IV. ENVIRONMENTAL IMPACT ANALYSIS
J. TRAFFIC AND CIRCULATION
1. TRAFFIC

INTRODUCTION

The following discussion presents the findings and conclusions of the Traffic Impact Analysis, prepared by Greer & Company, dated November of 2000 *(revised April 2001)*. The Traffic Impact Analysis was prepared in consultation with the City of Los Angeles Department of Transportation (LADOT), and updates the previously prepared Traffic Impact Analysis, dated August 1999.[1] This revised analysis updates the base year traffic with new year 2000 traffic counts and incorporates recently added related projects. The Traffic Impact Analysis was prepared in compliance with the County's Congestion Management Program (CMP) and with LADOT's traffic study guidelines. The LADOT staff established the study parameters for this analysis consistent with the results of the Initial Study Assessment Form for Traffic Impacts. The following approach methodology was used to conduct this traffic and parking analysis:

Methodology

Data Collection

A field reconnaissance was conducted of the street system in the vicinity of the project by Greer & Co. staff. In consultation with the LADOT staff and based on the Initial Assessment Study, early consultation comments from Caltrans and other interested parties during the NOP period, twelve (12) key intersections have been identified as potentially impacted by the proposed project, and therefore, designated as study intersections. These intersections are as follows:

1. Rinaldi Street and Balboa Boulevard
2. Balboa Boulevard and SR 118 westbound ramps
3. Balboa Boulevard and SR 118 eastbound ramps
4. Rinaldi Street and Louise Avenue

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[1] *See City of Los Angeles Interdepartmental Correspondence from Sergio Valdez, Transportation Engineer, LADOT, to Emily Gable-Luddy, Associate Zoning Administrator, Department of City Planning, dated May 17, 2001 (included in Appendix H of this DEIR). This correspondence provides LADOT's review and approval of the Traffic Impact Study with specific requirements consistent with the applicants proposed traffic improvements and mitigation measures identified herein.*

5. Rinaldi Street and Andasol Avenue
6. Rinaldi Street and Encino Avenue
7. Rinaldi Street and Shoshone Avenue
8. Rinaldi Street and White Oak Avenue
9. Rinaldi Street and Zelzah Avenue
10. Rinaldi Street and Reseda Boulevard
11. Rinaldi Street/Amigo Avenue and SR 118 westbound ramps
12. Reseda Boulevard and SR 118 eastbound ramps

Analysis of Existing Conditions

Intersection capacity analyses were conducted for the study intersections based on a.m. and p.m. peak hour traffic volumes and existing intersection geometrics. The Critical Movement Analysis (CMA) methodology, as required by LADOT staff and consistent with the County's Congestion Management Program (CMP), was used to determine intersection operational levels. The CMA worksheets referenced throughout this report are contained in the Appendix.

Traffic conditions are generally defined in terms of "Level of Service" or (LOS). The LOS is an index of the quality of traffic flow through an intersection as defined by the Highway Capacity Manual.[2] The LOS definitions qualitatively describe operating characteristics under various conditions. The LOS definitions and corresponding V/C ratios for study intersections are presented in Table IV.J.1-1 on page 200.

Analysis of Pre-Project Conditions

The analysis of traffic impacts resulting from other area projects was also undertaken as identified by LADOT and the Department of City Planning staff. In order to provide a pre-project evaluation base, the related project volumes plus an annual growth factor were added to the existing intersection volumes to forecast traffic conditions for the target year as specified by the LADOT staff. Traffic generated by the related projects were combined with the existing traffic, increased by an annual growth factor, to provide pre-project traffic volumes. Pre-project conditions were evaluated using the same CMA analysis methodology.

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[2] *Highway Capacity Manual, Transportation Research Board, National Academy of Sciences, Washington, D.C., 1985.*

Table IV.J.1-1
Level of Service Definitions

Level of Service	V/C Ratio*	Interpretation
A	<0.60	Uncongested Operations; all queues clear in a single cycle.
B	0.60 - 0.70	Stable operation; an occasional approach phase is fully utilized.
C	0.71 - 0.80	Light congestion; occasional backups on critical approaches.
D	0.81 - 0.90	Significant congestion on critical approaches, but intersection is functional. Cars are required to wait through more than one cycle during short peaks. No long-standing queues formed.
E	0.91 - 1.00	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es).
F	>1.00	Total Breakdown, stop-and-go operation.

* *V/C= Volume to Capacity Ratio.*
Source: Highway Capacity Manual, Highway Research Board Special Report 87, 1965.

Project Traffic

The calculation of project traffic was undertaken to identify the potential for project traffic impacts. Trip generation rates were obtained from LADOT's data files and the Institute of Transportation Engineers' Trip Generation, Sixth Edition, and applied to the proposed project uses to estimate future project traffic volumes. Project traffic was assigned to the local street system based on the student demographic data provided by Hillcrest Christian School, and on area traffic patterns, site access and general demographic distributions. Project traffic volumes was added to pre-project traffic volumes to obtain post-project traffic volumes.

Analysis of Post-Project Conditions

The same CMA analysis methodology was again applied in determining intersection operational conditions for a.m. and p.m. peak hours for post-project conditions. Project traffic impacts, if any, were identified.

Table IV.J.1-2
Freeway Mainline Level of Service Definitions

D/C Ratio	LOS	D/C Ratio	LOS*
>0.00 – 0.35	A	<1.00 – 1.25	F(0)
>0.35 – 0.54	B	>1.25 – 1.35	F(1)
>0.54 – 0.77	C	>1.35 – 1.45	F(2)
>0.77 – 0.93	D	>1.45	F(3)
>0.93 – 1.00	E		

* *LOS F(1) through F(3) represent severe congestion travel speeds less than 25 MPH for more than one hour.*

Source: Los Angeles County Metropolitan Transportation Authority, Congestion Management Program, 1997.

Review of Area Circulation and Site Access

The proposed site access was reviewed in terms of vehicular access, on-site circulation, pedestrian access and circulation, and the provision of truck and service access. The existing local circulation pattern of project traffic was examined to determine the extent, if any, of neighborhood intrusion into adjacent neighborhoods. Any appropriate modifications, if any, were identified and recommended.

Analysis of Freeway Segments and Ramps

Using existing and projected 2020 freeway and freeway ramp traffic volumes provided by Caltrans, the local freeway segments and freeway ramps were analyzed to identify existing levels of service and any projected project traffic impacts. The LOS values for freeway segment analysis are estimated by calculating the demand to capacity (D/C) ratio and using the LOS definitions shown in Table IV.J.1-2, above.

Recommended Traffic Mitigation Measures

Overall traffic mitigation improvements were recommended based on the intersection capacity analyses, the freeway and freeway ramp capacity analyses, the local area circulation review, and the site access analyses. The principal objectives were to determine the anticipated traffic impacts which would result from the proposed project, and to recommend improvements and modifications necessary to improve roadway capacities and to provide safe, efficient operations, to mitigate those impacts attributed directly to project traffic.

ENVIRONMENTAL SETTING

Existing Street System

The following constitutes a general discussion of the primary area street system serving the project site.

Rinaldi Street, in the vicinity of the project site, provides for east-west arterial travel parallel to the Simi Valley Freeway (SR 118) across the length of the San Fernando Valley. Rinaldi Street is

designated a major highway and is generally improved with an 80-foot roadway within a 100-foot right of way in the vicinity of the project site. Rinaldi generally provides two travel lanes in each direction with a two-way left turn and separate left turn lanes at intersections, and striped bike lanes on each side of the street. On-street parking is generally permitted on both sides of the street.

Reseda Boulevard, Zelzah Avenue and Balboa Boulevard, are north-south major highways extending southerly of Rinaldi across the San Fernando Valley. North of Rinaldi, Reseda and Balboa extend into hillside residential communities. Zelzah presently extends north of Rinaldi as only a narrow paved roadway without curbs and gutters serving a local residential neighborhood. Reseda and Balboa, and Zelzah south of Rinaldi, provide two and three lanes in each direction with two-way left turn lanes and separate left turn lanes at intersections and provide on-street parking. They all provide crossings of the Simi Valley Freeway, and Reseda and Balboa have existing full-access interchange ramps with the freeway. All three are generally fronted by both residential and commercial development.

