Agenda City of Loma Linda

From the Department of Community Development

PLANNING COMMISSION

REGULAR MEETING OF
March 4, 2015
7:00 p.m.
CITY COUNCIL CHAMBERS
25541 BARTON ROAD, LOMA LINDA, CA 92354

A. CALL TO ORDER - Persons wishing to speak on an agenda item are asked to complete an information card and present it to the secretary. The Planning Commission meeting is recorded to assist in the preparation of the minutes, and you are, therefore, asked to give your name and address prior to offering testimony. All testimony is to be given from the podium.

B. ROLL CALL

C. PLEDGE OF ALLEGIANCE

D. ITEMS TO BE DELETED OR ADDED

E. ORAL REPORTS/PUBLIC PARTICIPATION ON NON-AGENDA ITEMS (LIMITED TO 30 MINUTES; 3 MINUTES ALLOTTED FOR EACH SPEAKER) - This portion of the agenda provides opportunity to speak on an item, which is **NOT** on the agenda. Pursuant to the Brown Act, the Planning Commission can take no action at this time; however, the Planning Commission may refer your comments/concerns to staff, or request the item be placed on a future agenda.

F. NEW BUSINESS

G. PUBLIC HEARINGS (THREE MINUTES IS ALLOTTED FOR EACH SPEAKER PER PUBLIC HEARING ITEM) – CONTINUED

1. **GENERAL PLAN AMENDMENT (GPA 14-075), PRE-ZONE (ZMA 14-076); ANNEXATION (ANX 14-074) AND TENTATIVE TRACT MAP (TTM 14-073) –**

The Project Site is currently located within the County of San Bernardino and Loma Linda's Sphere of Influence on the east side of California Street, between Orange Avenue and Citrus Avenue.

The Project Proponent is requesting approval of:

1) A General Plan Amendment (GPA) to change the existing City of Loma Linda General Plan designation from Business Park to Low Density Residential for the Bell Property;

2) A Pre-Zone application to establish the Single Family Residence (R-1) Zone for the Bell property and the General Business (C-2) Zone for the Ramirez property;

3) An Annexation application to annex the entire Project Site (both properties) into the City of Loma Linda for water and sewer service; and

4) Approval of Tentative Tract Map (TTM) to subdivide the approximate 9.5-acre Bell property into 35 single-family residences and four (4) common lettered lots.

RECOMMENDATION

The recommendation is that the Planning Commission continue the public hearing to the May 6, 2015 Commission meeting.

2. **CONDITIONAL USE PERMIT (CUP) NO. 14-114 AND VARIANCE (VA) NO. 14-115** – The Applicant is requesting approval of the University Church Master Plan, a project that will consist of three phases completed over a 13 year span and includes the demolition of two existing buildings, the construction of three new buildings, and renovation of an existing building totaling 132,624 square feet and a new 9,640 square-foot amphitheater. The variance is a request is to allow the encroachment of a stairway and trash enclosure into the required 25-foot front yard setback along Campus Street. The project is located at 11125 Campus Street, within Loma Linda University's campus in the Institutional (I) Zone

RECOMMENDATION

The recommendation is for the Planning Commission to recommend approval to the City Council of Conditional Use Permit No. 14-114 and Variance No. 14-115, subject to the attached Conditions of Approval.

3. **GENERAL PLAN AMENDMENT NO. 14-060, ZONE CHANGE NO. 14-061; AND PRECISE PLAN OF DESIGN NO. 14-059** – The Applicant is requesting approval of: 1) a General Plan Amendment (GPA) to change the existing City of Loma Linda General Plan designation from High Density Residential (0-13 du/ac) to Health Care; 2) a Zone Change application to change the Multi-Family (R-3) Zone to Institutional (I) Zone; and 3) a Precise Plan of Design to construct a 40-unit assisted senior living facility for the properties located at 25401-17 Cole Street.

RECOMMENDATION

The recommendation is for the Planning Commission to recommend approval to the City Council of General Plan Amendment No. 14-060, Zone Change No. 14-161, and Precise Plan of Design No. 14-059, subject to the attached Conditions of Approval.

H. APPROVAL OF MINUTES

1. Minutes of January 7, 2015

I. REPORTS BY THE PLANNING COMMISSIONERS

J. COMMUNITY DEVELOPMENT DIRECTOR REPORT

K. ADJOURNMENT - Reports and documents relating to each agenda item are on file in the Department of Community Development and are available for public inspection during normal business hours, Monday through Thursday, 7:00 a.m. to 5:30 p.m. The Loma Linda Branch Library can also provide an agenda packet for your convenience.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Clerk at (909) 799-2819. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. Later requests will be accommodated to the extent feasible.

Staff Report **City of Loma Linda**

From the Department of Community Development

PLANNING COMMISSION MEETING OF MARCH 4, 2015

TO: PLANNING COMMISSION

FROM: KONRAD BOLOWICH, ASSISTANT CITY MANAGER/ COMMUNITY DEVELOPMENT DEPARTMENT

SUBJECT: **GENERAL PLAN AMENDMENT (GPA 14-075), PRE-ZONE (ZMA 14-076); ANNEXATION (ANX 14-074) AND TENTATIVE TRACT MAP (TTM 14-073) - APNS 0292-161-01, 08, 11 and 12**

SUMMARY

The Project Site is currently located within the County of San Bernardino and Loma Linda's Sphere of Influence on the east side of California Street, between Orange Avenue and Citrus Avenue.

The Project Proponent is requesting approval of:

1) A General Plan Amendment (GPA) to change the existing City of Loma Linda General Plan designation from Business Park to Low Density Residential for the Bell Property;

2) A Pre-Zone application to establish the Single Family Residence (R-1) Zone for the Bell property and the General Business (C-2) Zone for the Ramirez property;

3) An Annexation application (submitted to LAFCO; requiring City concurrence) to annex the entire Project Site (both properties) into the City of Loma Linda for water and sewer service; and

4) Approval of Tentative Tract Map (TTM) to subdivide the approximate 9.5-acre Bell property into 35 single-family residences and four (4) common lettered lots.

The Applicant is presently addressing the comments received from the Office of Historic Preservation and the State Department of Conservation, through the preparation of supplemental cultural studies, however, the studies are not yet complete.

RECOMMENDATION

Staff recommends that the Planning Commission continue the Public Hearing to the May 6, 2015 Commission meeting to allow Staff and consultants the opportunity to address the Office of Historic Preservation – Department of Parks and Recreation's and the State Department of Conservation's concerns.

Respectfully submitted,

Guillermo Arreola
Associate Planner

Staff Report City of Loma Linda

From the Department of Community Development

PLANNING COMMISSION MEETING OF MARCH 4, 2015

TO: **PLANNING COMMISSION**

FROM: **KONRAD BOLOWICH, ASSISTANT CITY MANAGER**

SUBJECT: **CONDITIONAL USE PERMIT (CUP) NO. 14-114 AND VARIANCE (VA) NO. 14-115**

SUMMARY

The project is located at 11125 Campus Street, within Loma Linda University's campus in the Institutional (I) Zone (Exhibit A). The project will consist of three phases completed over a 13 year span and includes the demolition of two existing buildings, the construction of three new buildings, and renovation of an existing building totaling 132,624 square feet and a new 9,640 square-foot amphitheater. The variance is a request is to allow the encroachment of a stairway and trash enclosure into the required 25-foot front yard setback along Campus Street.

RECOMMENDATION

The recommendation is that the Planning Commission recommends the following action to the City Council:

1. Adopt the Mitigated Negative Declaration (Exhibit B); and
2. Approve Conditional Use Permit No. 14-114 and Variance No. 14-115, based on the Findings and subject to the attached Conditions of Approval (Exhibit C).

PERTINENT DATA

Owner/Applicant:	Southeastern California Association of 7th Day Adventist 11330 Pierce Street Riverside, CA 92515
General Plan/Zone:	Institutional/Institutional
Site:	160,257 gross square feet (3.68 gross acres) / 142,516 net square feet (3.27 net acres). The project site is at the south east corner of Campus Street and University Avenue.
Topography:	Mainly flat with a gentle slope towards north of the property.
Special Features:	The existing site is a Church with School Facilities.

BACKGROUND AND EXISTING SETTING

Background

In June 2014, the applicant submitted a Preliminary Development Review (PDR) application to the City of Loma Linda (City) for early comments. On September 3, 2014, a Conditional Use Permit and Variance application was submitted for review. Due to the extent of proposed construction, the City hired consultant MIG|Hogle-Ireland to review the project for consistency with the General Plan and Development Standards.

Historical Commission Review

In 1988 the City conducted a historical survey, Windshield Survey and Preliminary Architectural/Historical Inventory (Hatheway and McKenna, January 1988), which indicated four potential historic districts. The historic districts were established based on areas that contained concentrations of improvements with historic interest or value. The project site does not occur within any of the four identified historic districts. Therefore, no additional study is required for the proposed project.

Existing Setting

The project is located within a neighborhood consisting of a variety of institutional uses that include a hospital, an existing multi-level parking structure, Loma Linda University (LLU) classrooms, and existing Loma Linda University Church operation. The surrounding properties are within the LLU Medical Center main campus area.

	General Plan Designation	Zoning District	Land Use
Site	**Institutional**	**Institutional**	**Loma Linda Church**
North	Institutional	Institutional	Loma Linda University Medical Center
South	Health Care	Institutional	Loma Linda University Medical Center
East	Institutional	Institutional	Loma Linda University Facility
West	Institutional	Institutional	Parking Structure

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) STATUS

The property is subject to the California Environmental Quality Act (CEQA) and an Initial Study was prepared to address the potential environmental impacts of the project. The Notice of Intent (NOI) to adopt a Mitigated Negative Declaration of Environmental Impact for the project was posted and noticed for the CEQA mandatory, 20-day public review period, which began on (February 13, 2015) and ended on (March 4, 2015). No public comments on the environmental document were submitted to the City during the public review period. A copy of the NOI/Initial Study is attached (Exhibit B).

PUBLIC COMMENTS

On February 11, 2015, public hearing notices were mailed out to property owners and occupants within 300 feet of the project site and were published in the (The Sun Newspaper) newspaper, and posted at three public locations.

ANALYSIS

Project Description / Site Analysis

Loma Linda University Church is proposing to demolish existing classrooms, administrative offices, and multipurpose rooms to construct two new building complexes. The proposed addition will also include a two-story addition to the existing pastoral offices located on the west side of the main Sanctuary, including a remodel of the existing office spaces. Site amenities will include a new central entry plaza, a fellowship plaza, a one-thousand seat outdoor amphitheater, a prayer garden, and children's garden plus right-of-way improvements along Campus Street. Plans have been attached for reference (Exhibit E).

The project is comprised of a three phase Master Plan. Phase 1a, located on the north side of the project site, and 1b, located on the south side of the project site, will be completed over a three year period and consists of demolition of a classroom building and replacing it with a three-story structure and a two-story structure. Phase 2, located on the west side of the project site (between Phase 1a and Phase 1b), will be completed within a ten year period and consists of demolishing administrative offices, classrooms, and multipurpose rooms, and replacing it with a two-story structure. Table 1 shows the details of construction schedule and activity.

Table 1
Loma Linda University Church Master Plan Phase Schedule

Phase	Demolition (SF)	Construction (SF)	Estimated Construction Start Date	Estimated Completion Date
1a	0 SF	Ground Floor – 16,483 SF 1st Floor – 13,277 SF 2nd Floor – 13,220 SF 3rd Floor – 2,549 SF Roof Terrace – 8,871 SF Amphitheater – 9,640 SF **TOTAL – 64,040 SF**	April/May 2015	March 2016
1b	13,047 SF	1st Floor – 20,457 SF 2nd Floor – 18,845 SF Terrace – 1,604 SF **TOTAL – 40,906 SF**	April 2016	March 2017
2	29,641 SF	1st Floor – 18,373 SF 2nd Floor – 14, 554 SF Roof Terrace – 6,940 SF **TOTAL – 39,867 SF**	Fall 2020	Dependent of fundraising after 2020

Phase 1a includes spaces for maintenance, café and lounge, an outdoor amphitheater, classrooms, meeting rooms, offices, a multi-purpose room, U: Reach meeting room, and roof top terrace. Phase 1b includes spaces for children's ministry classrooms, children's chapel, lending library, classrooms, ministry offices, and a prayer chapel with a garden. Phase 2 connects to phase 1a, 1b, and the existing Sanctuary building. A new fellowship hall, youth room, youth terrace, and roof terrace will be added to the phase 1a complex. A music department and junior high meeting room will be attached to the phase 1b complex. The existing single-story administrative offices and choir rehearsal area will be renovated and a new second-story addition will be constructed over the existing offices and main sanctuary transepts. The second story addition will contain pastoral offices, administrative work areas, the business office, conference room, and work room.

The architecture of the building includes different architectural elements such as, arched windows, different elevation heights, stone textured panels, and the use of various colors.

Pursuant to Loma Linda Municipal Code (LLMC) Section 17.60.060, setbacks for a structure within the Institutional Zone shall be a minimum of 25 feet in the front, and side and rear yard setbacks shall be a minimum of ten feet each if not adjacent to residential zones, which shall be 20 feet. With exception of the front yard setback requirement, the project is in compliance with side and rear yard regulations. The variance is a request is to allow the encroachment of a proposed stairway into the required 25-foot front yard setback area. The proposed setback for the stairway is 20'-6," which is an 18% reduction of the required 25 foot setback.

The project includes landscaping throughout the project site. Landscaping will cover approximately 72,000 square feet (50%) of the lot. This will include 38,479 SF (27%) of pervious surfaces and 33,490 SF (23%) of impervious surfaces. The project consists of planting various types of trees including, but not limited to, Raywood Ash, Oak, Chinese Flame Trees, Date Palms, California Sycamore, Mexican Fan Palms, Maidenhair Trees, Japanese Maples, Crape Myrtle, Giant Bird of Paradise, Jacaranda, and Cajeput Trees.

On November 7, 2006, the Loma Linda voters passed Measure V, *The Residential and Hillside Development Control Measure*. Staff analyzed the project using the adopted development guidelines in Chapter 19.16 of the Loma Linda Municipal Code (LLMC) and determined that the project complies with the requirements of Measure V, as follows:

Section I (F)(2) of Measure V requires that traffic Levels of Service (LOS) be maintained at level C or better.

> ***Section I (F)(2) –*** *To assure the adequacy of various public services and to prevent degradation of the quality of life experienced by the residents of Loma Linda, all new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, traffic levels of service (LOS) are maintained at a minimum of LOS C throughout the City, except where the current level of service is lower than LOS C. In any location where the level of service is below LOS C at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the level of traffic service is maintained at levels of service that are*

> *no worse than those existing at the time an application for development is filed. In any location where the Level of Service is LOS F at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the volume to capacity ratio is maintained at a volume to capacity ratio that is no worse than that existing at the time an application for development is filed. Projects where sufficient mitigation to achieve the above stated objectives is infeasible shall not be approved unless and until the necessary mitigation measures are identified and implemented.*

On November 12, 2014, a Traffic Impact Analysis for the Loma Linda University Church was prepared by Kunzman Associates, Inc. The traffic analysis presents existing traffic generation at the project site and trip generation from the proposed project and analyzed five (5) intersections; Campus Street and Stewart Street, Campus Street and University Avenue, Campus Street and Barton Road, Anderson Street and Stewart Street, and Anderson Street and Barton Road (Exhibit D).

As required by Measure V, or the Growth Management Element of the amended City of Loma Linda General Plan, which is an initiative approved by voters in November 2006, any location where the level of service is below LOS C, the Transportation Element criterion, at the time an application for development is submitted, mitigation measures shall be imposed to ensure that the level of traffic service is maintained.

The proposed project will not directly impact existing roadways since its proposed use is consistent with the current zoned use of the site. The proposed project includes the demolition of two existing buildings, construction of three new buildings, and renovation of one existing building in a developed area.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 Freeway. The project also does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections outside of the City of Loma Linda. The project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. Therefore, impacts will be less than significant.

The General Plan and Measure V states that peak hour intersection operations of Level of Service C or better are acceptable. The study area intersections currently operate at Level of Service C or better during the peak hours for existing traffic conditions, except for the study area intersection of Anderson Street at Redlands Boulevard, which currently operates at a Level of Service D during the evening peak hour.

Based on generation estimates defined by the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition),* the project is expected to generate approximately 226 Saturday mid-day peak hour vehicles trips, 98 of which will occur inbound and 128 of which will occur outbound. The weekday trips projected to be generated by the proposed development is approximately 229 daily weekday vehicle trips, 16 of which will occur during the morning peak hours and 16 of which will occur during the evening peak hours. In addition, the weekday services which occur on Tuesday and Wednesday evenings were also reviewed. The 5:00 PM Tuesday service has an attendance rate of 60-70 students. Since students primarily walk to this service, the

service will be less than significant impact on the generation. The 6:00 PM Wednesday service has an attendance rate of 50-60 persons. The resulting trips will be 36 inbound evening peak hour trips on Wednesday. The trips generated from this project does not reach 50 trips at a single intersection therefore will not require analysis during the weekdays.

Consistent with Measure V, as mitigation for the potential traffic impacts, the proposed project shall contribute on a fair share basis, through an adopted traffic impact fee program, in the implementation of the recommended intersection lane improvements or freeway improvements, or in dollar equivalent in lieu mitigation contributions, or in the implementation of additional capacity on parallel routes to offset potential impacts to Congestion Management Program intersections and freeway segments.

The following are recommendations to ensure acceptable Levels of Service consistent with Measure V:

On-Site Improvements

- Construct from Campus Street from University Avenue to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.
- The project site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

Off-Site Improvements

- The necessary off-site improvement recommendations were described in previous sections of this report. The project should contribute towards the cost of necessary study area improvements on a fair share or “pro-rata” basis.
- As is the case for any roadway design, the City of Loma Linda should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

FINDINGS

Conditional Use Permit Findings

1. *That the use applied for at the location set forth in the application is properly on for which a conditional use permit is authorized by this title;*

   Pursuant to Loma Linda Municipal Code (LLMC) Section 17.30.140 (A.2) a Conditional Use Permit is required for churches. The site is located within the Institutional Zone and is consistent with all development standards with the exception of the front setback, as described in the Project Description/Site Analysis. The proposed project complies with all development standards with the exception of a stairway in the front setback, which serves as an architectural element as prescribed in the General Plan Section 3.1.5.2 (b), “employ architectural details and articulation (pop-outs) to avoid blank walls.” The site

currently is a large façade with windows giving the church an uninviting welcome. The proposed design will enhance the architecture to complement the existing buildings throughout the university campus. The existing site is currently operating as a Church, and need to expand to accommodate its congregation. The project is consistent with Institutional Guiding Policy 2.2.6.1 a and b in the General Plan, which states that the City will increase the functionality, identity, and the appearance of the Loma Linda University, especially at the edges where it meets the surrounding community, through appropriate land uses and land use controls, site planning, and use of design elements

2. *That the said use is necessary or desirable for the development of the community, is in harmony with the various elements or objectives of the general plan, and is not detrimental to existing uses or to uses specifically permitted in the zone in which the proposed use is to be located;*

   The project is consistent with Institutional Guiding Policy 2.2.6.1 a and b in the General Plan, which states that the City will increase the functionality, identity, and the appearance of the Loma Linda University, especially at the edges where it meets the surrounding community, through appropriate land uses and land use controls, site planning, and use of design elements. A church use is desirable for those who live, work and study in the area for spiritual worship.

3. *That the site for the intended use is adequate in size and shape to accommodate said use and all of the yards, setbacks, walls, or fences, landscaping and other features required in order to adjust said use to those existing or permitted future uses on land in the neighborhood;*

   The existing site is a church and the proposed use is to expand the size of the existing Church and its facilities. The project site complies with all development standards for churches within the Institutional Zone, with the exception of the stairway in the front setback as described in the Project Description/Site Analysis and the Variance Findings. As proposed, the stairway serves as an architectural element that will break up the continuation of the front elevation of the Loma Linda University Church. Additionally, the proposed architecture and design is consistent with the parking structure on the west side of Campus Street and the structures in the Loma Linda University campus.

4. *That the site for the proposed use related to streets and highways properly designed and improved to carry the type and quantity of traffic generated or to be generated by the proposed use;*

   The existing church is located at the southeast corner of Campus Street and University Avenue. A Traffic Analysis was prepared and recommends that the project accommodates sufficient parking. A 1,163 parking stall, seven story parking structure is located across Campus Street on the southwest corner to accommodate the Church members, which there is a parking agreement between the Church and the University to comply with parking requirements as prescribed in LLMC Section 17.24.070 (D.2.i).

Furthermore, as stated in the Traffic analysis, impacts will be less than significant because the project will not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 freeway and will not contribute trips greater than the arterial link threshold volume of 50 two-way trips in peak hours.

5. *That the conditions set forth in the permit and shown on the approved site plan are deemed necessary to protect the public health, safety and general welfare.*

   The overall design of the project is consistent with all development standards, with the exception of the stair way in the front setback. The proposed design will create a buffer between the street and the site to reduce the noise generated by traffic. It will also create a more intimate campus by enclosing the property with structures to serve the church. Through the permit and inspection process, the reference agencies will ensure that the proposed project is not detrimental to the public welfare or materially injurious to the subject vicinity and zone which the property is located

Variance Findings

1. *That there are exceptional and extraordinary circumstances of conditions applicable to the property involved.*

   Section 3.1.7 of the General Plan states that the City of Loma Linda acknowledges that some uses within the institutional category may be outside of the jurisdictional control of the City and that the corresponding entities might not be required to follow the City's development standards. The proposed project complies with all development standards with the exception of a stairway in the front setback, which serves as an architectural element as prescribed in the General Plan Section 3.1.5.2 (b), "employ architectural details and articulation (pop-outs) to avoid blank walls." The church building currently includes a large façade with windows giving the church an uninviting welcome. The proposed design will enhance the architecture to complement the existing buildings throughout the university campus.

   The project is consistent with Institutional Guiding Policy 2.2.6.1 a and b in the General Plan, which states that the City will increase the functionality, identity, and the appearance of the Loma Linda University, especially at the edges where it meets the surrounding community, through appropriate land uses and land use controls, site planning, and use of design elements.

2. *That such variance is necessary for the preservation and enjoyment of the substantial property right possessed by other property in the same vicinity and zone and denied to the property in question*.

   Most of the properties in the surrounding area meet the required setback of 25 feet. However, on August 18, 2010, the Planning Commission recommended approval of a parking structure with a Variance to allow the encroachment of the exterior stairway, elevator shaft, and entry canopies along the front of the building, which faces Campus Street. As such, the proposed project projections will enhance the articulation and the consistency of existing structure to enhance

the architectural features of both structures in the immediate area. The proposed project complies with all development standards except for a stair way that faces Campus Street. The proposed setback for the stair way is 20'-6," an 18 percent enhancement encroachment of the required front setback. All other architectural elements meet all required setbacks. The variance is necessary for the preservation and enjoyment of the proposed project to enhance the architectural façade by projecting architectural elements to minimize a continuous building wall, similar to those needs of the parking structure across the street.

3. *That the granting of such variance will not materially detrimental to the public welfare or injurious to the property or improvements in such vicinity and zone in which the property is located*.

   The variance request is related to the overall design of the project. The stair way that will encroach into the front setback will enhance the architecture of the building and will not obstruct the vehicular or pedestrian traffic along Campus Street. The overall design will make improvements to allow pedestrians to cross from the parking structure to Loma Linda University Church. The crosswalk should slow traffic. Through the permit and inspection process, the reference agencies will ensure that the proposed project is not detrimental to the public welfare or materially injurious to the subject vicinity and zone which the property is located.

4. *The granting of such variances will be consistent with the general plan of the city.*

   The variance request is to accommodate the encroachment of a stair way into the front set back of the proposed building. The request facilitates Guiding Policy No. 2.2.6.1 of the General Plan which identifies the importance of strengthening the physical layout and visual identity of Loma Linda University as it relates to the community so that it both functionally integrates with the larger community and is an identifiable land mark. The proposed project will provide a distinctive design that is also compatible with the existing parking structure across the street and the existing campus structures.

5. *That a public hearing was held wherein the applicant is heard and in which he substantiates all of the conditions cited in this subsection.*

   The variance request is scheduled for review on the (March 4, 2015) Planning Commission Agenda as a public hearing item. The project will also be reviewed in a public hearing by the City Council, the final review authority for buildings and structures over 20,000 square feet. The date of the City Council meeting has not yet been determined but will be noticed, posted and advertised as required by State law, upon approval by the Planning Commission.

CONCLUSION

Staff recommends approval of the project because it meets the goals and policies of the General Plan. The applicant has worked closely with staff and has made every effort possible to provide the most appropriate layout, design, and architecture for this project. The proposed additions have been modified to comply with development standards. The proposed encroachment into the front set back will not interfere with pedestrians or vehicles traveling along Campus Street and the required Findings for the Variance have been prepared.

The Draft NOI/Initial Study was prepared pursuant to CEQA and the CEQA Guidelines.

Report prepared by:
MIG|Hogle-Ireland

EXHIBITS

A. Vicinity Map
B. Environmental Initial Study/Negative Declaration
C. Conditions of Approval
D. Traffic Impact Analysis Summary
E. Architectural Plans

VICINITY MAP

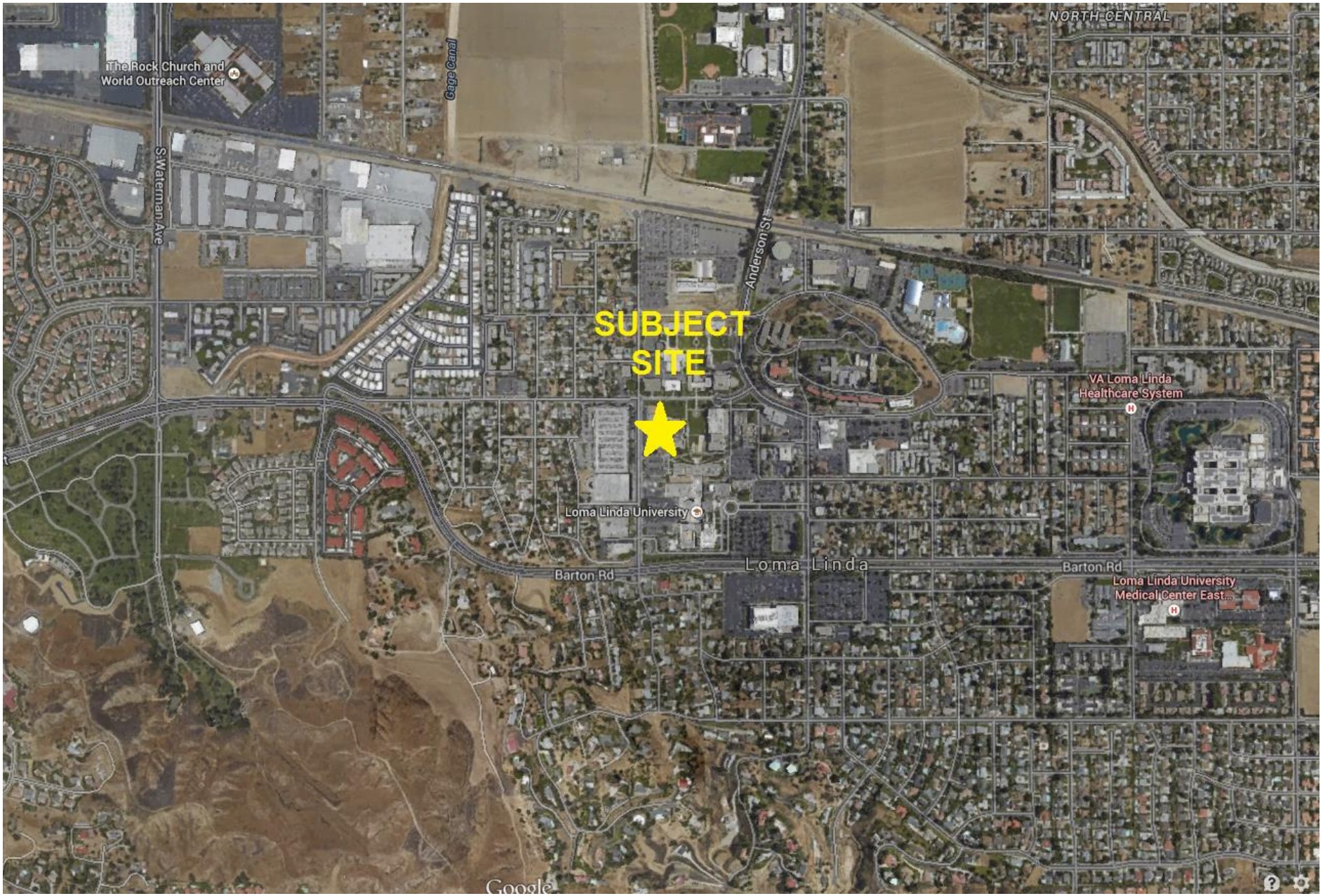

EXHIBIT – A

Loma Linda University Church Master Plan

Initial Study | Negative Declaration

Lead Agency:

City of Loma Linda
25541 Barton Road
Loma Linda, California 92354

Consultant to the City:

MIG | Hogle-Ireland, Inc.
1500 Iowa Avenue
Riverside, California 92507

December 2014

EXHIBIT – B

- This document is designed for double-sided printing -

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1 INTRODUCTION

The City of Loma Linda (Lead Agency) received applications for a Conditional Use Permit and Variance prepared for the Loma Linda University Church Master Plan. The project is located at 11125 Campus Street, within Loma Linda University's campus. The project will consist of three phases anticipated to be completed over a 13 year span that will include the demolition of two existing buildings, the construction of three new buildings, and renovation of an existing building. The approval of the applications constitute a project that is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code, Section 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations, Section 15000 et. seq.).

This Initial Study has been prepared to assess the short-term, long-term, and cumulative environmental impacts that could result from the proposed residential subdivision.

This report has been prepared to comply with Section 15063 of the State CEQA Guidelines, which sets forth the required contents of an Initial Study. These include:

- A description of the project, including the location of the project (See Section 2);
- Identification of the environmental setting (See Section 2.10);
- Identification of environmental effects by use of a checklist, matrix, or other methods, provided that entries on the checklist or other form are briefly explained to indicate that there is some evidence to support the entries (See Section 4);
- Discussion of ways to mitigate significant effects identified, if any (See Section 4);
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls (See Section 4.10); and
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study (See Section 5).

1.1 – PURPOSE OF CEQA

The body of state law known as CEQA was originally enacted in 1970 and has been amended a number of times since then. The legislative intent of these regulations is established in Section 21000 of the California Public Resources Code, as follows:

The Legislature finds and declares as follows:

a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.

b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.

c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.

d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the State takes immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.

e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.

g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the State to:

h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.

i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.

j) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.

k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.

l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.

m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.

n) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment.

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002 of the Public Resources Code, quoted below:

> *The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.*

1.2 – Public Comments

Comments from all agencies and individuals are invited regarding the information contained in this Initial Study. Such comments should explain any perceived deficiencies in the assessment of impacts, identify the information that is purportedly lacking in the Initial Study or indicate where the information may be found. All comments on the Initial Study are to be submitted to:

Guillermo Arreola, Associate Planner
City of Loma Linda, Planning Division
25541 Barton Road, Loma Linda, California 92354
(909) 799-2830
garreola@lomalinda-ca.gov

Following a 20-day period of circulation and review of the Initial Study, all comments will be considered by the City of Loma Linda prior to adoption.

1.3 – Availability of Materials

All materials related to the preparation of this Initial Study are available for public review. To request an appointment to review these materials, please contact:

Guillermo Arreola, Associate Planner
City of Loma Linda, Planning Division
25541 Barton Road, Loma Linda, California 92354
(909) 799-2830
garreola@lomalinda-ca.gov

2.1 – PROJECT TITLE

City of Loma Linda University Church Master Plan

2.2 – LEAD AGENCY NAME AND ADDRESS

City Loma Linda
25541 Barton Road
Loma Linda, California 92354

2.3 – CONTACT PERSON AND PHONE NUMBER

Guillermo Arreola, Associate Planner
(909) 799-2830
garreola@lomalinda-ca.gov

2.4 – PROJECT LOCATION

The project site is located in the City of Loma Linda, San Bernardino County, California (see Exhibit 1, Regional and Vicinity Map), within the Loma Linda University Campus. The project site is bounded by University Avenue to the north, Campus Street to the west, the Loma Linda University Medical Center to the south, and institutional uses to the east.

- Latitude 34° 03' 05.0" North, Longitude 117° 15' 54.8" West
- Assessor's Parcel 0284-082-15-0000
- 1125 Campus Street, Loma Linda, California 92354

2.5 – PROJECT SPONSOR'S NAME AND ADDRESS

City Loma Linda
Community Development Department
Planning Division
25541 Barton Road
Loma Linda, California 92354

2.6 – GENERAL PLAN LAND USE DESIGNATION

The project site is designated *Institutional* in the City of Loma Linda General Plan Land Use Element. The *Institutional* designation is intended for educational institutions and religious assembly uses. Included within this designation is the Loma Linda University (LLU), which is characterized by lecture halls, classroom buildings, laboratory buildings, libraries, administrative buildings, and service buildings. The maximum allowable density for large uses is 0.8 FAR and maximum density for small uses is 0.5 FAR.

2.7 – ZONING DISTRICT

The project site is zoned *Institutional* pursuant to the City of Loma Linda Zoning Ordinance.

2.8 – Project Description

The City of Loma Linda (Lead Agency) received applications for a Conditional Use Permit and Variance prepared for the Loma Linda University Church Master Plan. The project is located at 11125 Campus Street, within Loma Linda University's campus. The project consists of demolition of existing classrooms, administrative offices, and multipurpose rooms, construction of two new building complexes, a two-story addition to the existing pastoral offices located on the west side of the main sanctuary, including remodeling of the existing office spaces. Site amenities will include a new central entry plaza, a fellowship plaza, a one thousand seat amphitheater, a prayer garden, and a children's garden plus right-of-way improvements along Campus Street (see Exhibit 2, Conceptual Site Plan and Exhibit 3, Conceptual Color Perspective).

Construction

The project is comprised of a three phase Master Plan. Phase 1a, located on the north side of the project site, and 1b, located on the south side of the project site, will be completed over a three year period and consists of demolition of a classroom building and replacing it with a three-story structure and a two-story structure. Phase 3, located on the west side of the project site, will be completed within a ten year period and consists of demolishing administrative offices, classrooms, and multipurpose rooms, and replacing them with a two-story structure. Table 1 shows the details of construction schedule and activity.

Table 1
Loma Linda University Church Master Plan Phase Schedule

Phase	Demolition (sf)	Construction (sf)	Estimated Construction Start Date	Estimated Completion Date
1a	0 sf	Basement – 14,980 sf 1st Floor – 11,841 sf 2nd Floor – 11,947 sf 3rd Floor – 1,600 sf + 7,776 sf roof deck Amphitheater – 9,623 sf	April/May 2015	March 2016
1b	10,054 sf	1st Floor – 19,480 sf 2nd Floor – 16,777 sf	April 2016	March 2017
3	26,580 sf	1st Floor – 18,045 sf 2nd Floor – 15,219 sf 2nd Floor Decks – 7,069 sf	Fall 2020	Dependent of fund raising after 2020

Phase 1a includes spaces for maintenance, a student café and lounge, an amphitheater, family ministry classrooms, discipleship classrooms, offices and an information kiosk, U:Reach offices, Re:Live offices and work area, media ministry offices and studio space, and a roof top terrace. Phase 1b includes spaces for children's ministry classrooms, children's chapel, lending library, playroom, ministry offices, kitchen facilities, prayer chapel and garden, and children's garden. Phase 3 connects to phase 1a, 1b, and the existing Sanctuary building. A new fellowship hall, youth room, youth terrace, and roof terrace will be added to the phase 1a complex. A music department and junior high meeting room will be attached to the phase 1b complex. The existing single-story administrative offices and choir rehearsal area will be renovated and a new second-story addition will be constructed over the existing offices and main sanctuary transepts. The second story addition will contain pastoral offices, administrative work areas, the business office, conference room, and work room.

Grading

Because none of the proposed structures are proposed to be constructed below-grade, export or import of soil will not be required as on-site soils are expected to balance.

Landscaping

The project includes landscaping throughout the project site. Landscaping will cover 71,969 square feet (sf) or 50 percent of the project site (27 percent of the site within pervious surfaces and 23 percent of the site within impervious surfaces). Project landscaping will consist of trees including Raywood Ash, Oak, Chinese Flame Trees, Date Palms, California Sycamore, Mexican Fan Palms, Maidenhair Trees, Japanese Maples, Crape Myrtle, Giant Bird of Paradise, Jacaranda, and Cajeput Trees.

Utilities

The project includes the installation of a new 8-inch sewer main and 42-inch storm drain under University Avenue to replace an existing 8-inch sewer main and 39-inch storm drain within the same right-of-way. Approximately 450 linear feet will be disturbed in replacing these utilities. The project will connect to an existing 8-inch water main under University Avenue. Sewer and water mains are maintained by the City of Loma Linda. Electricity and natural gas will be provided by Southern California Edison and Southern California Gas Company.

