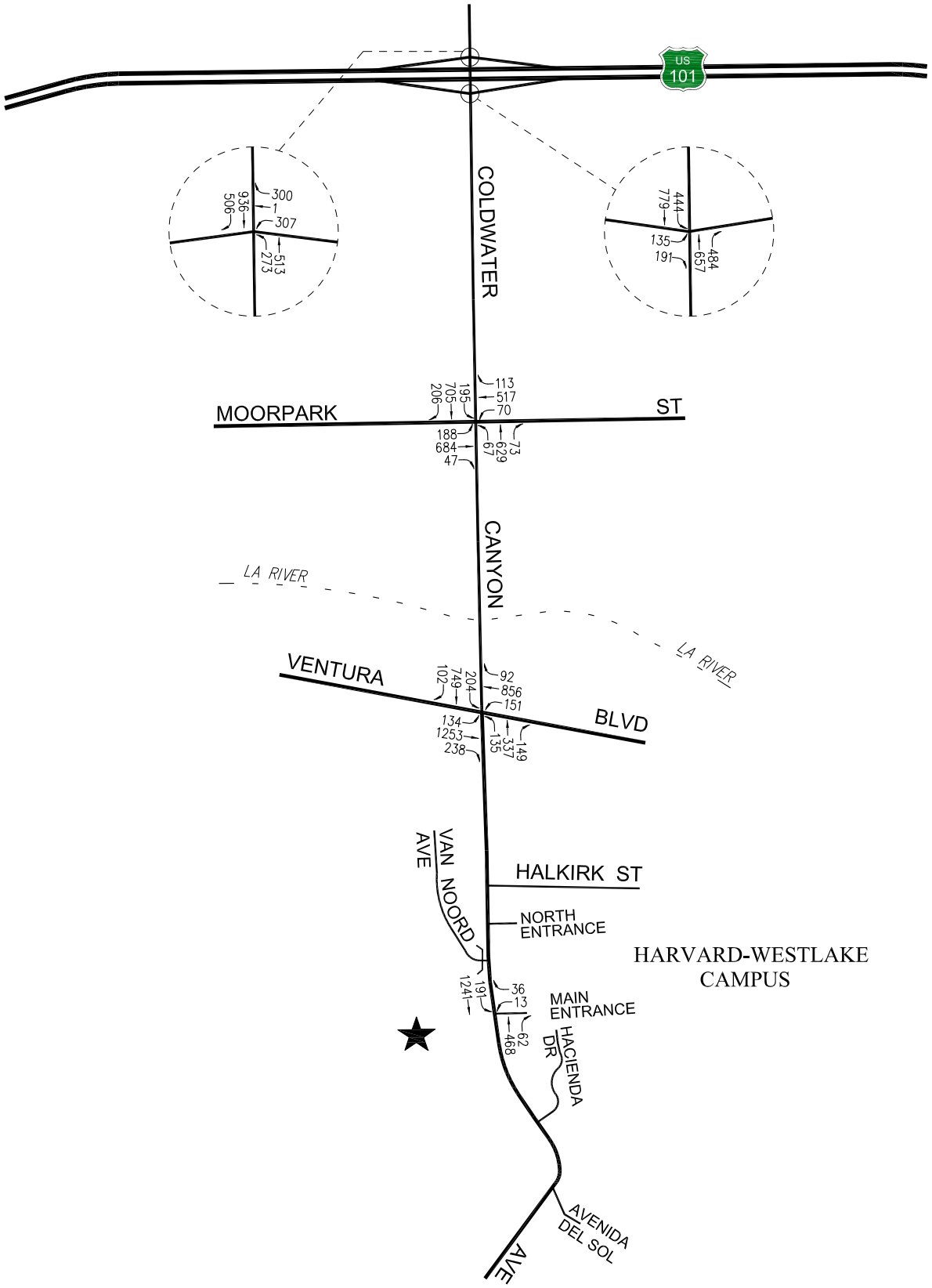
The future cumulative baseline (existing, ambient growth, and related projects) traffic volumes at the study intersections during the weekday commuter AM and PM peak hours are presented in ***Figures 10–3*** and ***10–4***, respectively.

10.2.2 *Future Cumulative with Construction Traffic Conditions*

As shown in column [4] of *Table 10–1*, application of the City's threshold criteria to the "Future With Construction" scenario indicates that the proposed project is not expected to create significant impacts at the five study intersections. Incremental, but not significant, impacts are noted at the study intersections and two of the five study intersections are expected to continue operating at LOS D or better during the weekday commuter AM and PM peak hours with the addition of growth in ambient traffic, related project traffic, and construction traffic, as presented in *Table 10-1*.

The future cumulative with construction (existing, ambient growth, related projects, and construction) traffic volumes at the study intersections during the weekday commuter AM and PM peak hours are illustrated in ***Figures 10-5*** and ***10–6***, respectively.

Based on the results of the impact analyses, traffic impacts associated with construction of the project would be less than significant, and mitigation is not required or recommended.