White Oak Avenue, Shoshone Avenue, Encino Avenue and Louise Avenue, are north-south collector streets serving residential neighborhoods north and south of Rinaldi and south of the Simi Valley Freeway (SR 118). White Oak is designated a major highway south of Rinaldi. Louise is designated a secondary highway south of Rinaldi. Shoshone and Encino, and Rinaldi and Louise north of Rinaldi, are all local collector streets with 40-foot roadways within 60-foot rights of way. Each street provides one travel lane in each direction with on-street parking permitted on both sides of the street.

Simi Valley Freeway (SR 118), in the vicinity of the project, lies southerly of Rinaldi Street and extends from Simi Valley on the west to east of the Golden State Freeway (I-5) on the east. The freeway in the immediate vicinity of the project site consists of four through lanes and a car pool lane in each direction. Full freeway access in the general vicinity of the project area is provided at Rinaldi Street west of Reseda Boulevard (westbound), Reseda Boulevard south of Rinaldi Street (eastbound), and Balboa Boulevard south of Rinaldi Street.

Site Access and Circulation

Primary access to the East Campus is provided via two one-way driveways to and from Rinaldi Street which access a 40-space parking lot for staff and visitors. A second parking lot of 108 parking spaces has been constructed at the rear of the existing school buildings with an access driveway to Shoshone Avenue. The circulation pattern for the existing parking area adjacent to Rinaldi on the East Campus is one-way traffic through the parking lot from the easterly most driveway with a right turn exit only at the westerly driveway. The westerly driveway exits onto Rinaldi just east of the Rinaldi/Encino intersection. Currently, most of the student drop off and pick-up activity takes place in this lot.

Under an arrangement with LADOT and LAPD, school officials currently provide traffic control for arriving and departing parents during the drop off/pickup periods. Class schedules are staggered to reduce the peak activity levels. Some drop-off and pick-up activity takes place in the north parking lot with access from Shoshone, primarily during the peak afternoon departure period. The existing drop-off and pick-up activity in the south parking lot along Rinaldi, and during the afternoon departure period, in the north parking lot along Shoshone will be maintained with the proposed expansion.

The circulation pattern within the existing rear parking lot provides for an internal loop with access into and out of one driveway on Shoshone Avenue. The driveway functions as a full access driveway. With school officials providing staggered class schedules and traffic control internally within the parking lot, the drop- off and pick-up activity is contained within the parking lot. The driveway also provides access to 130 temporary overflow parking spaces on the play area at the rear of the parking lot.

Neighborhood Traffic Patterns

Shoshone Avenue serves as a collector street for much of the local hillside residential area north of Rinaldi Street. The character of Shoshone Avenue is easily noted as a collector street with a daily traffic volume in excess of 7,000 vehicles whereas the criteria for a local residential street is specified for neighborhood streets of 1,000, 2,000 and 3,000 vehicles per day.

In order to make an assessment of the potential impacts of project traffic on neighborhood streets, a series of automatic, 24-hour counts and manual intersection turning movement counts were made on Shoshone Avenue, Andasol Avenue, Flanders Street and Mayerling Street in the vicinity of the proposed project. Automatic, 24-hour counts were conducted at six locations on two different weekdays. Counts were conducted on Tuesday, August 29, 2000 and Wednesday, September 13, 2000. On August 29, 2000, none of the four public and private schools in the neighborhood area were in session-Frost Middle School, St. Euphrasia School, Hillcrest Christian School and Rinaldi Adult School. On September 13, 2000, all four schools were in regular session. The daily traffic volumes

for the two days of counts including directional traffic volumes are presented in Figure IV.J.1-1 on page 205.

The 24-hour automatic traffic count conducted on Shoshone between Flanders and Mayerling was 7,652 vehicles--3,949 vehicles northbound and 3,703 vehicles southbound. The a.m. peak hour occurred between 7:00 and 8:00 a.m. with a total of 1,104 vehicles--397 vehicles northbound and 707 vehicles southbound. The p.m. peak hour occurred between 5:00 and 6:00 p.m. with a total of 566 vehicles--359 vehicles northbound and 207 vehicles southbound. A second afternoon peak occurs during the time area schools are letting out between 2:00 and 3:00 p.m. with a total of 640 vehicles--396 vehicles northbound and 244 vehicles southbound and between 3:00 and 4:00 p.m. with a total of 691 vehicles--338 vehicles northbound and 353 vehicles southbound.

While there is a normal fluctuation in daily and peak hour traffic volumes, the midweek days tend to be relatively steady and similar with perhaps as much as a 10 percent deviation on any given pair of days. Assuming that the entire difference in the traffic volumes for the two count days is due to school traffic, the daily school traffic was calculated as well as calculating the daily school traffic as a percentage of total daily traffic. The daily school traffic volumes and percentage of total daily traffic are also presented in Figure IV.J.1-1 on page 205.

As depicted in Table IV.J.1-3, on page 206, school traffic ranges between a low of 9 percent on Flanders to 42 percent on Mayerling between Shoshone and Andasol.

Hillcrest School-Related Traffic Patterns

A review of the existing local access traffic patterns reveals an apparent use of Flanders Street and/or Mayerling Street of some vehicles departing the Hillcrest Christian School, particularly during the drop-off and pick-up of students at the front parking lot on Rinaldi Street. This situation results primarily from the right turn only access into and out of the parking lot. With the traffic distribution for the student population being roughly 50-50 from the east and west, it means that the vehicles approaching from the west or departing to the east must be reoriented to the westbound only access to and from the parking lot. Some of this reorientation for those vehicles approaching more from the south and southwest directions occurs before reaching Rinaldi by using numerous other east-west streets and approaching Rinaldi east of the school site and then proceeding westbound to access the parking lot. For vehicles approaching more directly from the west, two patterns occur. The first pattern is demonstrated by vehicles approaching in an eastbound direction on Rinaldi, passing the school site and making a u-turn either midblock before reaching the Andasol intersection, or at the intersection itself, and then proceeding westbound to the parking lot entrance. This was described by community members at the open house meeting and verified in field observations. The second pattern involves

Figure IV.J.1-1 Existing Daily Neighborhood Traffic Volumes

Table IV.J.1-3
Neighborhood Street Segment Traffic Flow

Street Segment	Traffic Flow (Percentage)
Rinaldi between Shoshone and Andasol	18.2%
Shoshone north of Rinaldi	29.9%
Shoshone north of Flanders	15.0%
Andasol north of Rinaldi	19.6%
Flanders between Shoshone and Andasol	9.1%
Mayerling between Shoshone and Andasol	41.7%
Source: Greer and Co., April 2001.	

those vehicles approaching from the west, and choosing to turn north on Shoshone, east on either Flanders or Mayerling to reach Rinaldi east of the parking lot at the Andasol intersection, then proceeding westbound on Rinaldi to the parking lot.

A similar pattern for vehicles departing with an eastbound destination. Two reverse patterns occur. The first pattern involves vehicles departing westbound on Rinaldi, turning north on Shoshone, east on Flanders and/or Mayerling, and south on Andasol to reach Rinaldi, whereupon they make a left turn to head eastbound. The second pattern involves a number of vehicles making the right turn out of the parking lot, and an immediate left turn to southbound Encino, whereupon they disperse easterly or southeasterly from the school.

The volume of existing school traffic using Flanders, Mayerling and Andasol for this reorientation maneuver is not precisely quantified, but based on field observations and an examination of the traffic patterns and the existing neighborhood traffic counts, it would appear that perhaps this volume could currently be on the order of 10 to 20 vehicles during the a.m. and afternoon peak hours during school arrival and departure times, or 20 to 40 vehicles per day.