2.9 – Surrounding Land Uses

The project is bounded by University Avenue to the north and Campus Street to the west. North of University Avenue are institutional uses. The land uses to the east, west, and south are all institutional uses. Surrounding uses are summarized in Table 2 (Surrounding Land Uses).

Table 2
Surrounding Land Uses

Direction	General Plan Designation	Zoning District	Existing Development
Project Site	Institutional	Institutional	Religious & School Facility
North	Institutional	Institutional	Medical Center
South	Health Care	Institutional	Medical Center
East	Institutional	Institutional	School Facility
West	Institutional	Institutional	School Facility (Parking Lot)

2.10 – Environmental Setting

The project is located on a previously developed site in Loma Linda, San Bernardino County, California. Previous development on the project site has been partially demolished. The project site currently contains a single-story classroom building and a two-story classroom building on a south side of the project site and a single-story administrative and hall/multipurpose building on the west side of the project site that are fully functional. The project site also consists of an existing sanctuary located at the center of the parcel and will remain as is throughout construction of the three proposed phases. The project site is surrounded by institutional and medical uses and the area is completely built-out and urbanized. The Loma Linda University Church Master Plan includes the demolition of two structures, construction of three new buildings, and renovation of an existing building. The site is bound to the north by University Avenue, to the south by the Loma Linda University Medical Center, to the east by the Loma Linda University School of Dentistry, and to the west by College Street. Interstate 10 (I-10) is located approximately 0.83 miles north of the project site. The project site elevation ranges from 1,104 feet to 1,097 feet. Exhibit 4 (Photographic Survey) provides details on the existing conditions of the project site and surrounding development.

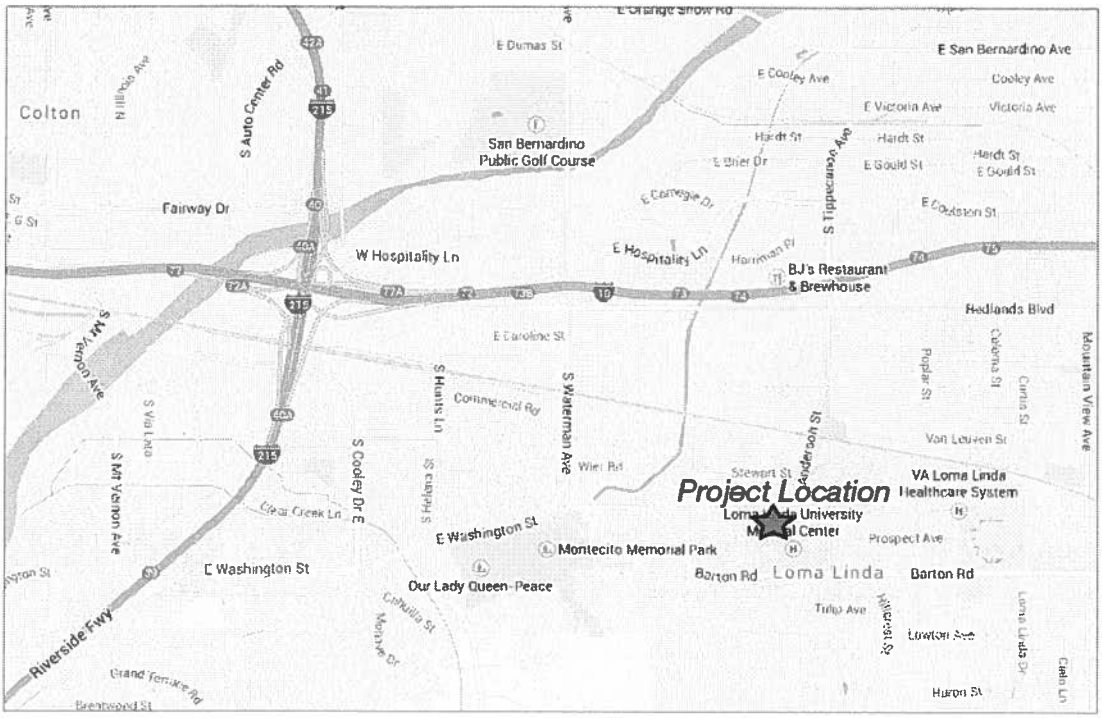
2.11 – Required Approvals

The City of Loma Linda is the only land use authority for this project requiring the following approvals for entitlement of the project:

- Conditional Use Permit
- Variance

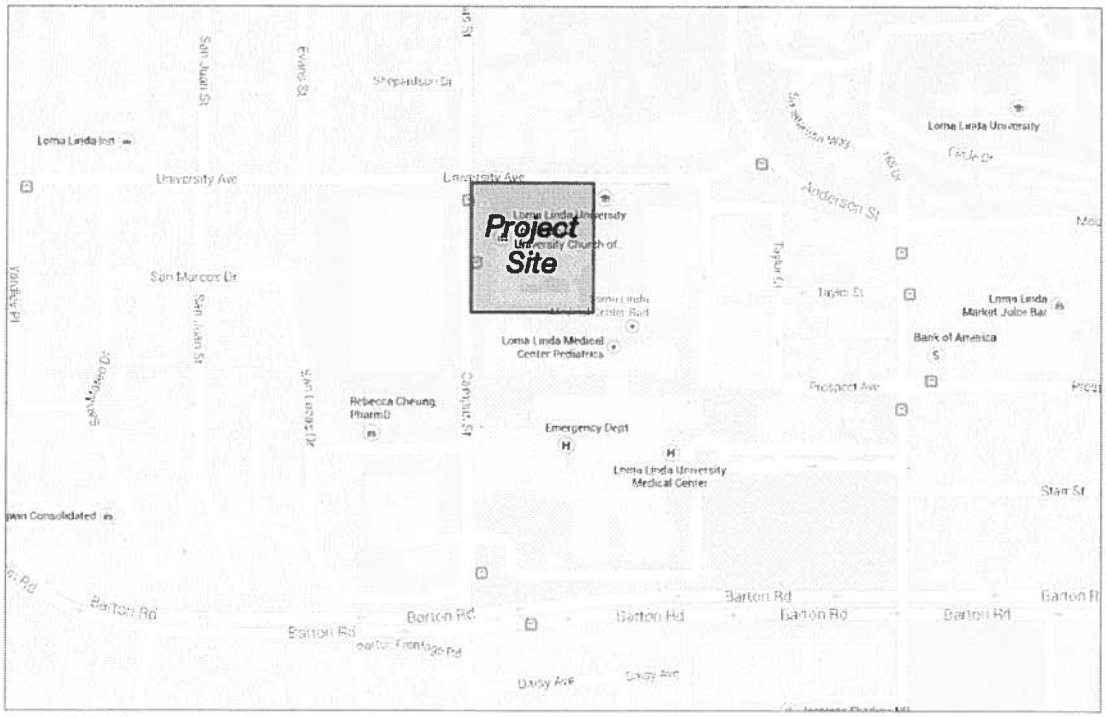
2.12 – Other Public Agency Whose Approval Is Required

None



Source: Google Maps, 2015

Regional



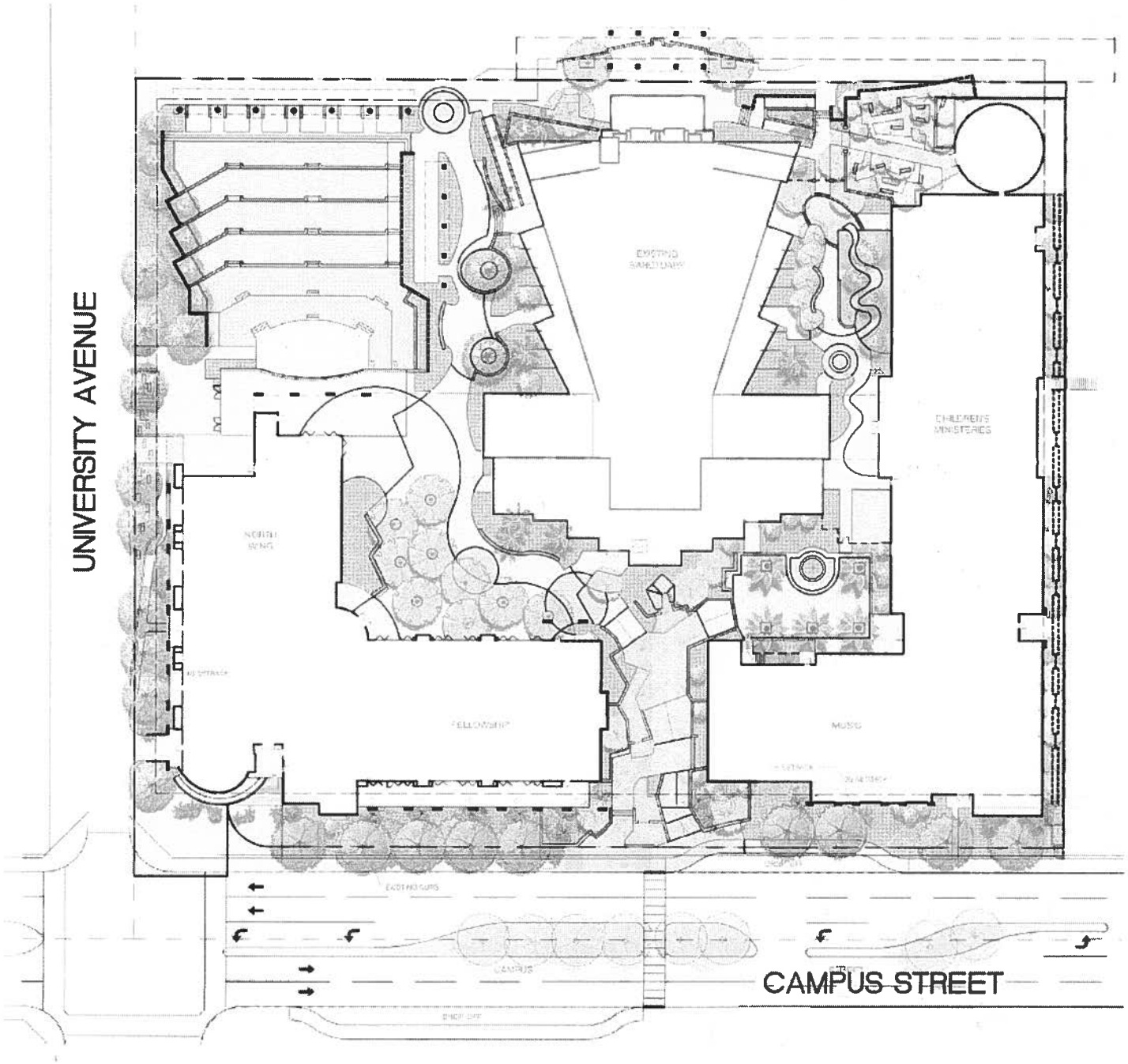
Source: Google Maps, 2015

Vicinity

Not to Scale

Exhibit 1 Regional and Vicinity Map

Loma Linda University Church Master Plan
Loma Linda, California



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Source: adrian gaus architects

Exhibit 2 Conseptual Site Plan

Loma Linda University Church Master Plan
Loma Linda, California

MIG Hogle-Ireland

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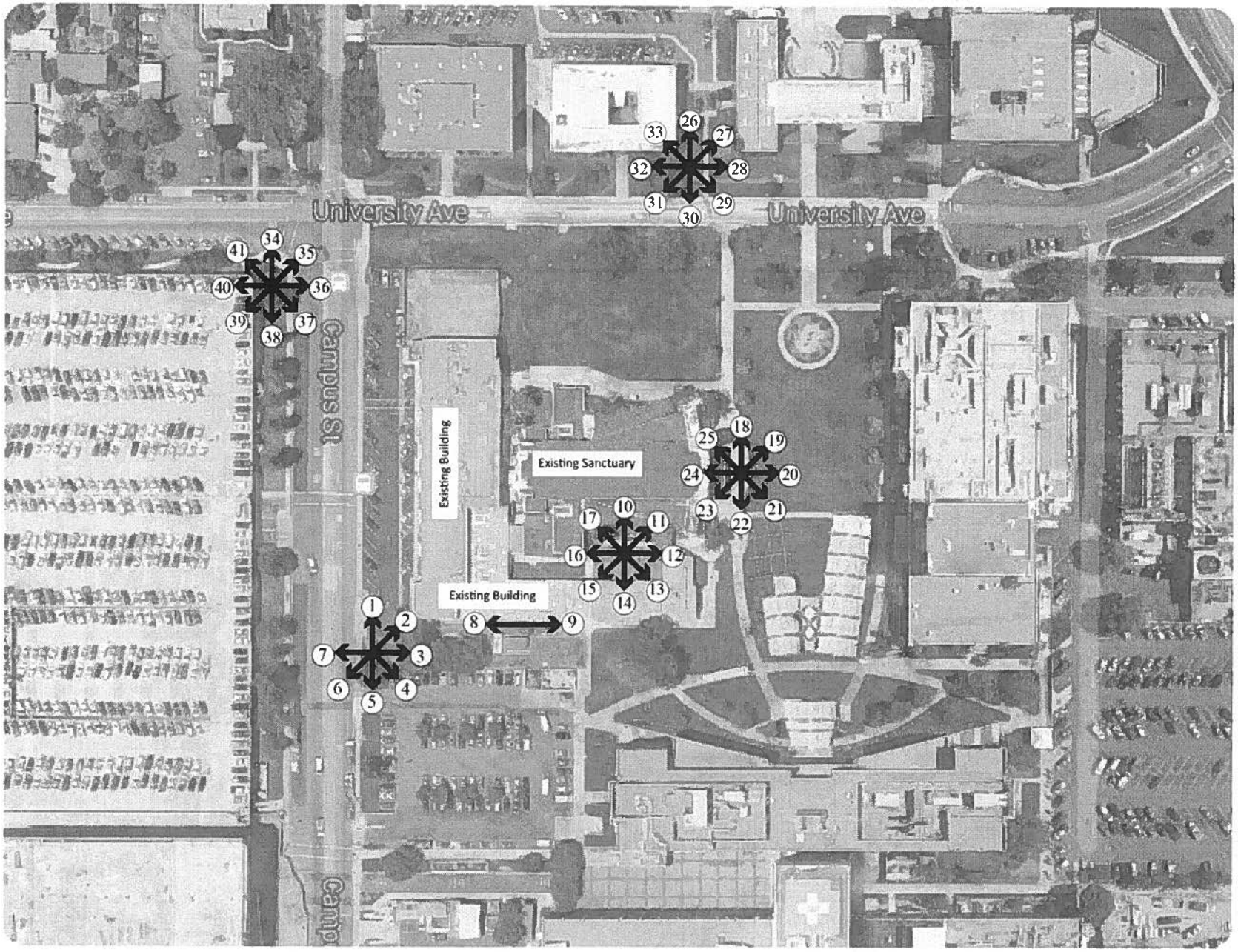
Source: adrian gaus architects

Exhibit 3 Conceptual Color Perspective

MIG Hogle-Ireland

Loma Linda University Church Master Plan
Loma Linda, California



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http://www.migcom.com

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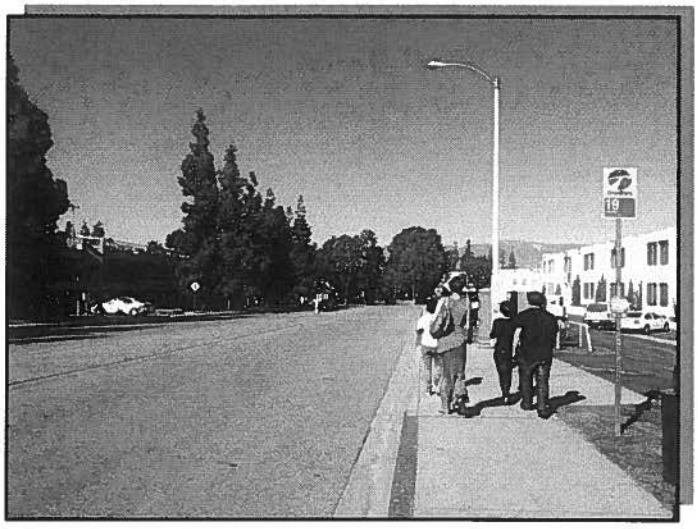
Exhibit 4 Photographic Survey

Loma Linda University Church Master Plan

Loma Linda, California



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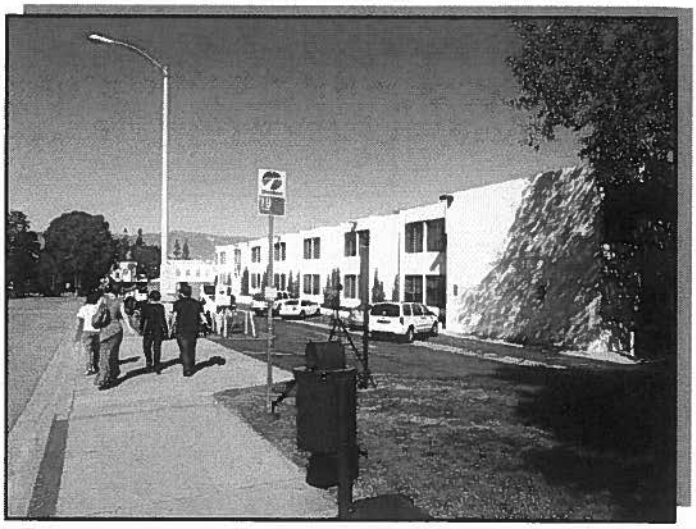

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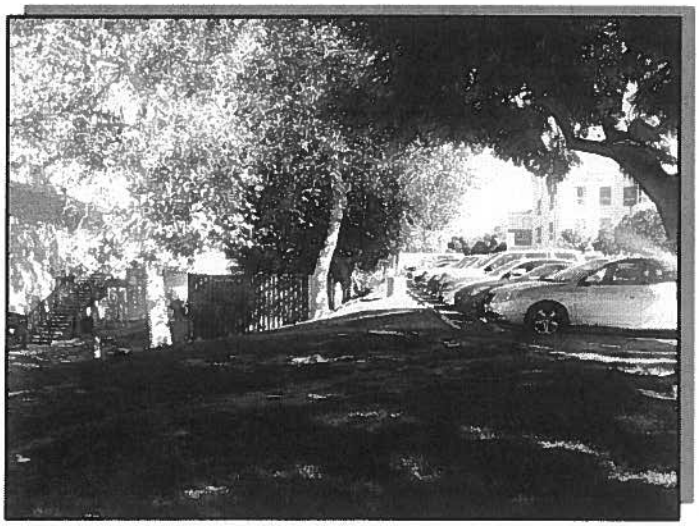

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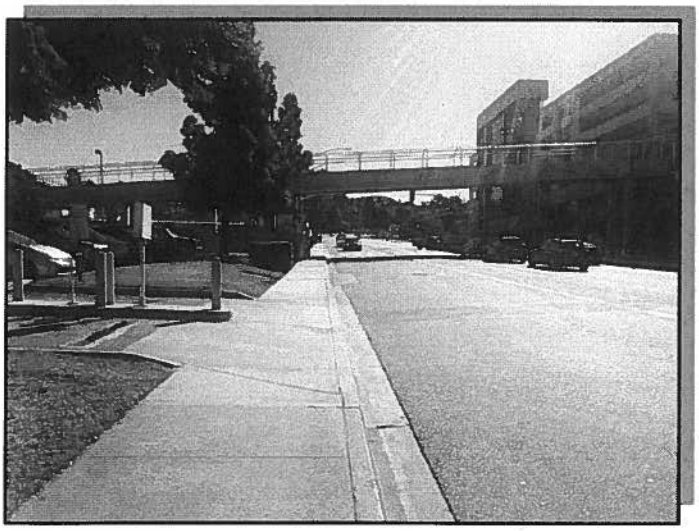

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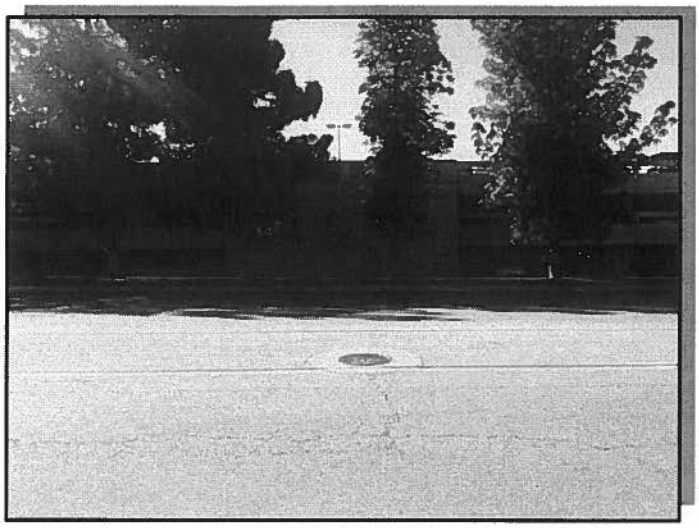
Exhibit 4a Photographic Survey

Loma Linda University Church Master Plan

Loma Linda, California



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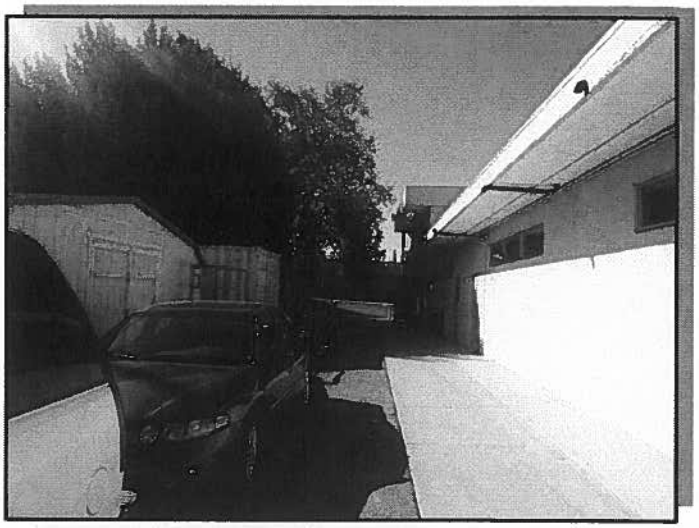

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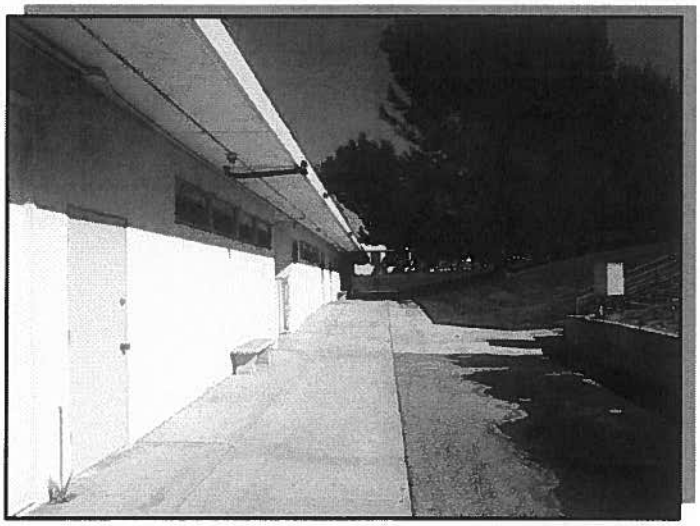

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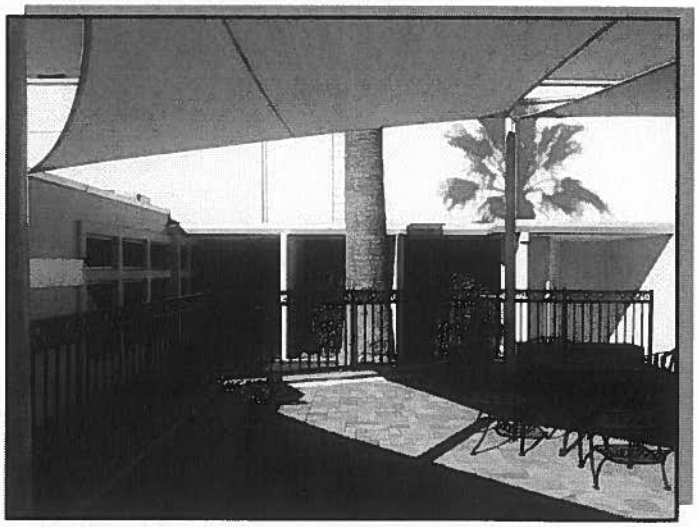

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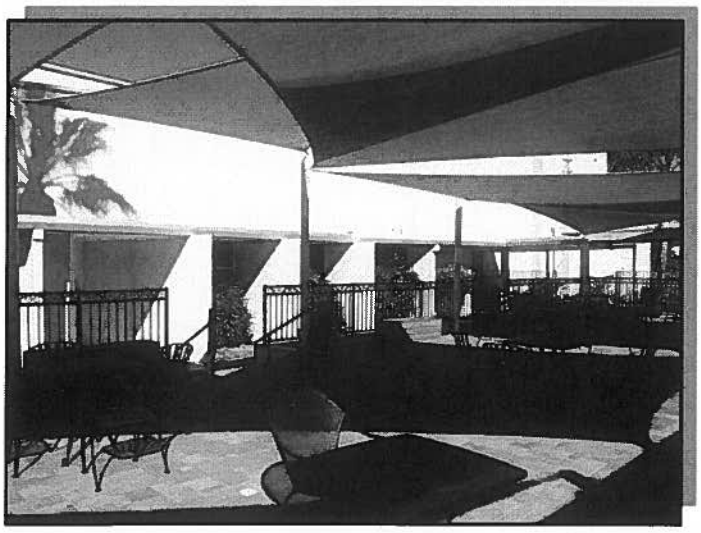

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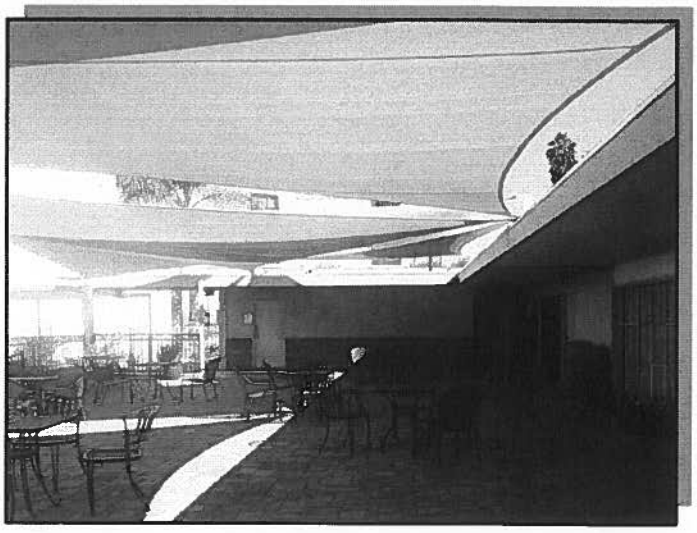

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Exhibit 4b Photographic Survey

Loma Linda University Church Master Plan

Loma Linda, California

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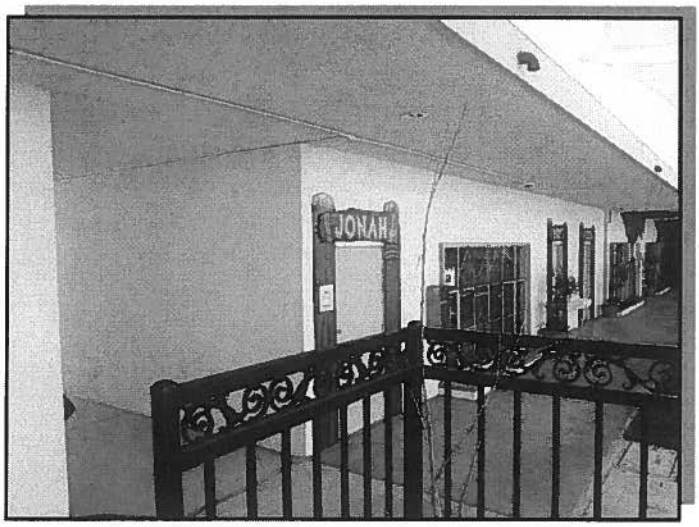

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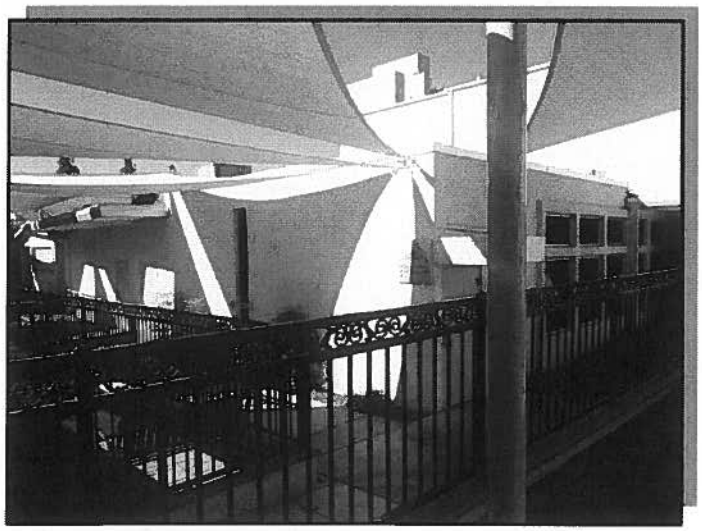

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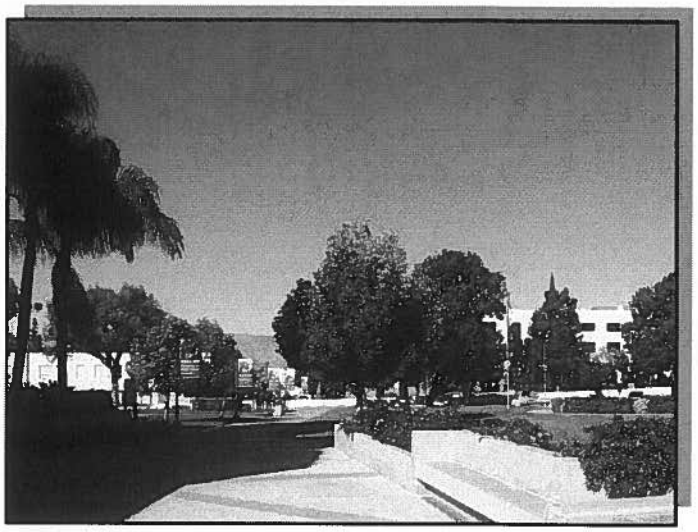

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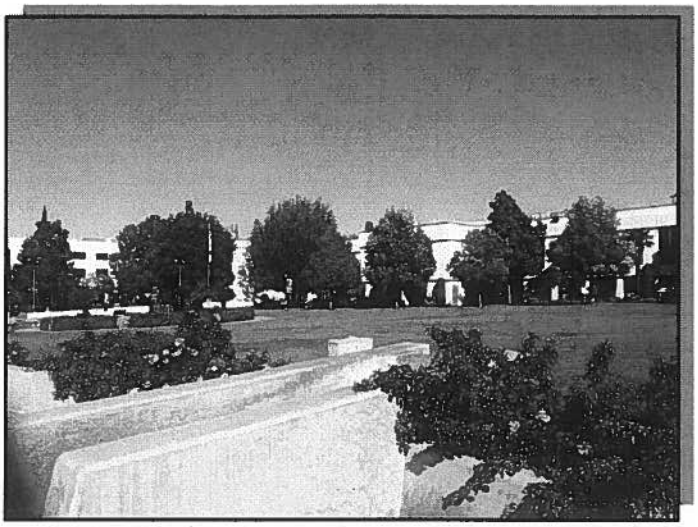

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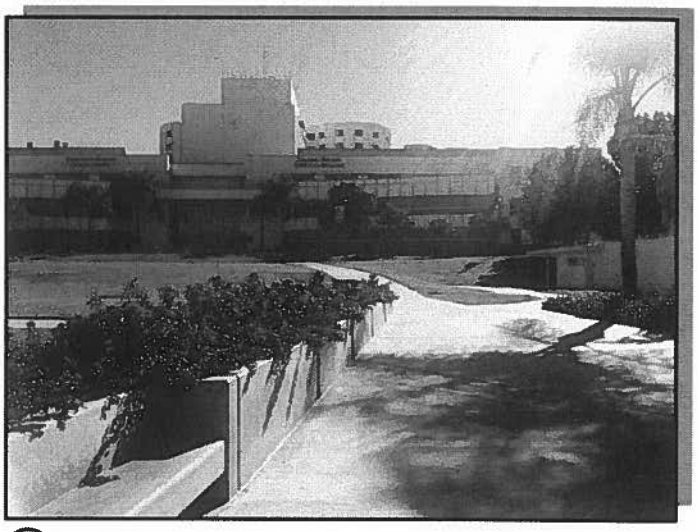

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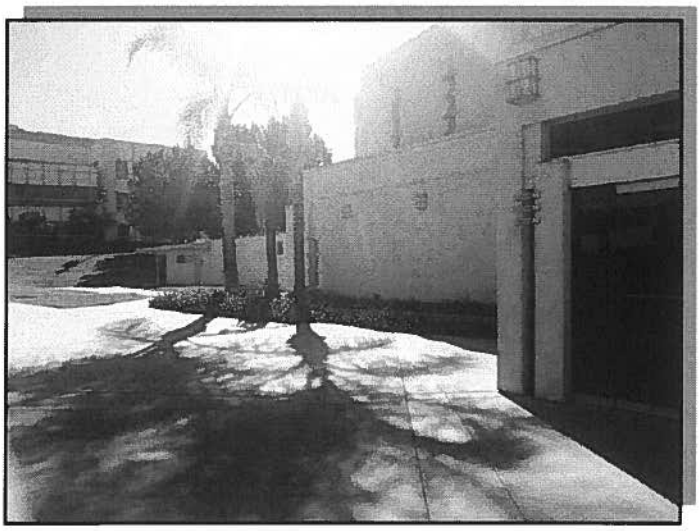

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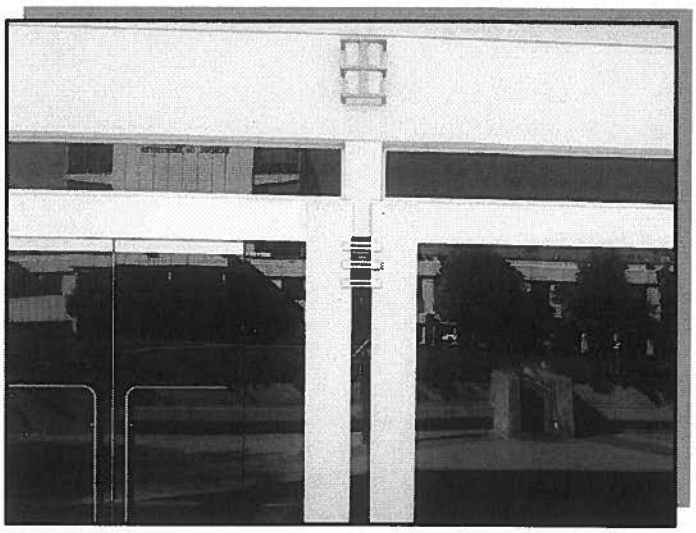

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Exhibit 4d Photographic Survey

Loma Linda University Church Master Plan

Loma Linda, California

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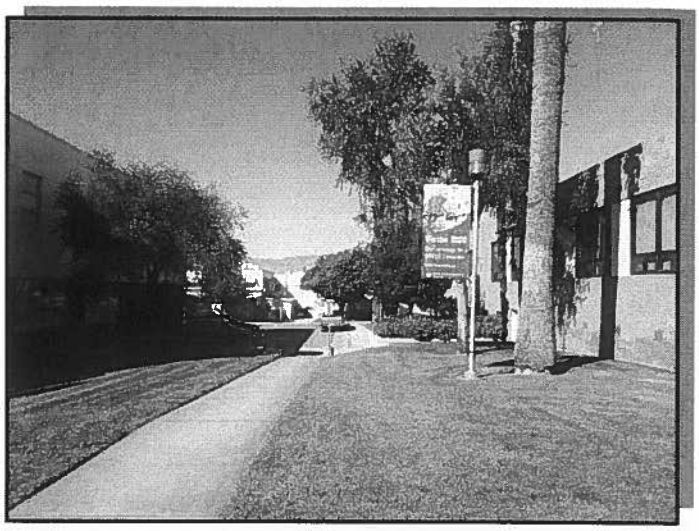

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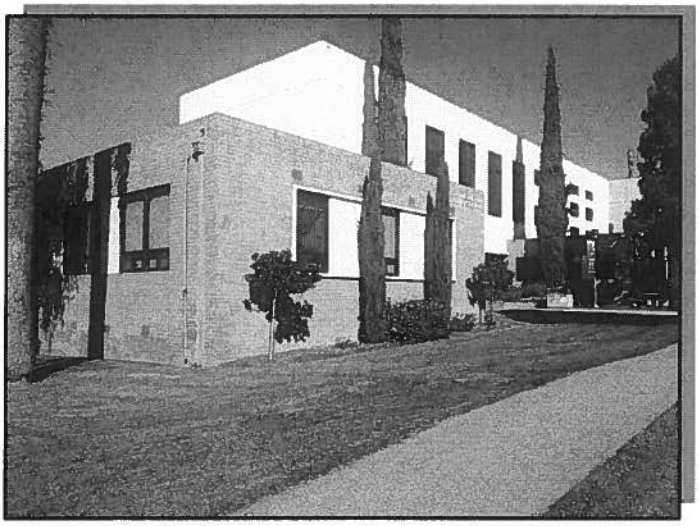