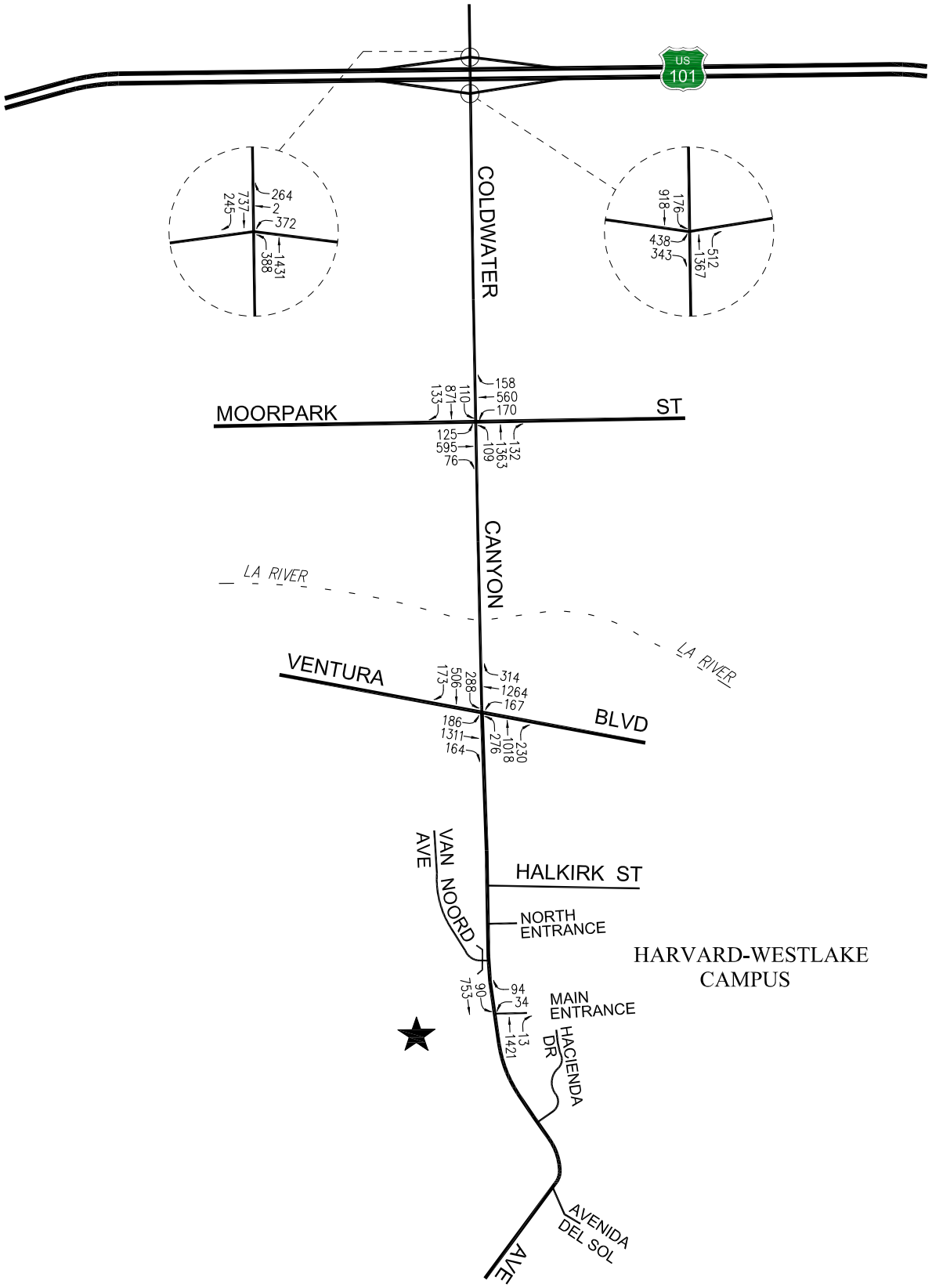
NOT TO SCALE

PROJECT SITE

FIGURE 10-3
FUTURE CUMULATIVE BASELINE TRAFFIC VOLUMES
COMMUTER AM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f10-3.dwg 10/16/2012 11:10:53 gutierrez llg exhibits color.ctb