Existing Conditions Intersection Analyses

An analysis of existing traffic conditions was conducted for the identified study intersections using the CMA analysis methodology. With the exception of Rinaldi and Andasol, all of the study intersections are presently signalized. For purposes of these analyses, the Rinaldi/Andasol was assumed to be signalized. Turning movement traffic counts for the study intersections were conducted during the weeks of September 11, 18 and 25, 2000 after all local area schools were in session for the fall schedule. Public and private schools in the area were in session during the period the traffic counts

Table IV.J.1-4
Level of Service—Existing Conditions-2000

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS[a]	V/C[b]	LOS	V/C
Balboa Boulevard/EB ramps	A	0.460	C	0.747
Balboa Boulevard/WB ramps	D	0.856	C	0.781
Balboa Boulevard /Rinaldi Street	F	1.027	E	0.975
Rinaldi Street/Louise Avenue	E	0.920	A	0.480
Rinaldi Street /Andasol Avenue	B	0.662	A	0.395
Rinaldi Street /Encino Avenue	A	0.542	A	0.504
Rinaldi Street /Shoshone Avenue	E	0.988	A	0.534
Rinaldi Street /White Oak Avenue	B	0.657	A	0.515
Rinaldi Street /Zelzah Avenue	B	0.653	B	0.615
Rinaldi Street /Reseda Boulevard	F	1.008	C	0.774
Rinaldi Street /WB ramps	B	0.630	D	0.873
Reseda Boulevard/EB ramps	D	0.877	C	0.767

[a] *Level of Service.*
[b] *Volume to Capacity Ratio.*
Source: Greer & Co., Engineers and Planners, April 2001.

were conducted. The counts were conducted between the hours of 6:00-9:00 a.m. and 3:00-6:00 p.m. The existing a.m. and p.m. peak hour traffic volumes are depicted in Figure IV.J.1-2 on page 208.

The analyses were based on the existing intersection geometrics and current a.m. and p.m. peak hour traffic volumes. Table IV.J.1-4, above, presents the Volume-to-Capacity ratios (V/C) and the Levels of Service (LOS) for each study intersection under current conditions.

As can be seen in Table IV.J.1-4, the intersections of Balboa/Rinaldi and Rinaldi/Reseda are currently operating at Level of Service "F" with the intersections of Rinaldi/Louise and Rinaldi/Shoshone currently operating at LOS "E" during the a.m. peak hour . All of the remaining intersections currently operate at acceptable levels of service for urban conditions during the a.m. peak hour, i.e. at LOS "D" or better. The intersection of Balboa/Rinaldi currently operates at LOS "E" during the p.m. peak hour with all remaining intersections operating at acceptable levels of service during the p.m. peak hour.

Figure IV.J.1-2 Existing A.M. and P.M. Peak hour traffic volumes

Figure IV.J.1-3 Existing Freeway and Ramp Traffic Volumes

CMP Freeway Segments and Ramps Analyses

Caltrans was consulted during the early planning stages of this project. As requested by Caltrans, the mainline freeway segments and the freeway ramps for the SR 118 freeway at the Balboa interchange and the Reseda interchange were analyzed to identify any potential project traffic impacts on the freeway and freeway access system. Existing daily and peak hour freeway traffic volumes were obtained from Caltrans District 7, Regional Transportation Planning/LARTS Section. The existing traffic volumes for these freeway segments and ramps are presented in Figure IV.J.1-3 on page 209.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

Study Intersection Criteria

LADOT has established the level of significance for traffic impacts through its policies and procedures.[3] A traffic impact is deemed "significant" under the following circumstances depicted in Table IV.J.1-5 below:

Table IV.J.1-5
Significant Impact Criteria for Study Intersections

Level of Service	Final V/C Ratio	Project-Related Increase in V/C
C	>0.700-8.00	≥0.0400
D	>0.800-0.900	≥0.0200
E,F	>0.900	≥0.0100

Source: Traffic Study Policies and Procedures, City of Los Angeles, Department of Transportation, November 2, 1993.

Residential Street Criteria

The LADOT has established criteria for determining the significance level of project related traffic increases on local residential streets. Shoshone Avenue does not function strictly as a local residential neighborhood street. It functions as a residential collector street collecting traffic from the hillside

[3] *Traffic Study Policies and Procedures, City of Los Angeles, Department of Transportation, November 2, 1993.*

Table IV.J.1-6
Significant Impact Criteria for Residential Streets

Projected Average Daily Traffic with Project (Final ADT)	Project Related Increase in ADT
1,000 or more	12 percent or more of final ADT
2,000 or more	10 percent or more of final ADT
3,000 or more	8 percent or more of final ADT
Source: Greer and Co., April 2001.	

neighborhoods to the north and funneling it to Rinaldi as the major arterial street. As depicted in Table IV.J.1-6, above, LADOT's significance criteria for local residential streets are based on an increase in the projected average daily traffic (ADT) volumes.

Freeway Segment and Ramp Criteria

The Congestion Management Plan (CMP) for Los Angeles County was developed in accordance with Section 65089 of the California Government Code. The CMP is intended to address vehicular congestion relief by linking land use, transportation and air quality decisions. Further, the program seeks to develop a partnership among transportation decision-makers to devise appropriate transportation solutions that include all modes of travel and to propose transportation projects which are eligible to compete for state gas tax funds. To receive funds from Proposition 111 (i.e., state gasoline taxes designated for transportation improvements) cities, counties, and other eligible agencies must implement the requirements of the CMP. Within Los Angeles County, the Metropolitan Transportation Authority (MTA) is the designated congestion management agency responsible for coordinating the County's adopted CMP. The freeway segment and ramp analysis was prepared in accordance with the CMP and LADOT Guidelines.

The CMP defines regional project impacts as significant if the demand-to-capacity ratio increases by 0.020 or more, and the final "with project" LOS value is "F".

Future "Pre Project" Traffic Conditions

In order to determine project traffic impacts, the Traffic Impact Analysis considers the baseline "pre project" conditions for the 2005 target analysis (or estimated project buildout year). While the project is expected to be completed in less than five years, the 2005 project buildout projection is used to provide a conservative and worst case estimate. This future year buildout projection would also account for any unexpected delays in project scheduling and full completion of the related projects. The pre–project conditions assume ambient (or existing) traffic volumes increase by a growth factor of

Figure IV.J.1-4 Related Projects Traffic Volumes

Figure IV.J.1-5 Ambient Background Traffic Volumes 2005

Table IV.J.1-7
Related Projects Trip Generation

Project	Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
1. Porter Ranch Shopping Center (570,000 sf)	N/A	358	229	587	903	979	1,882
2. Pep Boys, 11130 Balboa Blvd. (42,007 sf)	2,601	46	47	93	123	128	251
3. 7 Single-Family Residences, 11909 Zelzah Ave.	67	1	4	5	4	3	7
4. Church and Hall Expansion, 18901 Chatsworth St. (21,000 sf)	N/A	0	0	0	0	0	0
5. 70-Unit Senior Housing Complex, 16920 Chatsworth St.	244	3	2	5	4	3	7
6. Staples/El Polo Loco, 17000 Chatsworth St. (38,944 sf/2,000 sf) - replaces Ralph's Market	0	0	0	0	0	0	0
7. 82-Unit Convalescent home, 10801 Lindley Ave.	214	8	6	14	6	10	16
8. 9 Single family residences, 12001 Longacre Ave.	86	2	5	7	6	3	9
9. 50 student increase to an existing Day Care Center 10452 Louise Ave.	226	22	19	41	20	23	43
10. Bridlewood Estates, Tr. No. 46700 (59 single-family residential subdivision)	565	11	33	44	38	22	60
TOTAL	**4,003**	**451**	**345**	**796**	**1,104**	**1,171**	**2,275**

Source(s): City of Los Angeles Department of Transportation, City of Los Angeles Department of City Planning, and Trip Generation, Sixth Edition, Institute of Transportation Engineers, Washington, D.C., 1997; Greer & Co., Engineers and Planners, April 2001.

two percent per year, together with additional traffic volumes generated by related projects. These factors are then calculated into the existing a.m. and p.m. peak hour traffic volumes to form the future 2005 "pre-project traffic conditions".

Related Projects

A total of ten projects were identified in LADOT and Planning Department files and by LADOT staff as currently being in the planning and development stages within the general area of the proposed project. The location of the related projects are shown in Figure III.F-1, Related Projects Location Map in Section III. Project Description. The a.m. and p.m. peak hour traffic generation for the related projects is presented in Table IV.J.1-7 on page 214.