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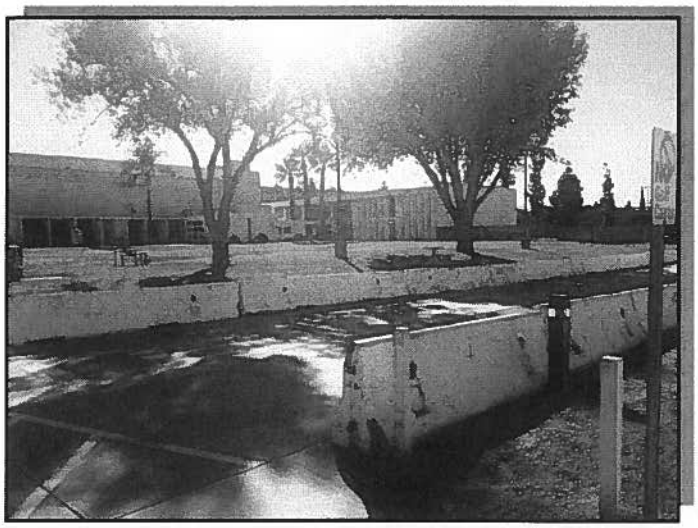
Exhibit 4e Photographic Survey

Loma Linda University Church Master Plan

Loma Linda, California



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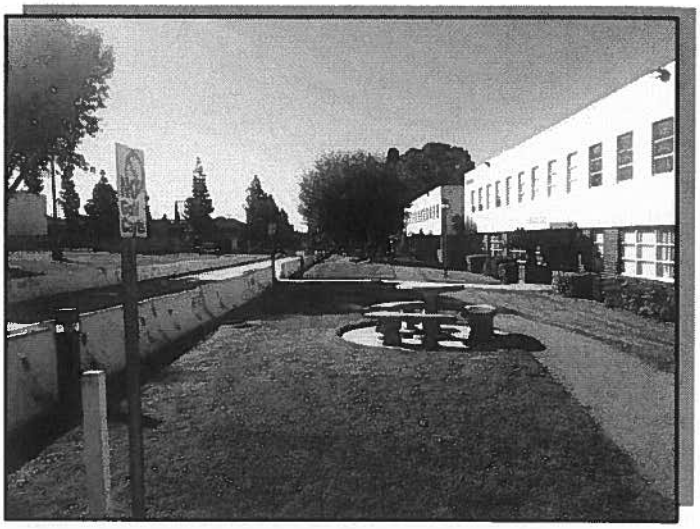

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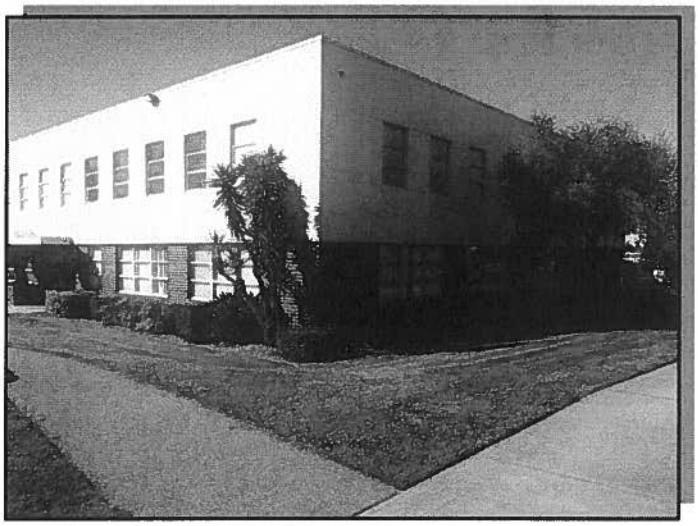

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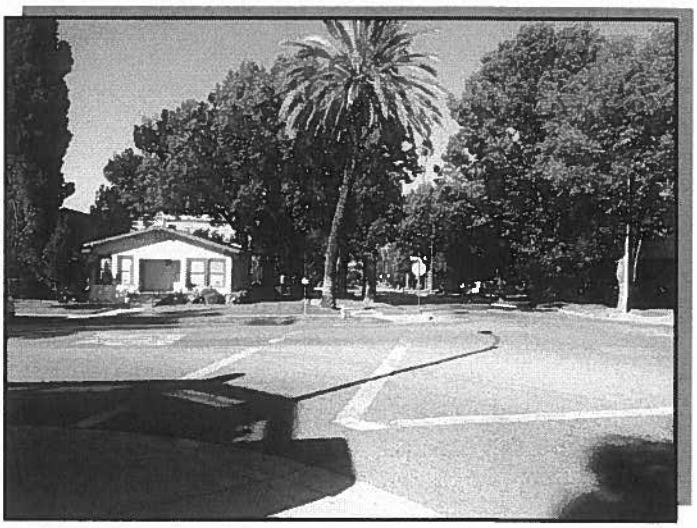

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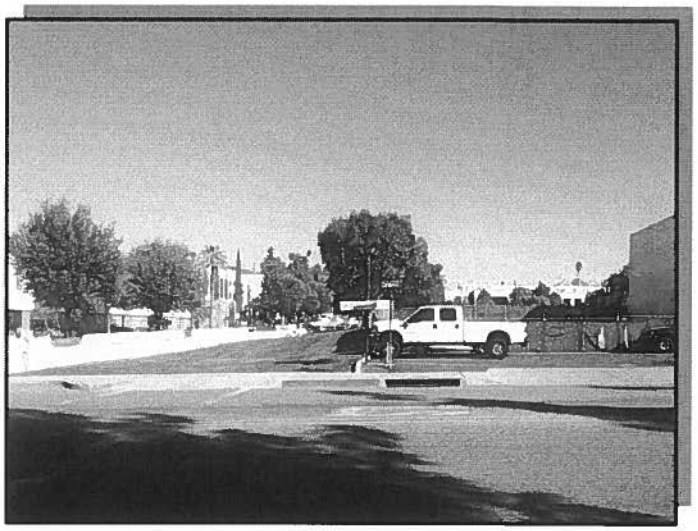

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Exhibit 4f Photographic Survey

Loma Linda University Church Master Plan

Loma Linda, California

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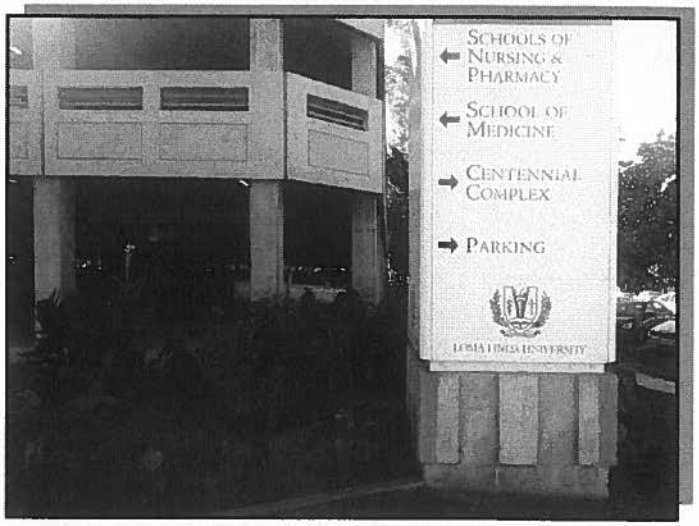
SCHOOLS OF NURSING & PHARMACY
SCHOOL OF MEDICINE
CENTENNIAL COMPLEX
PARKING
LOMA LINDA UNIVERSITY

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3 DETERMINATION

3.1 – ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a 'Potentially Significant Impact' as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology /Soils
☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials	☐	Hydrology / Water Quality
☐	Land Use / Planning	☐	Mineral Resources	☐	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities / Service Systems	☐	Mandatory Findings of Significance

3.2 – DETERMINATION

☒	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a 'potentially significant impact' or 'potentially significant unless mitigated' impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Name: Guillermo Arreola, Associate Planner	Date

4.1 – AESTHETICS

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
B) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view from a state scenic highway?	☐	☐	☐	☒
C) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
D) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

A) **No Impact.** A scenic vista is defined by a generally uninterrupted view of the horizon, creating an aesthetic viewpoint. Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks view of a vista. Second, the vista itself may be altered (i.e., development on a scenic hillside).

According to the City's General Plan EIR, the City of Loma Linda has no officially designated scenic vistas or views. The proposed project is located on a previously developed site in the City of Loma Linda, within a fully urbanized area visually dominated by institutional uses and surface streets. As the previous development and proposed development on the project site is similar in use and to the surrounding land uses, impacts to scenic vistas will not occur.

B) **No Impact.** The proposed project is not adjacent to a designated state scenic highway or eligible state scenic highway as identified on the California Scenic Highway Mapping System[1]; therefore scenic resources as seen from such highways could not be impacted. Renovations to the existing Church structures will primarily occur in areas that are currently developed and without scenic resources. The eastern portion of the project site is proposed for development in Phase 1A; however there are no scenic resources located on this portion of the project site. No impact will occur.

C) **Less than Significant Impact.** Development of the proposed project could potentially result in a significant impact if it results in a permanent substantial degradation of the existing visual character or quality of the site and its surroundings. Degradation of visual character or quality is generally defined by substantial changes to the existing site appearance through construction of structures such that they are poorly designed or conflict with the site's existing surroundings.

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[1] California Department of Transportation. California Scenic Highway Mapping System. San Bernardino County. http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm [September 15, 2014]

Operation of the proposed renovation of the Church on the previously developed site will not alter the existing visual character of the site. Once constructed, the proposed project will represent an urban feature within an existing urban area. The project site is currently fully functional and operating as a religious and institutional facility. The project proposes to demolish two existing buildings, construct three new structures, and renovate an existing building. The finished structures will result in a permanent structural change to the visual character of the site and area because of the new building structures. The project architecture is consistent between the northern and southern buildings and reminiscent of the existing buildings with a palate of red and white plaster and horizontal breaks. The proposed architecture will be enhanced when compared to existing conditions by the introduction of columns and vertical breaks to add additional visual interest to the project site. Considering the visual character of the site will improve, impacts will be less than significant.

D) **Less than Significant Impact.** Excessive or inappropriate directed lighting can adversely impact night-time views by reducing the ability to see the night sky and stars. Glare can be caused from unshielded or misdirected lighting sources. Reflective surfaces (i.e., polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (i.e., if glare is directed into the eyes of motorists). Light spillover and glare will be avoided by requiring lights to be designed to prevent the light from shining directly onto surrounding property per the requirements of the Loma Linda Construction Standards - Street Light Specifications. Compliance with the Loma Linda construction standards for lighting will ensure that lighting and glare impacts are less than significant by ensuring light does not spill onto adjacent properties. The proposed building will have plaster, stone textured panels, metal awnings, louvers, and composite wood, which are not surfaces that cause glare. Given the lack of glare-inducing materials in the design of the proposed building, reflective glare impacts will be less than significant.

4.2 – Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
B)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
C)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	☐	☐	☐	☒
D)	Result in loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
E)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

A) **No Impact.** The proposed project will be located in a fully developed, urbanized area that does not contain agriculture or forest uses. Land designated as Prime Farmland is located in the City of Loma Linda according to the California Department of Conservation, Division of Land Resource Protection.[2] Prime Farmland has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. However, agricultural use within Loma Linda has declined in recent years, primarily due to the effects of urban expansion and economic considerations. The proposed project is not located within or in proximity to agricultural uses. Therefore, there will be no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Important to a non-agricultural use as a result of the project. No impact will occur.

[2] California Department of Conservation. Farmland Mapping and Monitoring Program. San Bernardino County Important Farmland 2010. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/sbd10_so.pdf [September 15, 2014]

B) **No Impact.** Implementation of the proposed University Church Master Plan will not conflict with existing zoning for agriculture use or a Williamson Act contract since, according to the California Department of Conservation, no land in the City is under a Williamson Act contract.[3] No impact will occur.

C) **No Impact.** The Public Resources Code Section 12220(g) defines forest land as *land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.* The Public Resources Code Section 4526 defines timberland as *land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.* The Government Code section 51104 (g) defines timberland zoned as Timber Production as *an area which has been zoned pursuant to Section 51112 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.* No properties in the City are zoned for forest land, timberland, or Timberland Production, therefore no impact will occur.

D) **No Impact.** The project site is already graded with existing development and contains some ornamental landscaping. Therefore, there will be no loss of forest land or conversion of forest land as a result of implementation of the proposed project.[4] No Impact will occur.

E) **No Impact.** As discussed in this Section 4.2.a, land designated as Prime Farmland is located in the City of Loma Linda according to the California Department of Conservation, Division of Land Resource Protection. However, agricultural use within Loma Linda has declined in recent years, primarily due to the effects of urban expansion and economic considerations. Because no forest land or agricultural land is located on or near the project site, no impact will occur.

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[3] California Department of Conservation. Agricultural Preserves 2004: Williamson Act Parcels, San Bernardino County, California. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/sanbernardino_so_12_13_WA.pdf [September 15, 2014]
[4] California Department of Forestry and Fire Protection. Statewide Land Cover Map 2006. http://frap.fire.ca.gov/data/frapgismaps-landcover2006_download.php [September 15, 2014]

4.3 – AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
B)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
C)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
D)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
E)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

A) **No Impact.** The City of Loma Linda is located within the South Coast Air Basin (basin) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD and the Southern California Association of Governments (SCAG) are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the basin. The AQMP is a series of plans adopted for the purpose of reaching short- and long-term goals for those pollutants the basin is designated as a "nonattainment" area because it does not meet federal and/or State Ambient Air Quality Standards (AAQS). To determine consistency between the project and the AQMP, the project must comply with all applicable SCAQMD rules and regulations, comply with all proposed or adopted control measures, and be consistent with the growth forecasts utilized in preparation of the Plan.

A significant impact could occur if the proposed project conflicts with or obstructs implementation of the South Coast Air Basin 2012 AQMP. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the South Coast Air Basin 2012 AQMP is affirmed when a project: 1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and 2) is consistent with the growth assumptions in the AQMP. Consistency review is presented below.

1. The project will result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions threshold established by SCAQMD, as demonstrated in Section 4.3 et seq of this report; therefore, the project will not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation.

2. The CEQA Air Quality Handbook indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and *significant projects. Significant*

projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and off-shore drilling facilities. The project does not involve a General Plan Amendment, Specific Plan Amendment and is not a *significant project.*

Based on the consistency analysis presented above, the proposed project will not conflict with the AQMP; no impact will occur.

B) **Less than Significant Impact.** A project may have a significant impact if project-related emissions will exceed federal, state, or regional standards or thresholds, or if project-related emissions will substantially contribute to existing or project air quality violations. The proposed project is located within the South Coast Air Basin, where efforts to attain state and federal air quality standards are governed by the South Coast Air Quality Management District (SCAQMD). Both the state of California (state) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as 'criteria pollutants'). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (Pb). The state has also established AAQS for additional pollutants. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the state and federal standards differ, California AAQS are more stringent than the national AAQS.

Air pollution levels are measured at monitoring stations located throughout the air basin. Areas that are in nonattainment with respect to federal or state AAQS are required to prepare plans and implement measures that will bring the region into attainment. Table 3 (South Coast Air Basin Attainment Status) summarizes the attainment status in the project area for the criteria pollutants. Discussion of potential impacts related to short-term construction impacts and long-term area source and operational impacts are presented below.

Table 3
South Coast Air Basin Attainment Status (Non-Los Angeles)

Pollutant	Federal	State
O_3 (1-hr)	--	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Attainment	Attainment
VRP	--	Unclassified
SO_4	--	Attainment
H_2S	--	Unclassified
Sources: ARB 2014		

CONSTRUCTION EMISSIONS

An Air Quality and Global Climate Change Impact Analysis was prepared by Kunzman Associates, Inc.[5] on November 14, 2014. The California Emissions Estimator Model (CalEEMod) version 2013.2.2 was utilized to estimate emissions from the proposed construction activities. The project will be constructed in three phases, Phase 1a, 1b, and 3. The Phase 1a construction length is 224 days consisting of site preparation, grading, building construction, paving, and architectural coating phases. The Phase 1b construction length is 239 days consisting of demolition, grading, building construction, paving, and architectural coating phases. The Phase 3 construction

[5] Kunzman Associates, Inc., Air Quality and Global Climate Change Impact Analysis, 2014

phase length is 122 days consisting of demolition, grading, building construction, paving, and architectural coating phases. The tentative construction schedule is summarized in Table 4 (Tentative Construction Schedule).

Table 4
Tentative Construction Schedule

Phase	Start	End	Days
Phase 1a			
Site Preparation	4/1/2015	4/2/2015	2
Grading	4/3/2015	4/8/2015	4
Building Construction	4/9/2015	1/13/2016	200
Paving	1/14/2016	1/27/2016	10
Architectural Coating	1/28/2016	2/10/2016	10
		Total	**224**
Phase 1b			
Demolition	4/1/2016	4/14/2016	10
Grading	4/15/2016	4/29/2016	11
Building Construction	4/30/2016	1/30/2017	196
Paving	1/31/2017	2/14/2017	11
Architectural Coating	2/15/2017	3/1/2017	11
		Total	**239**
Phase 3			
Demolition	9/1/2020	9/14/2020	10
Grading	9/15/2020	9/16/2020	2
Building Construction	9/17/2020	2/3/2021	100
Paving	2/4/2021	2/10/2021	5
Architectural Coating	2/11/2021	2/17/2021	5
		Total	**122**
Source: Kunzman Associates, Inc. 2014			

The construction-related criteria pollutant emissions for each phase are summarized in Table 5 (Maximum Daily Construction Emissions (lbs/day)). Construction-related emissions for three phases will not exceed regional thresholds. No mitigation is required. Regional impacts will be less than significant.

Table 5
Maximum Daily Construction Emissions (lbs/day)

Activity	ROG	NO_X	CO	SO_2	PM^{10}	$PM^{2.5}$
Demolition						
Phase 1a	--	--	--	--	--	--
Phase 1b[1, 2]	1.43	12.56	10.30	0.02	1.40	0.90
Phase 3	1.07	10.12	10.73	0.02	1.85	0.72
Site Preparation						
Phase 1a[1, 2]	1.50	16.05	12.41	0.01	3.12	1.95
Phase 1b	--	--	--	--	--	--
Phase 3	--	--	--	--	--	--
Grading						
Phase 1a[2]	2.11	21.99	14.70	0.02	3.20	2.11
Phase 1b[2]	1.36	11.29	9.39	0.01	1.24	0.96
Phase 3[2]	0.88	7.76	8.57	0.01	1.00	0.64
Building Construction						
Phase 1a[2]	3.79	22.58	17.66	0.03	1.81	1.53
Phase 1b[2]	1.48	14.22	9.67	0.01	1.14	0.92
Phase 3[2]	0.92	9.13	8.35	0.02	0.69	0.53
Paving						
Phase 1a[2]	1.34	13.28	9.98	0.02	0.95	0.78
Phase 1b[2]	1.11	9.92	8.36	0.01	0.80	0.61
Phase 3[2]	0.76	6.69	7.80	0.01	0.55	0.38
Architectural Coating						
Phase 1a[2]	24.71	2.39	2.16	0.00	0.24	0.21
14.16	14.16	2.20	2.05	0.00	0.21	0.18
Phase 3[2]	27.05	1.53	1.91	0.01	0.12	0.10
Total Overlapping Construction Phases for Phase 1a[3]	**29.85**	**38.25**	**29.81**	**0.05**	**3.00**	**2.52**
Total Overlapping Construction Phases for Phase 1b[3]	**16.76**	**26.33**	**20.08**	**0.03**	**2.15**	**1.72**
Total Overlapping Construction Phases for Phase 3[3]	**28.74**	**17.35**	**18.05**	**0.03**	**1.36**	**1.01**
SCAQMD Threshold	**75.00**	**100.00**	**550.00**	**150.00**	**150.00**	**55.00**
Potential Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Kunzman Associates, Inc. 2014
[1] Demolition occurs in Phase 1b and 3 only. Site Preparation in Phase 1a only (tree and path removal)
[2] Includes both on-site and off-site construction emissions
On-site emissions from equipment operated on site that is not operated on public roads
Off-site emissions from equipment operated on public roads
[3] Construction phase, paving phase, and painting phase may overlap
Note: Volatile organic compounds are measured as reactive organic compounds

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ from the proposed project could result in a significant impact to the local air quality. The emissions thresholds were calculated based on the East San Bernardino Valley source receptor area (SRA) 35 and a disturbance value of one acre per day. The proposed project is located within the existing Loma Linda University campus which is adjacent to, and includes, the 11-stoty Loma Linda University Medical Center and surrounding complex. The closest sensitive receptor in the vicinity of the project site is an existing sanctuary building that is located in the middle of the project site. The nearest off-site sensitive uses are a

pair of health center buildings located approximately 77 feet north of the project site across University Avenue. The worst-case emissions from Phase 1a were used (demolition emissions are from Phase 1b) in the analysis. Table 6 (Local Construction Emissions at the Nearest Receptors) shows that none of the analyzed criteria pollutants will exceed the calculated local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact will occur from construction of the proposed project.

Table 6
Local Construction Emissions at the Nearest Receptors

Phase	On-Site Pollutant Emissions (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition	11.24	8.70	1.19	0.83
Site Preparation	16.02	12.03	3.07	1.93
Grading	21.94	14.09	3.11	2.09
Building Construction	21.56	15.00	1.49	1.43
Paving	13.21	9.09	0.81	0.74
Architectural Coating	2.37	1.88	0.20	0.20
Threshold	**118**	**775**	**4**	**4**
Potential Impact?	**No**	**No**	**No**	**No**

Resource: Kunzman Associates, Inc.

Operational Emissions

The worst-case summer or winter VOC, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions created from the proposed project's long-term operations have been calculated for each Phase and are summarized in Table 7 (Operational Daily Emissions (lbs/day)). None of the phases either individually or combined exceed SCAQMD regional thresholds. Therefore, a less than significant regional air quality impact will occur from operation of the proposed project.

Table 7
Operational Daily Emissions (lbs/day)

Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase 1a						
Area Sources[1]	1.31	0.00	0.00	0.00	0.00	0.00
Energy Demand[2]	0.01	0.13	0.11	0.00	0.01	0.01
Mobile Sources[3]	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1a Total	**1.32**	**0.13**	**0.11**	**0.00**	**0.01**	**0.01**
Threshold	**55.00**	**55.00**	**550.00**	**150.00**	**150.00**	**55.00**
Potential Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Phase 1b						
Area Sources[1]	0.82	0.00	0.00	0.00	0.00	0.00
Energy Demand[2]	0.02	0.17	0.15	0.00	0.01	0.01
Mobile Sources[3]	0.77	1.93	7.43	0.02	1.06	0.30
Phase 1b Total	**1.60**	**2.11**	**7.58**	**0.02**	**1.07**	**0.31**
Threshold	**55.00**	**55.00**	**550.00**	**150.00**	**150.00**	**55.00**
Potential Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Phase 3						
Area Sources[1]	0.72	0.00	0.00	0.00	0.00	0.00
Energy Demand[2]	0.02	0.16	0.14	0.00	0.01	0.01
Mobile Sources[3]	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 Total	**0.74**	**0.16**	**0.14**	**0.00**	**0.01**	**0.01**
Threshold	**55.00**	**55.00**	**550.00**	**150.00**	**150.00**	**55.00**
Potential Impact?	**No**	**No**	**No**	**No**	**No**	**No**
Total for Phases 1a and 1b	**2.92**	**2.24**	**7.69**	**0.02**	**1.08**	**0.32**
Total for Phases 1a, 1b, and 3	**3.66**	**2.40**	**7.83**	**0.02**	**1.10**	**0.33**
Threshold	**55.00**	**55.00**	**550.00**	**150.00**	**150.00**	**55.00**
Potential Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Kunzman Associates, Inc. 2014
[1] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment
[2] Energy usage consists of emissions from generation of electricity and on-site natural gas usage
[3] Mobile sources consist of emissions from vehicle and road dust
Note: Volatile organic compounds are measured as reactive organic compounds

According to the SCAQMD LST methodology, LSTs will apply to the operational phase of a project, if the project includes stationary sources, or attract mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed project does not include such uses. Therefore localized operational impacts will be less than significant.

C) **Less than Significant Impact.** SCAQMD has prepared an Air Quality Management Plan (AQMP) to set forth a comprehensive and integrated program that will lead the Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments toward meeting the federal 8-hour ozone standards. The Basin is currently in non-attainment for State and Federal criteria pollutants ozone, nitrogen dioxide and fine particulate matter ($PM_{2.5}$ and PM_{10}).[6]

Cumulative short-term, construction-related emissions and long-term, operational emissions from the project will not contribute considerably to any potential cumulative air quality impact because short-term project and operational emissions will not exceed any SCAQMD daily threshold. As required of the proposed project, other concurrent construction projects and operations in the region will be required to implement standard air quality

[6] United States Environmental Protection Agency. The Green Book Nonattainment Areas for Criteria Pollutants. www.epa.gov/oar/oaqps/greenbk/index.html [September 15, 2014]

regulations and mitigation pursuant to state CEQA requirements, thus ensuring that air quality standards are not cumulatively exceeded. Impacts will be less than significant.

D) **Less than Significant Impact.** Sensitive receptors are those segments of the population that are most susceptible to poor air quality such as children, the elderly, the sick, and athletes who perform outdoors. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, outdoor athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest land uses that are considered *sensitive receptors* are the medical facilities located to the north and south of the project site and Loma Linda University facilities to the east and west of the project site. The proposed project will not generate toxic pollutant emissions because the proposed classrooms, offices, amphitheater, and religious facility uses are characterized as typical institutional uses that do not produce such emissions. The proposed development, therefore, will have less than significant impacts on sensitive receptors related to toxic pollutant emissions.

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential for violation of state and federal CO standards at study area intersections, even if the broader Basin is in attainment for federal and state levels. The potential for violation of state and federal CO standards at study area intersections and exposure to sensitive receptors at those intersections is addressed using the methodology outlined in the California Department of Transportation *Project-Level Carbon Monoxide Protocol* (CO Protocol).

To determine if the proposed project could cause emission levels in excess of the CO standards, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

The Traffic Analysis showed that the project will only generate a maximum of 226 trips. The intersection with the highest traffic volume is located at Campus Street and Barton Road and has a peak hour volume of 1,028 trips for the 2035 year Saturday mid-day peak hour plus project plus other development scenario. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day will not violate the CO standard. Therefore, as the intersection with the highest traffic volume falls far short of 100,000 vehicles, no CO "hot spot" modeling is required and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project. Impacts will be less than significant.

E) **No Impact.** According to the CEQA Air Quality Handbook, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfill, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc). Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. The proposed project does not include any of the above noted uses or process. No impact will occur.

4.4 – Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
C) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
E) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

A) **Less than Significant Impact.** The project site is currently fully developed with existing religious and institutional uses on site. The project site is not identified as critical habitat for threatened and endangered species.[7] There is some ornamental landscaping on site that does not classify as critical habitat for threatened and endangered species. Based on the lack of habitat on the property, the highly urbanized and developed character of the area and activities that are incompatible with wildlife, less than significant impacts to candidate, sensitive, or special species or their habitat will occur with implementation of existing regulation.

B) **No Impact.** The proposed University Church Master Plan is located on previously developed land. The site has been graded, previously developed. There is no riparian habitat on site. As such, no impacts to biological resources, including riparian habitat that could support sensitive species, will occur.

C) **No Impact.** The USFWS National Wetlands Inventory does not provide any data for the City of Loma Linda.[8] The project site does not contain any wetlands and the proposed project will not disturb any off site wetlands. There is no on-site water features indicative of potential wetlands. No impact will occur.

D) **No Impact.** The project site is currently developed with a religious and institutional use and is surrounded to the north, south, east, and west by development, preventing the use of the project site and surrounding areas as a wildlife corridor. The project site contains ornamental vegetation in the context of a completely urbanized setting surrounded by institutional uses. There are no substantial vegetation areas or waterbodies located on site. The project site does not provide for the movement of any native resident or migratory fish and wildlife. No impact will occur.

E) **Less than Significant Impact.** The project site contains non-native, ornamental plants. The Loma Linda General Plan Conservation and Open Space Element contains policies intended to protect biological resources. Adherence to the following General Plan policies and City ordinances will reduce impacts of biological resources to less than significant.[9]

The City of Loma Linda Municipal Code (Title 17, Chapter 74.120) prohibits construction of any building, structure or improvement without first providing sufficient protection, such as a fence, guard or frame, equivalent to a distance in feet from the tree equal to the trunk diameter at breast height (4.5 feet), to prevent injury to any park or street tree or landscape material in connection with such construction. Municipal Code (Title 17, Chapter 74.070) no person shall excavate within the drip line or ten feet of a tree (whichever is greater), or install, replace, or alter any tree designated as a landmark (on private property with owner's consent) or any tree located within city parkways, (street rights-of-way), or street tree easements, without first obtaining a permit. General Plan policy 9.4.4.c below addresses the preservation of oak woodland areas within the City.

General Plan Conservation and Open Space Element Policies

9.4.4 Preserve habitats supporting rare and endangered species of plants and animals including wildlife corridors.

9.4.4.a Comply with the Federal policy of no net loss of wetlands through avoidance and clustered development. Where preservation in place is found to be infeasible (such as an unavoidable a road crossing through habitats), require 1) on-site replacement of wetland areas, 2) off-site replacement, or 3) restoration of degraded wetland areas at a minimum ratio of one acre of replacement/restoration for each acre of impacted on-site habitat, such that the value of impacted habitat is replaced.

9.4.4.b Require appropriate setbacks adjacent to natural streams to provide adequate buffer areas ensuring the projection of biological resources.

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[7] U.S. Fish and Wildlife Service. FWS Critical Habitat for Threatened & Endangered Species. http://criticalhabitat.fws.gov/ [September 16, 2014]
[8] U.S. Fish & Wildlife Service. National Wetlands Inventory. http://www.fws.gov/wetlands/Wetlands-Mapper.html [September 15, 2014]
[9] City of Loma Linda General Plan. 9.4 Biological Resources p. 9-16. 2009.

9.4.4.c Preserve, as feasible, the oak woodland areas within the City by requiring development to incorporate the trees into the development design.

9.4.4.d Through the project approval and design review processes, require new development projects to protect sensitive habitat areas, including, but not limited to, coastal sage scrub, and native grasslands. Ensure the preservation in place of habitat areas found to be occupied by state and federally protected species. Where preserved habitat areas occupy areas that would otherwise be graded as part of a development project, facilitate the transfer of allowable density to other, non-sensitive portions of the site.

9.4.4.e Through development review, retain, as feasible, wildlife corridors in the Planning Area in particular, the San Timoteo Wash area.

9.4.4.f Require the landscape design of developments adjacent to areas of preserved biological resources to avoid the use of invasive species which could negatively impact the value of the preserved resource.

9.4.4.g Cooperate with the State and Federal agencies to encourage preserving streams and creeks in the south hills area in their natural state in order to maintain their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors. Where such preservation is no technically and financially feasible, require appropriate mitigation for the loss or modification of a creek or stream.

F) **No Impact.** According to the Conservation Plans and Agreements Database, no Habitat Conservation Plans or Natural Community Conservation Plans apply within the planning area.[10,11] No impact will occur.

4.5 – Cultural Resources

Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	☐	☐	☐	☒
B)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	☐	☐	☒	☐
C)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
D)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

A) **No Impact.** The property does not satisfy any of the criteria for a historic resource defined in Section 15064.5 of the state CEQA Guidelines. The City conducted a historic inventory report in 1988, Windshield Survey and Preliminary Architectural/Historical Inventory (Hatheway and McKenna, January 1988) that indicated four potential historic districts. The historic districts were established based on areas that contained concentrations of improvements with historic interest or value. The project site does not occur within any of the four identified historic districts. In addition, the project proposes to demolish two existing buildings which were built in the mid-1980s. Because the

[10] U.S. Fish & Wildlife Service. Conservation Plans and Agreements Database. http://ecos.fws.gov/conserv_plans/PlanReportSelect?region=8&type=HCP [September 15, 2014]

[11] California Department of Fish and Wildlife. Natural Community Conservation Planning. http://www.dfg.ca.gov/habcon/nccp/ [September 15, 2014]

buildings were built in the mid-1980s, the buildings being demolished have no historical value. Thus, no impact will occur.

B-C) **Less than Significant Impact.** The project site is located in an urbanized area that has been previously disturbed and heavily affected by past activities, specifically construction of previous on-site structures. Given that the project site has been substantially disturbed by previous construction, any cultural resources that may have existed at one time likely have been unearthed, collected, and/or destroyed. In the unlikely event that archaeological or paleontological materials are uncovered, General Plan policy 9.7.5.f shall be implemented to ensure that uncovered resources are evaluated, left in place if possible, or curated as recommended by a qualified anthropologist or paleontologist. Adherence to General Plan policy 9.7.5.f and CEQA guidelines where archaeological or paleontological resources may be affected will reduce impacts to buried cultural resources. Impacts will be less than significant with existing regulations and standards.

General Plan Conservation and Open Space Element Policies

9.7.5.f As a standard condition of approval for new development projects, require that, if cultural or paleontological resources are encountered during grading, alteration of earth materials in the vicinity of the find be halted until a qualified expert has evaluated the find and recorded identified cultural resources.

D) **Less than Significant Impact.** The project site is located in an urbanized area that has been previously disturbed and heavily affected by past activities, specifically construction of previous on-site structures. No known cemeteries or human burials have been identified on the project site. However, it is possible that unknown human remains could be located in the area, and if proper care is not taken during project construction, particularly during excavation activities, damage to or destruction of these unknown remains could occur. The General Plan EIR includes the following mitigation measure relating to the discovery of human remains.

General Plan EIR Mitigation Measure

4.5.5.2A If human remains are encountered during a public or private construction activity, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified within 24 hours. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis.

Impacts will be less than significant with the implementation of General Plan policies and General Plan EIR Mitigation Measures.

4.6 – GEOLOGY AND SOILS

Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii)	Strong seismic ground shaking?	☐	☐	☒	☐
iii)	Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv)	Landslides?	☐	☐	☐	☒
B)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
C)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
D)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☒	☐
E)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

A.i) **Less than Significant Impact.** The State of California Department of Conservation indicates that an Alquist-Priolo Fault Hazard Zone is located in the western portion of the City of Loma Linda.[12] The project site is in close proximity but not located in an Alquist-Priolo Fault Hazard Zone. The following General Plan policies are in place to protect people and structures from the rupture earthquake faults.

[12] State of California Department of Conservation. Alquist-Priolo Earthquake Fault Zone Maps. http://www.quake.ca.gov/gmaps/ap/ap_maps.htm [September 15, 2014]

General Plan Public Health and Safety Element Policies

10.1.2 Minimize the risks of property damage and personal injury resulting from seismic and geologic hazards.

10.1.2.a Limit development to low density in areas near geologic hazards such as the San Jacinto Fault that would create adverse conditions to those inhabiting the area and to the overall community.

10.1.2.b Enforce the provisions of the Alquist-Priolo Earthquake Fault Zoning Act.

10.1.2.c Require geologic and soils reports to be prepared for proposed development sites, and incorporate the findings and recommendations of these studies into project development requirements.

10.1.2.d Provide information and establish incentives such as free inspections or possibly reduced fees for property owners to rehabilitate existing buildings using construction techniques to protect against seismic hazards particularly in buildings with high occupancy such as churches and other places of assembly.

10.1.2.e Identify and publicize the geologic and seismic hazards within Loma Linda and advise residents and property owners of appropriate protection measures to reduce or eliminate structural damage.

Site-specific geologic reports are required for development within this Zone to determine the precise location of and any required setbacks from any active faults. Loma Linda Municipal Code (17.66.040) prohibits the placement of human occupancy structures on an active fault or within the area within fifty feet of an active fault. Furthermore, a geologic report is required for applications, permits, or zoning devices for all real estate developments and structures for human occupancy within the Geologic Hazard overlay zone (Municipal Code 17.66.050). The proposed project does not increase any risks associated with fault rupture, as no land use policy changes are proposed which will allow development where it was not previously permitted. No changes are proposed to General Plan policies in place to protect against earthquake hazards. The proposed project will be subject to all applicable City, state, and local building regulations, including the California Building Code (CBC) seismic standards as approved by the City Building & Safety Division. Impacts will be less than significant.

A.ii) **Less than Significant Impact.** Ground shaking can vary greatly due to the variation in earth properties. The project site is subject to strong ground shaking, as is the entirety of Southern California. As discussed above, the project site is located within an Alquist-Priolo Earthquake Fault Zone and there are multiple active and potentially active fault zones in the region that could affect the area. However, as with all properties in the seismically active Southern California region, all development will be susceptible to ground shaking during a seismic event and could expose people and structures to potentially medium to strong seismic ground motion.

The Loma Linda University Church Master Plan will be required to be in conformance with the California Building Code (CBC) and other applicable standards. As discussed above in Section 4.6(a)(i), the proposed project will be designed and constructed in compliance with all applicable City and state codes and requirements, including those established in the California Code of Regulations, Title 24, Part 2, Volume 2. The CBC regulations are designed to protect building occupants and limit the damage sustained by buildings during seismic events. The General Plan Public Health and Safety Element contains policies to reduce seismic hazards within the City. Less than significant impact will result with the implementation of existing regulations and General Plan policies.