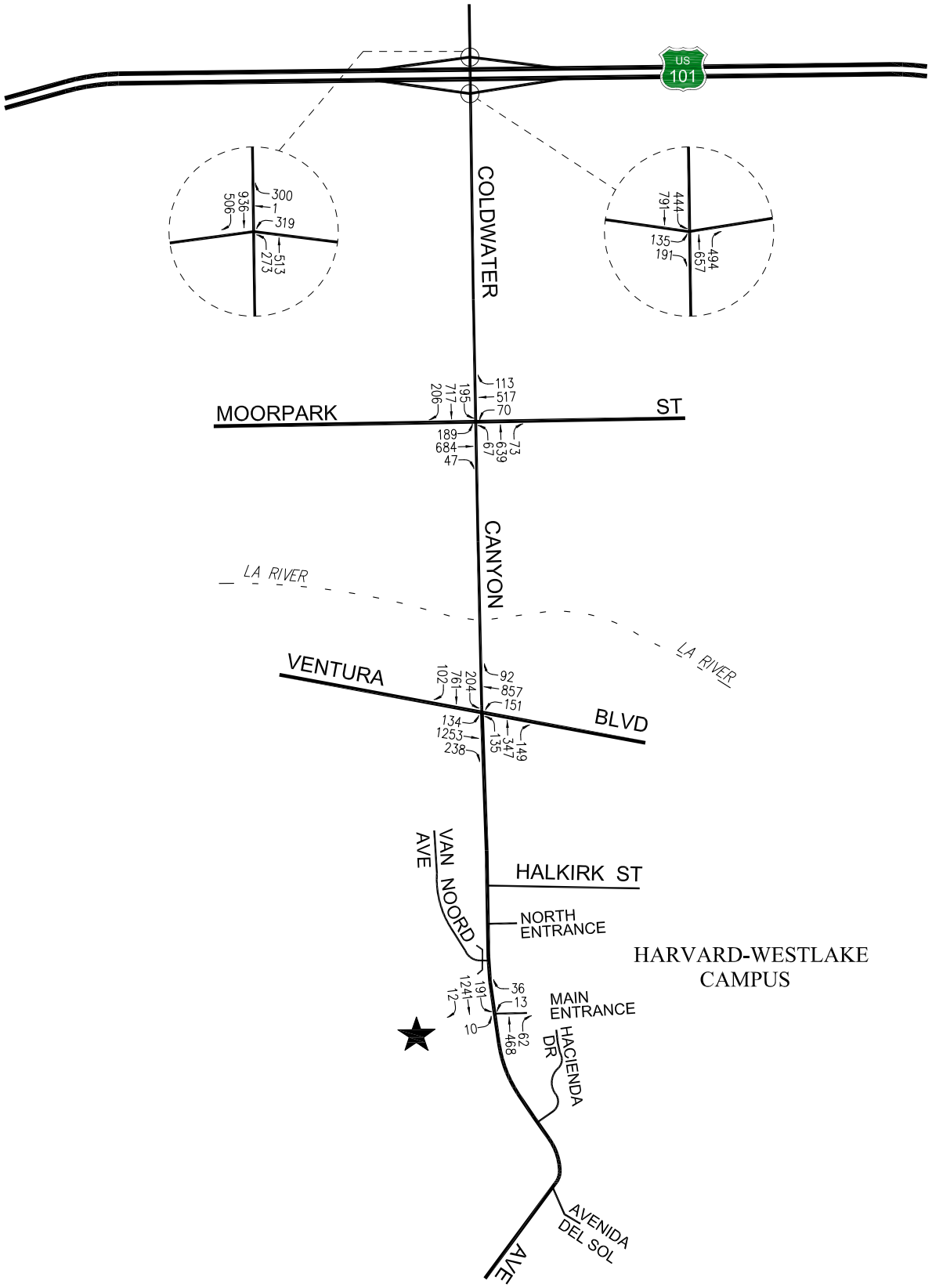
NOT TO SCALE

PROJECT SITE

FIGURE 10-4
FUTURE CUMULATIVE BASELINE TRAFFIC VOLUMES
COMMUTER PM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f10-4.dwg 10/16/2012 11:11:24 gutierrez llg exhibits color.ctb