Figure IV.J.1-6 2005 Pre-Project AM and PM Peak Hour Traffic Volumes

Table IV.J.1-8
Level of Service -- Pre-Project Conditions - 2005

Intersection	Existing Conditions				Pre-Project Conditions			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	LOS[a]	V/C[b]	LOS	V/C	LOS	V/C	LOS	V/C
Balboa/EB Ramps	A	0.460	C	0.747	A	0.510	D	0.833
Balboa/WB Ramps	D	0.856	C	0.781	E	0.942	D	0.871
Rinaldi/Balboa	F	1.027	E	0.975	F	1.146	F	1.088
Rinaldi/Louise	E	0.920	A	0.480	F	1.030	A	0.565
Rinaldi/Andasol	B	0.662	A	0.395	C	0.742	A	0.469
Rinaldi/Encino	A	0.542	A	0.504	B	0.613	A	0.588
Rinaldi/Shoshone	E	0.988	A	0.534	F	1.115	B	0.646
Rinaldi/White Oak	B	0.657	A	0.515	C	0.732	B	0.605
Rinaldi/Zelzah	B	0.653	B	0.615	C	0.730	C	0.720
Rinaldi/Reseda	F	1.008	C	0.774	F	1.115	D	0.867
Rinaldi/WB Ramps	B	0.630	D	0.873	C	0.709	F	1.006
Reseda/EB Ramps	D	0.877	C	0.767	E	0.968	D	0.853

[a] *Level of Service.*
[b] *Volume to Capacity Ratio.*
Source: Greer & Co., Engineers and Planners, April 2001.

Trip Distribution

Calculated trip generation for the related projects was assigned to the street system in the area of the proposed project using assignment parameters based on available project traffic reports, existing traffic volumes, existing traffic patterns and freeway access, and area development patterns. The resulting a.m. and p.m. peak hour traffic volumes for the related project are shown in Figure IV.J.1-4 on page 212.

Ambient Traffic Growth

The growth in the background ambient traffic growth of two percent per year was applied to the year 2000 existing traffic volumes. The background ambient traffic for the analysis year of 2005 is shown in Figure IV.J.1-5 on page 213.

Pre-Project Traffic Conditions Analysis

The traffic volumes for the pre-project traffic conditions are the summation of the existing 2000 traffic volumes increased by two percent per year to the year 2005 used as the project target year, and the traffic volumes for the related projects. The pre-project traffic volumes for the a.m. and p.m. peak hours are presented in Figure IV.J.1-5 on page 215.

The previously referenced CMA intersection analysis methodology was applied at each of the study intersections using the pre-project traffic volumes and existing geometrics at all intersections. The resulting "pre-project" LOS and V/C ratios estimated for the year 2005 buildout year are presented in Table IV.J.1-8 on page 216. As can be noted from Table IV.J.1-8, during the a.m. peak hour, the Rinaldi/Balboa and Rinaldi/Reseda intersections will continue to operate at LOS "F" with further deterioration of the V/C ratios. The intersections of Rinaldi/Louise and Rinaldi/Shoshone will deteriorate from LOS "E" to "F", and the intersections of Balboa/westbound SR 118 ramps and Reseda/eastbound SR 118 ramps will deteriorate from LOS "D" to "E". All remaining intersections will continue to operate at acceptable levels of service during the a.m. peak hour. During the p.m. peak hour, the Rinaldi/Balboa intersection will deteriorate from LOS "E" to "F", while the Rinaldi/westbound SR 118 ramps intersection will deteriorate from LOS "D" to "F". All other intersections will continue to operate at acceptable levels of service during the p.m. peak hour.

Both of the intersections of Rinaldi/Balboa and Rinaldi/Reseda are operating poorly, in part, due to both of these streets serving as freeway access with full interchange ramps located a short distance from the intersections. The heavily utilized interchange intersections at Rinaldi/Balboa and Rinaldi/Reseda, and to some extent, the heavy traffic volumes on Rinaldi itself are due in part to the fact that the originally proposed freeway interchange at White Oak was never built. There are no current plans to install that interchange. The missing interchange causes double loading on the two adjacent interchanges as well as double loading on Rinaldi parallel to the freeway to reach the adjacent interchanges.

Pre-Project Freeway Segment and Ramp Conditions:

To assess the pre-project freeway segment and ramp conditions Caltrans provided projected 2020 daily and peak hour traffic volumes for the study area freeway segments and freeway ramps. These data are presented in Figure IV.J.1-7 on page 219.

Table IV.J.1-9
Project Trip Generation

400 Students K-12	Daily	A.M. Peak Hour			P.M. Peak Hour		
		In	Out	Total	In	Out	Total
Rate	3.50	0.55	0.37	0.92	0.16	0.26	0.42
Trips	1,400	220	148	368	64	104	168

Source: Trip Generation, Sixth Edition, Institute of Transportation Engineers, Washington, D. C., 1997; Greer & Co., Engineers and Planners.

Project Impacts

Project Generated Traffic

The project trip generation was calculated using the Institute of Transportation Engineers (ITE) trip rates for a private school (K-12). The ITE trip rates were applied by LADOT staff and verified by Greer & Co. staff to the 400 student expansion contained in the school's expansion proposal. The expansion proposes to raise the current limit of 800 students to 1,200 students in K-12. Since Hillcrest School is already operating at full capacity, trips associated with the existing student enrollment of 800 students are already accounted for as they contribute to the existing traffic conditions. As depicted in

Table IV.J.1-9, on page 218, the proposed project will generate an increase of 1,400 daily trips with 368 trips during the a.m. peak hour and 168 trips during the p.m. peak hour.

Project Trip Assignments: In order to assign the project generated traffic to the area roadway system, the directional distribution of the project traffic was estimated and project traffic assignments determined. The project traffic assignments were based on the school's student demographics from residence zip codes and also on the existing traffic volumes, area roadway and access system, and general area demographics. The project traffic distribution assignments are presented in Figure IV.J.1-8 on page 220. The resulting project traffic volumes for the proposed project for the a.m. and p.m. peak hours presented in Figure IV.J.1-9 on page 221.

Figure IV.J.1-7 Future 2020 Freeway and Ramp Plus Project Traffic Volumes

Figure IV.J.1-8 Project Traffic Distribution Assignment

Figure IV.J.1-9 Project AM and PM Peak Hour Traffic Volumes

Figure IV.J.1-10 2005 Post Project AM and PM Peak Hour Traffic Volumes

Table IV.J.1-10
Level Of Service Traffic Conditions (2005)With and Without Project

Intersection	Pre-Project				Post Project				Project Impact		With Mitigation			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour	AM Peak Hour		PM Peak Hour	
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	V/C	V/C	LOS	V/C	LOS	V/C
Balboa/EB Ramps	A	0.512	D	0.833	A	0.519	D	0.833	0.007	0.000				
Balboa/WB Ramps	E	0.942	D	0.871	E	0.942	D	0.874	0.000	0.003				
Rinaldi/Balboa	F	1.146	F	1.088	F	1.198	F	1.090	**0.052**	0.002	F	1.128	F	1.020
Rinaldi/Louise	F	1.030	A	0.565	F	1.067	A	0.581	**0.037**	0.016	E	0.997	A	0.511
Rinaldi/Andasol	C	0.742	A	0.469	C	0.776	A	0.485	0.034	0.016				
Rinaldi/Encino	B	0.613	A	0.588	B	0.650	B	0.605	0.037	0.017				
Rinaldi/Shoshone	F	1.115	B	0.646	F	1.157	B	0.659	**0.042**	0.013	E	0.921	B	0.622
Rinaldi/White Oak	C	0.732	B	0.605	C	0.770	B	0.618	0.038	0.013				
Rinaldi/Zelzah	C	0.730	C	0.720	C	0.769	C	0.732	0.039	0.012				
Rinaldi/Reseda	F	1.115	D	0.867	F	1.117	D	0.869	0.002	0.002				
Rinaldi/WB Ramps	C	0.709	E	1.006	C	0.717	F	1.013	0.008	0.007				
Reseda/EB Ramps	E	0.968	D	0.853	E	0.969	D	0.853	0.001	0.000				

[c] *Notes:*
[d] *LOS - Level of Service*
[e] *V/C - Volume to Capacity Ratio*
[f] *Bold type denotes a significant project impact.*
Source: Traffic Impact Analysis, Greer & Co., Engineers & Planners, April 2001.