A.iii) **Less than Significant Impact.** Liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition due to the effects of increased pore-water pressure. This typically occurs where susceptible soils (particularly the medium sand to silt range) are located over a high groundwater table. Affected soils lose all strength during liquefaction and foundation failure can occur. Loma Linda is not mapped as an area susceptible to liquefaction.[13] However, the General Plan EIR indicates two general liquefaction zones identified within northwest and southwest corners of the City (General Plan EIR Figure 4.6.2). According to the General Plan

[13] California Department of Conservation, California Geological Survey. Information Warehouse. http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm [September 16, 2014]

Figure 10.1, the project site is located in the northwest corner of the City but is not in the San Jacinto Alquist-Priolo Fault Zone or liquefaction zones.[14] The site exhibits a very low seismic settlement potential and liquefaction will not be significant to the proposed development. Impacts due to seismically induced liquefaction will be less than significant.

A.iv) **No Impact.** Landslides are mass movements of the ground that include rock falls, relatively shallow slumping and sliding of soil, and deeper rotational or transitional movement of soil or rock. In general, landslides are abundant in areas underlain by shale and siltstone bedrock materials. According to the General Plan EIR, the southern portion of the City of Loma Linda is susceptible to dangers from slope instability because the terrain is characterized as having steep natural slopes. However, as the project site is located in the northern, urbanized portion of the City and is relatively flat, the proposed project is not susceptible to landslide dangers. No impact will occur.

B) **Less than Significant Impact.** Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms. Little, if any, native topsoil is likely to occur on site because the topsoil will have been removed or compacted as a result of engineering for the existing on-site development. The project has the potential to expose surficial soils to wind and water erosion during construction activities. Wind erosion will be minimized through soil stabilization measures required by South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust), such as daily watering. Water erosion will be prevented through the City's standard erosion control practices required pursuant to the California Building Code and the National Pollution Discharge Elimination System (NPDES), such as silt fencing and sandbags. Following project construction, the site will be covered completely by paving, structures, and landscaping. Impacts related to soil erosion will be less than significant with implementation of existing regulations.

C) **Less than Significant Impact.** Impacts related to liquefaction and landslides are discussed above in Section 4.6.a. The project site, which is currently developed and is fully functional and operating, is located in the northwest corner of the City but is not in a liquefaction zone. As discussed in Section 4.6(a), the CBC requires all new development to have a site-specific geology report prepared by a registered geologist or soils expert and submitted to the City, which will ensure impacts related to expansive soils will be evaluated on a project-by-project basis and mitigated as necessary. Compliance with the policies of the General Plan and the Building Code will ensure potential impacts will be reduced to a less than significant level.

D) **Less than Significant Impact.** Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly and can cause structural damage to building and infrastructure if the potentially expansive soils were not considered in project design and construction. Compaction of loose soils and poorly consolidated alluvium occur as a result of strong seismic shaking. The amount of compaction may vary from a few inches to several feet and may be significant in areas of thick soil cover. Topsoil, recent alluvium, and weathered bedrock are typically porous and may be subject to hydro-collapse; therefore, these materials can be unsuitable for the support of engineered fills and structures.

The City is underlain by several different soil types including Hanford sandy loam (0-2% slopes), San Emigdio fine sandy loam (0-2% slopes), San Emigdio gravelly sandy loam (2-9% slopes), San Emigdio fine sandy loam (2-9% slopes), Ramona sandy loam (9-15% slopes), Hanford coarse sandy loam (2-9% slopes), Greenfield sandy loam (9-15% slopes), San Timoteo loam (30-50% slopes), San Emigdio sandy loam (9-15% slopes), Saugus sandy loam (30-50% slopes), Metz coarse sandy loam (2-9% slopes), Tujunga gravelly loamy sand (0-9% slopes), and Hanford coarse sandy loam (9-15% slopes). Soils within the City exhibit a low shrink-swell potential and are not likely to be expansive.[15] General Plan policy and the CBC require geologic and soils reports to be prepared for the proposed

[14] City of Loma Linda General Plan. 10.1 Public Health and Safety Element p. 10.4. 2009.
[15] City of Loma Linda General Plan Draft EIR. Geology and Soils p. 4.6-3. 2004.

development and appropriate design parameters identified to prevent and minimize damage related to expansive soils . As such, potential impacts associated with expansive soils will be less than significant.

E) **No Impact.** The project proposes to connect to the existing municipal sewer system. Septic tanks are not used in the project. No impact will occur.

4.7 – GREENHOUSE GAS EMISSIONS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
B)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

A) **Less than Significant Impact.** Climate change is the distinct change in measures of climate for a long period of time. Climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. Natural changes in climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of greenhouse gases (GHG) and changes to the planet's surface. Human activities that produce GHGs are the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation); methane from landfill wastes and raising livestock, deforestation activities; and some agricultural practices.[16]

Greenhouse gases differ from other emissions in that they contribute to the "greenhouse effect." The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Greenhouse gases occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity. Emissions of greenhouse gases affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere.

GHG emissions for the project were quantified utilizing the California Emissions Estimator Model (CalEEMod) version 2013.2.2 to determine if the project could have a cumulatively considerable impact related to GHG emissions (see Appendix A, Air Quality Modeling Data), and summarized in Table 8 (Greenhouse Gas Emissions Inventory). The emissions inventory accounts for GHG emissions from construction and operational activities.

[16] United States Environmental Protection Agency. *Frequently Asked Questions About Global Warming and Climate Change. Back to Basics.* April 2009.

Operational emissions associated with the proposed project will include GHG emissions from mobile sources (transportation), energy, water use and treatment, and waste disposal. Greenhouse gas emissions from electricity use are indirect emissions from the energy (purchased energy) that is produced offsite. Construction activities are short term and cease to emit GHGs upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. Because of this difference, SCAQMD recommends amortizing construction emissions over a 30-year operational lifetime. This normalizes construction emissions so that they can be grouped with operational emissions in order to generate a precise project-based GHG inventory.

Table 8
Greenhouse Gas Emissions Inventory

Source	Bio-CO_2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Phase 1a						
Area Sources[1]	0.00	0.00	0.00	0.00	0.00	0.00
Energy Demand[2]	0.00	74.07	74.07	0.00	0.00	74.41
Mobile Sources[3]	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste[4]	17.33	0.00	17.33	1.02	0.00	38.85
Water[5]	0.15	4.08	4.23	0.02	0.00	4.67
Construction[6]	0.00	7.97	7.97	0.00	0.00	8.00
Total	**17.48**	**86.11**	**103.59**	**1.04**	**0.00**	**125.93**
					Phase 1a Total	**334.15**
					Threshold	**3,000.00**
					Potential Impact?	**No**
Phase 1b						
Area Sources[1]	0.00	0.00	0.00	0.00	0.00	0.00
Energy Demand[2]	0.00	96.32	96.32	0.00	0.00	96.77
Mobile Sources[3]	0.00	213.48	213.48	0.01	0.00	213.66
Solid Waste[4]	22.54	0.00	22.54	1.33	0.00	50.51
Water[5]	0.19	5.30	5.50	0.02	0.00	6.08
Construction[6]	0.00	4.98	4.98	0.00	0.00	5.01
Phase 1b Total	**22.73**	**320.08**	**342.81**	**1.37**	**0.00**	**372.02**
					Phase 1b Total	**1,059.01**
					Threshold	**3,000.00**
					Potential Impact?	**No**
Phase 3						
Area Sources[1]	0.00	0.00	0.00	0.00	0.00	0.00
Energy Demand[2]	0.00	89.25	89.25	0.00	0.00	89.66
Mobile Sources[3]	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste[4]	20.89	0.00	20.89	1.23	0.00	46.81
Water[5]	0.18	4.91	5.09	0.02	0.00	5.63
Construction[6]	0.00	2.44	2.44	0.00	0.00	2.45
Phase 3 Total	**21.06**	**96.60**	**117.66**	**1.26**	**0.00**	**144.56**
					Phase 3 Total	**381.14**
					Threshold	**3,000.00**
					Potential Impact?	**No**
Total for Phases 1a and 1b						**497.95**
Total for Phases 1a, 1b, and 3						**642.51**
					Threshold	**3,000.00**
					Potential Impact?	**No**

Source: Kunzman Associates, Inc. 2014
[1] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscaping equipment
[2] Energy usage consists of GHG emissions from generation of electricity and on-site natural gas usage
[3] Mobile sources consist of GHG emissions from vehicles; no additional mobile source emissions for Phases 1a and 3
[4] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills
[5] Water includes GHG emissions from electricity used for transport of water and processing of wastewater
[6] Construction GHG emissions CO_2e based on a 30 year amortization rate
Note: Volatile organic compounds are measured as reactive organic compounds

A numerical threshold for determining the significance of greenhouse gas emissions in the South Coast Air Basin (Basin) has not officially been adopted by the SCAQMD. As an interim threshold based on guidance provided in the CAPCOA *CEQA and Climate Change* white paper, a non-zero threshold based on Approach 2 of the handbook will be used. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is 3,000 metric tons carbon dioxide equivalent ($MTCO_2E$) per year for residential and commercial projects. This threshold is based on the review of 711 CEQA projects.

Greenhouse gas emissions associated with the proposed project will not exceed the 3,000 $MTCO_2E$ threshold with implementation of existing standards and regulations; therefore, impacts will be less than significant.

B) **Less than Significant Impact.** According to the 2009 Loma Linda General Plan, the City will undertake preparation of a Climate Action Plan to guide the City toward attainable conservation goals that may also significantly reduce the impact of greenhouse gas emissions within the community. The City has adopted the 2013 edition of the California Building Code (Title 24), including the California Green Building Standards Code (pursuant to Loma Linda Municipal Code Title 15). The project will be subject to the California Green Building Standards Code, which requires new buildings to reduce water consumption, employ building commissioning to increase building system efficiencies for large buildings, divert construction waste from landfills, and install low pollutant-emitting finish materials. The project does not include any feature (i.e. substantially alter energy demands) that will interfere with implementation of these state and City codes and plans. Impacts will be less than significant.

4.8 – Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
B) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
D) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
E) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
F) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
G) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
H) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

A) **Less than Significant Impact.** The proposed project could result in a significant hazard to the public if the project includes the routine transport, use, or disposal of hazardous materials or places housing near a facility which routinely transports, uses, or disposes of hazardous materials. The proposed project is located within a university campus facility within the City, surrounded by institutional and health care uses. The proposed project will not place people near any hazardous materials facilities. The routine use, transport, or disposal of hazardous materials is

primarily associated with industrial uses which require such materials for manufacturing operations or produce hazardous wastes as by-products of production applications. The proposed project does not propose or facilitate any activity involving significant use, routine transport, or disposal of hazardous substances as part of the institutional use. Furthermore, according to the EPA, the proposed project is not located near any listed facilities that emit toxic air contaminants, utilize toxic or radioactive materials, produce hazardous wastes, or discharge to surface water bodies.[17]

During construction, there will be a minor level of transport, use, and disposal of hazardous materials and wastes that are typical of construction projects. This will include fuels and lubricants for construction machinery, coating materials, etc. Routine construction control measures and best management practices for hazardous materials storage, application, waste disposal, accident prevention and clean-up, etc. will be sufficient to reduce potential impacts to a less than significant level.

With regard to project operation, widely used hazardous materials common at institutional uses include paints and other solvents, cleaners, and pesticides. The remnants of these and other products are disposed of as household hazardous waste (HHW) that includes used dead batteries, electronic wastes, and other wastes that are prohibited or discouraged from being disposed of at local landfills. Regular operation and cleaning of the classes and offices will not result in significant impacts involving use, storage, transport or disposal of hazardous wastes and substances. Use of common household hazardous materials and their disposal does not present a substantial health risk to the community. Impacts associated with the routine transport, use of hazardous materials or wastes will be less than significant.

B) **Less than Significant Impact.** There are no open cases of leaking underground storage tanks (LUST) on the project site or in the project vicinity.[18] There will be no impact related to the release of hazardous materials into the environment.

Construction of the proposed project will require the use and transport of hazardous materials such as paints and other solvents. Construction activities could also produce hazardous wastes associated with the use of such products. Demolition and construction of the proposed project requires ordinary demolition and construction activities and will not require a substantial or uncommon amount of hazardous materials to complete. All hazardous materials are required to be utilized and transported in accordance with their labeling pursuant to federal and state law. Routine construction practices include good housekeeping measures to prevent/contain/clean-up spills and contamination from fuels, solvents, concrete wastes and other waste materials. Impacts will be less than significant.

C) **No Impact.** The proposed project is located within the Loma Linda University campus area. However, operation of the proposed project will not generate any hazardous emissions; and storage, handling, production or disposal of acutely hazardous materials is not required or proposed for any aspect of this project. As discussed in Section 4.8.b, existing regulations address potential off-site construction-related hazards associated with demolition of the existing on-site structures. No impact will occur.

D) **No Impact.** The proposed project is not located on a site listed on the State *Cortese List,* a compilation of various sites throughout the state that have been compromised due to soil or groundwater contamination from past uses.[19] No impact will occur.

Based upon review of the *Cortese List*, the project site is not:

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[17] California Department of Toxic Substances Control. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm [September 17, 2014]

[18] California State Water Resources Control Board. GeoTracker. https://geotracker.waterboards.ca.gov/ [September 17, 2014]

[19] California Environmental Protection Agency. Cortese List Data Resources. http://www.calepa.ca.gov/sitecleanup/corteselist/ [September 17, 2014]

- Listed as a hazardous waste and substance site by the Department of Toxic Substance Control (DTSC),[20]
- Listed as a leaking underground storage tank (LUST) site by the State Water Resources Control Board (SWRCB),[21]
- Listed as a hazardous solid waste disposal site by the SWRCB,[22]
- Currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB,[23] or
- Developed with a hazardous waste facility subject to corrective action by the DTSC.[24]

E-F) **No Impact.** The project site is not located within an airport land use plan influence area. The closest airport is the San Bernardino International Airport and Trade Center (SBIA), which is located approximately 3.15 miles north of the project site. There are no public airports or private airstrips within two miles of the project site. No impact will occur.

G) **Less than Significant Impact.** The proposed project will demolish two existing buildings, construct three new buildings, and renovate an existing building. Per state Fire and Building Codes, sufficient space will have to be provided around the building for emergency personnel and equipment access and emergency evacuation. All project elements, including landscaping, will be sited with sufficient clearance from existing and proposed structures so as not to interfere with emergency access to and evacuation from the facility. The project will comply with the California Fire Code (Title 24, California Code of Regulations, Section 9).

The proposed project will allow emergency access and evacuation from the site, and will be constructed to California Fire Code specifications. The proposed project will not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan because no permanent public street or lane closures are proposed. The site is already served by local utilities and will be connected directly to existing sewer and utility lines. Traffic control will be provided for any lane closures. Project impacts will be less than significant.

H) **No Impact.** The project site is not located within a fire hazard zone, as identified on the latest Fire Hazard Severity Zone (FHSZ) maps prepared by the California Department of Forestry and Fire Protection (CALFIRE).[25] There are no wildland conditions in the suburbanized area where the project site is located. No impact will occur.

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[20] California Department of Toxic Substances Control. EnviroStor. http://www.envirostor.dtsc.ca.gov/public/search.asp [September 17, 2014]
[21] California State Water Resources Control Board. GeoTracker. https://geotracker.waterboards.ca.gov/ [September 17, 2014]
[22] California State Water Resources Control Board. Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit. http://www.calepa.ca.gov/sitecleanup/corteselist/CurrentList.pdf [September 17, 2014]
[23] California State Water Resources Control Board. List of Active CDO and CAO. http://www.calepa.ca.gov/sitecleanup/corteselist/CDOCAOList.xlsx [September 17, 2014]
[24] California Department of Toxic Substances Control. Cortese List: Section 65962.5(a). http://www.calepa.ca.gov/sitecleanup/corteselist/SectionA.htm#Facilities [September 17, 2014]
[25] California Department of Forestry and Fire Protection. Fire Hazard Severity Zones Maps. http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones.php [September 17, 2014]

4.9 – Hydrology and Water Quality

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
B)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
C)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
D)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
E)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
F)	Otherwise substantially degrade water quality?	☐	☐	☐	☒
G)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
H)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
I)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
J)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

A) **Less than Significant Impact.** A project normally will have an impact on surface water quality if discharges associated with the project will create pollution, contamination, or nuisance as defined in Section 13050 of the California Water Code (CWC), or if the project causes regulatory standards to be violated as defined in the applicable National Pollutant Discharge Elimination System (NPDES) stormwater permit or Water Quality Control Plan for the receiving waterbody. For the purpose of this specific issue, a significant impact could occur if the project will discharge water that does not meet the quality standards of the agencies which regulate surface and groundwater quality and water discharge into stormwater drainage systems. Significant impacts could also occur if the project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB). These regulations include preparation of a Standard Urban Storm Water Mitigation Plan (SUSMP) to reduce potential post-construction water quality impacts.

Construction Impacts

Three general sources of potential short-term, construction-related stormwater pollution associated with the proposed project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth-moving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment. The proposed project will disturb approximately 3.27 acres of land and therefore will be subject to NPDES permit requirements during construction activities. In addition, pursuant to LLMC § 13.26.240 (Construction Best management practices), all construction grading activity will comply with the International Building Code, Chapter 70 and prior to the issuance of a grading permit, a grading plan and erosion control plan must be approved by the Director of Public Works. Compliance with City code will ensure that the construction of the proposed project will not violate any water quality standards or discharge requirements, or otherwise substantially degrade water quality. Impacts will be less than significant with implementation of existing regulations.

Long-Term Operational Impacts

Proposed construction of the project will increase impervious areas on the site, as the proposed project will include buildings and ornamental landscaping similar to existing conditions in the area. Runoff from the developed site will not result in any increased potential water contamination from urban pollutants because project-related runoff will be similar in composition and amount as the runoff from the existing buildings and landscaping. The proposed project will not generate hazardous wastewater that will require any special waste discharge permits. All wastewater associated with the buildings' interior plumbing system will be discharged into the local sewer system for treatment at the regional wastewater treatment plant. Impacts will be less than significant with adherence to existing regulations.

B) **Less than Significant Impact.** If the project removes an existing groundwater recharge area or substantially reduces runoff that results in groundwater recharge such that existing wells will no longer be able to operate, a potentially significant impact could occur.

The project site is located in the Bunker Hill Sub-basin. Groundwater levels measure groundwater elevations within the Basin at approximately 350 feet below the ground surface. Project-related grading will not reach these depths and no disturbance of groundwater is anticipated. The proposed project increases impervious surface coverage on the site, thereby reducing the total amount of infiltration on-site. Since this site is located in a completely urbanized area, and is not managed for groundwater supplies, this change in infiltration will not have a significant effect on groundwater supplies or recharge. Impacts will be less than significant.

C) **Less than Significant Impact.** Potentially significant impacts to the existing drainage pattern of the site or area could occur if the project results in substantial on- or off-site erosion or siltation. The drainage will largely be accommodated within the streets surrounding the project site. A site drainage plan is required by the City of Loma Linda and will be reviewed by the City Engineer. The final grading and drainage plan will be approved by the City Engineer during plan check review. Erosion and siltation reduction measures will be implemented during construction. At the completion of construction, the project will consist of impervious surfaces, and will therefore not

be prone to substantial erosion. No streams cross the project site; thus, the project will not alter any stream course. Impacts will be less than significant.

D-E) **Less than Significant Impact.** No streams traverse the project site; thus, construction of the proposed project will not result in the alteration of any stream course. With regard to project operation, on-site drainage will continue to function as it did with the previous development. Substantially increased discharges to the City's existing storm drain system will not occur and will not impact local storm drain capacity because the proposed project is located in an area that is completely urbanized and the existing storm drainage system will be capable of handling the increased discharges from the additional buildings. The project is not an industrial use and therefore will not result in substantial pollutant loading such that treatment control BMPs will be required to protect downstream water quality. Impacts will be less than significant.

F) **No Impact.** The project does not propose any uses that will have the potential to otherwise degrade water quality beyond those issues discussed in Section 4.9 herein. No impacts will occur.

G-H) **Less than Significant Impact.** Flooding represents a potential hazard in Loma Linda, especially within the northern portion of the City. The City is potentially vulnerable to flooding associated with San Timoteo Creek, Mission Channel, and the Santa Ana River, as well as small-scale floods originating on hillsides in the southern portion of the City.[26] However, the proposed project is not located within a 100-year floodplain, as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps. The project site is identified as Zone X, defined by FEMA as areas outside the 0.2 percent annual chance floodplain.[27] Therefore no rising of a floodplain will occur; impacts will be less than significant.

I) **No Impact.** The northern portion of the City is within the inundation area of the Seven Oaks Dam, the failure of which while not likely, will impact the City and its Sphere of Influence. The Seven Oaks Dam is a dry dam that serves to decrease peak water flows during spring runoff and rainstorm events.[28] According to the San Bernardino County General Plan Hazard Overlay, the project site is not located within the inundation area of the Seven Oaks Dam.[29] No levees are located in vicinity of the project. No impact will occur.

J) **Less than Significant Impact.** A tsunami is a large wave that generates in the ocean, generally from an earthquake, and builds intense strength and height before impacting a coast. Loma Linda is not subject to impacts from a tsunami because it is not located near an ocean or sea. A seiche is the process by which water sloshes outside its containing boundaries, generally due to an earthquake. This generally occurs with uncovered, above-ground reservoirs. According to the General Plan, an earthquake may cause local flooding by creating seiches by damaging water storage facilities or detention basins. However, compliance with General Plan implementing policies will reduce hazards caused by local flooding through maintenance and improvements to the area's storm drain system. Mudflows require a slope, water, and unconsolidated soil to occur. As noted in Section 4.6.a, the project site has not been identified as an area susceptible to landslides or mudflows. Impacts relating to inundation by seiche, tsunami, and mudflow will be less than significant.

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[26] City of Loma Linda General Plan. Public Health and Safety Element, p.10.6, 2009.
[27] Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06071C869H. September 17, 2014.
[28] City of Loma Linda General Plan. Public Health and Safety Element, p.10.6, 2009.
[29] San Bernardino County. General Plan. Hazard Overlay FH30B. March 2010

4.10 – Land Use and Planning

Would the project:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Physically divide an established community?	☐	☐	☐	☒
B)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
C)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

A) **No Impact.** The proposed project is surrounded by institutional and health care uses. There are institutional uses to the east and west, and health care uses to the north and south of the project site. The proposed project is consistent and compatible with the surrounding land uses and will not divide an established community. The project does not propose construction of any roadway, flood control channel, or other structure that will physically divide any portion of the community. Therefore, no impact will occur.

B) **No Impact.** The project is designated and zoned as Institutional in the City's General Plan. The project is not requesting any General Plan amendment that could conflict with policies designed to protect the environment and the project is consistent with the *Institutional* land use designation. The project does not conflict with the intent or implementation of these designations. No impact will occur.

C) **No Impact.** According to the Conservation Plans and Agreements database, there are no Habitat Conservation Plans or Natural Community Conservation Plans located in the City of Loma Linda.[30] No impact will occur.

[30] U.S. Fish & Wildlife Service. Conservation Plans and Agreements Database. http://ecos.fws.gov/conserv_plans/public.jsp [September 17, 2014]

4.11 – Mineral Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
B) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

A) **No Impact.** According to the Loma Linda General Plan EIR, no known mineral resources or mineral resource recovery sites are located within the City.[31] Therefore, the proposed project will not result in the loss of any known mineral resources. No impact will occur.

B) **No Impact.** Neither the General Plan nor any other City planning documents identify any locally important mineral resource recovery sites within the City. No impact will occur.[32]

[31] City of Loma Linda. General Plan Draft EIR. 2004.
[32] City of Loma Linda. General Plan Draft EIR. 2004.

4.12 – NOISE

Would the project result in:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
B)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
C)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
D)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
E)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
F)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Fundamentals of Sound and Environmental Noise

Noise can be defined as unwanted sound. The primary sources of noise affecting Loma Linda stem from various modes of transportation. Because the City is fully urbanized, the primary noise source in the community is traffic noise.

Sound (and therefore noise) consists of energy waves that people receive and interpret. Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called *bels*. In order to provide a finer description of sound, a *bel* is subdivided into ten decibels, abbreviated dB. To account for the range of sound that human hearing perceives, a modified scale is utilized known as the A-weighted decibel (dBA). Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dBA. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by 3 dBA. Conversely, halving the traffic volume or speed will reduce the traffic noise level by 3 dBA. A 3 dBA change in sound is the level where humans generally notice a *barely perceptible* change in sound and a 5 dBA change is generally *readily perceptible*.[33]

[33] California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement. November 2009.

Noise consists of pitch, loudness, and duration; therefore, a variety of methods for measuring noise has been developed. According to the California General Plan Guidelines for Noise Elements, the following are common metrics for measuring noise:[34]

> **L_{EQ} (Equivalent Energy Noise Level):** The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over given sample periods. LEQ is typically computed over 1-, 8-, and 24-hour sample periods.
>
> **CNEL (Community Noise Equivalent Level):** The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 P.M. to 10:00 P.M. and after addition of ten decibels to sound levels in the night from 10:00 P.M. to 7:00 A.M.
>
> **L_{DN} (Day-Night Average Level):** The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 10:00 P.M. and before 7:00 A.M.

CNEL and L_{DN} are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. L_{EQ} is better utilized for describing specific and consistent sources because of the shorter reference period.

Fundamentals of Environmental Groundborne Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second, and in the U.S. is referenced as vibration decibels (VdB).

The background vibration velocity level in residential and educational areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximately dividing line between barely perceptible and distinctly perceptible levels for many people. Sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors causes most perceptible indoor vibration. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, and 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

The general human response to different levels of groundborne vibration velocity levels is described in Table 9 (Human Reaction to Vibration).

Table 9
Human Reaction to Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

[34] California Governor's Office of Planning and Research. General Plan Guidelines. 2003.

A) **Less than Significant Impact.** The Loma Linda Municipal Code (Chapter 9.20 Noise Regulations) sets allowable levels for a variety of land uses. Exterior noise exposure for institutional use is allowable up to 70 dBA CNEL. Ambient noise in the project vicinity will generally be defined by traffic on Campus Street and University Avenue. The Loma Linda General Plan identifies noise performance standards for institutional land uses and maximum noise exposure levels, as summarized in Table 10 (City of Loma Linda Noise Performance Standards). Given that there is not anticipated to be a significant increase in traffic levels on Campus Street and University Avenue because of the proposed project, ambient noise levels will not increase beyond the 70 dBA standard set out by the City.

Table 10
City of Loma Linda Noise Performance Standards

Land Use Category	Maximum Community Noise Exposure Levels	L_{DN} or CNEL, dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	70
	Conditionally Acceptable	70
	Normally Unacceptable	80
	Clearly Unacceptable	81 or more

Source: City of Loma Linda, Municipal Code, September 2014

As previously noted, temporary noise impacts from construction activities will occur, however, given the small scale and nature of the proposed project, the noise will not cause community noise levels to exceed State recommended noise compatibility standards. Impacts will be less than significant.

B) **Less than Significant Impact.** Vibration can impact people, structures, and sensitive equipment. The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Implementation of the proposed Master Plan will not involve development activity and does not include uses that cause vibration. Any future development will be subject to the City's standard development review process.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack-hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers or large trucks are used. The proposed project, once constructed, does not utilize machinery that will generate substantial amounts of vibration. However, the construction of the project could utilize machinery that will generate substantial amounts of ground vibration. Construction of the proposed project is not likely to require rock blasting considering the built-out character of the area or pile driving because the area is not subject to liquefaction hazards; however, jack hammering will also likely be required for demolition activities.

Table 11 (Common Construction Vibration) summarizes vibration levels from common construction equipment. Impacts to structures can occur from 0.08 PPV to 2.00 PPV depending on the duration of the vibration and the age of the structure. Similarly, human annoyance to vibration can occur from 0.01 PPV to 2.00 PPV depending on the duration.

Table 11
Common Construction Vibration

Equipment	PPV (in/sec at 25ft)
Crack-and-Seat Operations	2.400
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Source: California Department of Transportation 2004	

According to the Caltrans vibration manual, large bulldozers, vibratory rollers (used to compact earth), and loaded trucks utilized during grading activities can produce vibration, and depending on the level of vibration, could cause annoyance at uses within the project vicinity or damage structures. Caltrans has developed a screening tool to determine if vibration from construction equipment is substantial enough to impact surrounding uses.

The Caltrans vibration manual establishes thresholds for vibration impacts on buildings and humans. These thresholds are summarized in Tables 12 (Vibration Damage Potential Threshold Criteria) and 13 (Vibration Annoyance Potential Threshold Criteria).

Table 12
Vibration Damage Potential Threshold Criteria

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50

Source: Caltrans 2004

Table 13
Vibration Annoyance Potential Threshold Criteria

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40

Source: Caltrans 2004

Construction activities that use vibratory rollers and small bulldozers are repetitive sources of vibration; therefore, the *continuous* threshold is used. The property to the northwest on University Avenue has a single-family residence constructed in 1942, the institutional use to the north and east were constructed in the 1960s, and the LLU Medical Center to the south was constructed in 1967. As such, the *Older Residential Structures* threshold is used. Based on the threshold criteria summarized in Tables 12 and 13, vibration from use of heavy construction equipment for the proposed project will be below the thresholds to cause damage to nearby structures or result in above barely

perceptible vibration as shown in Table 14 (Distance to Vibration Receptors) and 15 (Construction Vibration Impacts).

Table 14
Distance to Vibration Receptors

Receptors	Distance (ft)
Phase 1a	
Institutional Use (N)	233
LLU Medical Center (S)	775
Institutional Use (E)	439
Single-Family Residential (NW)	483
Phase 1b	
Institutional Use (N)	506
LLU Medical Center (S)	500
Institutional Use (E)	426
Single-Family Residential (NW)	713
Phase 3	
Institutional Use (N)	355
LLU Medical Center (S)	670
Institutional Use (E)	529
Single-Family Residential (NW)	558

Table 15
Construction Vibration Impacts

Equipment	PPVref	Distance	PPV
Vibratory Roller	0.21	233	0.011534
Vibratory Roller	0.21	775	0.002418
Vibratory Roller	0.21	439	0.005062
Vibratory Roller	0.21	483	0.004471
Vibratory Roller	0.21	506	0.004209
Vibratory Roller	0.21	500	0.004274
Vibratory Roller	0.21	426	0.005264
Vibratory Roller	0.21	713	0.002695
Vibratory Roller	0.21	355	0.006672
Vibratory Roller	0.21	670	0.002922
Vibratory Roller	0.21	529	0.003972
Vibratory Roller	0.21	558	0.003706
Small Bulldozer	0.003	233	0.000165
Small Bulldozer	0.003	775	0.000035
Small Bulldozer	0.003	439	0.000072
Small Bulldozer	0.003	483	0.000064
Small Bulldozer	0.003	506	0.000060
Small Bulldozer	0.003	500	0.000061
Small Bulldozer	0.003	426	0.000075
Small Bulldozer	0.003	713	0.000038
Small Bulldozer	0.003	355	0.000095
Small Bulldozer	0.003	670	0.000053
Small Bulldozer	0.003	529	0.000057
Small Bulldozer	0.003	558	0.000053

Vibration impacts are temporary and rare except in cases where large equipment is used near existing, occupied development. Construction activities that utilize vibratory rollers and small bulldozers for the project will not create a significant vibration impact to surrounding land uses. In addition, construction noise and associated vibration will be controlled through the time restrictions currently established in the City's Noise Ordinance. Section 9.20.040 of the Municipal Code requires that construction activity and equipment maintenance is limited to the hours between 7:00 A.M. to 10:00 P.M. These restrictions will minimize potential annoyance impacts to nearby residential development during sensitive evening and noise hours.

With regard to short- and long-term operational impacts, activities associated with construction and operation of the residences will not result in any vibration-related impacts to adjacent properties. The Loma Linda University Church Master Plan will be subject to comply with local environmental review procedures, therefore impacts related to exposure to groundborne vibration will be less than significant.

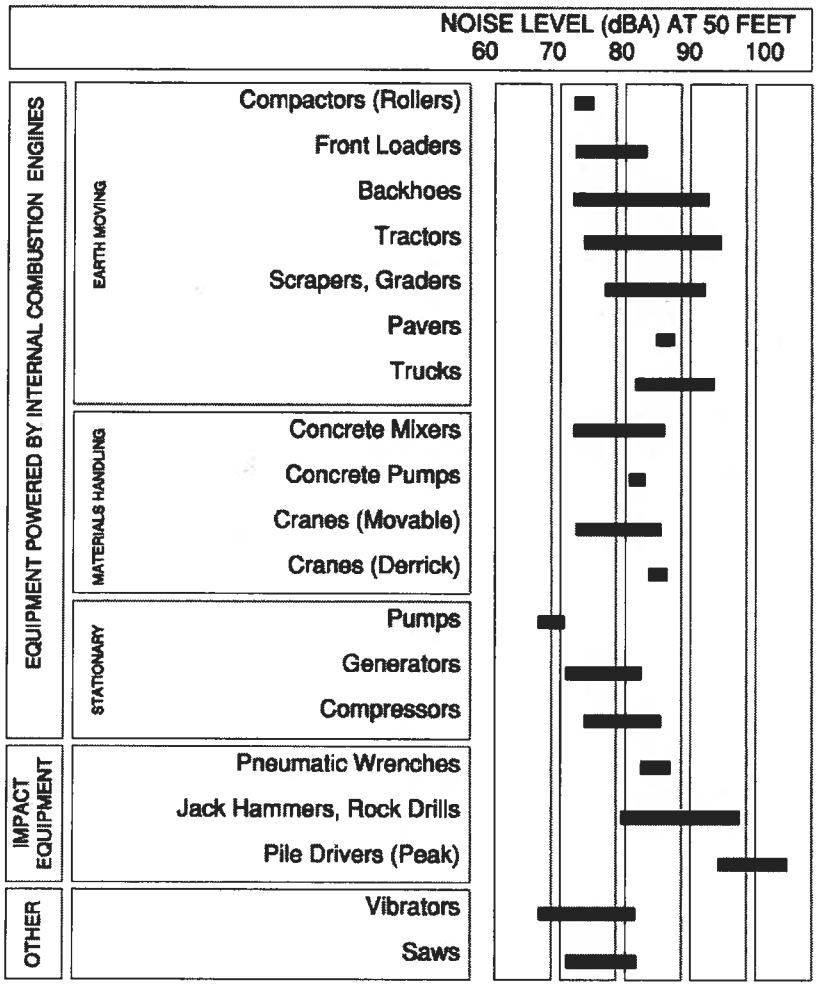
C) **Less than Significant Impact.** The proposed project will increase ambient noise levels due to increased traffic generation in the project vicinity. Based on trip generation estimates defined by the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition),* the three new buildings are anticipated to generate 226 weekend daily trips and 229 weekday daily trips. The proposed residences will not double traffic on Campus Street or University Avenue and therefore will not result in an ambient increase in traffic-related noise by 3 dBA; thus, traffic-related noise increase due to the project will not be perceptible by the surrounding community. Traffic increases are such that no significant increase in ambient noise will occur.

D) **Less than Significant Impact.** Operationally, the proposed project will not result in a periodic increase in ambient noise levels in the project vicinity above levels existing without the project. All of the activities that will take place at the proposed project site will be consistent with activities that are common in an institutional area. As such, periodic operational noise increase will be less than significant.

Temporary Construction Noise

The project will result in temporary construction-related noise increases due to on-site ground disturbing and construction activities. Construction noise levels vary, depending on the type and intensity of construction activity, equipment type and duration of use, and the distance between the noise sources and the receiver. Typical sound emission characteristics of construction equipment are provided in Figure 1 (Construction Equipment Noise).

Figure 1
Construction Equipment Noise



NOTE: Based on limited available data samples.

SOURCE: United States Environmental Protection Agency, 1971, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," NTID 300-1.

Construction noise levels were estimated using the FHWA Roadway Construction Noise Model (RCNM). Temporary noise increases will be greatest during grading activities where graders can produce noise levels up to 71.6 dBA at 233 feet (Institutional use to the north) from the equipment source. This noise level will be considered "conditionally acceptable" by the City Noise Performance Standard. Construction noise in excess of noise standards is permitted by the City's Noise Ordinance between the hours of 7:00 A.M. and 10:00 P.M. or as otherwise allowed per a noise permit. This will reduce noise impacts to the surrounding institutional and health care uses limiting construction activities to regular working hours. Temporary construction-related noise impacts will be less than significant.

E-F) **No Impact.** No airport land use plans apply to the area, and the proposed project site is not located within two miles of an airport. No impacts to airport land use plans or airports could occur. There are also no private airstrips in the project vicinity; there will be no impacts related to excessive noise near a private airstrip.

4.13 – Population and Housing

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
B) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
C) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

A) **No Impact.** This project will include demolition of two existing buildings, construction of three new buildings, and renovation of one existing building. The project will result in direct employment growth of four persons, bringing the total staff of 42. The project is expanding its facilities for its existing church members; the new administration and classroom buildings that are built will be used by the same people as those attending the church services, therefore it will not increase the population within that area. Due to the urban nature of the City and surrounding area, this potential minimal increase in population is expected to have no impact.