N

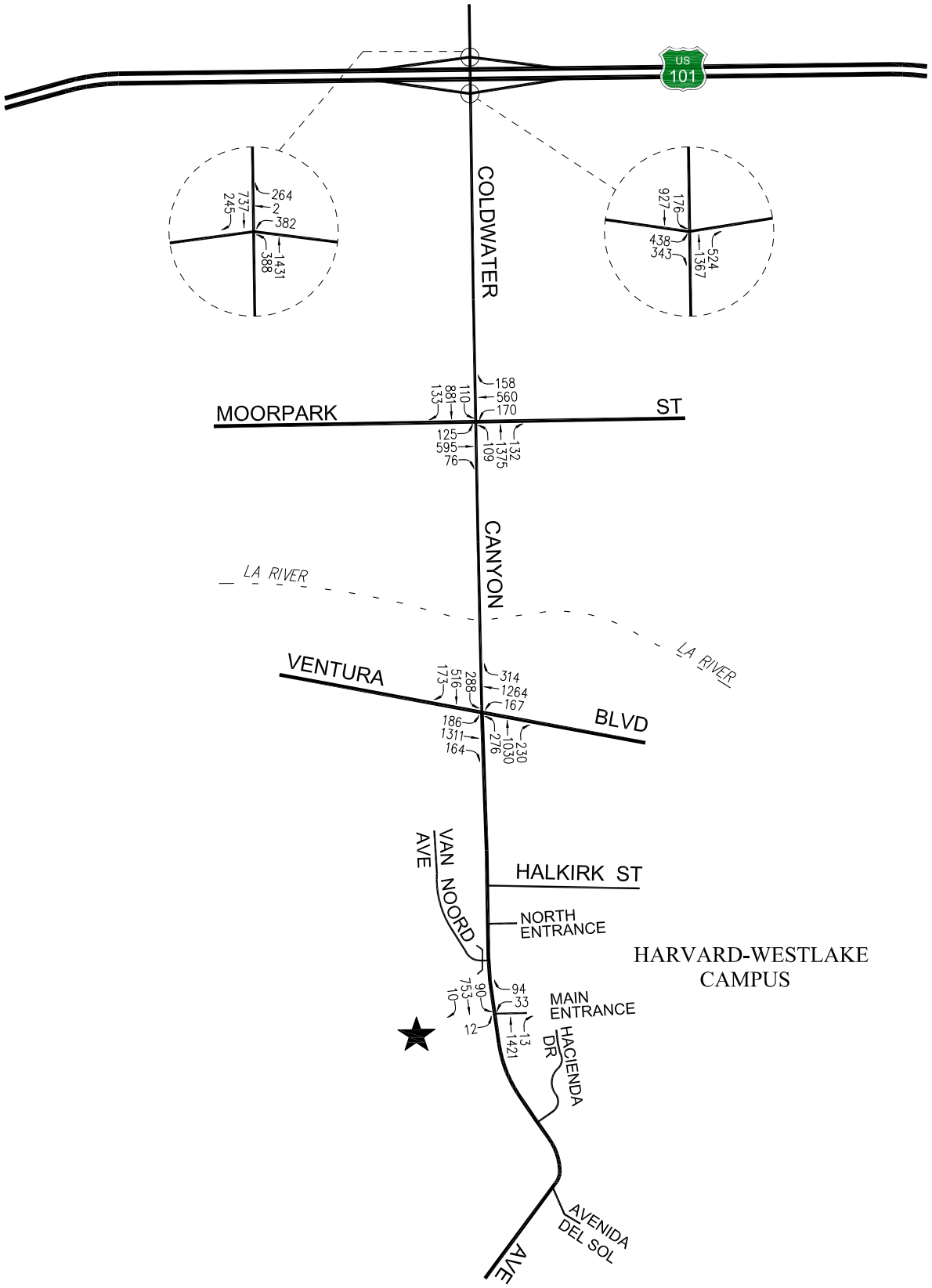
NOT TO SCALE

★ PROJECT SITE

FIGURE 10-5
FUTURE WITH CONSTRUCTION TRAFFIC VOLUMES
COMMUTER AM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f10-5.dwg 10/16/2012 11:11:52 gutierrez llg exhibits color.ctb



NOT TO SCALE

PROJECT SITE

FIGURE 10-6
FUTURE WITH CONSTRUCTION TRAFFIC VOLUMES
COMMUTER PM PEAK HOUR
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f10-6.dwg 10/16/2012 11:12:21 gutierrez llg exhibits color.ctb

11.0 PROJECT OCCUPANCY TRAFFIC ANALYSIS

The project occupancy traffic impact analysis prepared for the study intersection using the CMA methodology and application of the City of Los Angeles significant impact criteria is summarized in ***Table 11-1***. The calculation worksheets for the project occupancy traffic analyses using the CMA methodology are contained in ***Appendix C-2***.

11.1 Existing Conditions

11.1.1 *Existing Conditions*

As indicated in column [1] of *Table 11–1*, the Coldwater Canyon Avenue/Harvard-Westlake Driveway study intersection is presently operating at LOS C during the weekday school AM peak hour and LOS E during the weekday school PM peak hour under existing conditions.

The existing traffic volumes at the study intersections during the weekday school AM and PM peak hours are displayed in *Figure 6-3*.

11.1.2 *Existing With Project Occupancy Traffic Conditions*

As previously described in Section 2.4, in conjunction with the proposed parking structure project, Harvard-Westlake will improve the Coldwater Canyon Avenue/Harvard-Westlake Driveway intersection. These improvements include: 1) Providing a southbound through lane on Coldwater Canyon Avenue adjacent to the project site; 2) Providing separate left-turn and a right-turn lanes at the intersection to facilitate traffic entering the parking structure; 3) Enhancing the traffic signal to provide separate left-turn phasing for northbound and southbound traffic, plus LADOT's ATSAC/ATCS equipment; and 4) Relocating the intersection approximately 34 feet to the south of its current location along Coldwater Canyon Avenue in order to align with the proposed northerly parking structure driveway. As indicated in column [2] of *Table 11–1*, application of the City's threshold criteria to the "Existing With Project Occupancy" scenario indicates that the project occupancy – including implementation of the improvements outlined above - is not expected to create significant impacts at the study intersection. Rather, the project and these improvements will cause a substantial decrease in the calculated *v/c* ratio at the study intersection during the school AM hour, as well as an incremental decrease in the calculated *v/c* ratio during the PM peak hour, primarily related to the increased capacity provided at the intersection in conjunction with the project. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersection under the "Existing With Project Occupancy" conditions. The existing with project occupancy traffic volumes at the study intersections during the weekday school AM and PM peak hours are illustrated in ***Figure 11–1***.