The same intersection analysis methodologies were applied at each of the study intersections using the post project traffic volumes and existing geometrics at all of the study intersections. The resulting LOS and V/C ratios are presented in Table IV.J.1-10 on page 223. As shown in Table IV.J.1-10, nine of the twelve study intersections would not be significantly impacted by the proposed project. Three of the twelve study intersections under post project conditions, however, will be significantly impacted by project traffic during the a.m. peak hour. Namely, the significantly impacted intersections include Rinaldi Street and Balboa Boulevard, Rinaldi Street and Louise Avenue, and Rinaldi Street and Shoshone Avenue. By the very nature of the trip characteristics for a school use (i.e., the morning peak hour for the school coincides with the a.m. peak hour for traffic on the street), all three of the significantly impacted intersections are impacted during the a.m. peak hour. No significant traffic impacts would occur during the p.m. peak hour.

When comparing post project conditions with pre-project conditions, the intersection of Rinaldi/Balboa will continue to operate at LOS "F" during the a.m. peak hour, while the V/C ratio will deteriorate from 1.146 to 1.198 with a change in the V/C ratio of 0.052, and for the p.m. peak hour, will continue to operate at LOS "F" with a deterioration of the V/C ratio from 1.088 to 1.090, a change of 0.002. For the Rinaldi/Louise intersection, during the a.m. peak hour, the intersection will continue to operate at LOS "F" with a reduction in the V/C ratio from 1.030 to 1.067 and a change of 0.037. During the p.m. peak hour, the intersection will continue to operate at LOS "A". For the intersection of Rinaldi/Shoshone, during the a.m. peak hour, the intersection will continue to operate at LOS "F" with a decrease in the V/C ratio from 1.115 to 1.157, a change of 0.042. Based on these analyses, the proposed project will be required to mitigate the project traffic impacts at the three study intersections significantly impacted by project traffic.

CMP Freeway Segments and Ramps Analyses

As mentioned previously, the mainline freeway segments and the freeway ramps for the SR 118 Freeway at the Balboa interchange and the Reseda interchange were analyzed to identify any potential project traffic impacts on the freeway and freeway access system. A segment capacity analysis was conducted for each of the freeway segments on a directional basis using a.m. and p.m. peak hour traffic volumes for existing conditions and for future 2020 conditions with and without project traffic. These analyses are presented in Table IV.J.1-11 and Table IV.J.1-12, on pages 225 and 226, respectively.

As can be seen in Table IV.J.1-11 and Table IV.J.1-12, none of the freeway segments and freeway ramps analyzed will be significantly impacted by project traffic. Therefore, no specific project traffic mitigation improvements are recommended.

Table IV.J.1-11
Level of Service--Freeway Analyses--Existing Conditions 2000--Future Conditions 2020

Segment SR 118	Dir.	Existing – 2000						Future -- 2020 w/o Project			Future – 2020 w/Project			
		Peak Hour	No. of Lanes	Capacity	Peak Hour Volumes	D/C	LOS	Peak Hour Volumes	D/C	LOS	Volumes	D/C	LOS	D/C
E/o Balboa	EB	AM	5*	9600	11,500	1198	F(0)	15,250	1.589	F(2)	15,287	1.592	F(2)	0.003
		PM	5*	9600	9,500	0.990	E	12,600	1.313	F(1)	12,626	1.315	F(1)	0.002
	WB	AM	5*	9600	9,050	0.943	E	12,000	1.250	F(1)	12,055	1.256	F(l)	0.006
		PM	5*	9600	12,100	1.260	F(1)	16,050	1.672	F(3)	16,066	1.674	F(3)	0.002
Bet Balboa & Reseda	EB	AM	5*	9600	11,000	1.146	F(0)	16,100	1.677	F(3)	16,000	1.677	F(3)	0.0
		PM	5*	9600	9,100	0.948	E	13,300	1.385	F(1)	13,300	1.385	F(1)	0.0
	WB	AM	5*	9600	8,650	0.901	E	12,600	1.313	F(1)	12,600	1.313	F(1)	0.0
		PM	5*	9600	11,550	1.203	F(1)	16,900	1.760	F(3)	16,900	1.760	F(3)	0.0
W/o Reseda	EB	AM	5*	9600	9,800	1.021	F(0)	14,300	1.490	F(2)	14,324	1.492	F(2)	0.002
		PM	5*	9600	8,100	0.844	D	11,800	1.229	F(1)	11,807	1.230	F(1)	0.001
	WB	AM	5*	9600	7,700	0.802	D	11,250	1.172	F(0)	11,262	1.173	F(0)	0.001
		PM	5*	9600	10,300	1.073	F(0)	15,050	1.568	F(2)	15,058	1.569	F(2)	0.001

** 4 lanes at 2,000 vehicles with HOV lane at 1,600 vehicles*
LOS - Level of Service
D/C - Demand to Capacity Ratio
Source: Source: Traffic Impact Analysis, Greer & Co., Engineers & Planners, April 2001.

Table IV.J.1-12
Level Of Service--Freeway Ramp Analyses--Existing Conditions 2000--Future Conditions 2020

Interchange SR 119	Dir.	Existing – 2000						Future -- 2020 w/o Project			Future – 2020 w/Project			
		Peak Hour	No. of Lanes	Capacity	Peak Hour Volumes	D/C	LOS	Peak Hour Volumes	D/C	LOS	Volumes	D/C	LOS	D/C
Balboa	EB off	AM	1	1600	480	0.300	A	640	0.400	A	640	0.400	A	0.0
		PM	1	1600	800	0.500	A	1070	0.669	B	1070	0.669	B	0.0
	EB on	AM	1	1600	770	0,481	A	1020	0.638	B	1020	0.638	B	0.0
		PM	1	1600	670	0.419	A	900	0.563	A	900	0.563	A	0.0
	EB on loop	AM	1	1600	1020	0.638	B	1350	0.844	D	1387	0.867	D	0.023
		PM	1	1600	460	0.288	A	610	0.381	A	636	0.398	A	0.017
	WB off	AM	2	3040	890	0.556	A	1180	0.388	A	1235	0.406	A	0.018
		PM	2	3040	1430	0.894	D	1900	0.625	B	1916	0.630	B	0.005
	WB on	AM	1	1600	1050	0.656	B	1390	0.869	D	1390	0.869	D	0.0
		PM	1	1600	700	0.438	A	920	0.575	A	920	0.575	A	0.0
Reseda	EB off	AM	1	1600	400	0.250	A	600	0.375	A	624	0.390	A	0.015
		PM	1	1600	300	0.188	A	430	0.269	A	437	0.273	A	0.004
	EB on	AM	1	1600	1380	0.863	D	2010	1.256	F	2010	1.256	F	0.0
		PM	1	1600	1100	0.688	B	1610	1.006	F	1610	1.006	F	0.0
	WB off	AM	1	1600	1100	0.688	B	1610	1.006	F	1610	1.006	F	0.0
		PM	1	1600	1400	0.875	D	2050	1.281	F	2050	1.281	F	0.0
	WB on	AM	1	1600	550	0.344	A	800	0.500	A	812	0.508	A	0.008
		PM	1	1600	470	0.294	A	700	0.438	A	708	0.443	A	0.005

** 4 lanes at 2,000 vehicles with HOV lane at 1,600 vehicles*
LOS - Level of Service
D/C - Demand to Capacity Ratio
Source: Traffic Impact Analysis, Greer & Co., Engineers & Planners, April 2001.

Site Access and Circulation

Roadway and access improvements will include reconfiguring the westernmost driveway and traffic signal on the East Campus parking lot fronting Rinaldi Street to align with Encino Avenue and widening the southbound Shoshone Avenue lanes to provide a right-turn only lane accessing Rinaldi Street. The proposed driveway reconfiguration is proposed to alleviate traffic congestion on Rinaldi Street and improve access for vehicles entering and exiting the parking lot. This configuration is also intended to minimize congestion and improve vehicular access on the surrounding roadway system.

Access to the proposed parking lot on the West Campus will be provided via one ingress/egress driveway located approximately 250 feet west of Shoshone Avenue on Rinaldi Street. This driveway will permit full access to the West Campus with left and right turn entry and exiting onto and from Rinaldi Street.

A second driveway from Shoshone Avenue will also be required for access by maintenance vehicles to the play fields north of the building facilities and for temporary access for handicap parking on the West Campus. This access would be a driveway located on Shoshone at the northerly end on the play fields and north of the 150 to 200 foot right turn lane recommended on Shoshone at Rinaldi for intersection traffic mitigation. The access would be used for maintenance and temporary handicap parking only, and would be closed and secured at all other times.