B) **No Impact.** The project site is currently a fully functional religious and school facility; the project proposes to expand its facilities by demolishing two existing buildings, constructing three new buildings, and renovating an existing building. The project site is located in a completely urbanized area and is surrounded on all sides by institutional and health care uses within the Loma Linda University campus. The proposed project will not require removal of any residential units, thus no impact will occur.

C) **No Impact.** Displacement can generally be defined as persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence.[35] The project site is not considered residential and is currently occupied by existing buildings. The Loma Linda University Church Master Plan is a three phrase master plan that allows operation of the facility during construction. Therefore no residents will be displaced. As such, there is no *forced or obliged* removal of persons, and therefore no displacement. No impact will occur.

[35] The Brookings Institute. Handbook for Applying the Guiding Principles on Internal Displacement. 1999.

4.14 – Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A)	Fire protection?	☐	☐	☒	☐
B)	Police protection?	☐	☐	☒	☐
C)	Schools?	☐	☐	☐	☒
D)	Parks?	☐	☐	☐	☒
E)	Other public facilities?	☐	☐	☐	☒

A) **Less than Significant Impact.** The City of Loma Linda is serviced by the Fire and Rescue Division of the Loma Linda Department of Public Safety. According to the General Plan, the Department of Public Safety's Fire and Rescue Division consists of one Chief Officers, six Captains, six Engineers, six Firefighter/Paramedics, and six Firefighters.[36] The project site is located approximately one mile northwest of the Loma Linda Fire and Rescue Division station, located at 11325 Loma Linda Drive. The fire station houses two triple-combination engines, one aerial multi-purpose ladder truck, one brush engine, one water tender, one paramedic fire/rescue squad, one portable lighting/rehab trailer, and one rescue/backup paramedic squad.[37]

The Loma Linda Fire and Rescue Division (LLFRD) provides technical fire prevention activities by checking building construction plans to make sure all proposed buildings meet appropriate safety codes prior to construction. Fire inspectors perform plan review on all proposed fire sprinkler systems, fire alarm systems, and restaurant hood extinguishing system installation. LLFRD will review site plans for the proposed project as part of the City's standard review process.

The proposed project will include demolishing two existing buildings, constructing three new buildings, and renovating one existing building. The project will not have a significant impact on fire response times because the project is located within the existing service area of the LLFRD. No new or expanded fire protection facilities will be required as a result of this project. Furthermore, the proposed project does not propose to use substantially hazardous materials or engage in hazardous activities that will require new or modified fire protection equipment to meet potential emergency demand. Impacts related to expansion of fire protection services will be less than significant.

B) **Less than Significant Impact.** The San Bernardino Sheriff's Department (SBSD), located at 655 East Third Street in San Bernardino, provides police protection services in the City of Loma Linda. The City has provided a workstation at City Hall, which provides deputies and a sheriff's service specialist with an area for completing reports, conducting interviews, and crime prevention activities.

The sheriff personnel currently serving the City of Loma Linda include 12 sworn police officers and 5 non-sworn, civilian personnel. The present ratio of sheriff offices to the population in the City of Loma Linda is one deputy per

[36] City of Loma Linda Website, Loma Linda Fire Department. http://www.lomalinda-ca.gov/asp/Site/Departments/PublicSafety/FireDepartment/OurHistory/index.asp [September 18, 2014]
[37] City of Loma Linda General Plan. Public Services and Facilities Element, p.8-2. 2009.

2,478 residents. Sheriff vehicles include 5.5 marked units, 2 unmarked units, and 1 citizen patrol unit. The Sheriff Department divides the City into 16 reporting districts, with an average emergency response time within the City of 3.25 minutes.[38]

Loma Linda University maintains its own security force with the City providing services on an as-needed basis. The Loma Linda University Security Department is located at 11206 Campus Street, approximately 0.12 miles south of the project site, and serves the University campus. The Security Department includes 37 security patrol officers and has an average emergency response time of two (2) minutes.

The proposed development will not result in any unique or more extensive crime problems that cannot be handled with the existing level of police resources. The proposed project is located within the San Bernardino Sheriff's Department and Loma Linda University Security Department service area. No new or expanded police facilities will need to be constructed as a result of this project. Impacts related to expansion of police protection services will be less than significant.

C) **No Impact.** The proposed project is located within the Loma Linda University campus. The Loma Linda University Church Master Plan proposes to demolish two existing buildings, construct three new buildings, and renovate one existing building which will not increase the population in the area by a substantial amount. The expansion of the religious and institutional facilities on the project site will provide a positive impact and serve the surrounding student body and community within the Loma Linda University campus. No impact will occur.

D) **No Impact.** Institutional uses generally do not directly result in additional demand for park and recreational facilities due to the fact that it does not generate a substantial number of residents within the area. The proposed Master Plan includes demolition of two existing buildings, construction of three new buildings, and renovation of one existing building. The project will generate an additional four employees to maintain the new facilities and will not generate a substantial amount of population growth for the area. Therefore, no impact will occur.

E) **No Impact.** The proposed project will not result in any significant population growth that will require expansion of any other public services such as libraries or hospitals. The Loma Linda University Church Master Plan proposes to expand and renovate its religious and school facilities which will have a positive impact for the surrounding community and University campus. No impact will occur.

[38] City of Loma Linda General Plan. Public Services and Facilities Element, p.8-5. 2009.

4.15 – RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
B) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

A) **No Impact.** The proposed project will not significantly increase use of existing recreational facilities, because the three new structures will result in a net population increase of approximately four employees. This increase in population is not expected to cause substantial physical deterioration of recreational facilities. Therefore, no impacts are anticipated and no mitigation measures are needed.

B) **No Impact.** The proposed project does not include outdoor recreational facilities and does not necessitate expansion of existing outdoor recreational facilities. The proposed project includes the demolition of two existing buildings, construction of three new buildings, and renovation of one existing building and does not require the construction of new recreational facilities. Therefore, there will be no adverse physical effects on the environment caused by expansion or construction of outdoor recreational facilities. No impact will occur.

4.16 – Transportation and Traffic

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
B) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
C) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
D) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
E) Result in inadequate emergency access?	☐	☐	☒	☐
F) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

A) **Less than Significant Impact.** A traffic impact study was conducted by Kunzman Associates, Inc. dated November 12, 2014, to assess the project-related traffic impacts. The traffic analysis presents existing traffic generation at the project site and trip generation from the proposed project and analyzed five (5) intersections; Campus Street and Stewart Street, Campus Street and University Avenue, Campus Street and Barton Road, Anderson Street and Stewart Street, and Anderson Street and Barton Road.

The proposed project will not directly impact existing roadways since its proposed use is consistent with the current zoned use of the site. The proposed project includes the demolition of two existing buildings, construction of three new buildings, and renovation of one existing building in a completely urbanized area.

The applicant is proposing an expansion of 375 occupancy-seating in an auxiliary chapel at an existing facility with 1,844 occupancy-seating in the main sanctuary. The project will have access to Campus Street and University Avenue. Based on generation estimates defined by the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition),* the project is expected to generate approximately 226 Saturday mid-day peak hour vehicles trips, 98 of which will occur inbound and 128 of which will occur outbound. The weekday trips projected to be generated by the proposed development is approximately 229 daily weekday vehicle trips, 16 of which will occur during the morning peak hours and 16 of which will occur during the evening peak hours. In addition, the weekday services which occur on Tuesday and Wednesday evenings were also reviewed. The 5:00 PM Tuesday service has an attendance rate of 60-70 students. Since students primarily walk to this service, the service will not generate trips. The 6:00 PM Wednesday service has an attendance rate of 50-60 persons. The resulting trips will be 36 inbound evening peak hour trips on Wednesday. The trips generated from this project does not reach 50 trips at a single intersection therefore will not require analysis during the weekdays.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 Freeway. The project also does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections outside of the City of Loma Linda. The project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. Therefore, impacts will be less than significant.

B) **No Impact.** The San Bernardino Congestion Management Program (CMP) provides the overall direction and approach for the regional transportation system, and includes specific projects that may affect the future regional transportation system. The project site is bounded by Campus Street to the west and University Avenue to the north; this intersection is not listed as one of the regional roadway improvements within CMP Capital Improvement Program and Final 2002 Regional Transportation Improvement Program. The project will not increase substantial population growth to the area, which will not generate a substantial amount of trips, and therefore will have no impact on applicable congestion management programs.

C) **No Impact.** The Loma Linda University Church Master Plan proposes to demolish two existing structures, construct three new structures, and renovate one existing structure and will not result in the need to redirect or otherwise alter air traffic patterns. Furthermore, the proposed project will not result in substantial population growth that could significantly increase air traffic. Therefore, the project will have no air traffic impacts.

D) **No Impact.** The project does not involve the construction of any roadway but will have an effect on the City's street and site design standards. The project proposes to demolish two existing buildings, construct three new buildings, and renovate an existing building. The project will not substantially increase hazards due to design features or incompatible uses; no impact will occur.

E) **Less than Significant Impact.** The project does not involve any road construction and thus will not obstruct or restrict emergency access to or through the City. The proposed project will be subject to local site plan review. In conjunction with the review and approval of building permits, the County Fire Department reviews all plans to ensure compliance with all applicable emergency access and safety requirements. With continued application of project review procedures, impacts involving emergency access will be less than significant.

F) **No Impact.** The proposed master plan will not conflict with or have an effect on any local or regional policies involving support of alternative transportation. The project does not conflict with General Plan transportation policies that support public transit and will not interfere with the current or future goals involving the local bus systems or Metrolink transit options. The project will have no impact on alternative transportation plans.

4.17 – Utilities and Service Systems

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
A) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
B) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
C) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
D) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
E) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
F) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
G) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

A-B) **Less than Significant Impact.** The proposed project could affect Regional Water Quality Control Board treatment standards by increasing wastewater production, which will require expansion of existing facilities or construction of new facilities. Exceeding the RWQCB treatment standards could result in contamination of surface or ground waters with pollutants such as pathogens and nitrates. Wastewater treatment requirements for the City of Loma Linda are established by the Santa Ana Regional Water Quality Control Board (RWQCB). These treatment requirements establish pollutant limits for effluent discharges to receiving waters.

New development in the City is required to install wastewater infrastructure concurrent with project development. Wastewater service in Loma Linda is provided by the Loma Linda Public Works Department, Utilities Division. Sewer line maintenance programs within the City are administered by the City while wastewater treatment services are provided under provisions outlined in a Joint Powers Agreement (JPA) with the City of San Bernardino.[39] All

[39] City of Loma Linda General Plan Draft EIR. Public Services Utilities, p.4.13-23, p.8-5. 2004.

wastewater generated by the interior plumbing system of the proposed project will be discharged into the local sewer main and conveyed for treatment to the San Bernardino wastewater facility located at 399 Chandler Place in the City of San Bernardino. Wastewater flows will consist of typical institutional wastewater discharges and will not require new methods or equipment for treatment that are not currently permitted for the wastewater treatment facility. Wastewater flows associated with the proposed project will consist of the same kinds of substances typically generated by surrounding land uses and no modifications to any existing wastewater treatment systems or construction of any new ones will be needed to treat this project's wastewater. Estimated wastewater generated by the proposed project is approximately 2,635 gallons per day (gpd) (wastewater is estimated to be 80 percent of total water use) for Phase 1a, 3,426 gpd for Phase 1b, and 3,174 gpd for Phase 3. Because the project does not increase wastewater production and will not require new or expansion of wastewater facilities the proposed project will not exceed the RWQCB treatment standards. Impacts will be less than significant.

B) **Less than Significant Impact.** The City of Loma Linda Department of Public Works, Water Division produces and distributes domestic water for the City as well as areas in the City's Sphere of Influence. The City's water service area consists of approximately 10.6 square miles, which includes the City and the City's Sphere of Influence area. Groundwater from the Bunker Hill Basin is the primary source of water supply for the City. The City of Loma Linda groundwater is supplied from six wells. They include the Richardson Wells #1, #3, and #4; and Mountain View Wells #3, #4, and #5. Under normal conditions, four wells are utilized. The total production capacity of these wells totals 6,500 gallons per minute (gpm). Due to water quality issues, an additional well (Richardson No. 1) is used sparingly. Mountain View Well #4 is currently out of service due to high levels of fluoride. The combined capacity of City wells totals 7,900 gpm. The largest well has a rated capacity of 2,200 gpm. Well capacity without this well totals 5,700 gpm.[40] In addition to the groundwater wells, the City has two emergency connections with the City of San Bernardino and one with the City of Redlands. These connections are available only on an as-needed basis and only if a water supply is available. No contract is in effect that guarantees a specified amount of water from the City of San Bernardino. Therefore, only limited quantities of water from outside sources may be available during emergency events.

The proposed project's estimated water demand is approximately 3.69 AFY for Phase 1a, 4.44 AFY for Phase 1b, and 4.8 AFY for Phase 3. Estimated water demand for the proposed project is substantially less than the remaining projected use. Therefore impacts will be less than significant.

Regarding wastewater facilities, as discussed in the preceding response, wastewater generated at the project site is treated at the San Bernardino wastewater facility. The proposed project is estimated to have a wastewater generation of approximately 2,635 gallons gpd for Phase 1a, 3,426 gpd for Phase 1b, and 3,174 gpd for Phase 3, which does not increase wastewater production or require new wastewater facilities. Therefore impacts will be less than significant.

Connections to local water and sewer mains will not be disturbed and will not have temporary construction impacts. No additional improvements are needed to either sewer lines or treatment facilities to serve the proposed project. Therefore, the project will result in less than significant impacts as a result of new or expanded wastewater treatment facilities.

C) **Less than Significant Impact.** Potentially significant impacts could occur as a result of this project if storm water runoff is increased to a level that will require construction of new storm drainage facilities. As discussed in the Hydrology section, the proposed project will not generate any increased runoff from the site that will require construction of new storm drainage facilities. Existing storm drains and drainage facilities have the capability to handle increased flows that are a result of the proposed project. The project applicant/developer will be required to provide all necessary on-site infrastructure. Impacts will be less than significant, and no mitigation beyond

[40] City of Loma Linda Draft EIR. Water Resources p.4.8-1. 2004.

compliance with existing laws is required. The proposed project will have a less than significant impact on requiring the construction of new facilities or expansion of existing storm drainage facilities.

D) **Less than Significant Impact.** Domestic water service to the City of Loma Linda and Sphere of Influence (SOI) is provided by the City of Loma Linda Department of Public Works, Water Division. Groundwater from the Bunker Hill Basin is the primary source of water supply for the City.

The City's General Plan Conservation and Open Space Element includes policies to ensure that water supply and demand are maintained and conserved to ensure water for future generations. The proposed project will not result in a significant population growth or additional demand on water supplies. The proposed Master Plan will not result in the need for new or expanded water supplies, nor revise any policies associated with water supply or demand. The project does not include changes to land use policy set forth in the General Plan and analyzed in the General Plan EIR. Therefore, the proposed project will not create an additional impact. Impacts will be less than significant with implementation of General Plan Conservation and Open Space policies in section 9.6.2.

E) **Less than Significant Impact.** As detailed in Sections 4.17.a and 4.17.b, the proposed project will be adequately served by existing facilities. Therefore a less than significant impact will occur.

F) **Less than Significant Impact.** Significant impacts could occur if the proposed project will exceed the existing permitted landfill capacity or violates federal, state, and local statutes and regulations.

The collection of solid waste within the City is contracted to Waste Management of the Inland Empire. The San Timoteo Sanitary Landfill and the Mid-Valley Sanitary Landfill are the primary destinations for solid waste collected in Loma Linda.[41] The current capacity for the San Timoteo Landfill is approximately 2,100 tons per day of solid waste. The current capacity for the Mid-Valley Sanitary Landfill is approximately 7,500 tons per day of solid waste. Although the San Timoteo Landfill is expected to end operations on January 2043 and the Mid-Valley Landfill is expected to close in April 2033, other landfills are available to serve the City. The Olinda Alpha Sanitary Landfill, located in Brea, has a permitted daily capacity of 8,000 tons per day and a remaining capacity of 38,578,383 cubic yards. This landfill is scheduled to close in December 2021. The Colton Sanitary Landfill has a daily capacity of 3,100 tons per day and a remaining capacity of 2,700,000 cubic yards. This landfill is schedules to cease operations in January 2017. The Azusa Land Reclamation Co. Landfill has a daily capacity of 6,500 tons per day and has a remaining capacity of 34,100,000 cubic yards. This landfill is scheduled to close in January 2025. The California Street Landfill located in Redlands has a daily capacity of 829 tons per day and a remaining capacity of 6,800,000 cubic yards. This landfill is scheduled to cease operations in January 2042.

Considering the availability of landfill capacity and the relatively nominal amount of solid waste generation from the proposed project, project solid waste disposal needs can be adequately met without a significant impact on the capacity of the nearest and optional, more distant, landfills. Therefore, it is not expected that the proposed project will impact the City's compliance with State-mandated (AB 939) waste diversion requirements. Impacts will be less than significant.

G) **No Impact.** The proposed project is required to comply with all applicable Federal, State, County, and City statutes and regulations related to solid waste as a standard project condition of approval. Therefore, no impact will occur.

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[41] California Department of Resources Recycling and Recovery (CalRecycle). http://www.calrecycle.ca.gov/LGCentral/Reports/DRS/Destination/JurDspFa.aspx [September 18, 2014]

4.18 – Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
A) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
B) Does the project have impacts that are individually limited, but cumulatively considerable?	☐	☐	☒	☐
C) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

A) **Less than Significant Impact with Mitigation Incorporated.** The proposed project will not substantially impact any scenic vistas, scenic resources, or the visual character of the area, as discussed in Section 4.1, and will not result in excessive light or glare. The project site is located within an urbanized area with no natural habitat. The proposed project will not significantly impact any sensitive plants, plant communities, fish, wildlife or habitat for any sensitive species, as discussed in Section 4.4. Adverse impacts to archaeological and paleontological resources and human remains will not occur. The environmental analysis provided in Section 4.3 concludes that impacts related to emissions of criteria pollutants and other air quality impacts will be less than significant. Section 4.7 concludes that impacts related to climate change will be less than significant. Section 4.9 concludes that impacts related to hydrology and water quality will be less than significant. Based on the preceding analysis of potential impacts in the responses to items 4.1 thru 4.17, no evidence is presented that this project will degrade the quality of the environment. The City hereby finds that impacts related to degradation of the environment, biological resources, and cultural resources will be less than significant.

B) **Less than Significant Impact.** Cumulative impacts can result from the interactions of environmental changes resulting from one proposed project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public services, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long term, due to the permanent land use changes involved in the project.

Section 15130(b)(1) of the CEQA Guidelines identifies two methods to determine the scope of related projects for cumulative impact analysis:

> *List-of-Projects Method:* a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.

Summary-of-Projections Method: a summary of projections contained in an adopted general plan or related planning document or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

The proposed project consists of the demolition of two existing structures, construction of three new buildings, and renovation of an existing building at the Loma Linda University Church. The SCAG Regional Transportation Plan/Sustainable Communities Strategy projects an estimated population of 31,700 by 2035 for the City of Loma Linda. The proposed project will not be substantially growth inducing and will not contribute to a cumulative impact.

Non-Cumulative Impacts

Impacts related to aesthetics, geology and soils, and airport hazards at the project-level have no potential for cumulative impacts because impacts are limited to on-site conditions and include no component that could result in similar impacts over time or space. Therefore, no cumulative impacts related to these topics will occur.

Local Impacts

Projects can contribute considerably to cumulative impacts in context of the local environment. Local cumulative impacts are limited to agricultural and forestry resources, air quality, biological resources, cultural resources, hazardous materials, wildfires, groundwater levels, drainage and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, and utilities and service systems. A general discussion of potentially significant cumulative impacts in the local context is summarized below.

The analysis provided in Sections 4.10, 4.11, 4.13, and 4.15 found that no individual impacts will occur; therefore, the project could not contribute considerably to local land use and planning, mineral resources, recreation or population and housing impacts. The analysis provided in Section 4 related to agricultural and forestry, air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, and utilities and services systems found that impacts will be less than significant; therefore, while the project will contribute to localized cumulative impacts, the project contribution will not be considerable.

Regional Impacts

Projects can contribute considerably to cumulative impacts in context of the regional environment. Regional cumulative impacts are limited to air quality, biological resources, cultural resources, hazardous materials, wildfires, groundwater levels, drainage and water quality, flooding, land use and planning, mineral resources, transportation and traffic, and utilities and service systems. A general discussion of potentially significant cumulative impacts in the regional context is summarized below.

The analysis provided in Sections 4.10, 4.11, 4.13, and 4.15 found that no individual impacts will occur; therefore, the project could not contribute considerably to local land use and planning, mineral resources, or population and housing impacts. The analysis provided in Section 4 related to agricultural and forestry, air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, and utilities and services systems found that impacts will be less than significant; therefore, while the project will contribute to regional cumulative impacts, the project contribution will not be considerable.

Global Impacts

One topic of global concern is climate change. As discussed in Section 4.7, climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. The project will not contribute considerably to global climate change.

Based on the above analysis concerning the local, regional, and global impacts of the project in consideration of past, current, and future projects, the City hereby finds that the contribution of the proposed project to cumulative impacts will be less than significant.

C) **Less than Significant Impact.** Based on the analysis of the project's impacts in the responses to items 4.1 thru 4.17, there is no indication that this project could result in substantial adverse effects on human beings. While there will be a variety of temporary adverse effects during construction related to noise and criteria pollutant emissions, these will be reduced to less than significant levels through General Plan EIR mitigation and incorporation of standard requirements for air quality protection. Less than significant long-term effects will include air quality, population and housing, public services, recreation, and changing the visual character of the site, with a majority of these impacts affecting the project site itself. The analysis herein concludes that direct and indirect environmental effects will at worst require General Plan EIR mitigation to reduce to less than significant levels. Generally, environmental effects will result in less than significant impacts. Based on the analysis in this Initial Study, the City finds that direct and indirect impacts to human beings will be less than significant with mitigation incorporation.

5.1 – LIST OF PREPARERS

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- Anita Au, Project Assistant

5.2 – PERSONS AND ORGANIZATIONS CONSULTED

None

CONDITIONS OF APPROVAL
CONDITIONAL USE PERMIT NO. 14-114 AND VARIANCE NO. 14-115

COMMUNITY DEVELOPMENT DEPARTMENT

General

1. Within two years of this approval, the Precise Plan of Design shall be exercised by substantial construction or the permit/approval shall become null and void. In addition, if after commencement of construction, work is discontinued for a period of two years after the issuance of occupancy of the previous phase, the permit/approval shall become null and void.

PROJECT:	**EXPIRATION DATE:**
CONDITIONAL USE PERMIT NO. 14-114 AND VARIANCE NO. 14-115	**March 4, 2017**

2. The review authority may, upon application being filed 30 days prior to the expiration date and for good cause, grant a one-time extension not to exceed 12 months. The review authority shall ensure that the project complies with all current Development Code provisions.
3. In the event that this approval is legally challenged, the City will promptly notify the applicant of any claim or action and will cooperate fully in the defense of the matter. Once notified, the applicant agrees to defend, indemnify, and hold harmless the City, Redevelopment Agency (RDA), their affiliates officers, agents and employees from any claim, action or proceeding against the City of Loma Linda. The applicant further agrees to reimburse the City and RDA of any costs and attorneys fees, which the City or RDA may be required by a court to pay as a result of such action, but such participation shall not relieve applicant of his or her obligation under this condition.
4. Construction shall be in substantial conformance with the plan(s) approved by the Planning Commission. Minor modification to the plan(s) shall be subject to approval by the Director through a minor administrative variation process. Any modification that exceeds 10% of the following allowable measurable design/site considerations shall require the refilling of the original application and a subsequent hearing by the appropriate hearing review authority if applicable:
   a. On-site circulation and parking, loading and landscaping;
   b. Placement and/or height of walls, fences and structures;
   c. Reconfiguration of architectural features, including colors, and/or modification of finished materials that do not alter or compromise the previously approved theme; and,
   d. A reduction in density or intensity of a development project.

5. No vacant, relocated, altered, repaired or hereafter erected structure shall be occupied or no change of use of land or structure(s) shall be inaugurated, or no new business commenced as authorized by this permit until a Certificate of Occupancy has been issued by the Building Division. A Temporary Certificate of Occupancy may be issued by the Building Division subject to the conditions imposed on the use, provided that a deposit is filed with the Community Development Department prior to the issuance of the Certificate, if necessary. The deposit or security shall guarantee the faithful performance and completion of all terms, conditions and performance standards imposed on the intended use by this permit.

6. This permit or approval is subject to all the applicable provisions of the Loma Linda Municipal Code, Title 17 in effect at the time of approval, and includes development standards and requirements relating to: dust and dirt control during construction and grading activities; emission control of fumes, vapors, gases and other forms of air pollution; glare control; exterior lighting design and control; noise control; odor control; screening; signs, off-street parking and off-street loading; and, vibration control. Screening and sign regulations compliance are important considerations to the developer because they will delay the issuance of a Certificate of Occupancy until compliance is met. Any exterior structural equipment, or utility transformers, boxes, ducts or meter cabinets shall be architecturally screened by wall or structural element, blending with the building design and include landscaping when on the ground.

7. Signs are not approved as a part of this permit. Prior to establishing any new signs, the applicant shall submit an application, and receive approval, for a sign permit from the Planning Division (pursuant to LLMC, Chapter 17.18) and building permit for construction of the signs from the Building Division, as applicable.

8. The applicant shall comply with all of the Public Works Department requirements for recycling prior to issuance of a Certificate of Occupancy.

9. Prior to issuance of Certificate of Occupancy, the applicant shall submit a photometric plan and final lighting plan to City staff showing the exact locations of any exterior light fixtures (including but not limited to poles and wall mounted fixtures), the proposed orientation and shielding of the fixtures to prevent glare.

10. During construction of the site, the project shall comply with Section 9.20 (Prohibited Noises) which limit construction activities to the hours between 7:00 a.m. to 10:00 p.m. Monday through Friday, with no heavy construction occurring on weekends or national holidays. Additionally, all equipment is required to be properly equipped with standard noise muffling apparatus. Adhering to the City's noise ordinance and implementation of the above mitigation measure would ensure impacts from construction noise would be less than significant.

11. The following shall also be implemented to help reduce the noise impacts to meet the City's interior (45dB) noise level.

    a. Dual pane windows and entry doors with solid core wood and weather stripping construction shall be utilized.

12. The applicant shall implement SCAQMD Rule 403 and standard construction practices during all operations capable of generating fugitive dust, which will include but not be limited to the use of best available control measures and reasonably available control measures such as:
    a. Water active grading areas and staging areas at least twice daily as needed;
    b. The project proponent shall ensure that all disturbed areas are treated to prevent erosion until the site is constructed upon;
    c. The project proponent shall ensure that landscaped areas are installed as soon as possible to reduce the potential for wind erosion;
    d. Suspend grading activities when wind gusts exceed 25 mph;
    e. Sweep public paved roads if visible soil material is carried off-site;
    f. Enforce on-site speed limits on unpaved surface to 15 mph; and
    g. Discontinue construction activities during Stage 1 smog episodes.
13. The applicant shall implement the following construction practices during all construction activities to reduce VOC emission as stipulated in the project Initial Study and identified as mitigation measures:
    a. The contractor shall utilize (as much as possible) pre-coated building materials and coating transfer or spray equipment with high transfer efficiency, such as high volume, low pressure (HVLP) spray method, or manual coating applications such as paint brush, hand roller, trowel, dauber, rag, or sponge.
    b. The contractor shall utilize water-based or low VOC coating of 100 g/l of VOC (allowing approximately 31,500 square feet painted per day) to 250 g/l of VOC (allowing approximately 12,950 square feet painted per day). The following measures shall also be implemented:
        - Use Super-Compliant VOC paints whenever possible;
        - If feasible, avoid painting during peak smog season: July, August, and September;
        - Recycle leftover paint. Take any left-over paint to a household hazardous waste center; do not mix leftover water-based and oil-based paints;
        - Keep lids closed on all paint containers when not in use to prevent VOC emissions and excessive odors;
        - For water-based paints, clean up with water only. Whenever possible, do not rinse the clean-up water down the drain or pour it directly into the ground or the storm drain. Set aside the can of clean-up water and take it to a hazardous waste center (www.cleanup.org);
        - Recycle the empty paint can;
        - Look for non-solvent containing stripping products;
        - Use Compliant Low-VOC cleaning solvents to clean paint application equipment;

- Keep all paint and solvent laden rags in sealed containers to prevent VOC emissions;
- The developer/contractor shall use building materials that do not require painting, where feasible; and
- The developer/contractor shall use pre-painted construction materials where feasible.

14. The applicant shall work with the City's franchised solid waste hauler to follow a debris management plan to divert the material from landfills by the use of separate recycling bins (e.g., wood, concrete, steel, aggregate, glass) during demolition and construction to minimize waste and promote recycle and reuse of the materials.
15. To reduce emissions, all equipment used in grading and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.
16. The project proponent shall ensure that existing power sources are utilized where feasible via temporary power poles to avoid on-site power generation during construction.
17. The project proponent shall ensure that construction personnel are informed of ride sharing and transit opportunities.
18. The operator shall maintain and effectively utilize and schedule on-site equipment in order to minimize exhaust emissions from truck idling.
19. The operator shall comply with all existing and future CARB and SCAQMD regulations related to diesel-fueled trucks, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.
20. The proposed project shall contribute on a fair share basis, through an adopted traffic impact fee schedule, in the implementation of the recommended intersection lane improvements or in dollar equivalent in lieu mitigation contributions, or in the implementation of additional capacity on parallel routes to offset potential impacts to study area intersections as listed in the Traffic Impact Analysis.
21. Appropriate Development Impact Fees shall be paid to the City of Loma Linda prior to the issuance of the certificate of occupancy of each phase/permit.
22. Prior to issuance of any Building and/or Construction Permits, the applicant shall submit to the Community Development Department proof of payment or waiver from both the City of San Bernardino for sewer capacity fees and Redlands Unified School District for school impact fees.
23. The applicant shall pay all required development impact fees to cover 100 percent of the pro rata share of the estimated cost of public infrastructure, facilities, and services.
24. The developer shall provide infrastructure for the Loma Linda Connected Community Program, which includes providing a technologically enabled

development that includes coaxial, cable and fiber optic lines to all outlets in each unit of the development. Plans for the location of the infrastructure shall be provided with the precise plan of design, which includes providing a technologically enabled development that includes coaxial, cable, and fiber optic lines to all outlets in each unit of the development. Plans for the location of the infrastructure shall be provided with the precise grading plans and reviewed and approved by the City of Loma Linda prior to issuing grading permits.

25. Should paleontological resources be uncovered during grading, a qualified vertebrate paleontologist shall be contracted to perform a field survey to determine and record any nonrenewable paleontological resources found on-site. The paleontologist will determine the significance, and make recommendations for appropriate mitigation measures in compliance with the guidelines of the California Environmental Quality Act.

26. In the event that human remains are encountered during grading, all provisions of state law requiring notification of the County Coroner, contacting the Native American Heritage Commission, and consultation with the most likely descendant, shall be followed.

27. The project shall comply with all non-exempt provisions of Measure V and shall pay the full amount of any recalculated development impact fees, including traffic impact fees, prior to occupancy.

28. The applicant shall provide elevation details of the proposed trash enclosure. Trash enclosure design should incorporate matching colors and finishes to those found on the proposed church building.

Landscaping

29. The applicant shall submit three sets of the final landscape plan prepared by a state licensed Landscape Architect, subject to the approval of the Community Development Department, and Public Works Department for landscaping in the public right-of-way. Landscape plans for the Landscape Maintenance District shall be on separate plans. The applicant may also request approval from the Public Works Department for maintenance of off-site parkway improvements.

30. Final landscape and irrigation plans shall be in substantial conformance with the approved conceptual landscape plan and these conditions of approval. Any and all fencing shall be illustrated on the final landscape plan.

31. Landscape plans shall depict the utility laterals, concrete improvements, and tree locations. Any modifications to the landscape plans shall be reviewed and approved by the Public Works and Community Development Departments prior to issuance of permits.

32. The applicant, property owner, and/or business operator shall maintain the property and landscaping in a clean and orderly manner and all dead and dying plants shall be replaced with similar or equivalent type and size of vegetation.

33. Should the relocation or removal of any tree be required, the applicant shall submit an Arborist Report prior to site disturbance. Any removal or replacement of trees shall be in accordance with the City's Tree Preservation Ordinance.

34. The applicant shall perform a Phase I Environmental Site Assessment to determine if the project site includes any contamination prior to the issuance of building permits.

35. The applicant shall prepare a study for the presence of hazardous chemicals, mercury, and asbestos containing materials (ACM) as a result of the demolition of the existing on-site structures. If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.

36. Should future project construction require soil excavation or filling in certain areas, soil sampling may be required. If soil is contaminated, it must be properly disposed. Land Disposal Restrictions (LDRs) may be applicable to such soils. Soil sampling shall also be conducted on any imported soil.

37. If it is determined that hazardous wastes are, or will be generated by the proposed operation of the facility, the wastes shall be managed in accordance with the California Hazardous Waste Control Law and the Hazardous Waste Control Regulations. If it is determined that hazardous wastes will be generated, the facility shall obtain a United States Environmental Protection Agency Identification Number. Certain hazardous waste treatment processes or hazardous materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA).

38. If clean up oversight is required of the project, the applicant shall be required to obtain an Environmental Oversight Agreement with the DTSC.

FIRE DEPARTMENT

39. The applicant shall submit a complete set of plans to the Loma Linda Fire Department for review and approval prior to the issuance of building permits.

40. All construction shall meet the requirements of the editions of the California Building Code (CBC) and the California Fire Code (CFC)/International Fire Code (IFC) as adopted and amended by the City of Loma Linda and legally in effect at the time of issuance of building permit.

41. Pursuant to CFC Section 903, as amended in Loma Linda Municipal Code (LLMC) Sections 15.28.230-450, the building(s) shall be equipped with automatic fire sprinkler system(s). Pursuant to CFC Section 901.2, plans and specifications for the fire sprinkler system(s) shall be submitted to Fire Prevention for review and approval prior to installation. Fire flow test data for fire sprinkler calculations must be current within the last 6 months. Request flow test data from Loma Linda Fire Prevention.

42. On-site civil engineering improvement plans shall be submitted to Fire Prevention for review and approval prior to construction. Plans shall show the proposed

locations for water mains and fire hydrants; driveways, drive aisles and access roadways for fire apparatus.

43. The site address shall be as assigned by the Fire Marshal in a separate document, following approval of the project, and upon submittal of a working copy of the final approved site plan.

44. The developer shall submit a Utility Improvement Plan showing the location of fire hydrants for review and approval by the Fire Department.

PUBLIC WORKS DEPARTMENT

45. The developer shall submit an engineered grading plan for the proposed project.

46. All utilities shall be underground. The City of Loma Linda shall be the sewer purveyor.

47. All public improvement plans shall be submitted to the Public Works Department for review and approval.

48. Any damage to existing improvements as a result of this project shall be repaired by the applicant to the satisfaction of the City Engineer.

49. Prior to issuance of grading permits, the applicant shall submit to the City Engineer a Notice of Intent (NOI) to comply with obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit from the State Water Resources Control Board. Evidence that this has been obtained (i.e., a copy of the Waste Dischargers Identification Number) shall be submitted to the City Engineer for coverage under the NPDES General Construction Permit.

50. All site drainage shall be handled on-site and shall not be permitted to drain onto adjacent properties.

51. An erosion/sediment control plan and a Water Quality Management Plan are required to address on-site drainage construction and operation.

52. All necessary precautions and preventive measures shall be in place in order to prevent material from being washed away by surface waters or blown by wind. These controls shall include at a minimum: regular wetting of surface or other similar wind control method, installation of straw or fiber mats to prevent rain related erosion. Detention basin(s) or other appropriately sized barrier to surface flow must be installed at the discharge point(s) of drainage from the site. Any water collected from these controls shall be appropriately disposed of at a disposal site. These measures shall be added as general notes on the site plan and a statement added that the operator is responsible for ensuring that these measures continue to be effective during the duration of the project construction.

53. Per the City of Loma Linda recycling policy, the project proponent shall incorporate interior and exterior storage areas for recyclables.

54. The project proponent shall comply with City adopted policies regarding the reduction of construction and demolition (C&D) materials.

55. The project shall comply with the Low Impact Development (LID) Principles and LID Best Management Practices (BMPs) for Southern California.

SHERIFFS DEPARTMENT

56. The developer shall provide sufficient exterior lighting to the site that illuminates otherwise dark corridors which may compromise public safety.
57. The developer shall be required to prevent loitering on site.
58. The developer shall be required to provide clear windows at the lobby area.