11.2 Future Conditions

11.2.1 *Future Cumulative Baseline Conditions*

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the plus completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing

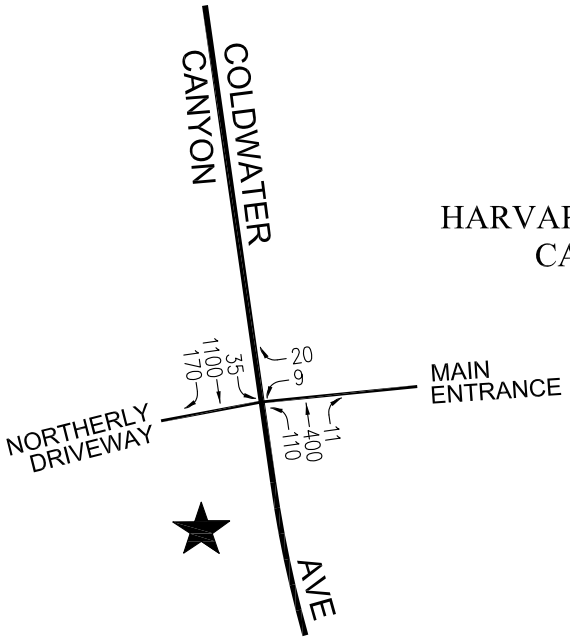
Table 11-1
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
AM AND PM (B) PEAK HOURS
PROJECT OCCUPANCY

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2012 EXISTING V/C	LOS	[2] YEAR 2012 EXISTING W/ PROJ. OCC. V/C	LOS	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT	[3] YEAR 2016 FUTURE W/O PROJECT OCC. V/C	LOS	[4] YEAR 2016 FUTURE WITH PROJECT OCC. V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT
5	Coldwater Canyon Avenue/ Harvard-Westlake Driveway	AM	0.761	C	0.377	A	-0.384	NO	0.836	D	0.419	A	-0.417	NO
		PM	0.901	E	0.876	D	-0.025	NO	0.985	E	0.967	E	-0.018	NO

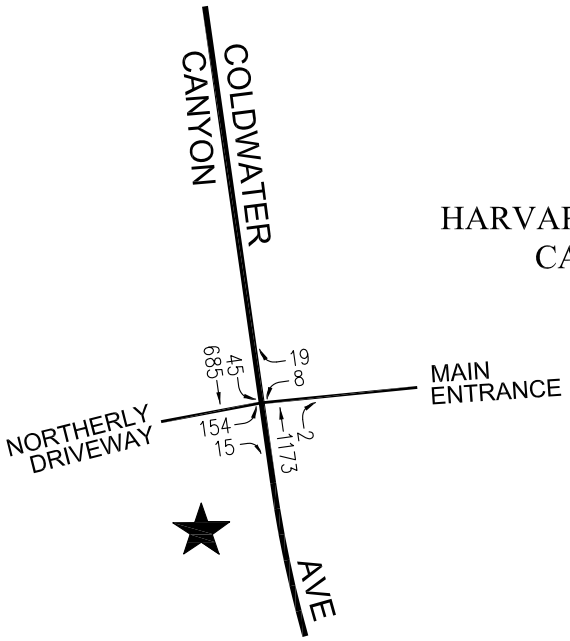
(A) According to LADOT's "Traffic Study Policies and Procedures, " May 2012, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
> 0.901	E,F	equal to or greater than 0.010

(B) PM peak hour analysis based on peak hour of traffic on Coldwater Canyon Avenue (2:45 PM to 3:45 PM) coinciding with student dismissal period at Harvard-Westlake.



SCHOOL AM PEAK HOUR



SCHOOL PM PEAK HOUR

N
NOT TO SCALE

PROJECT SITE

FIGURE 11-1
EXISTING WITH PROJECT OCCUPANCY TRAFFIC VOLUMES
SCHOOL AM AND PM PEAK HOURS
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f11-1.dwg 10/16/2012 11:13:21 gutierrez llg exhibits color.ctb

developments and other factors (i.e., ambient growth). The *v/c* ratios at the study intersection are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 7-1*. As presented in column [3] of *Table 11-1*, the Coldwater Canyon Avenue/Harvard-Westlake Driveway intersection is forecast to operate at LOS D during the school AM peak hour, and LOS E during the school PM peak hour with the addition of ambient traffic and related project traffic under the future cumulative baseline conditions.

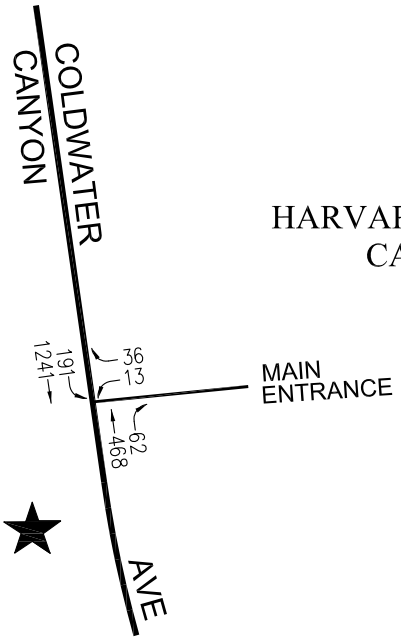
The future cumulative baseline (existing, ambient growth, and related projects) traffic volumes at the study intersections during the weekday school AM and PM peak hours are presented in ***Figure 11–2***.