Local Street Impact Analysis

Neighborhood Traffic Patterns

The potential traffic impacts of the proposed project on the residential collector nature of Shoshone Avenue north of the campus were examined to determine the extent to which current traffic volumes would be increased as a result of the project. As indicated previously in this analysis, the daily project trip generation is estimated at 1,400 trips per day. The project traffic assignments indicate that approximately three percent of the project traffic is expected to use Shoshone Avenue north of the project site. These trips would presumably be made by parents/students and faculty/staff at the school. The total number of project daily trips on Shoshone Avenue north of the project site is estimated at 42 trips per day-- 21 trips in each direction.

The 42 trips represent only 0.5 percent of the final ADT on Shoshone (7,652 existing + 42 project) north of the project site, or about one-twentieth the amount of project. In order for this traffic to be designated a significant impact on the neighborhood streets based on the LADOT definitions, the volume of traffic would have to be in excess of 120 vehicles per day (12 percent of a street with 1,000 or less vehicles per day). While this volume of traffic certainly does not meet the level of significant

impact on neighborhood streets, it has been identified as an irritant to neighborhood residents. This phenomenon of circulating around the block and intrusion into the adjacent neighborhood has been somewhat alleviated with the start of the new school year in the fall of 2000.

With the installation of the traffic signal at the Rinaldi/Shoshone intersection, the school is permitted to use the existing rear parking lot for parking and for a portion of drop-off and pick-up operations. With the new school year, a portion of drop-off and pick-up operations was instituted at the rear parking lot during the afternoon departure period, namely for those drivers approaching from and departing to the west. This has reduced the amount of neighborhood intrusion and has reduced the amount of u-turn activity on Rinaldi to enter the front parking lot in a westbound direction. Recommendations have been submitted below to further alleviate any remaining neighborhood intrusion of the existing school traffic.

It should be emphasized that this neighborhood intrusion is a phenomenon associated with the existing traffic and access to the front parking lot for drop-off and pick-up of the current students. The applicant has proposed several roadway reconfigurations and alignments that would improve circulation on adjacent roadways. These improvements will, in turn, reduce traffic intrusion into adjoining residential neighborhoods. In addition, this situation will not be exacerbated by the West Campus expansion because the West Campus driveway entrance will provide full access, both left and right turn entry and exiting, on to and from Rinaldi Street. Therefore, the West Campus site will be fully accessible from Rinaldi without the reorientation of traffic to comply with a right turn only entering and exiting access pattern.

Pedestrian Safety

The West Campus expansion will separate Hillcrest's existing elementary school operations from the secondary schools operations, which currently operate on one campus. While there are many benefits in separating these operations into two separate and distinct campuses, crossing Shoshone Avenue to access both campuses will be a routine occurrence for many students and staff administrators. While the West Campus is designed to operate as a separate campus and entirely independent of the East Campus, there will be no direct need for students or administrators to cross Shoshone Avenue. However, due to the relationship between the campuses, it is recognized that students and administrators will likely access both campuses for various reasons. For example, it is acknowledged that some families with more than one school-aged child attending Hillcrest may provide a single drop off and pick up point for children attending both the East and West Campuses. This case also applies for families who carpool. In this situation parents would be encouraged by campus administrators to designate an appropriate pick-up or drop-off location with preference for the East Campus. This recommendation is based on the safety factor of elementary school aged children, as opposed to more experienced secondary school-aged children. Since pedestrian traffic between the east and west side of Shoshone Avenue will increase as a result of the proposed West Campus expansion, impacts associated

with pedestrian/vehicle interaction and safety would be potentially significant. However, the mitigation measures identified below will reduce the potential impact to a level of insignificance.

CUMULATIVE IMPACTS

As presented earlier in this Section, cumulative traffic impacts have been projected into the methodology for analyzing project impacts. The analysis of project impacts for study intersections considers the effects of both ambient future traffic growth in the region and the related projects listed in Table IV.J.1-7 on page 214. Consequently, impacts of cumulative growth are already incorporated into the traffic model and are equivalent to those indicated for the future 2005 year "Pre Project" traffic conditions (see Table IV.J.1-8 on page 216). In addition, the analysis of freeway segment and ramps was based on future year 2020 daily and peak hour traffic volumes provided by Caltrans (see Figure IV.J.1-7). Therefore, the project analysis presented above already assesses cumulative traffic conditions.

MITIGATION MEASURES

Project traffic will significantly impact the intersections of Rinaldi/Balboa, Rinaldi/Louise and Rinaldi/ Shoshone during the a.m. peak hour. Required mitigation measures to reduce these impacts to levels of insignificance are provided below. The LADOT has reviewed and approved the Traffic Impact Study and concurs with the proposed mitigation measures as set forth below. In addition to the required mitigation measures, the project applicant has proposed several roadway and access improvements to address certain circulation and traffic issues relating to the operation of the existing East Campus. Since the East Campus is already entitled and conditionally approved under separate permits, such improvements shall be made pursuant to the applicant's requested plan approval. Whether the improvements will also be made conditions of approval for the West Campus project is a matter for the City decision makers. However, these voluntary improvements are described in this report to provide greater information to the public. These conditions are not intended to effect any of the existing entitlements for the East Campus.

Required Mitigation Measures

1. **Street Improvements.** Dedicate and widen 14 feet along the west side of Shoshone Avenue from Rinaldi Street to approximately 260 feet northerly to provide a 44-foot half width right-of-way with 34-foot half width roadway with suitable transition to accommodate three southbound lanes comprising a left turn lane, a shared left/right turn lane, a right turn only lane and a 10-foot wide sidewalk. LADOT recommends

that parking be restricted at all times along the widened portion of Shoshone Avenue. (see Figure IV.J-11 on page 231.

2. **ATSAC/ATCS Contribution for Traffic Signal System.** The intersections of Rinaldi Street and Balboa Boulevard and Rinaldi Street at Louise Avenue is part of the San Diego Freeway Corridor Phase I ATSAC System and the Ronald Reagan Freeway Corridor ATSAC system, respectively. Both of these systems are scheduled for construction in the year 2003 at a cost of $91,400 per intersection. The installation of the ATSAC/ATCS system will serve to improve signal progression in the vicinity thereby improving the capacity at the impacted intersections. The developer shall be required to submit a check or cash to LADOT prior to issuance of building permits for the cost of improvement of the two signalized intersections wit the cost of mitigation dependent on when payment is made.

3. **Highway Dedication and Improvement.** Rinaldi Street is designated as Major Highway Class II in the Streets and Highways Element of the City's General Plan. Rinaldi Street is currently 40-foot half roadway on a 50-foot half right-of-way. Standard Plans S-470-0, effective November 10, 1999, dictates that the standard cross section for a Major Highway Class II is 40-foot half roadway on a 52-foot half right-of-way. A 2-foot dedication along the project frontage will be required on Rinaldi Street to meet the standards required by the General Plan. The Bureau of Engineering, Department of Public Works will determine the exact dedication and widening requirements for this project.

4. **Site Access and Internal Circulation**.

   (a) LADOT's determination does not include approval of the project's driveways, internal circulation and parking scheme. In order to fully evaluate these terms, a site plan with a minimum scale of 1"=40' should be submitted to LADOT Valley Development Review at 19040 Vanowen Street, Reseda, 91335 as soon as possible and prior to submittal of building plans for plan check by the Department of Building and Safety.

   (b) On site pick-up and drop-off areas should be shown on the site plan.

5. **Pedestrian Safety.** The following mitigation measures are recommended to increase pedestrian safety at the corner of Shoshone Avenue and Rinaldi Street, which is expected to experience increased pedestrian activity as a result of the proposed West Campus Development.

Figure IV.J-11 Proposed Traffic Mitigation Improvement Rinaldi/Shoshone.

(a) Hillcrest Christian School and Church shall participate in an active Pedestrian Safety Program to promote pedestrian safety. Educational materials shall be provided to students and parents to address the hazards associated with crossing Shoshone Avenue. Such materials shall be provided at the beginning of each school year and continuously reinforced throughout the school year.