MITIGATION MEASURES

59. Prior to site disturbance, the applicant shall provide to the City a detailed construction schedule that shall include a 44-day (at a minimum) building coating schedule.
60. In the event historic or archaeological resources are unearthed, a qualified archaeologist shall be contacted to determine if reporting the finds is required and if further monitoring during site earthwork is warranted. If, at any time, resources are identified, the archaeologist shall make recommendations to the City of Loma Linda for appropriate mitigation measures in compliance with the guidelines of the California Environmental Quality Act.
61. Should paleontological resources be uncovered during grading, a qualified vertebrate paleontologist shall be contacted to perform a field survey to determine and record any non-renewable paleontological resources found on-site. The paleontologist shall determine the significance, and make recommendations to the City of Loma Linda for appropriate mitigation measures in compliance with the guidelines of the California Environmental Quality Act.
62. If human remains of any kind are found during earthwork activities, all activities must cease immediately and the San Bernardino County Coroner and a qualified archaeologist must be notified. The Coroner will examine the remains and determine the next appropriate action based on his or her findings. If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission. The Native American Heritage Commission will then identify the most likely descendants to be consulted regarding treatment and/or reburial of the remains. If a most likely descendant cannot be identified, or the most likely descendant fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to them, the contractor shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
63. The Project Proponent shall implement recommendations for the Project's following: foundation design, bearing value, total and differential (static) settlement,

earth pressures, slab on grade, pavement design and grading (as provided in the recommendations set forth in the June 11 Soils Exploration report prepared by CHJ Incorporated).

64. Prior to issuance of grading permits, the applicant shall submit to the City Engineer a Notice of Intent (NOI) to comply with obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit from the State Water Resources Control Board. Evidence that this has been obtained (i.e., a copy of the Waste Dischargers Identification Number) shall be submitted to the City Engineer for coverage under the NPDES General Construction Permit prior to the issuance of grading permits.

65. The Project Proponent shall comply with Best Management Practices set forth in the August 2013 Water Quality Management Plan and as approved by the City Engineer.

66. The developer shall require that all construction equipment is properly maintained with operating mufflers and air intake silencers, and prioritizes the location of equipment staging and storage as far as practical from the existing university buildings surrounding the site

67. Sight distance at each project access shall be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans.

68. The necessary off-site improvement recommendations are included in *Table 5* within this Initial Study. The Project Proponent shall contribute towards the cost of necessary study area improvements on a fair share or "pro-rata" basis.

69. The Project Proponent shall comply with City adopted policies regarding the reduction of construction and demolition (C&D) materials.

Applicant signature	Date
Owner signature	Date

End of Conditions

KUNZMAN ASSOCIATES, INC.

UNIVERSITY CHURCH MASTER PLAN PROJECT

TRAFFIC IMPACT ANALYSIS

November 12, 2014

EXHIBIT – D

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

UNIVERSITY CHURCH MASTER PLAN PROJECT

TRAFFIC IMPACT ANALYSIS

November 12, 2014

Prepared by:

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APPENDICES

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I. Introduction

The purpose of this report is to provide an assessment of the traffic impacts resulting from the development of the proposed University Church Master Plan project and to identify the traffic mitigation measures necessary to maintain the established level of service standard for the elements of the impacted roadway system. The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act.

The City of Loma Linda is the lead agency responsible for preparation of the traffic impact analysis, in accordance with California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with partial occupancy of the development in Opening Year (2017), at which time it will be generating trips at its full potential, and for the current traffic forecast year, which is the Year 2035.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

A. Project Description

The proposed development is located at 11125 Campus Street, within Loma Linda University's campus, in the City of Loma Linda. Loma Linda University Church of Seventh-day Adventists currently occupies the site and will continue to hold services during all phases of construction. The weekend services are on Saturday at 9:00 AM, 10:30 AM, 11:45 AM, and 4:30 PM. The general community is the target audience for the 9:00 and 11:45 services, and the college-age young adults are the target audience for the 10:30 service. Weekday attendance of evening services includes a collegiate service on Tuesdays at 5:00 PM and Wednesdays at 6:00 PM and 7:00 PM. A vicinity map showing the project location is provided on Figure 1.

The proposed project is comprised of a three phase master plan which includes the phased demolition, construction and remodeling of the church buildings. The applicant is proposing an expansion of church, school, and office space. A 375 occupant Children's' Chapel will be built to serve as the weekday service location when the existing Fellowship Hall is demolished for reconstruction. The Children's' Chapel will also serve as additional seating during large holiday services allowing more adults in the main sanctuary. The applicant is proposing an expansion of 375 occupancy-seating in an auxiliary chapel at an existing facility with 1,844 occupancy-seating in the main sanctuary.

The proposed project will eliminate all on-site parking; however, the Church will have off-site parking directly across the street in the Loma Linda University Medical Center parking structures. Handicapped and elder care access is provided by the church from the parking structure to the Church. The proposed project will have access to Campus Street and University Avenue.

B. Study Area

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The north-south roadways which will be most affected by the project include Campus Street and Anderson Street. The east-west roadways expected to provide local access include Stewart Street, University Avenue, and Barton Road.

A series of scoping discussions were conducted with the City of Loma Linda to define the desired analysis locations for each future analysis year. In addition, the San Bernardino Associated Governments staff has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Horizon Year) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments are required to be included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 Freeway. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections in any adjacent city. Otherwise, each of these agencies must also be provided with a copy of the traffic impact analysis, once the document is accepted by the City of Loma Linda[1].

C. Analysis Methodology

The analysis of the traffic impacts from the proposed development and the assessment of the required mitigation measures were based on an evaluation of the existing and forecast traffic conditions in the vicinity of the site with and without the project. The following analysis years are considered in this report:

- Existing Conditions (2014)
- Existing Plus Project Conditions[2]
- Project Opening Year Conditions (2017)
- Horizon Year Conditions (2035)

---

[1] The purpose of this notification is to allow the California Department of Transportation and other agencies to identify opportunities to make improvements to intersections concurrent with adjacent development, at considerably less cost and disruption than would occur if it were done after-the-fact.

[2] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time. This scenario is provided for informational purposes only, and will not be used for impact determinations or mitigation.

Existing intersection traffic conditions were established through Saturday mid-day peak hour traffic counts obtained by Kunzman Associates, Inc. from October 2014 (see Appendix B). In addition, truck classification counts were conducted at the study area intersections. The existing percent of trucks was used in the conversion of trucks to Passenger Car Equivalent's (see Appendix C).

Project traffic volumes for all future projections were estimated using the manual approach. Trip generation has been based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012 and data provided by the applicant.

The average daily traffic volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model (SBTAM) Year 2008 and Year 2035 average daily traffic volume forecasts (see Appendix C). This difference defines the growth in traffic over the 27 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between Year 2014 and Year 2035. For this purpose, linear growth between the Year 2008 base condition and the forecast Year 2035 condition was assumed. Since the increment between Year 2014 and Year 2035 is 21 years of the 27 year time frame, a factor of 0.78 (i.e., 21/27) was used.

The Year 2035 without project daily and peak hour directional roadway segment volume forecasts have been determined using the growth increment approach on the SBTAM traffic model Year 2008 and Year 2035 peak hour volumes. The growth increment calculation worksheets are shown in Appendix C. Current peak hour intersection approach/departure data is a necessary input to this approach. The existing traffic count data serves as both the starting point for the refinement process, and also provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions. The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The Opening Year (2017) traffic volumes have been interpolated from the Year 2035 traffic volumes based upon a portion of the future growth increment.

Project traffic volumes were then added to the Year 2035 SBTAM traffic model volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method (see Appendix D) based on the Highway Capacity Manual – Transportation Research Board Special Report 209. To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection. A signalized intersection is considered deficient (Level of Service F) if the overall intersection critical

volume to capacity ratio equals or exceeds 1.0, even if the Levels of Service defined by the delay value is below the defined Level of Service standard. The volume to capacity ratio is defined as the critical volumes divided by the intersection capacity. A volume to capacity ratio greater than 1.0 implies an infinite queue.

The Level of Service analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of two seconds per phase. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings has also been considered in the signalized intersection analysis. The following formula has been used to calculate the pedestrian minimum times for all Highway Capacity Manual runs:

(Curb to curb distance) / (3.5 feet/second) + 7 seconds.

For existing/existing plus project/Opening Year traffic conditions, saturation flow rates of 1,800 vehicles per hour of green for through and right turn lanes and 1,700 vehicles per lane for single left turn lanes, 1,600 vehicles per lane for dual left turn lanes and 1,500 vehicles per lane for triple left turn lanes have been assumed for the capacity analysis.

For Year 2035 traffic conditions, saturation flow rates of 1,900 vehicles per hour of green for through and right turn lanes and 1,800 vehicles per lane for single left turn lanes, 1,700 vehicles per lane for dual left turn lanes and 1,800 vehicles per lane for double right turn lanes have been assumed for the capacity analysis.

The peak hour traffic volumes have been adjusted to peak 15 minute volumes for analysis purposes using the existing observed peak 15 minute to peak hour factors for all scenarios analyzed. Where feasible improvements in accordance with the local jurisdiction's General Plan and which result in acceptable operations cannot be identified, the Year 2035 peak hour factor has been adjusted upwards to 0.95. This is to account for the effects of congestion on peak spreading. Peak spreading refers to the tendency of traffic to spread more evenly across time as congestion increases.

The traffic mitigation needs anticipated at the time of the project opening with full occupancy and for the Year 2035 were combined into a summary of mitigation requirements and costs. The mitigation cost responsibility for the proposed development was estimated based on the percent of the increase in traffic from the existing condition to the Year 2035 that was attributed to the project generated trips.

D. Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with the City of Loma Linda requirements.

1. Definition of Deficiency

The definition of an intersection deficiency has been obtained from the City of Loma Linda General Plan and Measure V. The General Plan and Measure V state that peak hour intersection operations of Level of Service C or better are generally acceptable. To assure the adequacy of various public services and prevent degradation of the

quality of life experienced by the residents of Loma Linda, all new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, traffic Levels of Service are maintained at a minimum of Level of Service C throughout the City, except where the current Level of Service is lower than Level of Service C. In any location where the Level of Service is below Level of Service C at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the level of traffic service is maintained at Levels of Service that are no worse than those existing at the time an application for development is filed. In any location where the Level of Service is F at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the volume to capacity ratio is maintained at a volume to capacity ratio that is no worse than that existing at the time an application for development is filed. Projects where sufficient mitigation to achieve the above stated objectives is infeasible shall not be approved unless and until the necessary mitigation measures are identified and implemented.

For freeway facilities, the Congestion Management Program controls the definition of deficiency for purposes of this study. The Congestion Management Program definition of deficiency is based on maintaining a Level of Service standard of Level of Service E or better, except where an existing Level of Service F condition is identified in the Congestion Management Program document (San Bernardino County Congestion Management Program Table 2-1). A Congestion Management Program deficiency is, therefore, defined as any freeway segment operating or projected to operate at Level of Service F, unless the segment is identified explicitly in the Congestion Management Program document.

The identification of a Congestion Management Program deficiency requires further analysis in satisfaction of Congestion Management Program requirements, including:

- Evaluation of the mitigation measures required to restore traffic operations to an acceptable level with respect to Congestion Management Program Level of Service standards.

- Calculation of the project share of new traffic on the impacted Congestion Management Program facility during peak hours of traffic.

- Estimation of the cost required to implement the improvements required to restore traffic operations to an acceptable Level of Service as described above.

This study incorporates each of these aspects for all locations where a Congestion Management Program deficiency is identified.

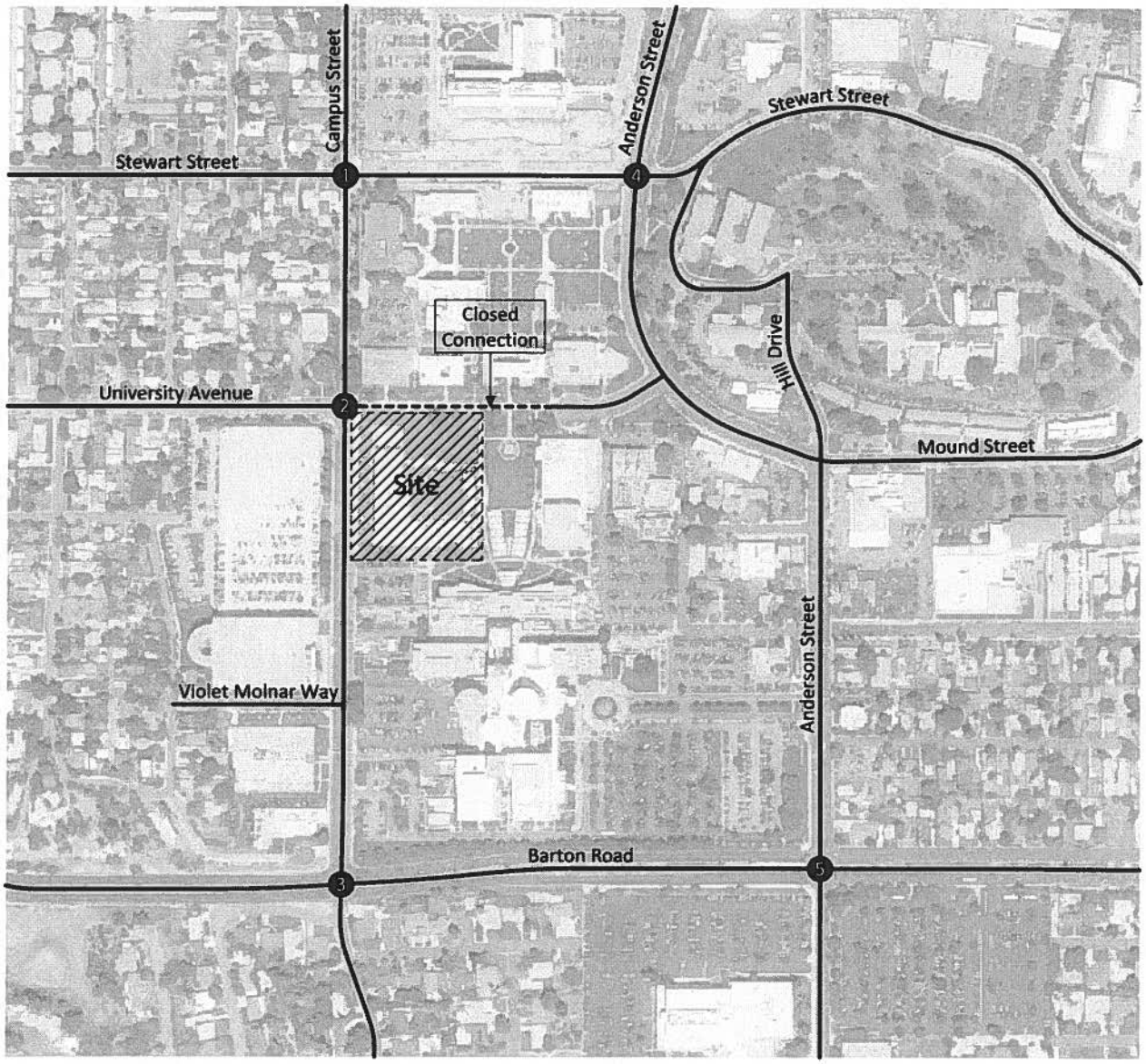
2. <u>Definition of Significant Impact</u>

The identification of significant impacts is a requirement of the California Environmental Quality Act. The City of Loma Linda General Plan and Circulation Element have been adopted in accordance with California Environmental Quality Act

requirements, and any roadway improvements within the City of Loma Linda that are consistent with these documents are not considered a significant impact, so long as the project contributes its "fair share" funding for improvements.

A traffic impact is considered significant if the project both: i) contributes measurable traffic to and ii) substantially and adversely changes the Level of Service at any off-site location projected to experience deficient operations under foreseeable cumulative conditions, where feasible improvements consistent with the City of Loma Linda General Plan cannot be constructed.

Figure 1
Project Location Map



Legend

1 = Intersection Reference Number

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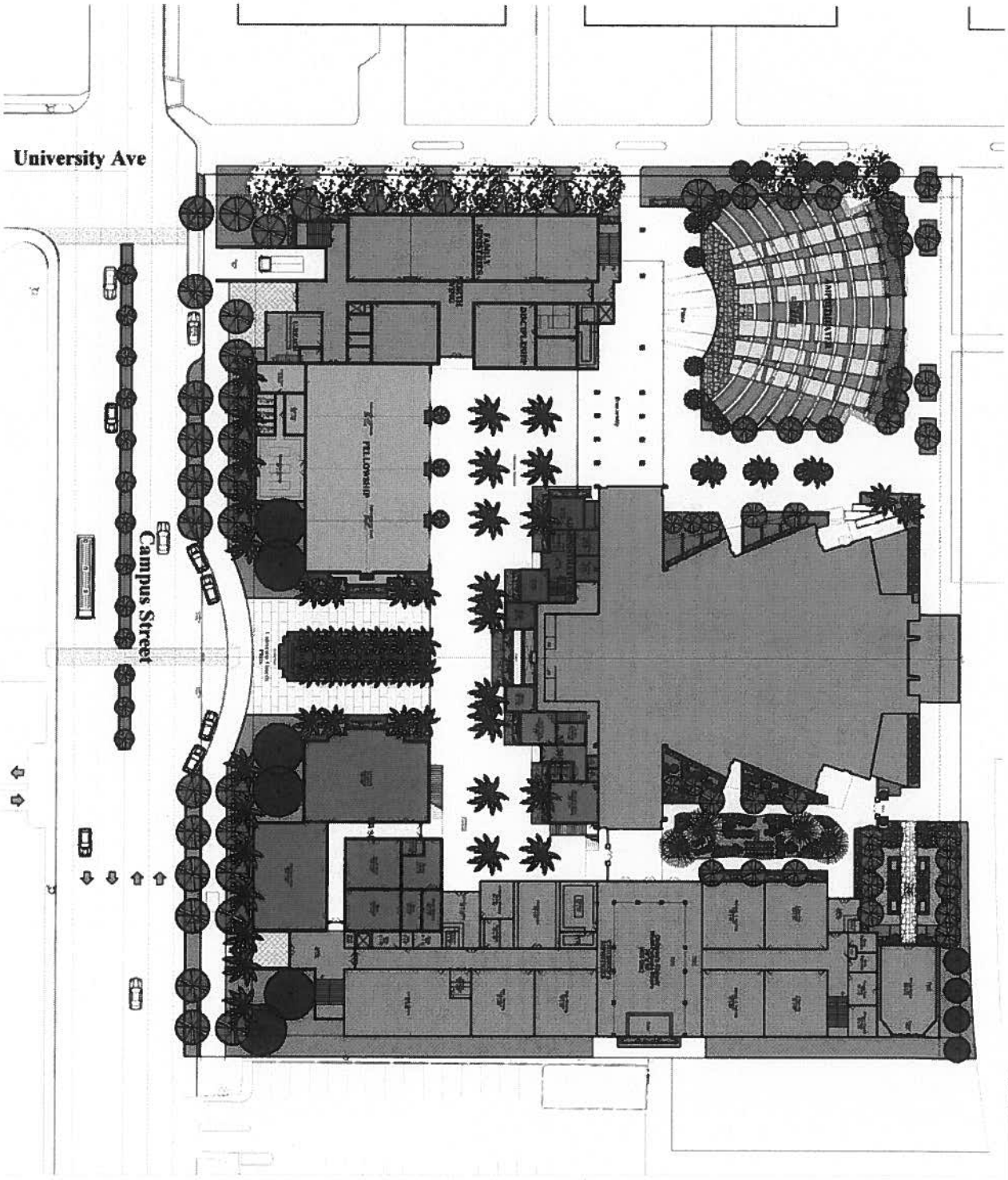
Figure 2
Site Plan



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II. Existing Conditions

A. Existing Roadway System

Figure 3 identifies the existing conditions for the study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The north-south roadways which will be most affected by the project include Campus Street and Anderson Street. The east-west roadways expected to provide local access include Stewart Street, University Avenue, and Barton Road.

B. Existing Volumes

Existing intersection traffic conditions were established through Saturday mid-day peak hour traffic counts obtained by Kunzman Associates, Inc. from October 2014 (see Appendix B) and shown on Figure 4. Explicit peak hour factors have been calculated using the data collected for this effort as well. The Saturday mid-day peak hour traffic volumes were identified by counting the four-hour period from 8:00 AM – 12:00 AM.

C. Existing Level of Service

The existing delay and Level of Service for the intersections in the vicinity of the project are shown in Table 1. The study area intersections currently operate at Level of Service C or better during the Saturday mid-day peak hour for existing traffic conditions, except for the following study area intersection that currently operates at Levels of Service D during the Saturday mid-day peak hour:

Anderson Street (NS) at:
Barton Road (EW) - #5

Existing delay worksheets are provided in Appendix D.

D. Planned Transportation Improvements and Relationship to General Plan

The City of Loma Linda General Plan Circulation Element is shown on Figure 5. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 5. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Loma Linda General Plan roadway cross-sections are illustrated on Figure 6.

Table 1

Existing Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]
			Northbound			Southbound			Eastbound			Westbound			
			L	T	R	L	T	R	L	T	R	L	T	R	Saturday
Campus Street (NS) at:															
Stewart Street (EW) - #1	Loma Linda	TS[4]	0.5	0.5	1	0	1	0	0	1	0	0.5	0.5	1	8.6-A
University Avenue (EW) - #2	Loma Linda	AWS	0	1	0	0	1	0	0	1	0	0	0	0	9.8-A
Barton Road (EW) - #3	Loma Linda	TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1	30.3-C
Anderson Street (NS) at:															
Stewart Street (EW) - #4	Loma Linda	TS	1	2	d	1	2	d	1	0.5	0.5	1	0.5	0.5	26.9-C
Barton Road (EW) - #5	Loma Linda	TS	1	0.5	0.5	1	1	1	2	2	1	1	2	1	3S.1-D

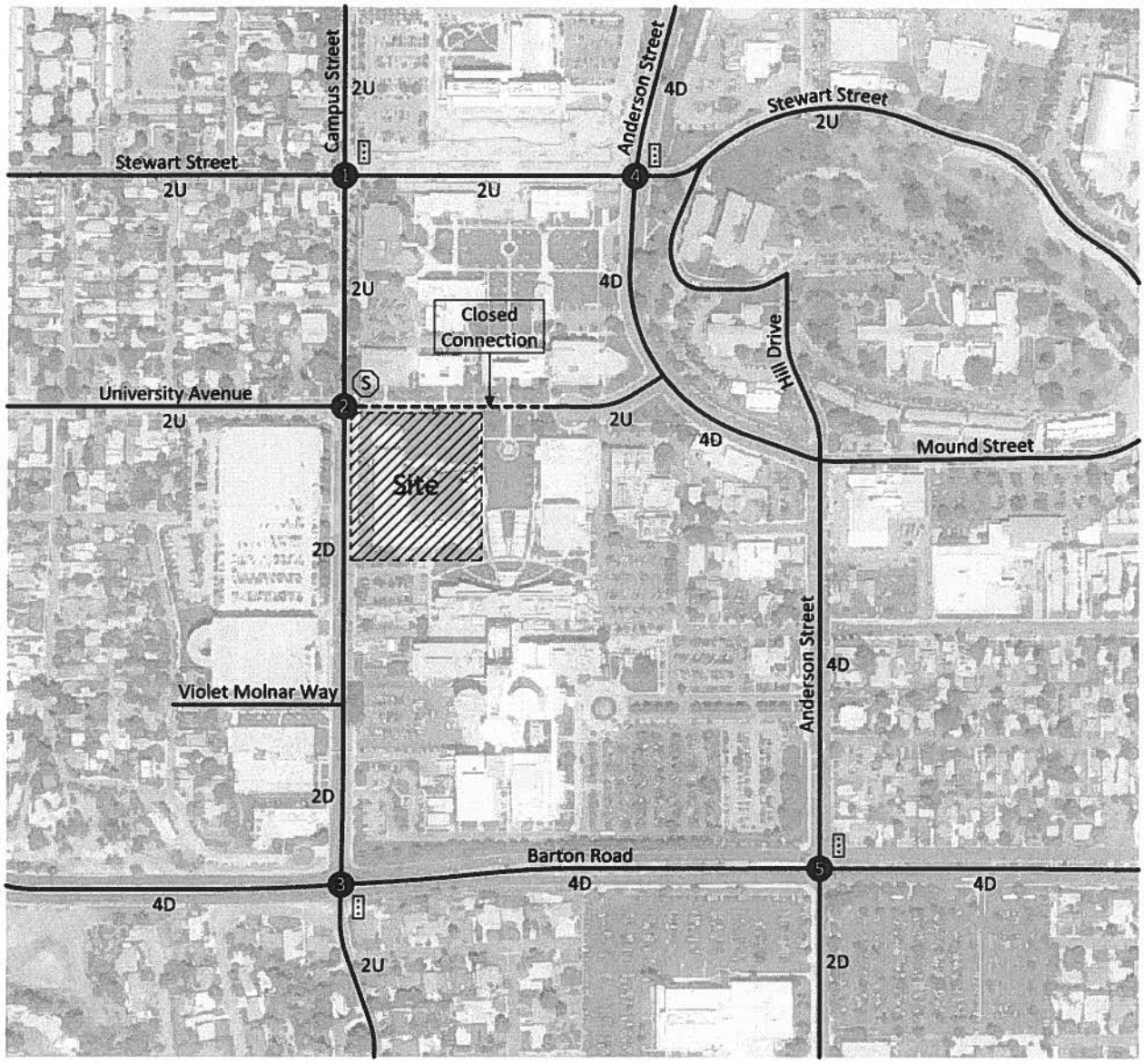
[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane.

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; AWS = All Way Stop; CSS = Cross Street Stop

[4] A traffic signal has been recently installed at the Campus Street/Stewart Street intersection in conjunction with the opening of the Stewart Street undercrossing.

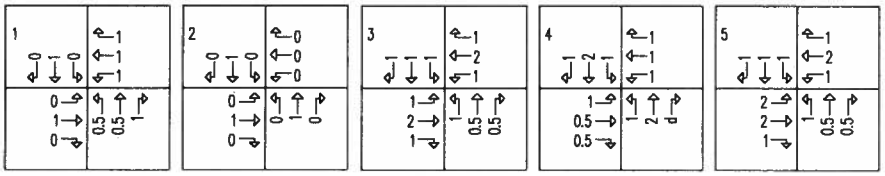
Figure 3
Existing Through Travel Lanes and Intersection Controls



Legend

- = Traffic Signal
- = All Way Stop
- = Stop Sign

4 = Through Travel Lanes
D = Divided
U = Undivided
d = De Facto Right Turn



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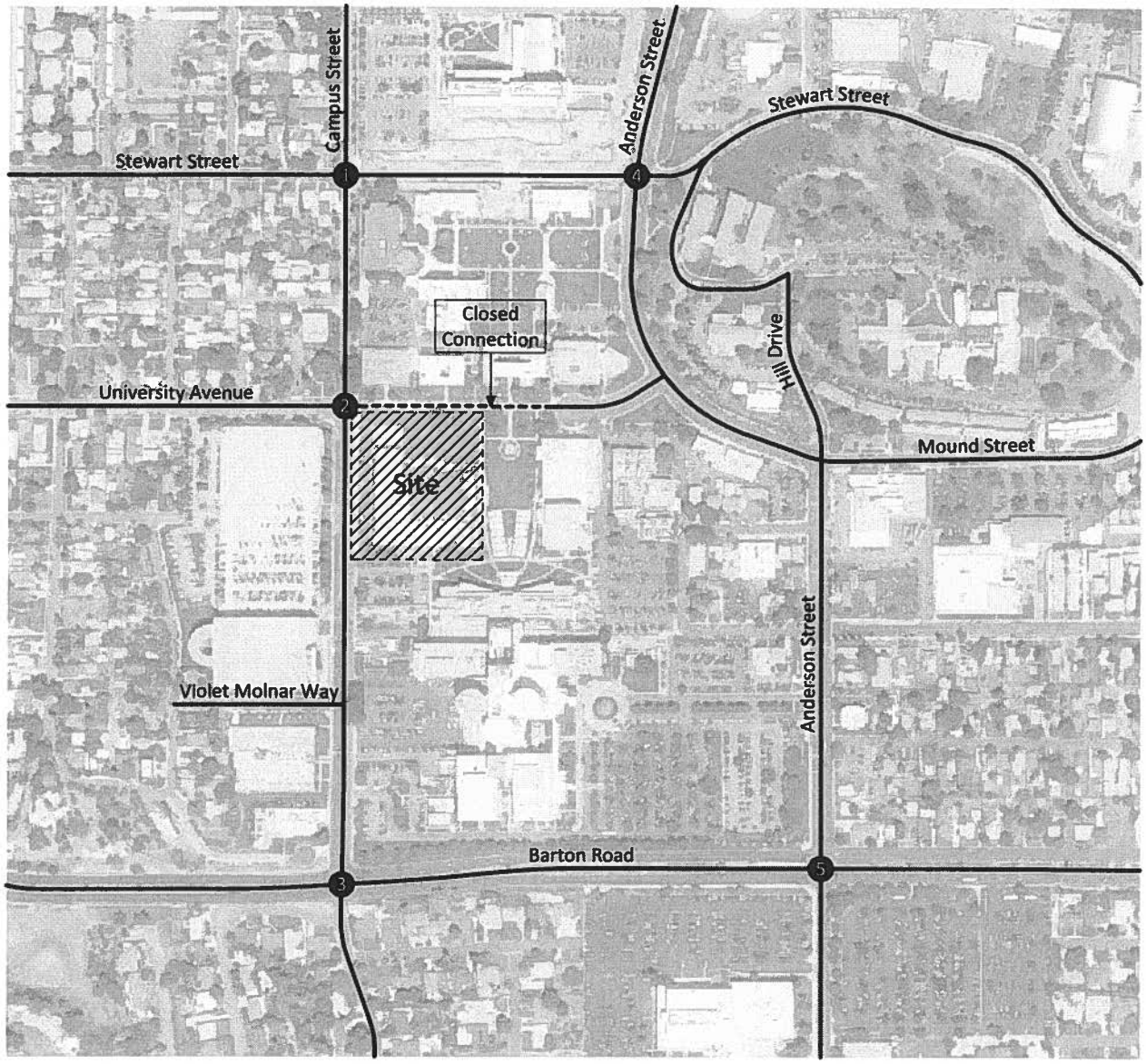
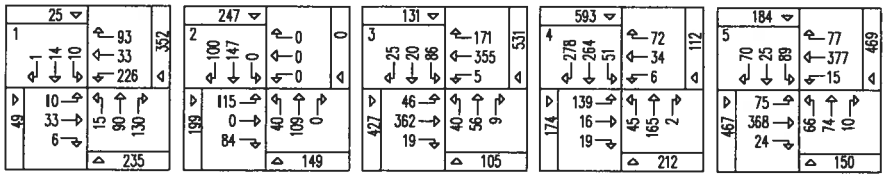
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 4
Existing Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes





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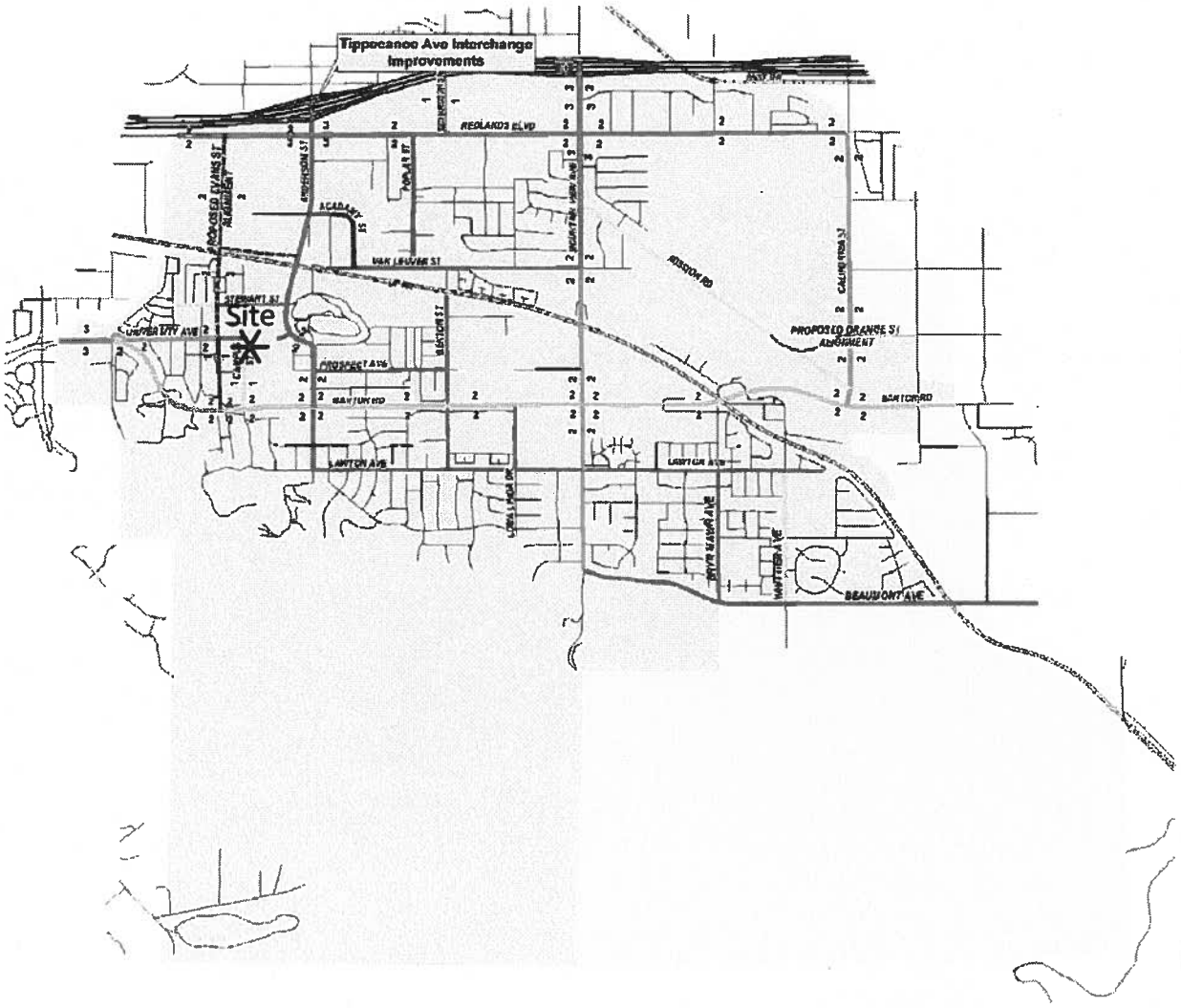
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 5
City of Loma Linda General Plan Circulation Recommendations



Legend

- FUTURE ROADWAY
- 2-LANE UNDIVIDED LOCAL STREET
- 2-LANE UNDIVIDED ROADWAY
- 2-LANE DIVIDED ROADWAY
- 4-LANE UNDIVIDED ROADWAY
- 4-LANE DIVIDED ROADWAY
- MODIFIED 4-LANE UNDIVIDED ROADWAY
- 6-LANE UNDIVIDED ROADWAY
- 6-LANE DIVIDED ROADWAY

JURISDICTIONAL AND INFRASTRUCTURE

- SPHERE OF INFLUENCE
- CITY LIMIT
- FREEWAY
- RAILROAD

Source: City of Loma Linda

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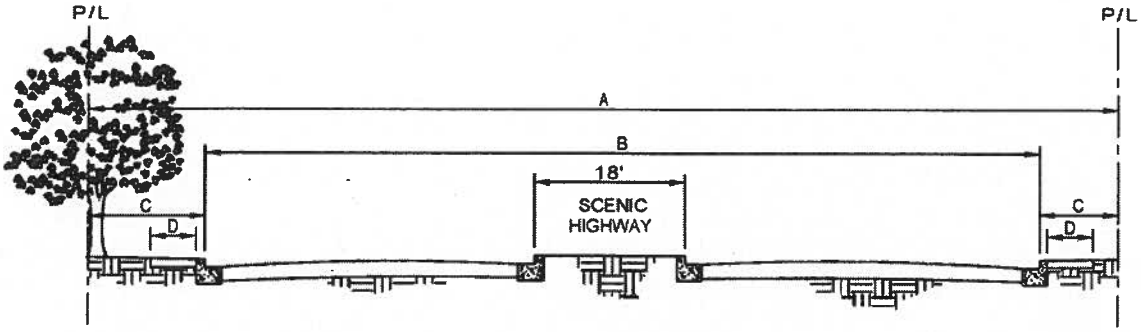
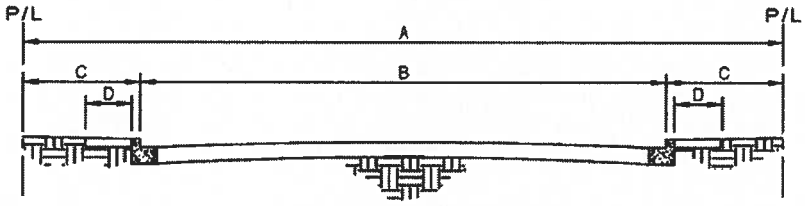
Figure 6
City of Loma Linda General Plan Roadway Cross-Sections



MAJOR ARTERIAL SECTION



STANDARD SECTION

	DIMENSIONS				MIN. PAVING	
STREET-TYPE	A	B	C	D*	T.I.	AC"/CAB"
LOCAL	60'	36'	12'	5'	6	3.5"/6"
COLLECTOR	64'	40'	12'	5'	6	3.5"/6"
COLLECTOR (SPECIAL)	66'	44'	11'	5'	7	4/6
SECONDARY HIGHWAY	88'	64'	12'	5'	8	4/7
MAJOR HIGHWAY	100'	72'	14'	5'	9	5/8
SCENIC HIGHWAY	120'	94'	13'	5'	9	5/8

*SIDEWALK EXTENDS TO PROPERTY LINE IN COMMERCIAL ZONE

Source: City of Loma Linda

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III. Project Traffic

A. Project Description

The applicant is proposing an expansion of 375 occupancy-seating in an auxiliary chapel at an existing facility with 1,844 occupancy-seating in the main sanctuary. The project will have access to Campus Street and University Avenue.

B. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are based on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hours inbound and outbound traffic, evening peak hours inbound and outbound traffic and weekend peak hours inbound and outbound traffic for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012 and data provided by the applicant.

The church will generate the most trips during Saturday morning weekend services. As shown in Table 2, the proposed development is projected to generate approximately 226 Saturday mid-day peak hour vehicle trips, 98 of which will occur inbound and 128 of which will occur outbound.

The weekday trips projected to be generated by the proposed development is approximately 229 daily weekday vehicle trips, 16 of which will occur during the morning peak hours and 16 of which will occur during the evening peak hours. In addition, the weekday services which occur on Tuesday and Wednesday evenings were also reviewed. The 5:00 PM Tuesday service has an attendance rate of 60-70 students. Students primarily walk to this service. The 6:00 PM Wednesday service has an attendance rate of 50-60 persons. Using a conservative vehicle occupancy rate of 1.67[3], the resulting trips would be 36 inbound evening peak hour trips on Wednesday. Weekday trips do not generate the 50 trips at a single intersection which would require analysis during the weekdays.

C. Trip Distribution

To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were

[3] Source: Federal Highway Administration, 2009 National Household Travel Survey, June 2011.

reviewed. Figures 7 and 8 contain the directional distributions of the project trips for the proposed land use.

D. Trip Assignment

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 9. Saturday mid-day peak hour intersection turning movement volumes expected from the project are shown on Figure 10.

E. Project Traffic Contribution Test

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Horizon Year) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments are required to be included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways. Figure 11 graphically depicts the project traffic contribution test volumes on all of the roadway segments until the project volume contribution has clearly dropped below the 50 trip threshold and 100 trip thresholds.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 Freeway. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections outside of the City of Loma Linda[4].

[4] The purpose of this notification is to allow the California Department of Transportation and other agencies to identify opportunities to make improvements to intersections concurrent with adjacent development, at considerably less cost and disruption than would occur if it were done after-the-fact.

Table 2

Project Trip Generation[1]

Land Use	Quantity	Units[5]	Weekday							Weekend[2]		
			Morning Peak Hour[3]			Evening Peak Hour[4]			Daily	Mid-Day Peak Hour		
			Inbound	Outbound	Total	Inbound	Outbound	Total		Inbound	Outbound	Total
Trip Generation Rates												
Church		SEATS	0.02	0.02	0.04	0.02	0.02	0.04	0.61	0.26	0.34	0.60
Trips Generated												
Proposed Children's Chapel[6]	375	SEATS	8	8	16	8	8	16	229	98	128	226
Proposed Increase	375	SEATS	8	8	16	8	8	16	229	98	128	226

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 560.

[2] Weekend services are on Saturday.

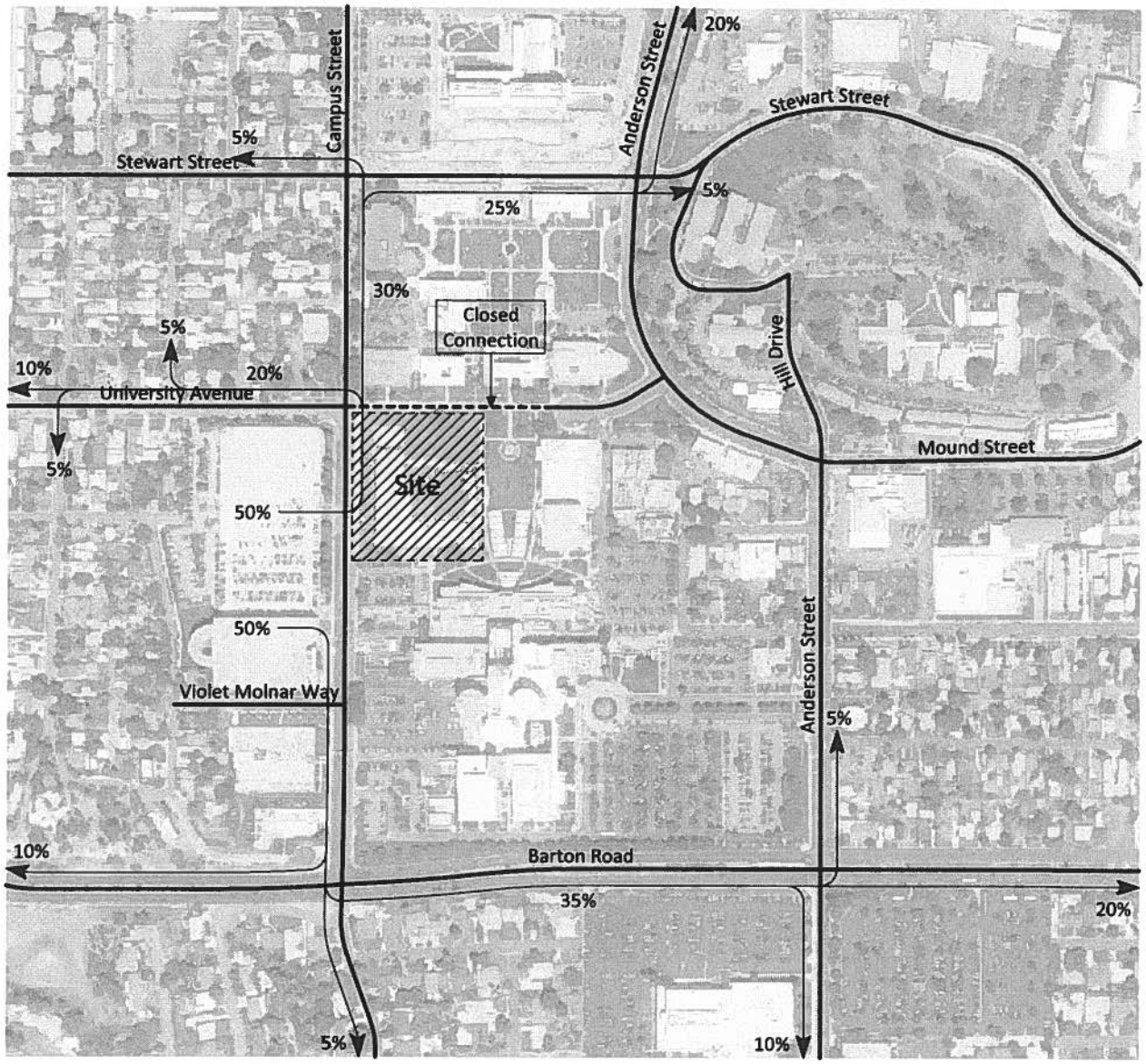
[3] Morning Peak Hour to Weekday Ratio is from Land Use Category 560 (square footage).

[4] Evening Peak Hour to Weekday Ratio from Land Use Category 560 (square footage).

[5] SEATS = Seats available during Church Services.

[6] The children's chapel (375 occupants) may be used during services which would provide additional seating of adults in the main sanctuary. The children's chapel with also serve during the weekday service when the 210 seat Fellowship Hall is demolished for reconstruction. The prayer chapel (50 occupants) is intend for quiet reflection or special use and not for use during services.

Figure 7
Project Outbound Trip Distribution



Legend

10% = Percent From Project

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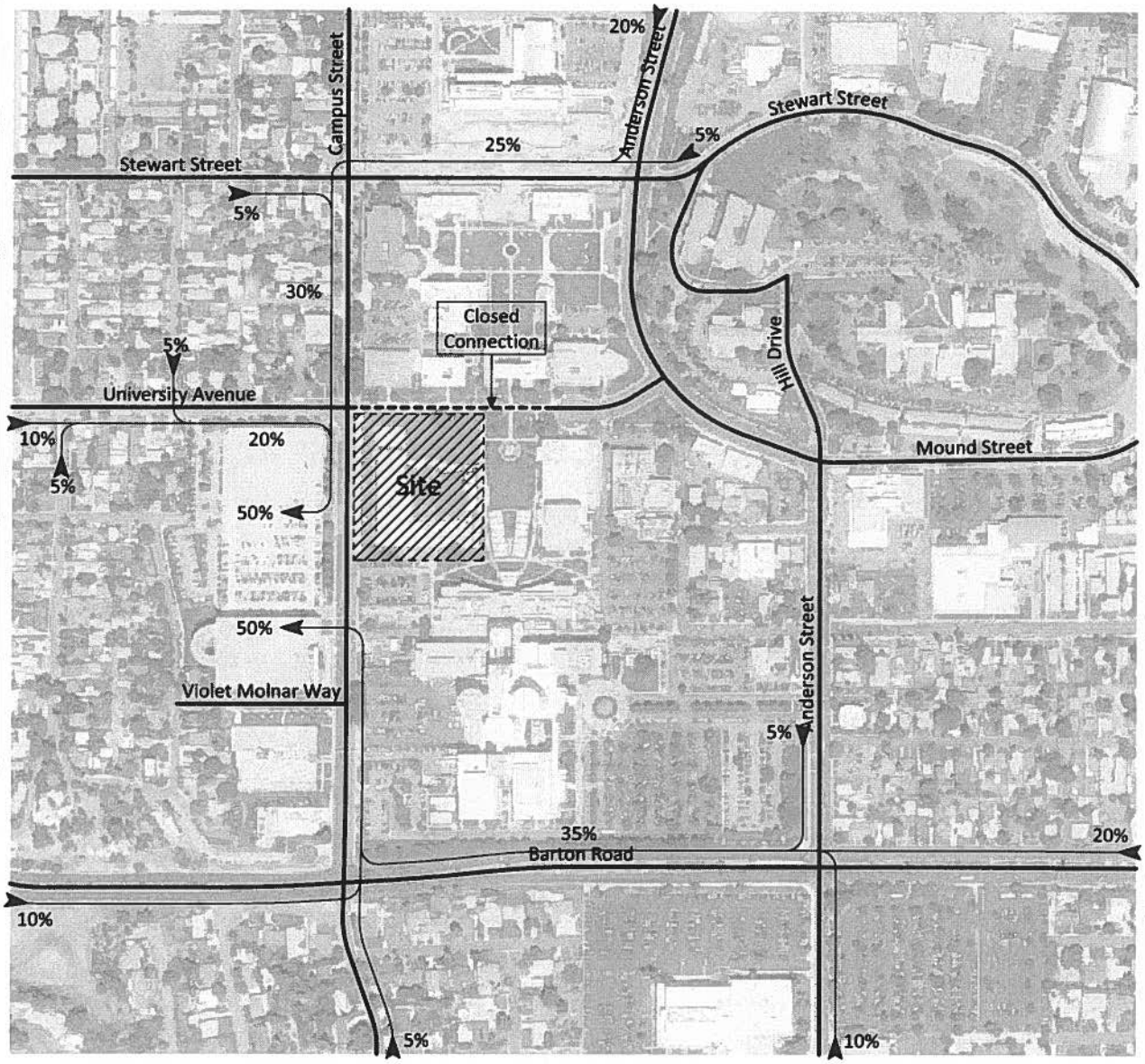
Figure 8
Project Inbound Trip Distribution



Legend

10% = Percent To Project

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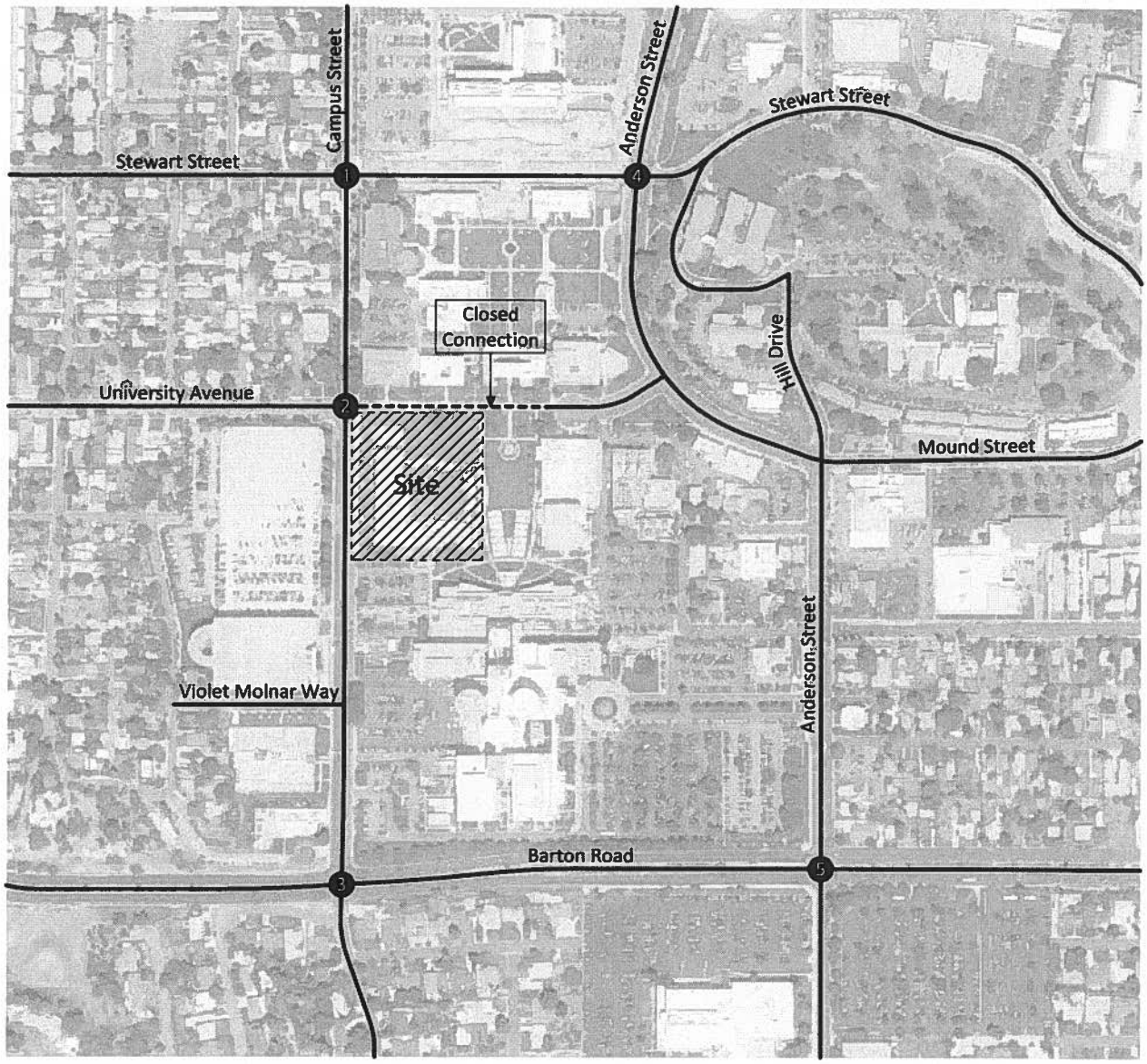
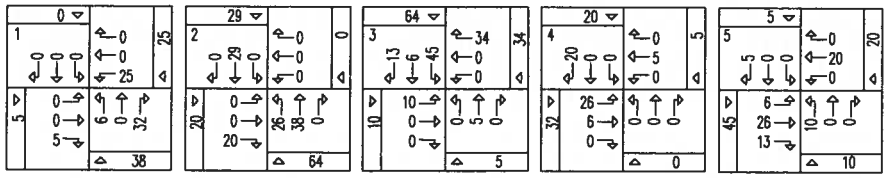
Figure 9
Project Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes





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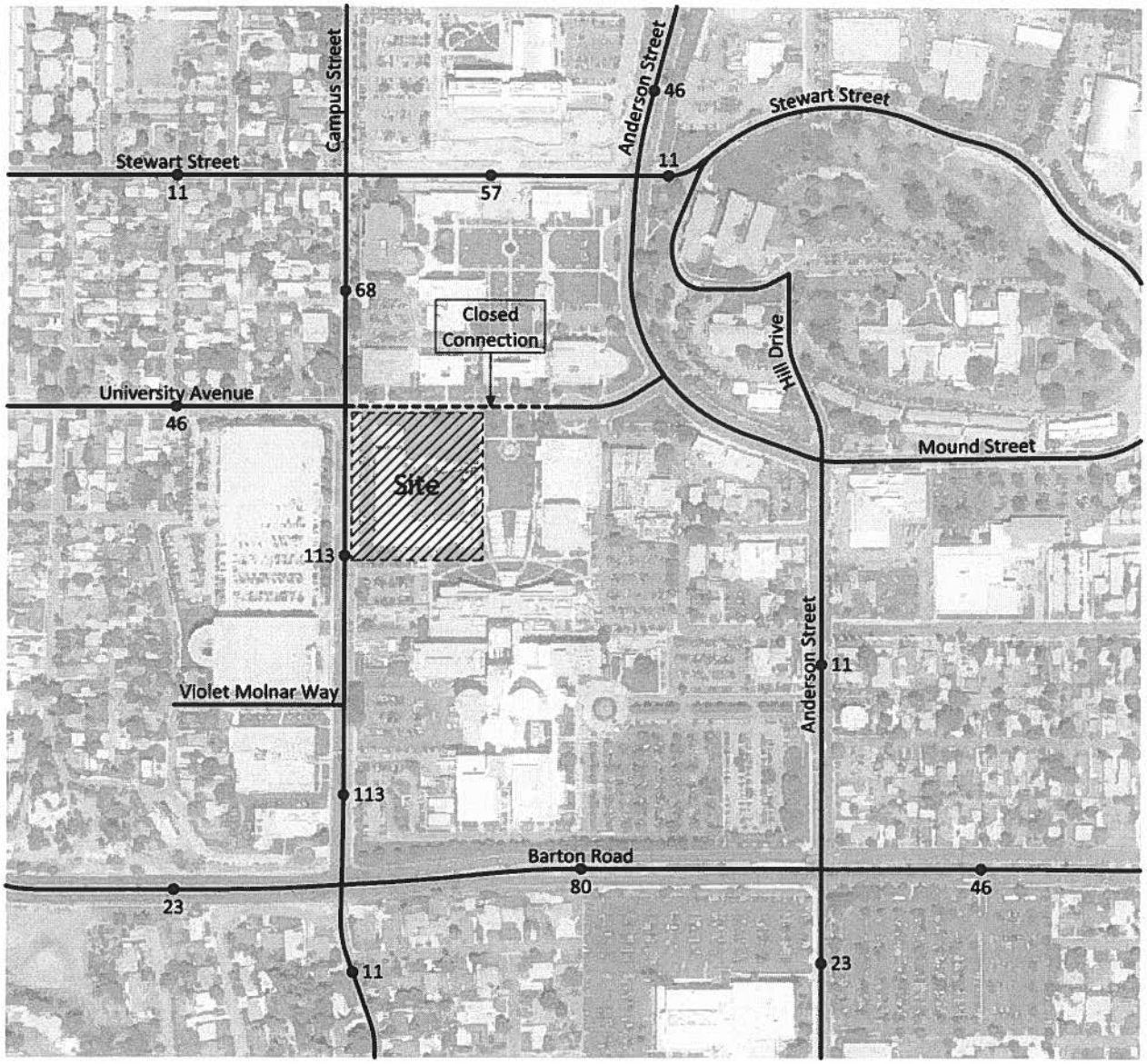
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 10
Project Contribution Test Volumes



Legend

23 = Saturday Peak Hour Volumes

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IV. Future Conditions

A. Future Volumes

As described within Section I.C., the Year 2035 average daily traffic volume forecasts with the project are developed using a growth increment process based on volumes predicted by the SBTAM traffic model Year 2008 and Year 2035 traffic models. The growth increment for Year 2035 on each roadway segment is the increase in SBTAM traffic model volumes from existing Year 2014 to Year 2035. The final Year 2035 roadway segment volume used for analysis purposes is then determined by adding the Year 2035 growth increment volume to the existing counted volume.

The Opening Year (2017) traffic projections have been interpolated between Year 2035 traffic volumes and existing traffic volumes utilizing a portion of the growth increment (see Section I.C.). Project traffic volumes for all future projections were estimated using the manual approach.

Project traffic volumes were then added to the Opening Year (2017) and Year 2035 traffic volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

B. Future Level of Service

1. Existing Plus Project

The Existing Plus Project delay and Level of Service for the study area roadway network are shown in Table 3. Table 3 shows delay values based on the existing geometrics at the study area intersections. Existing Plus Project delay calculation worksheets are provided in Appendix D. Existing Plus Project Saturday mid-day peak hour intersection turning movement volumes are shown on Figure 11.

For Existing Plus Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 3, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Existing Plus Project traffic conditions.

2. Opening Year (2017) Without Project

The Opening Year (2017) delay and Level of Service for the study area roadway network without the proposed project are shown in Table 4. Table 4 shows delay values based on geometrics at the study area intersections without and with improvements. Opening Year (2017) Without Project delay calculation worksheets are provided in Appendix D. Opening Year (2017) Without Project Saturday mid-day peak hour intersection turning movement volumes are shown on Figure 12.

For Opening Year (2017) Without Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 4, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Opening Year (2017) Without Project traffic conditions.

3. Opening Year (2017) With Project

The Opening Year (2017) delay and Level of Service for the study area roadway network with the proposed project are shown in Table 5. Table 5 shows delay values based on geometrics at the study area intersections without and with improvements. Opening Year (2017) With Project delay calculation worksheets are provided in Appendix D. Opening Year (2017) With Project Saturday mid-day peak hour intersection turning movement volumes are shown on Figure 13.

For Opening Year (2017) With Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 5, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Opening Year (2017) With Project traffic conditions.

4. Year 2035 Without Project

The Year 2035 delay and Level of Service for the study area roadway network without the proposed project are shown in Table 6. Table 6 shows delay values based on the geometrics at the study area intersections without and with improvements. Year 2035 Without Project delay calculation worksheets are provided in Appendix D. Year 2035 Without Project Saturday mid-day peak hour intersection turning movement volumes are shown on Figure 14.

For Year 2035 Without Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 6, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Year 2035 Without Project traffic conditions, with improvements.

5. Year 2035 With Project

The Year 2035 delay and Level of Service for the study area roadway network with the proposed project are shown in Table 7. Table 7 shows delay values based on the geometrics at the study area intersections without and with improvements. Year 2035 With Project delay calculation worksheets are provided in Appendix D. Year 2035 With Project Saturday mid-day peak hour intersection turning movement volumes are shown on Figure 15.

For Year 2035 With Project traffic conditions, the following study area intersections are projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Campus Street (NS) at:
Barton Road (EW) - #3

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 7, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Year 2035 With Project traffic conditions, with improvements.

C. Future Traffic Signal Warrant Analysis

A traffic signal is projected to be warranted at the following study area intersection for Opening Year (2017) with Project traffic conditions (see Appendix E):

Campus Street (NS) at:
University Avenue (EW) - #2

The unsignalized intersection has been evaluated for a traffic signal using the California Department of Transportation Warrant 3 Peak hours traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices (January 2012).

Table 3

Existing Plus Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]
			Northbound			Southbound			Eastbound			Westbound			
			L	T	R	L	T	R	L	T	R	L	T	R	Saturday
Campus Street (NS) at:															
Stewart Street (EW) - #1	Loma Linda	TS[4]	0.5	0.5	1	0	1	0	0	1	0	0.5	0.5	1	9.1-A
University Avenue (EW) - #2	Loma Linda	AWS	0	1	0	0	1	0	0	1	0	0	0	0	10.9-B
Barton Road (EW) - #3	Loma Linda	TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1	32.4-C
Anderson Street (NS) at:															
Stewart Street (EW) - #4	Loma Linda	TS	1	2	d	1	2	d	1	0.5	0.5	1	0.5	0.5	28.5-C
Barton Road (EW) - #5	Loma Linda	TS	1	0.5	0.5	1	1	1	2	2	1	1	2	1	35.3-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane.

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; AWS = All Way Stop; CSS = Cross Street Stop

[4] A traffic signal has been recently installed at the Campus Street/Stewart Street intersection in conjunction with the opening of the Stewart Street undercrossing.

Table 4

Opening Year (2017) Without Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]
			Northbound			Southbound			Eastbound			Westbound			
			L	T	R	L	T	R	L	T	R	L	T	R	Saturday
Campus Street (NS) at:															
Stewart Street (EW) - #1	Loma Linda	TS[4]	0.5	0.5	1	0	1	0	0	1	0	0.5	0.5	1	10.2-B
University Avenue (EW) - #2	Loma Linda														
- Without Improvements		AWS	0	1	0	0	1	0	0	1	0	0	0	0	10.4-B
- With Improvements		TS[5]	0	1	0	0	1	0	0	1	0	0	0	0	10.1-B
Barton Road (EW) - #3	Loma Linda	TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1	30.9-C
Anderson Street (NS) at:															
Stewart Street (EW) - #4	Loma Linda	TS	1	2	d	1	2	d	1	0.5	0.5	1	0.5	0.5	27.1-C
Barton Road (EW) - #5	Loma Linda	TS	1	0.5	0.5	1	1	1	2	2	1	1	2	1	35.4-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; 3 = Improvements.

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; AWS = All Way Stop; CSS = Cross Street Stop

[4] A traffic signal has been recently installed at the Campus Street/Stewart Street intersection in conjunction with the opening of the Stewart Street undercrossing.

[5] Traffic signal is projected to be warranted for this intersection for Opening Year With Project traffic conditions (See Appendix E).

Table 5

Opening Year (2017) With Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]
			Northbound			Southbound			Eastbound			Westbound			
			L	T	R	L	T	R	L	T	R	L	T	R	Saturday
Campus Street (NS) at:															
Stewart Street (EW) - #1	Loma Linda	TS[4]	0.5	0.5	1	0	1	0	0	1	0	0.5	0.5	1	10.7-B
University Avenue (EW) - #2	Loma Linda														
- Without Improvements		AWS	0	1	0	0	1	0	0	1	0	0	0	0	11.6-B
- With Improvements		TS[5]	0	1	0	0	1	0	0	1	0	0	0	0	10.4-B
Barton Road (EW) - #3	Loma Linda	TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1	33.3-C
Anderson Street (NS) at:															
Stewart Street (EW) - #4	Loma Linda	TS	1	2	d	1	2	d	1	0.5	0.5	1	0.5	0.5	28.8-C
Barton Road (EW) - #5	Loma Linda	TS	1	0.5	0.5	1	1	1	2	2	1	1	2	1	35.6-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; 3 = Improvements.

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; AWS = All Way Stop; CSS = Cross Street Stop

[4] A traffic signal has been recently installed at the Campus Street/Stewart Street intersection in conjunction with the opening of the Stewart Street undercrossing.

[5] Traffic signal is projected to be warranted for this intersection for Opening Year With Project traffic conditions (See Appendix E).

Table 6

Year 2035 Without Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]
			Northbound			Southbound			Eastbound			Westbound			
			L	T	R	L	T	R	L	T	R	L	T	R	Saturday
Campus Street (NS) at:															
Stewart Street (EW) - #1	Loma Linda	TS[4]	0.5	0.5	1	0	1	0	0	1	0	0.5	0.5	1	22.6-C
University Avenue (EW) - #2	Loma Linda														
- Without Improvements		AWS	0	1	0	0	1	0	0	1	0	0	0	0	14.7-B
- With Improvements		TS[5]	0	1	0	0	1	0	0	1	0	0	0	0	10.4-A
Barton Road (EW) - #3	Loma Linda														
- Without Improvements		TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1	34.0-C
- With Improvements		TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1>	31.8-C
Anderson Street (NS) at:															
Stewart Street (EW) - #4	Loma Linda	TS	1	2	d	1	2	d	1	0.5	0.5	1	0.5	0.5	28.0-C
Barton Road (EW) - #5	Loma Linda	TS	1	0.5	0.5	1	1	1	2	2	1	1	2	1	35.8-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane: > = Right Turn Overlap; 3 = Improvements.

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] TS = Traffic Signal; AWS = All Way Stop; CSS = Cross Street Stop

[4] A traffic signal has been recently installed at the Campus Street/Stewart Street intersection in conjunction with the opening of the Stewart Street undercrossing.

[5] Traffic signal is projected to be warranted for this intersection for Future Year Without Project traffic conditions (See Appendix E).

Table 7

Year 2035 With Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]
			Northbound			Southbound			Eastbound			Westbound			
			L	T	R	L	T	R	L	T	R	L	T	R	Saturday
Campus Street (NS) at:															
Stewart Street (EW) - #1	Loma Linda	TS[4]	0.5	0.5	1	0	1	0	0	1	0	0.5	0.5	1	23.8-C
University Avenue (EW) - #2	Loma Linda														
- Without Improvements		AWS	0	1	0	0	1	0	0	1	0	0	0	0	17.3-B
- With Improvements		TS[5]	0	1	0	0	1	0	0	1	0	0	0	0	10.7-A
Barton Road (EW) - #3	Loma Linda														
- Without Improvements		TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1	37.6-D
- With Improvements		TS	1	0.5	0.5	1	1	1	1	2	1	1	2	1>	33.3-C
Anderson Street (NS) at:															
Stewart Street (EW) - #4	Loma Linda	TS	1	2	d	1	2	d	1	0.5	0.5	1	0.5	0.5	29.1-C
Barton Road (EW) - #5	Loma Linda	TS	1	0.5	0.5	1	1	1	2	2	1	1	2	1	36.0-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane: > = Right Turn Overlap; 3 = Improvements.

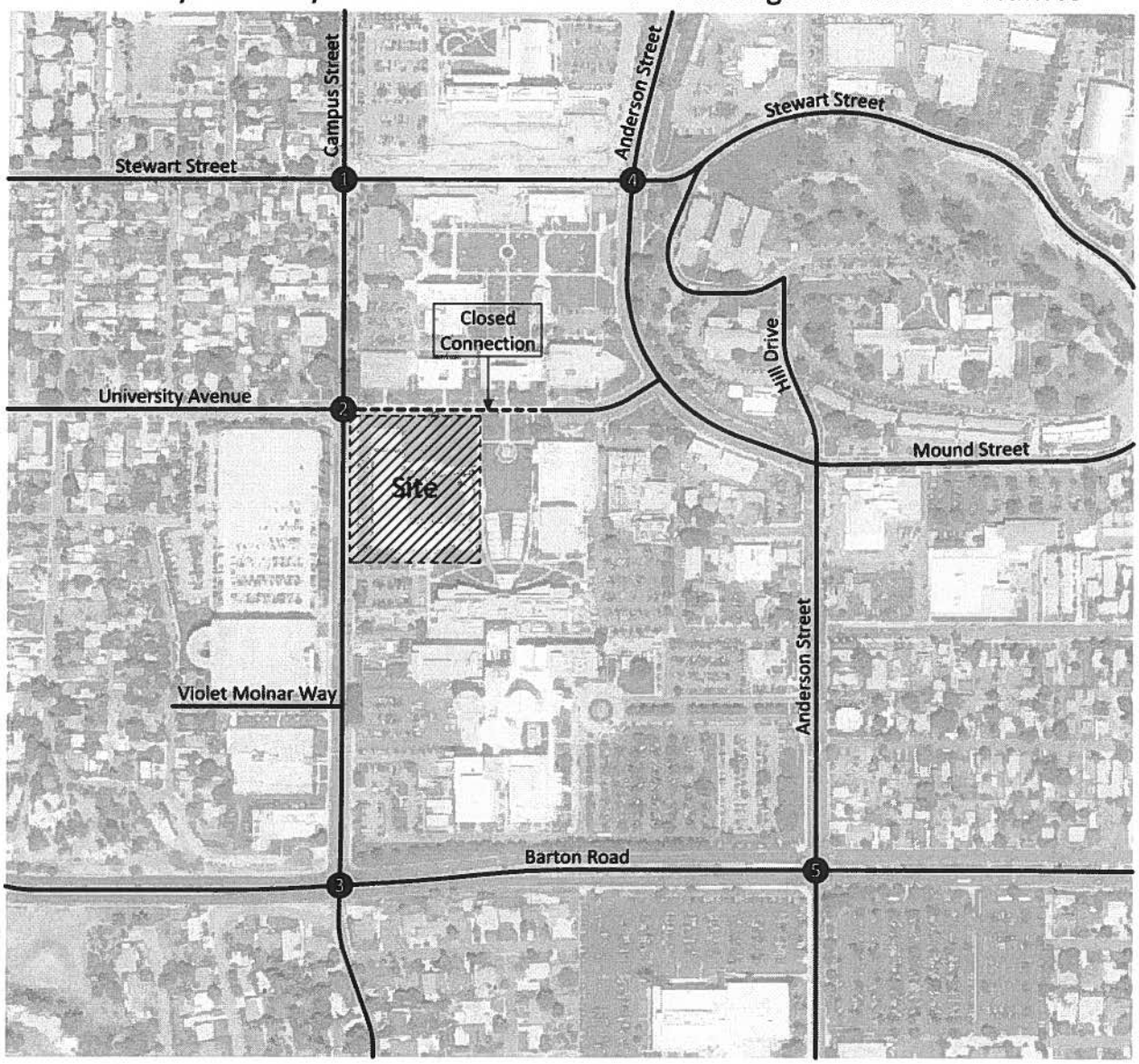
[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

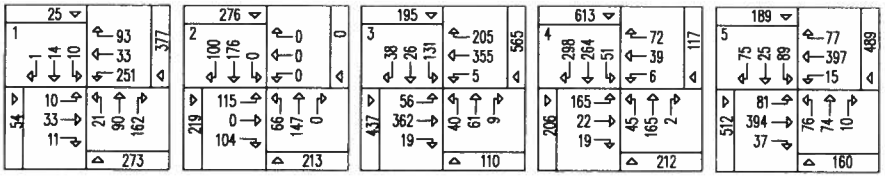
[3] TS = Traffic Signal; AWS = All Way Stop; CSS = Cross Street Stop

[4] A traffic signal has been recently installed at the Campus Street/Stewart Street intersection in conjunction with the opening of the Stewart Street undercrossing.

[5] Traffic signal is projected to be warranted for this intersection for Opening Year With Project traffic conditions (See Appendix E).