11.2.2 *Future Cumulative with Project Occupancy Traffic Conditions*

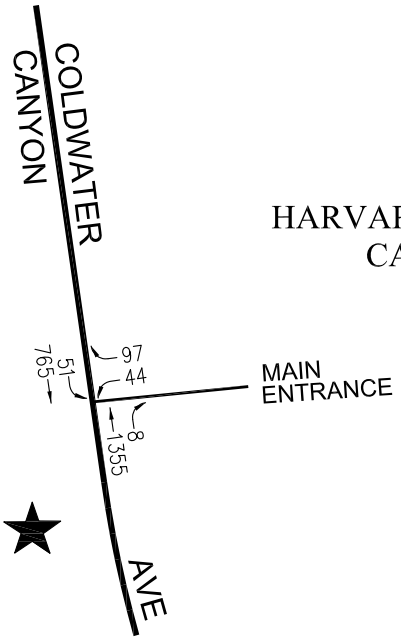
As shown in column [4] of *Table 11–1,* application of the City's threshold criteria to the "With Project Occupancy" scenario indicates that the proposed project occupancy including implementation of the improvements outlined above - is not expected to create significant impacts at the study intersection. Rather, the project and these improvements will cause a substantial decrease in the calculated *v/c* ratio at the study intersection during the school AM hour, as well as an incremental decrease in the calculated *v/c* ratio during the PM peak hour, as presented in *Table 11-1*, primarily related to the increased capacity provided at the intersection in conjunction with the project.

The future cumulative with project occupancy (existing, ambient growth, related projects, and project occupancy) traffic volumes at the study intersections during the weekday school AM and PM peak hours are illustrated in ***Figure 11-3***.

Based on the results of the impact analyses, traffic impacts associated with project occupancy would be less than significant, and mitigation is not required or recommended.



SCHOOL AM PEAK HOUR



SCHOOL PM PEAK HOUR

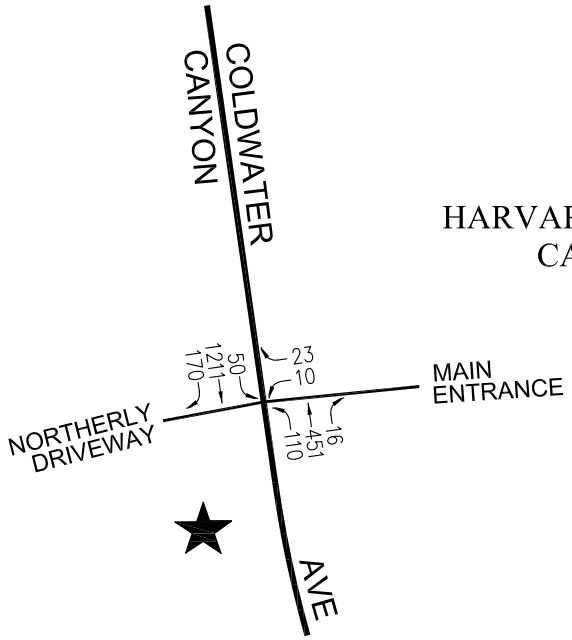
N
NOT TO SCALE

PROJECT SITE

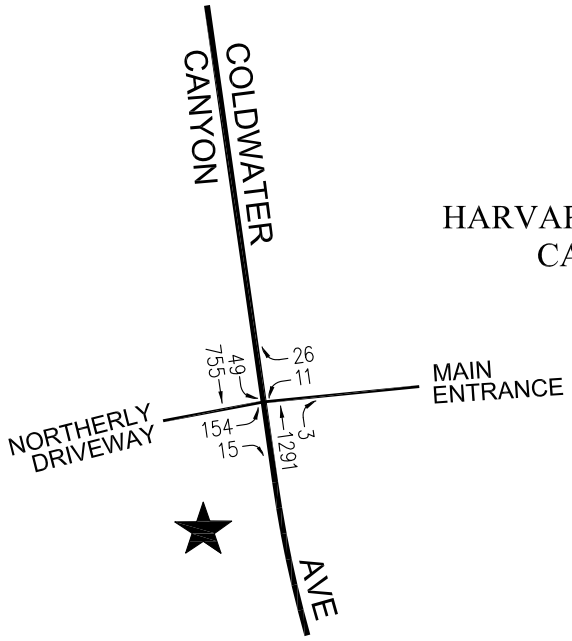
FIGURE 11-2
FUTURE CUMULATIVE BASELINE TRAFFIC VOLUMES
SCHOOL AM AND PM PEAK HOURS
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f11-2.dwg 10/16/2012 11:13:47 gutierrez llg exhibits color.ctb