(b) School administrators shall appoint and provide staff personnel to operate a pedestrian crossing guard program at the intersection of Rinaldi Street and Shoshone Avenue on days when school is in session. The hours of crossing guard operations shall coincide with the a.m. and p.m. peak pick-up and drop off periods and during any other times students are expected to cross Shoshone Avenue.

Proposed Voluntary Improvements

6. **Voluntary Modification of Traffic Signal at Rinaldi Street and Encino Avenue**. To curb neighborhood intrusion of vehicles going to the school, the developer proposes to improve the level of service at the project exit driveway on Rinaldi Street east of Encino Avenue. Both existing Driveways on Rinaldi Street allow only one way traffic, the exit-only driveway is closer to Encino Avenue than the enter-only driveway. The traffic impact analysis proposes to incorporate the exit right-turn-only driveway into the signalized operation at the intersection of Rinaldi Street and Encino Avenue. LADOT does not oppose the proposal to relocate the existing traffic signal and crosswalk from west of the exit-only driveway to east of the same driveway and to restripe the exit driveway to allow both right and left turns. LADOT accepts this proposed improvement provided that the developer bears the full cost of design and construction of the relocation of the existing traffic signal and modification of the striping of the intersection. Any improvements to the intersection must be done in consultation with the Geometric and Signal Design Sections of LADOT and done through the B-Permit process of the Bureau of Engineering (BOE) as detailed below.

7. **Expand the Drop-off and Pick up activities on the east campus rear parking lot.** To further alleviate any neighborhood intrusion, it is recommended that the drop-off and pick-up activities now occurring during the afternoon departure period in the Shoshone Avenue parking lot at the rear of the existing East Campus be expanded to the morning arrival period. This will further accommodate vehicles approaching from either the east of west direction without reorientation required to approach and depart only in a westbound direction on Rinaldi, and as a result will eliminate the need to use local residential streets to access the drop-off activities.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Rinaldi Street/Balboa Boulevard

For post project traffic conditions compared to pre-project traffic conditions, the intersection of Rinaldi/Balboa will continue to operate at LOS "F" during the a.m. peak hour, while the V/C ratio will deteriorate from 1.146 to 1.198 with a change in the V/C ratio of 0.052. In order to mitigate project traffic impacts at this intersection, it would be necessary to install a second northbound left turn lane on Balboa at Rinaldi. While the intersection would continue to operate at LOS "F" during the a.m. peak hour, the post-project V/C ratio would decrease from 1.198 to 1.058 with the left turn lane mitigation improvement, thereby reducing the project's traffic impact to a level of service (based on the V/C ratio) to better than pre-project conditions, and therefore, to a level of insignificance.

Installation of a second northbound left-turn lane on Balboa Boulevard at Rinaldi Street would require widening of the south leg to accommodate the additional lane, as well as widening of the north leg for geometric alignment of lanes through the intersection. The northwest, southwest and southeast corners all are occupied by gas stations, while the northeast corner is currently vacant. Widening of Balboa will effect at least two, if not all three, existing gas stations. Such an improvement is not under the control of the applicant and would be a financial commitment beyond the capability of this project. Therefore, adding the Rinaldi/Balboa intersection to the 118 Freeway Corridor Phase 1 ATSAC/ATCS system is recommended as the most reasonable method of mitigating project traffic impacts at this intersection.

Rinaldi Street/Louise Avenue

For post project traffic conditions compared to pre-project traffic conditions, the intersection of Rinaldi/Louise will continue to operate at LOS "F" during the a.m. peak hour, while the V/C ratio will deteriorate from 1.030 to 1.067 with a change in the V/C ratio of 0.037. By adding this intersection to the 118 Freeway Corridor Phase 1 ATSAC/ATCS system, "post-project after mitigation" during the a.m. peak hour the traffic conditions would be improved to a V/C ratio of 0.997, with a LOS "E". This improvement would reduce project impacts to a less than significant level.

Rinaldi Street/Shoshone Avenue

Comparing post project traffic conditions with pre-project traffic conditions at the intersection of Rinaldi/ Shoshone, the level of service will deteriorate within LOS "F" with a decrease in the V/C ratio from 1.115 to 1.157, a change of 0.042. Widening the southbound Shoshone Avenue approach to provide three approach lanes--a left turn lane, an optional left-right turn lane, and a separate right turn lane will improve the LOS from post project traffic conditions during the a.m. peak hour with a V/C

ratio of 0.921, with a LOS "E". This improvement will reduce the project traffic impact to a level of insignificance.

Neighborhood Intrusion of Existing Traffic

No significant local residential street impacts were identified. However, the voluntary and proposed improvements listed above (i.e., modification of the Encino Avenue/Rinaldi Street traffic signal and expanded drop-off and pick up activities on the East Campus rear parking lot) would further improve site circulation and benefit the surrounding roadway system. Residential street impacts would thus be less than significant before and after mitigation.

Pedestrian Safety

Upon completion of the traffic mitigation improvements proposed for the southbound Shoshone Avenue approach to Rinaldi (see Figure V.J.1-12), Shoshone Avenue will include a signalized pedestrian stripped crosswalk. Proper use of the crosswalk by pedestrians will reduce hazards commonly associated with crossing signalized intersections. Moreover, with implementation of the pedestrian safety mitigation measures listed above, impacts associated with pedestrian safety hazards would be further reduced to less than significant levels.

IV. ENVIRONMENTAL IMPACT ANALYSIS
J. TRANSPORTATION AND CIRCULATION
2. PARKING

ENVIRONMENTAL SETTING

Existing Conditions

The existing Hillcrest Christian School and Church currently operates under a Conditional Use Permit (CUP) for use as a private school facility (kindergarten through 12th grade) with a maximum permitted student capacity of 800 students. The East Campus is currently served by a total of 148 permanent parking spaces, which are established under the authority of the existing conditions of approval. 40 parking spaces are provided in a surface parking lot located at the easternmost portion of the East Campus fronting Rinaldi Street. Another 108 parking spaces are provided in a second surface parking lot located to the north of the church and gymnasium buildings along Shoshone Avenue.

In addition to the required parking spaces, approximately 130 additional spaces are provided on an as needed basis (i.e. overflow parking during special events) on a grass covered play area north of the surface parking lot on Shoshone Avenue.

The West Campus is currently developed with three residential uses. Parking for these residential uses is provided via two driveways on Shoshone Avenue and one driveway on Rinaldi Street.

Regulatory Setting

City of Los Angeles Parking Code Requirements

The City of Los Angeles Planning and Zoning Code does not specify parking requirements for secondary schools (i.e., middle and high schools) directly, except as related to the maximum occupancy load for auditorium or assembly areas. Pursuant to Section 12.21 A 4 (e) of the Planning and Zoning Code, parking requirements for auditoriums are as follows:

> *"There shall be at least one automobile parking space for each five seats contained within any theatre, church, high school, college or university auditorium, or general auditorium stadium or other similar place of assembly. Where there are no fixed seats in the auditorium or place of assembly, there shall be one parking space for each 35 square feet of floor area (exclusive of stage) contained therein."*

Based on the conceptual site plans for the proposed education building, the ground floor area for the gymnasium (excluding the stage area, per code) is estimated at approximately 10,000 square feet. The minimum code required parking for the proposed West Campus is therefore estimated at 286 spaces.

ENVIRONMENTAL IMPACTS

Methodology. As a result of the existing configuration of the West Campus site, area limitations, sloping topography, and financial feasibility of subterranean or structural parking designs, the applicant is requesting a parking variance to provide parking in accordance with a parking demand analysis, as detailed the analysis presented below. Section 12.21 A 4 (y) of the Planning and Zoning Code provides that the City Planning Commission may, upon application, authorize reduced on-site parking and remote off-site parking. The Code further states that such authorization may only be approved in connection with a City Planning Commission approval of an application or appeal otherwise subject to its jurisdiction including, among other situations, conditional use approval pursuant to Section 12.24 U. As the project will require a Conditional use approval from the City Planning Commission, a request for reduced on-site parking will be submitted based on a parking demand analysis.

Thresholds of Significance.

The proposed project would have a significant impact on parking if the project provides less parking than needed as determined through an analysis of demand from the project.