SCHOOL AM PEAK HOUR



SCHOOL PM PEAK HOUR

N

NOT TO SCALE

★ PROJECT SITE

FIGURE 11-3
FUTURE CUMULATIVE WITH PROJECT OCCUPANCY TRAFFIC VOLUMES
SCHOOL AM AND PM PEAK HOURS
HARVARD-WESTLAKE SCHOOL PARKING IMPROVEMENT PLAN

LINSCOTT, LAW & GREENSPAN, engineers

o:\3744-2\dwg\f11-3.dwg 10/16/2012 11:14:30 gutierrez llg exhibits color.ctb

12.0 STREET SEGMENT ANALYSIS

Although not required by LADOT or the City of Los Angeles traffic study guidelines, a street segment analysis was prepared using the Highway Capacity Manual (HCM) methodology for the segment of Coldwater Canyon Avenue from Ventura Boulevard to the Harvard-Westlake Driveway in order to demonstrate the effect of the voluntary street improvement of the additional southbound lane in the morning weekday commuter peak period. As described in Section 2.5, Harvard-Westlake proposes to implement voluntary roadway improvements to the segment of Coldwater Canyon Avenue between Ventura Boulevard and the northerly boundary of the project frontage along the west side of the roadway. The improvements (roadway restriping and signage) would provide for a second through lane on southbound Coldwater Canyon Avenue during the weekday morning commute period (e.g., 7:00 a.m. – 10:00 a.m.), which would connect to the existing second southbound lane on Coldwater Canyon Avenue immediately south of Ventura Boulevard.

The street segment analysis is summarized in ***Table 12-1***. The calculation worksheets for the street segment analysis using the HCM methodology are contained in ***Appendix D***.

12.1 Existing Conditions

As indicated in column [1] of *Table 12-1*, the study street segment is presently operating at LOS E during the weekday AM peak hour under existing conditions. However, as indicated in column [2] of *Table 12-1*, under the "Existing With Project Occupancy" scenario, the installation of the second southbound through lane during the weekday AM peak period will improve the study street segment to operate at LOS B during the weekday AM peak hour in the southbound direction.

12.2 Future Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the plus completion and occupancy of 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). As presented in column [3] of *Table 12-1* the study street segment is expected to continue to operate at LOS E during the AM peak hour with the addition of ambient traffic and related project traffic under future cumulative baseline conditions. However, as indicated in column [4] of *Table 12-1*, under the "Future With Project Occupancy" scenario, the installation of the second southbound through lane during the weekday AM peak period will improve the study street segment to operate at LOS B during the weekday AM peak hour in the southbound direction.

Table 12-1
SUMMARY OF STREET SEGMENT
LEVELS OF SERVICE
AM PEAK HOUR
PROJECT OCCUPANCY

NO.	STREET SEGMENT			PEAK HOUR	[1] YEAR 2012 EXISTING LOS	[2] YEAR 2012 EXISTING W/ PROJ. OCC. LOS	[3] YEAR 2016 FUTURE W/O PROJECT OCC. LOS	[4] YEAR 2016 FUTURE WITH PROJECT OCC. LOS
	STREET	FROM	TO					
1	Coldwater Canyon Avenue	Ventura Boulevard	Harvard-Westlake Driveway	AM	E	B	E	B

(A) Existing and Future Without Project Occupancy conditions were analyzed using HCM Two-Lane analysis with Coldwater Canyon Avenue providing one lane in each direction. For the Existing with Project Occupancy and Future With Project Occupancy conditions, the level of service was determined using HCM multi-lane analysis for southbound Coldwater Canyon Avenue, assuming two southbound through lanes from Ventura Boulevard to the Harvard-Westlake Driveway.

(B) Columns [2] and [4] represent a level of service for the southbound direction only.

13.0 SUMMARY OF EFFECTS OF PROJECT-RELATED ROADWAY IMPROVEMENTS

13.1 Effects of Harvard-Westlake Improvements

The improvements associated with the proposed Harvard-Westlake parking structure project will provide the following traffic benefits for motorists on Coldwater Canyon Avenue:

- Significant reduction in travel delay (up to 5-10 minutes) as compared to existing conditions;

- Improve through traffic flow adjacent to the parking structure during the morning commute period with a second southbound through traffic lane for approximately one-half mile from Ventura Boulevard to the Harvard-Westlake site for use during the weekday morning commute period (e.g., 7:00 a.m. to 10:00 a.m.);

- Ensure that traffic turning into the new parking structure will not disrupt through traffic flow on northbound and southbound Coldwater Canyon Avenue based on the construction of new separate left-turn and right-turn lanes at the parking structure entrance, as well as left-turn traffic signal phasing for northbound and southbound traffic, reducing potential conflicts for all motorists on Coldwater Canyon Avenue; and

- Enable the traffic signal at the Harvard-Westlake entrance to operate at optimum efficiency based on the installation of LADOT's ATSAC/ATCS traffic signal equipment.

As previously shown in *Tables 11-1 and 12-1* Coldwater Canyon Avenue will operate at substantially improved Levels of Service with the completion of the proposed project, including construction of the Harvard-Westlake improvements.

Intersection and Street Segment Levels of Service				
Intersection/Segment	**Peak Hour**	**Existing**	**Future (2016) Without Project**	**Future (2016) With Project**
Coldwater Canyon/ Harvard-Westlake Driveway Intersection	AM	LOS C	LOS D	LOS A
	PM	LOS E	LOS E	LOS E
Coldwater Canyon Southbound: Ventura Blvd to Harvard-Westlake	AM	LOS E	LOS E	LOS B

The following conclusions and observations are made regarding the effects of the Harvard-Westlake improvements:

- Implementation of the improvements provides an additional half-mile length to the second southbound travel lane on Coldwater Canyon Avenue during the busy weekday morning commute period.

- The second southbound lane provided by the improvements will substantially improve traffic flow at the Coldwater Canyon Avenue/Ventura Boulevard intersection, which suffers from congestion today due to the existing merge point located on southbound Coldwater Canyon immediately south of Ventura Boulevard, and the improved traffic flow will allow residents to turn to and from local streets with greater ease during peak periods.

- At the Coldwater Canyon Avenue/Harvard-Westlake Driveway intersection, motorists should expect less congestion during peak hours, as well as at all times during the day with implementation of the project and associated improvements.

- At the Coldwater Canyon Avenue/Harvard-Westlake Driveway intersection, it is expected that turning movements will be completed in a relatively safer manner based on the provision for left-turn traffic signal phasing.

13.2 Conclusion

For motorists in Studio City using Ventura Boulevard, the segment of Coldwater Canyon south to Harvard-Westlake, and local intersecting streets, substantial benefits in traffic flow should result based on implementation of the improvements.

In general, the severity and duration of traffic congestion on these streets as compared to current conditions will be substantially reduced. For some motorists, this will result significant reductions in travel delay (e.g., 5-10 minutes, depending on the travel route).

14.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California 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, 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

> "A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02), causing or worsening LOS F (V/C > 1.00)."

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

14.1 Intersections

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

CMP Station	Intersection
Int. No. 74	Ventura Boulevard/Laurel Canyon Boulevard
Int. No. 76	Ventura Boulevard/Sepulveda Boulevard
Int. No. 78	Ventura Boulevard/Woodman 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 commuter peak hours. The proposed project will not add 50 or more trips during either the AM or PM weekday commuter peak hours (i.e., of adjacent street traffic) at the three 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.

14.2 Freeways

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

- CMP Station — Location

  No. 1038 — 101 Freeway at Coldwater Canyon Avenue

  No. 1057 — 170 Freeway south of Sherman Way

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 commuter peak periods. The proposed project will not add 150 or more trips (in either direction) during either the AM or PM weekday commuter peak hours to CMP freeway monitoring locations 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.

14.3 Transit Impact Review

As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the potential impacts of the construction of the project on transit service. As discussed in Subsection 5.5 herein, existing transit service is provided in the vicinity of the existing Harvard-Westlake Campus.

The construction trip generation, as shown in *Table 8-1*, 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 one transit trip during the commuter AM peak hour and one transit trip during the commuter PM peak hour. Over a 24-hour period, the proposed project is forecast to generate demand for 14 daily transit trips. Therefore, the calculations are as follows:

- AM Peak Hour = $22 \times 1.4 \times 0.035 = 1$ Transit Trips
- PM Peak Hour = $22 \times 1.4 \times 0.035 = 1$ Transit Trips
- Daily Trips = $240 \times 1.4 \times 0.035 = 12$ Transit Trips

As shown in *Table 5–1,* five bus transit lines and routes are provided adjacent to or in close proximity the project site. As outlined in *Table 5–1*, under the "No. of Buses During Peak Hour" column, these five transit lines provide services for an average of (i.e., average of the directional number of buses during the peak hours) generally 31 buses during the commuter AM peak hour and roughly 28 buses during the commuter PM peak hour. Therefore, based on the above calculated AM and PM peak hour trips, this would correspond on average to no more than one additional transit rider per bus. It is anticipated that the existing transit service in the project area

will adequately accommodate the increase of project construction-generated transit trips. Thus, given the low number of project construction-generated transit trips per bus, no project construction impacts on existing or future transit services in the project area are expected to occur as a result of the construction of the proposed project.

Occupancy of the proposed project will not generate any new vehicle trips to and from the site. Accordingly, no changes to utilization of public transit services are anticipated as a result of occupancy of the proposed project.

15.0 CONCLUSIONS

This traffic impact analysis has been prepared to evaluate the potential impacts to the local street system due to the Harvard-Westlake School Parking Improvement Plan. Five intersections were identified and analyzed in order to determine changes in operations during construction and following occupancy of the proposed project. Application of the impact threshold criteria from the City of Los Angeles indicates that none of the five study intersections would be significantly impacted either by the forecast construction traffic associated with the proposed project or the forecast shifted project traffic following completion and occupancy of the project. Incremental but not significant impacts are noted at the study intersections evaluated in this analysis. As no significant impacts are expected due to the proposed project, no traffic mitigation measures are required or recommended for the study locations.