Project Impacts

The Hillcrest Christian School and Church West Campus Expansion Plan project will increase the existing maximum permitted student capacity of 800 students in grades kindergarten through high school (K-12th grade) to a total of 1,200 students and will expand the Hillcrest Campus to include the adjacent West Campus site. The proposed West Campus Expansion Plan expansion will allow for separation of the elementary and secondary grades into two separate campuses, with the elementary grades operating on the East Campus and the secondary grades operating on the West Campus. The following discussion describes the anticipated parking demand of the proposed Hillcrest Christian School West Campus Expansion Plan, with separate discussions addressing daily operational parking demands and event parking demands.

Daily Operational Parking

The proposed parking plan is depicted in Figure IV.J.2-1. As shown, parking for the East Campus will remain unchanged with 148 permanent parking spaces provided in two separate parking lots. The

school is currently operating at full capacity with a maximum enrollment of 800 students. Since enrollment for the East Campus will never exceed the current 800 student capacity, the existing parking supply is considered adequate since, among other reasons, prior City decisions authorized 148 parking spaces for the East Campus.

Parking for the West Campus will be provided in a 124-space surface parking lot located in front of the new school facilities on the West Campus. This parking lot will serve staff, students and visitor parking needs for the secondary school. Ingress and egress for the new surface parking lot will be provided from a full-access driveway to Rinaldi Street. A secondary driveway from Shoshone Avenue at the northerly end of the play fields would provide access to the fields for temporary handicap parking and maintenance vehicles only. The proposed parking lot and roadway improvements will be constructed during the Initial Phase to support the school operations during the construction period for the Final Phase buildout.

The West Campus expansion will involve increasing the existing enrollment by 400 students. School officials have the option of controlling the parking demand for the student population in terms of placing limits on the number of permitted student cars. This can be done similarly as is done on many other university and high school campuses by issuing parking stickers to students permitted to park on campus and by establishing criteria for the issuance of stickers to limit the parking demand. School administrators have indicated that at full student capacity approximately 168 students will be of driving age including most seniors (12th graders) and some juniors (11th graders), and based on other similar (comparable private school) campuses, that about one-third of those will actually drive. With 168 projected students of driving age, approximately 56 are expected to drive to school. To be conservative, however, the proposed West Campus parking lot will provide approximately 66 parking spaces for students. Allocation of 66 spaces to student parking leaves 58 spaces in the proposed 124-space lot on the West Campus. 10 of those parking spaces will be allocated for visitor parking, leaving 48 spaces. Those 48 spaces will be assigned to school staff.

Allowing 0.9 parking space for each of the approximately 130 staff members for the combined campus at full occupancy of the new facilities, 117 staff parking spaces should provide ample staff parking. Allocating 48 spaces on the West Campus lot requires 69 staff parking spaces on the East Campus. Of the 40 spaces in the lot fronting Rinaldi Street on the East Campus, 35 spaces will be reserved for staff parking with the remaining 5 spaces allocated for visitor parking. The remaining staff parking needs of 34 spaces would be accommodated in the existing north parking lot on the existing East Campus. The north parking lot has 108 parking spaces. The 34 needed staff parking spaces will be allocated for parking during school days with the remaining 74 spaces left open for play courts.

The total parking availability for staff, students and visitors on the entire campus would be approximately 272 permanent parking spaces. With the school administration controlling the amount of

student parking demand by limiting the number of students authorized for parking privileges, the 272 parking spaces to be provided would provide adequate parking on any typical school day. If student parking needs are limited to the 56 spaces presently indicated as being needed based on student population and drivers, there will be 74 available parking spaces in the rear parking lot on the present campus. Increased student parking in the front parking lot on the new campus would shift more staff parking to the existing rear parking lot at the expense of available play area. A total of 74 additional student parking spaces would be available for a total of 130 student parking spaces if they were ever required or permitted by administrative policy. With the 272 total parking spaces, there will be ample parking to accommodate the parking needs of the entire campus, and sufficient additional overflow parking to provide school administration the flexibility required to accommodate additional student parking if desired or required. Therefore, no operational parking impacts will occur as a result of the proposed project.

Special Event Parking

Outside of typical school operations, parking demands are generated by attendance at special events. As discussed in Section III, Project Description, special events are generally grouped into three categories: community events, school events (non-sport related), and school events (sport-related). Examples of special events include "meet the teacher" nights; pep rallies; grandparents' days; special events; a jog-a-thon; and special event banquets. School sporting events are typically scheduled outside of school hours. Special events typically occur outside of normal school hours.

Events scheduled for the gymnasium building would be limited to an average occupancy load of approximately 666 persons.[4] As indicated previously, the City of Los Angeles parking code estimates the demands for a 10,000 square foot gymnasium at 285 parking spaces. Using a more conservative estimate for events utilizing outdoor areas (such as graduation ceremonies and athletic events), an average attendance of 1,000 is anticipated. Assuming a typical auto occupancy of 2.5 persons per vehicle, a demand of approximately 400 parking spaces would be needed. Because special events would occur outside school hours, parking would be provided from both the East and West Campus parking lots.

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[4] *Based on a maximum occupancy load of 15 square feet per person for a 10,000 square foot gymnasium.*

Figure IV.J.2-1 Proposed Parking Plan

A total of 272 parking spaces would be available from the parking lots on the East and West Campuses (124 spaces on the West Campus and 148 spaces on the East Campus). Based on the estimated attendance for special events held in the gymnasium, a parking deficiency of 13 spaces would occur. Larger events utilizing the outdoor athletic field would result in a shortage of 128 parking spaces. Parking for special events would require the use of overflow parking areas. As demonstrated on the Overflow Parking Plan depicted in Figure IV.J.2-2, the play area behind the existing rear parking lot on the East Campus would be used for temporary overflow parking. Approximately 130 vehicles could be parked in tandem on this play area. Utilizing the overflow parking area, a total of 402 parking spaces would be available during special events. Based on the anticipated attendance at special events, the available on-site parking would adequately accommodate the projected parking demands. However, should actual attendance at special events exceed the anticipated attendance levels, a parking deficiency would occur. In this event, persons would be forced to park on side streets in the immediate project vicinity. Hillcrest administrators have indicated that at times when event parking is deficient in the past, it has been allowed to use the parking lot at the Islamic Masjid Granada Hills Center at 11439 Encino Avenue to provide special event parking. Nevertheless, because the demand for parking during special events may exceed the available on-site parking capacity, a significant parking impact could occur on an occasional basis throughout the year.

CUMULATIVE IMPACTS

A cumulative parking assessment is applicable only if a proposed project would not provide all necessary parking on-site and is proposing to depend upon on street or other off street parking facilities which are or would be shared with other users. The proposed project is located in a residential area and is not surrounded by commercial uses. There are no related projects located in the immediate project vicinity that would contribute to a loss of parking availability either on- or off- site. In addition, as demonstrated in the parking demand analysis above, the 148 permanent parking spaces that will be provided on the proposed West Campus are expected to meet the future daily parking demands of the project. Parking demands for special events would also be accommodated by utilizing an on-site overflow temporary parking lot on the East Campus. Therefore, no cumulative parking impacts would occur.

MITIGATION MEASURES

Although no parking impacts are anticipated to occur, other than occasional parking impacts during special events, the following proposed conditions of approval recommended to the adequate supply of parking on-site.

Figure IV.J.2-2 Proposed Overflow Parking Plan

- Hillcrest Christian School and Church shall monitor the occurrence of off-site parking by its students and visitors to avoid the intrusion of school parking into the local neighborhood.
- Proactive measures, such as providing informational leaflets at the beginning of each school year to discourage off-site parking, pick-up, or drop off traffic patterns should be implemented.
- Student parking shall be controlled by administrative policy. A student parking program shall be implemented to control the availability of on-site parking spaces for student use. Student parking shall be limited to a maximum of 56 student parking permits per school year at the West Campus.
- Prior to special events, Hillcrest shall contact neighboring commercial/institutional property owners to request the use of their parking facilities (i.e., such as requesting the voluntary use of the parking lot at the Islamic Masjid Granada Hills Center). The use of private parking areas at neighboring properties would be at the discretion of the respective property owners.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No parking impacts are anticipated to occur as a result of the normal day to day project operations. Implementation of the recommended conditions of approval presented above would further ensure daily parking availability impacts would be less than significant.

A significant unavoidable parking impact may occur as a result of school-related special events on an occasional basis throughout the school year.