Figure 11
Existing Plus Project
Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes



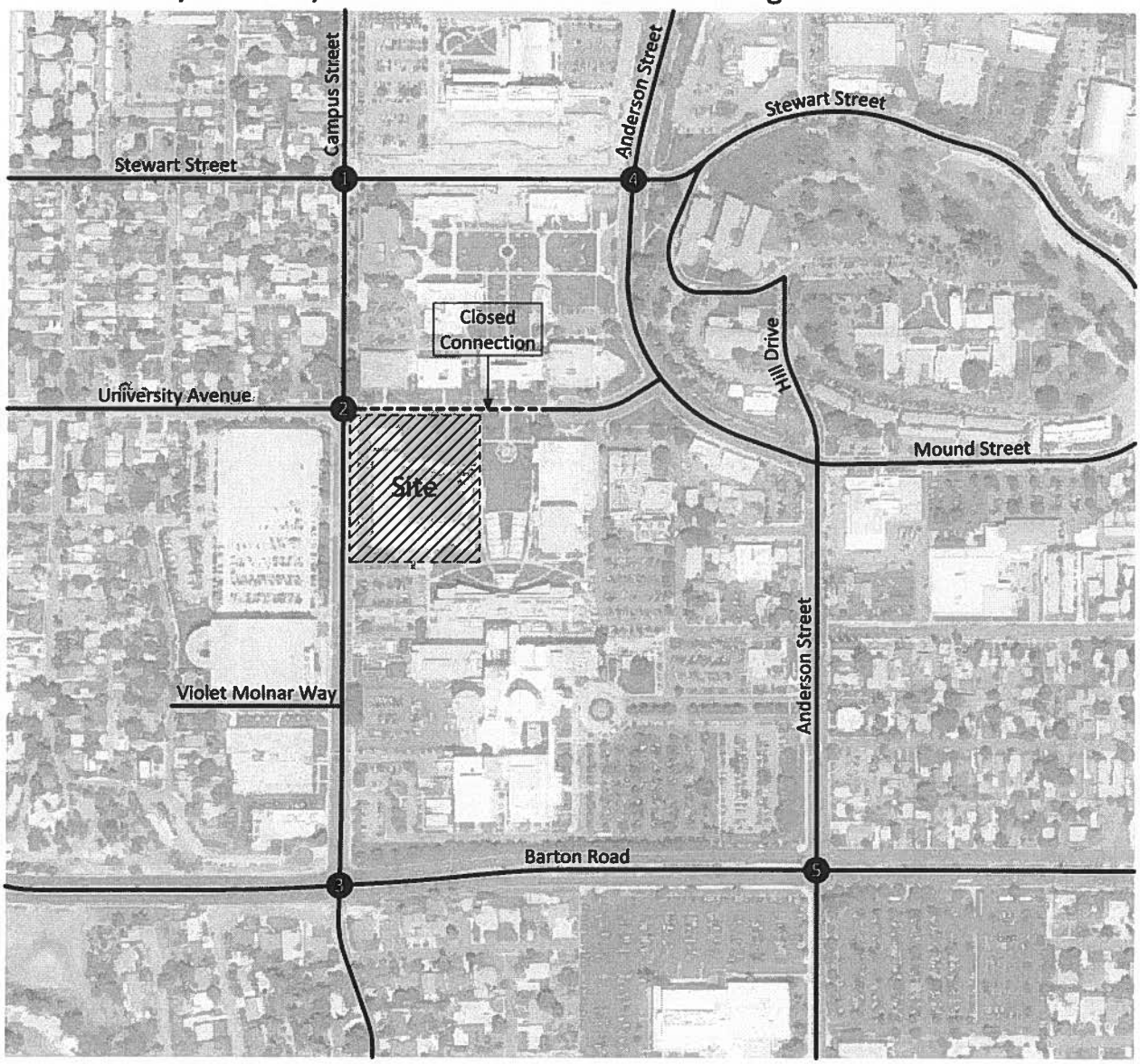


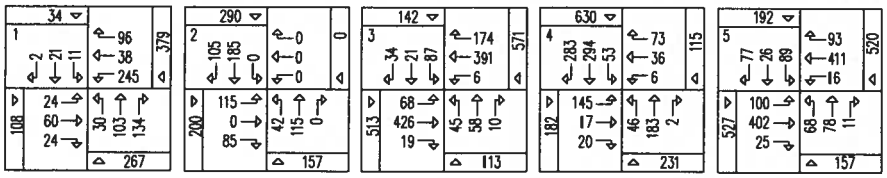
5830/11

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 12
Opening Year (2017) Without Project
Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes



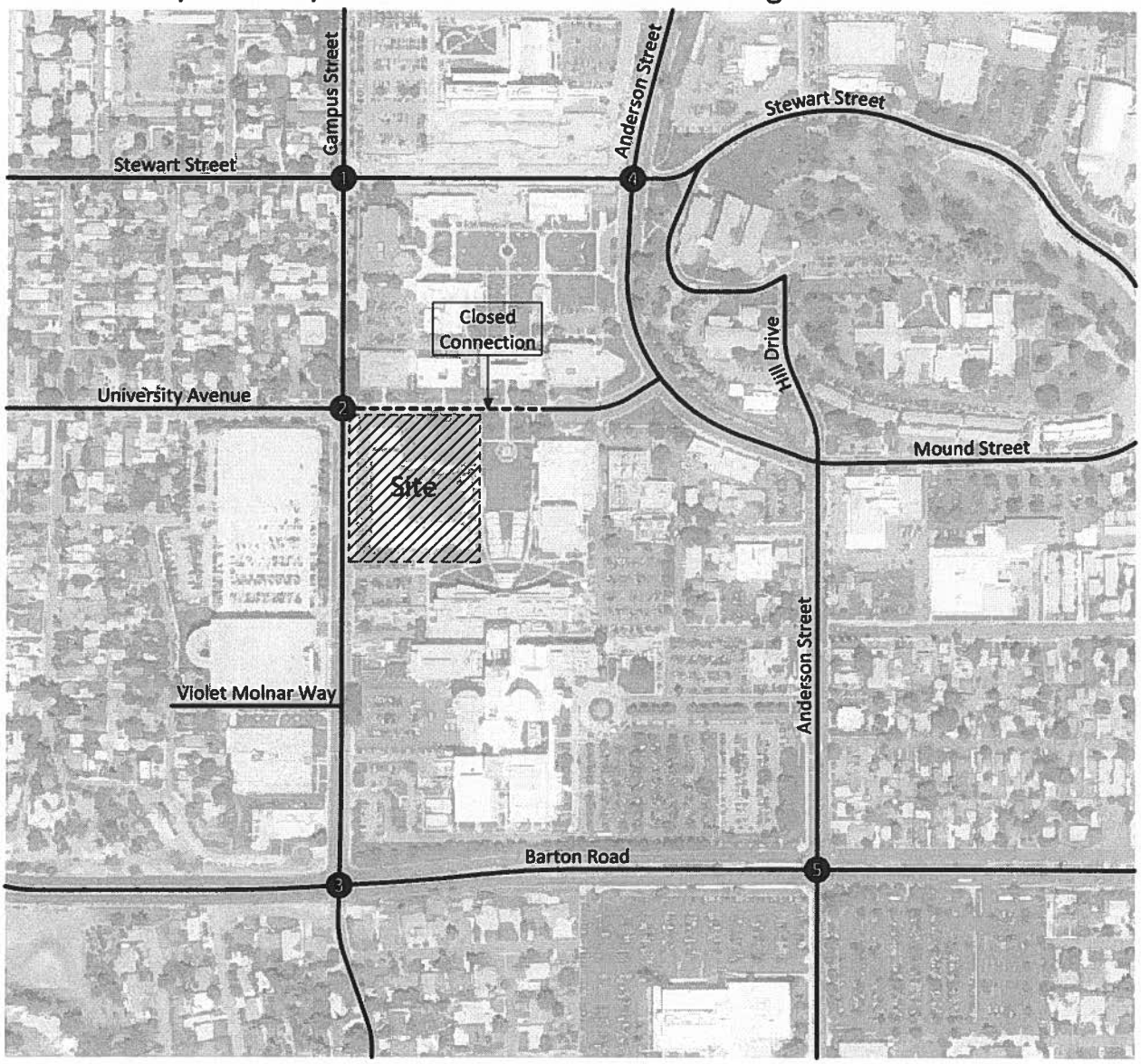


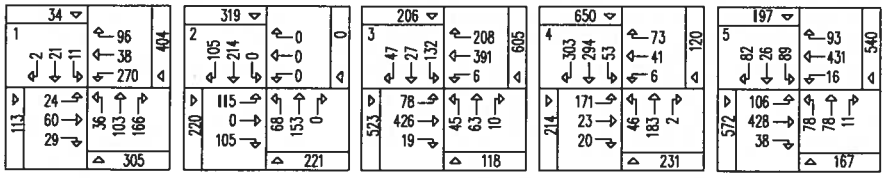
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

5830/12

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 13
Opening Year (2017) With Project
Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes



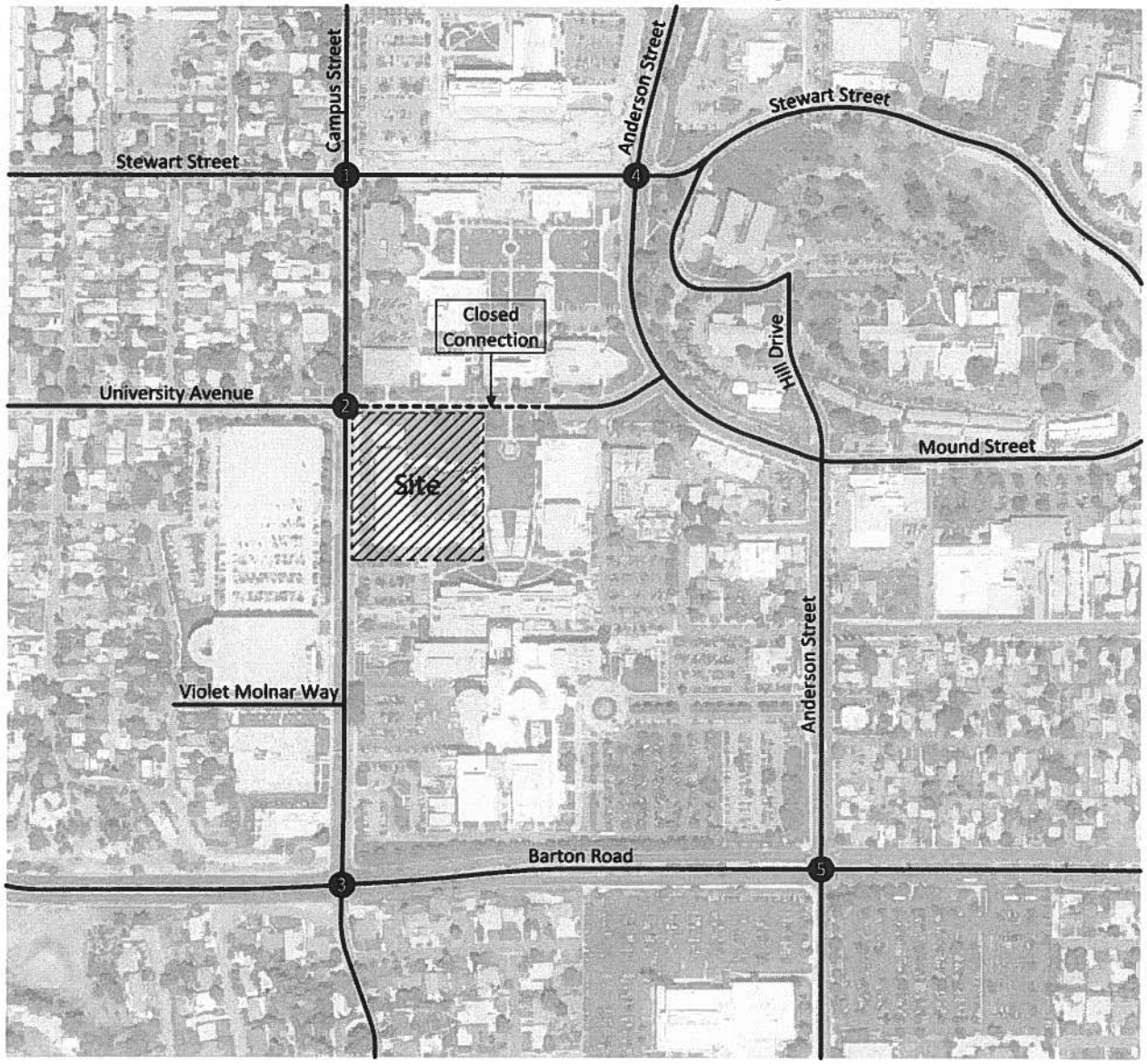


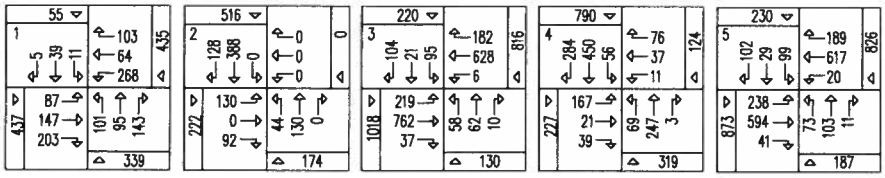
5830/13

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 14
Year 2035 Without Project
Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes



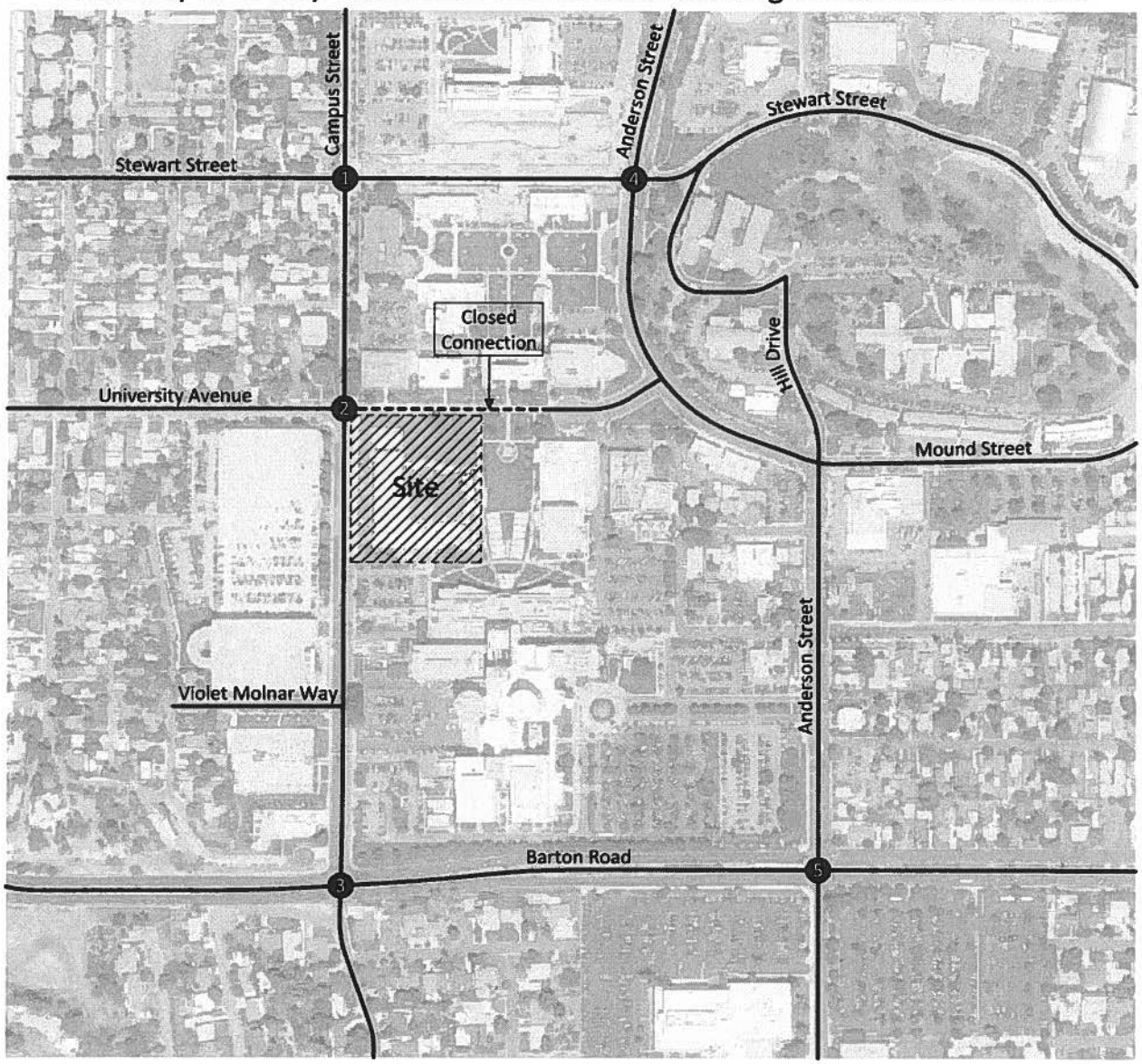


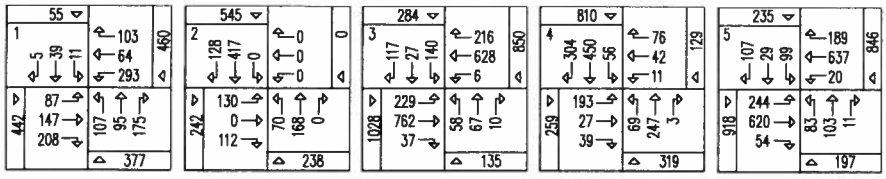
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

5830/14

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 15
Year 2035 With Project
Saturday Mid-Day Peak Hour Intersection Turning Movement Volumes





5830/15

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

V. Project Mitigation

A. Required Improvements and Costs

Improvements that will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for Existing Plus Project, Opening Year (2017), and Year 2035 traffic conditions. The improvements were determined through the operations analysis of Section IV.

The approximate costs for the Year 2035 improvements have generally been estimated using cost guidelines in the Congestion Management Program Handbook (see Appendix F). A unit cost of $400,000 for installation of a traffic signal has been substituted for the somewhat lower value cited in the Congestion Management Program materials. For adding a through lane, a unit cost of $290,000 has been assumed. The needed improvements and resulting costs are summarized in Table 8 for study area intersections.

The total cost of needed and unfunded intersection improvements is $410,000.

B. Project Contribution and Fair Share Costs

The project fair share contributions have also been calculated for Year 2035 improvement locations. The project share of cost has been based on the proportion of project peak hour traffic contributed to the improvement location relative to the total new peak hour Year 2035 traffic volume.

Table 9 presents a summary of improvement cost and project cost shares at the Year 2035 intersection improvement locations. The intersection fair share cost calculations are based on the Saturday mid-day peak hour traffic volumes. As shown in Table 9, the project's fair share of identified intersection costs is $106,141.

The dollar figures are rough order of magnitude estimates only. They are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

Consistent with Measure V, as mitigation for the potential traffic impacts, the proposed project shall contribute on a fair share basis, through an adopted traffic impact fee program, in the implementation of the recommended intersection lane improvements or freeway improvements, or in dollar equivalent in lieu mitigation contributions, or in the implementation of additional capacity on parallel routes to offset potential impacts to study area intersections.

Table 8

Summary of Intersection Improvements and Costs

Intersection	Improvement	Total Cost
Campus Street (NS) at:		
University Avenue (EW) - #2	Install Traffic Signal	$ 400,000
Barton Road (EW) - #3	Install WB Right Turn Overlap	$ 10,000
Total		$ 410,000

Table 9

Project Fair Share Intersection Traffic Contribution

Intersection	Total Cost	Peak Hour	Existing Traffic	Year 2035 With Project Traffic	Project Traffic	Total New Traffic	Project % of New Traffic	Project Cost Share
Campus Street (NS) at:								
University Avenue (EW) - #2	$ 400,000	Saturday	595	1,025	113	430	26.3%	$ 105,116
Barton Road (EW) - #3	$ 10,000	Saturday	1,194	2,297	113	1,103	10.2%	$ 1,024
Total								$ 106,141

VI. Conclusions and Recommendations

A. Summary

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act.

The City of Loma Linda is the lead agency responsible for preparation of the traffic impact analysis, in accordance with California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development in Year 2017, at which time it will be generating trips at its full potential, and for the current traffic forecast year, which is the Year 2035.

A series of scoping discussions were conducted with the City of Loma Linda to define the desired analysis locations for each future analysis year. In addition, the San Bernardino Associated Governments staff has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Horizon Year) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments are required to be included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hour. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 Freeway. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections outside the City of Loma Linda[5].

The average daily traffic volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model (SBTAM) Year 2008 and Year 2035 average daily traffic volume forecasts (see Appendix C). This difference defines the growth in traffic over the 27 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between Year 2014 and Year 2035. For this purpose, linear growth between the Year 2008 base condition and the forecast Year 2035 condition was assumed. Since the increment between Year 2014 and Year 2035 is 21 years of the 27 year time frame, a factor of 0.78 (i.e., 21/27) was used.

[5] The purpose of this notification is to allow the California Department of Transportation and other agencies to identify opportunities to make improvements to intersections concurrent with adjacent development, at considerably less cost and disruption than would occur if it were done after-the-fact.

The Year 2035 without project daily and peak hour directional roadway segment volume forecasts have been determined using the growth increment approach on the SBTAM traffic model Year 2008 and Year 2035 peak hour volumes. The growth increment calculation worksheets are shown in Appendix C. Current peak hour intersection approach/departure data is a necessary input to this approach. The existing traffic count data serves as both the starting point for the refinement process, and also provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions. The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

Project traffic volumes were then added to the Year 2035 SBTAM traffic model volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

B. Existing Conditions

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The north-south roadways which will be most affected by the project include Campus Street and Anderson Street. The east-west roadways expected to provide local access include Stewart Street, University Avenue, and Barton Road.

The existing delay and Level of Service for the intersection in the vicinity of the project are shown in Table 1. The study area intersections currently operate at Level of Service C or better during the peak hour for existing traffic conditions, except for the following study area intersection that currently operates at Levels of Service D during the Saturday mid-day peak hour:

Anderson Street (NS) at:
Barton Road (EW) - #5

C. Project Traffic

Project traffic volumes for all future projections were estimated using the manual approach. Trip generation has been based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012 and data provided by the applicant.

To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and

other additional information on future development and traffic impacts in the area were reviewed.

As shown in Table 2, the proposed development is projected to generate approximately 226 Saturday mid-day peak hour vehicle trips, 98 of which will occur inbound and 128 of which will occur outbound.

D. Future Conditions

An Existing Plus Project, Opening Year (2017) analysis, and Year 2035 analysis are included in this report. Existing Plus Project traffic operations analyses have been completed for the Saturday mid-day peak hour and are shown in Table 3. Opening Year (2017) traffic operations analysis have been completed for the Saturday mid-day peak hour and are shown in Tables 4 and 5. Saturday mid-day peak hour traffic operations analysis are summarized in Tables 6 and 7 for Year 2035.

For Existing Plus Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 3, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Existing Plus Project traffic conditions.

For Opening Year (2017) Without Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 4, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Opening Year (2017) Without Project traffic conditions.

For Opening Year (2017) With Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 5, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Opening Year (2017) With Project traffic conditions.

For Opening Year (2017) With Project traffic conditions, a traffic signal is projected to be warranted at the following study area intersection (see Appendix E):

Campus Street (NS) at:
University Avenue (EW) - #2

For Year 2035 Without Project traffic conditions, the following study area intersection is projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 6, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Year 2035 Without Project traffic conditions, with improvements.

For Year 2035 With Project traffic conditions, the following study area intersections are projected to operate at Level of Service D during the Saturday mid-day peak hour, without improvements:

Campus Street (NS) at:
Barton Road (EW) - #3

Anderson Street (NS) at:
Barton Road (EW) - #5

As shown in Table 7, the study area intersections are projected to operate within acceptable Levels of Service consistent with Measure V during the peak hour for Year 2035 With Project traffic conditions, with improvements.

E. Cost Summary

Improvements that will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for Opening Year (2017) and Year 2035 traffic conditions. The improvements were determined through the operations analysis of Section IV.

The total cost of needed and unfunded intersection improvements is $410,000.

Table 9 presents a summary of improvement cost and project cost shares at the Year 2035 intersection improvement locations. The intersection fair share cost calculations are based on the highest of the morning or evening peak hour traffic volumes. As shown in Table 9, the project's fair share of identified intersection costs is $106,141.

The dollar figures are rough order of magnitude estimates only. They are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

Consistent with Measure V, as mitigation for the potential traffic impacts, the proposed project shall contribute on a fair share basis, through an adopted traffic impact fee program, in the implementation of the recommended intersection lane improvements or freeway improvements, or in dollar equivalent in lieu mitigation contributions, or in the implementation of additional capacity on parallel routes to offset potential impacts to Congestion Management Program intersections and freeway segments.

F. Recommendations

Site-specific circulation and access recommendations are depicted on Figure 16.

1. On-Site Improvements

Construct from Campus Street from University Avenue to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

The project site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.

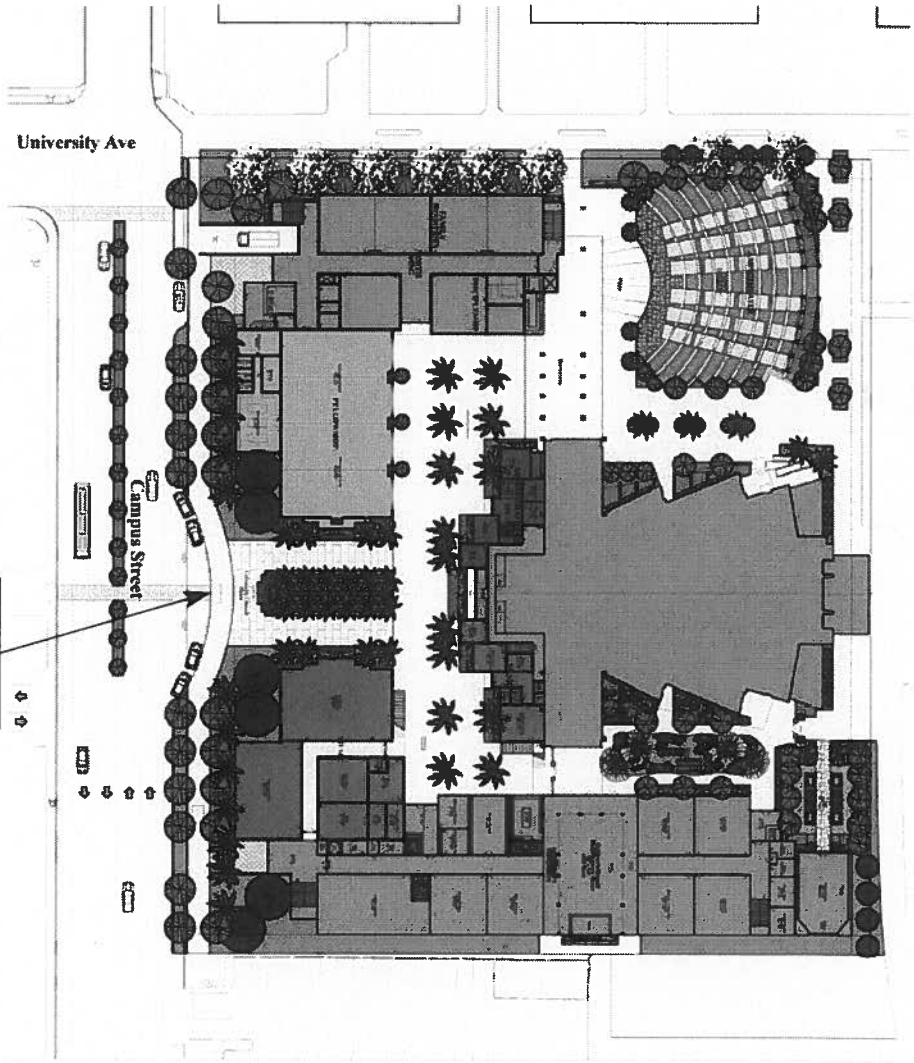
On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

2. Off-Site Improvements

The necessary off-site improvement recommendations were described in previous sections of this report. The project should contribute towards the cost of necessary study area improvements on a fair share or "pro-rata" basis.

As is the case for any roadway design, the City of Loma Linda should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Figure 16
Circulation Recommendations



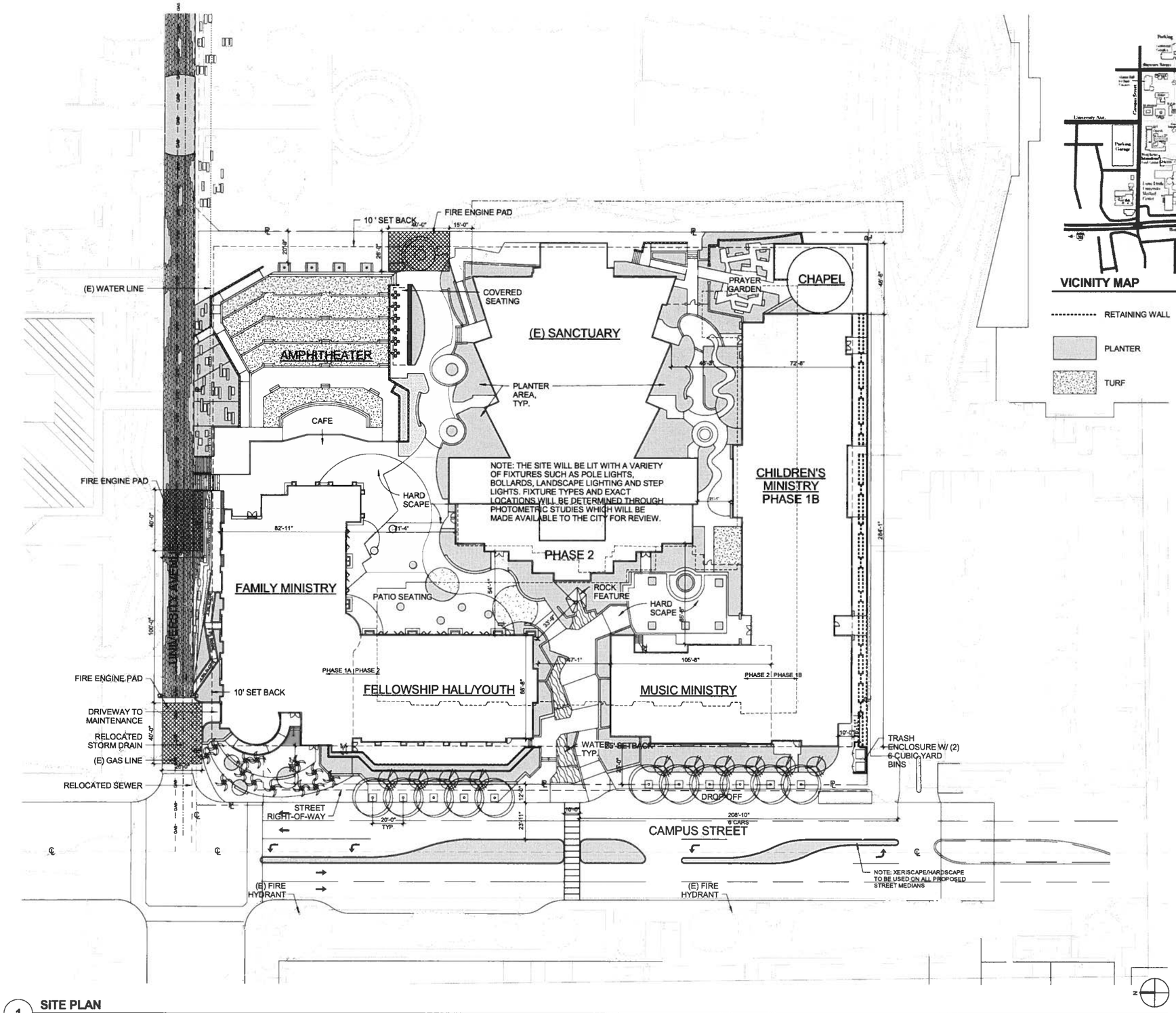
Construct Campus Street from University Avenue to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

The project site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.

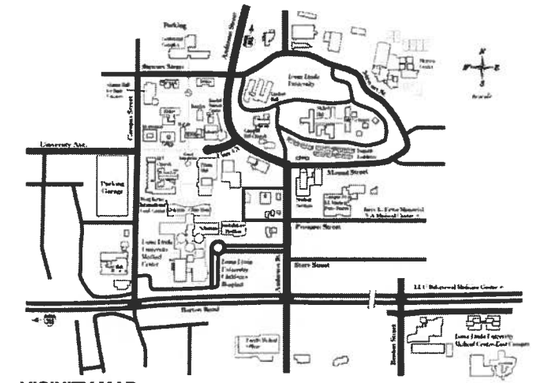
On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

The project should contribute towards the cost of necessary study area improvements on a fair share or "pro-rata" basis.

As is the case for any roadway design, the City of Loma Linda should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.



1 SITE PLAN
1" = 30'-0"



VICINITY MAP

RETAINING WALL

PLANTER

TURF

ASSESSORS PARCEL NO.: 0284-082-15-0000

PROJECT ADDRESS: 11125 CAMPUS STREET LOMA LINDA, CA 92354

LEGAL DESCRIPTION:

MOUND CITY N 400 FT LOT 4 AND W 80.4 FT N 400 FT LOT 3 BLK 36 AND PTN UNIVERSITY AVE VAC ADJ ON N EX ST ***** ST VAC (UNIVERSITY AVE) PER 11/15/91 #91-435805 *****

EXISTING ZONE: INSTITUTIONAL

PROPOSED ZONE: INSTITUTIONAL

OCCUPANCY: A-3

CONSTRUCTION TYPE: TYPE IV-A

PROPERTY SIZE:
- GROSS ACRES: 3.679 ACRES, 160,257.24 S.F.
- NET ACRES: 3.27 ACRES, 142,516 S.F.
- LOT COVERAGE: 71,835 S.F., 50%

LANDSCAPING:
- EXISTING
  - PERVIOUS 64,354 S.F., 40%
  - IMPERVIOUS 43,322 S.F., 27%
- NEW
  - PERVIOUS 38,479 S.F., 27%
  - IMPERVIOUS 33,490 S.F., 23%

PHASE	DEMOLITION	NEW
PHASE 1A	NONE	
GROUND FLOOR		16,483 S.F.
FIRST FLOOR		13,277 S.F.
SECOND FLOOR		13,220 S.F.
THIRD FLOOR		2,549 S.F.
ROOF TERRACE		8,871 S.F.
AMPHITHEATER		9,640 S.F.
TOTAL		64,040 S.F.
PHASE 1B	13,047 S.F.	
FIRST FLOOR		20,457 S.F.
SECOND FLOOR		18,845 S.F.
TERRACE		1,604 S.F.
TOTAL		40,906 S.F.
PHASE 2	29,641 S.F.	
FIRST FLOOR		18,373 S.F.
SECOND FLOOR		14,554 S.F.
ROOF TERRACE		6,940 S.F.
TOTAL		39,867 S.F.

LEGEND

adrian gaus architects, inc.
ac-6 architects
adrian gaus architects, inc.
300 east state street
suite number 620
redlands, ca 92373
phone 909 748.0444
fax 909 748.0559

LICENSED ARCHITECT NO. C-28593 REG. 10-31-15 STATE OF CALIFORNIA

architect

UNIVERSITY CHURCH

owner

consultant

approvals

UNIVERSITY CHURCH NEW MINISTRY BUILDINGS

Revision Date

Revision Da

Date 11/24/14

Job Number LLUC

project

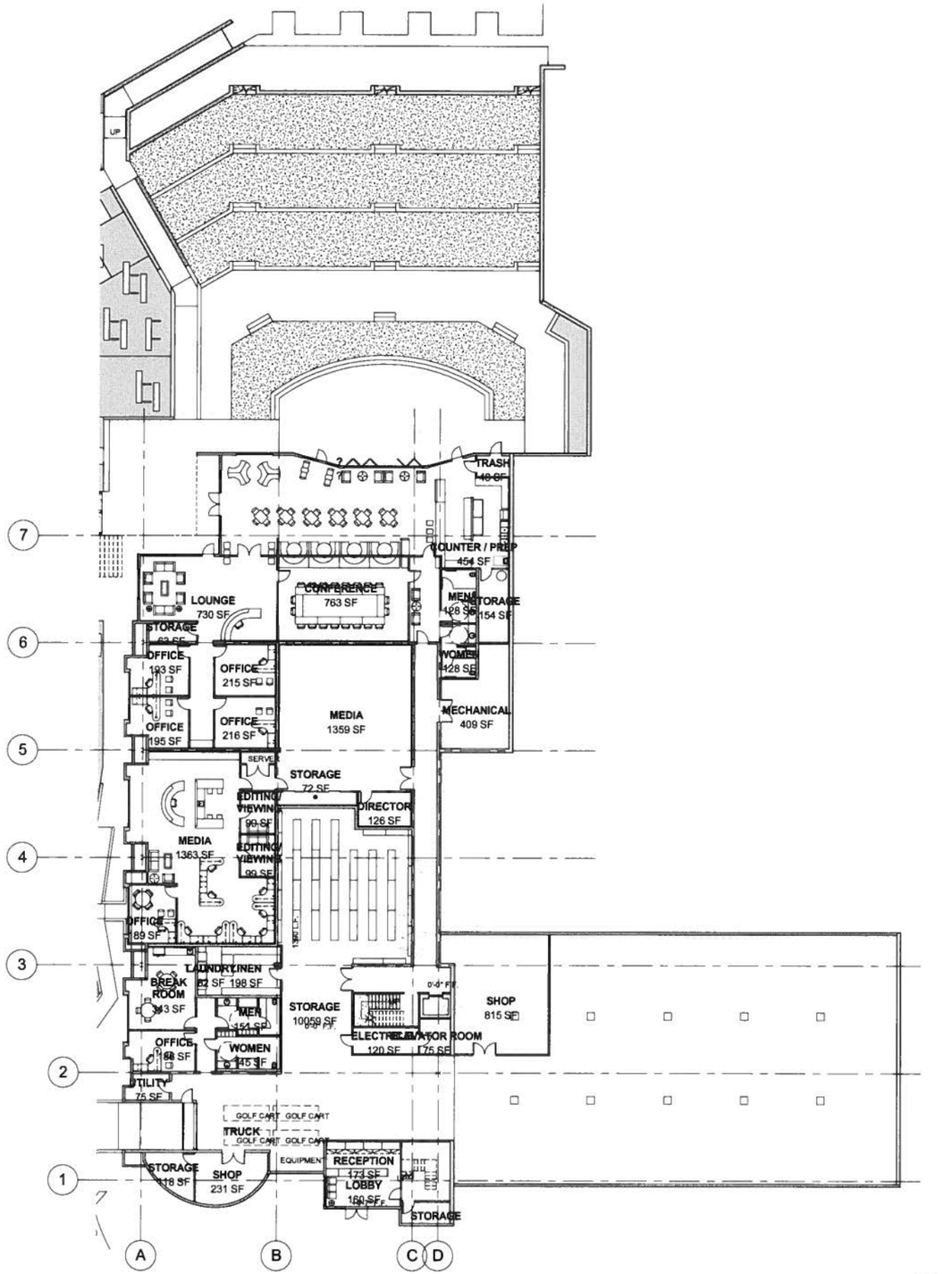
ARCHITECTURAL SITE PLAN

sheet title

A1.1

sheet numb

EXHIBIT - E



1 **0 GROUND - ALL PHASES**

1/16" = 1'-0"

adrian gaus architects, inc.

ac-6 architects collaborative

adrian gaus architects, inc.
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suite number 620
redlands, ca 92373
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fax 909 748.0559

LICENSED ARCHITECT
HERIA GAUS
NO. C-28593
REN. 10-31-15
STATE OF CALIFORNIA

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UNIVERSITY CHURCH

owner

consultant

approvals

UNIVERSITY CHURCH NEW MINISTRY BUILDINGS

Revision Date

Revision Date

Date 11/24/14

Job Number LLUC

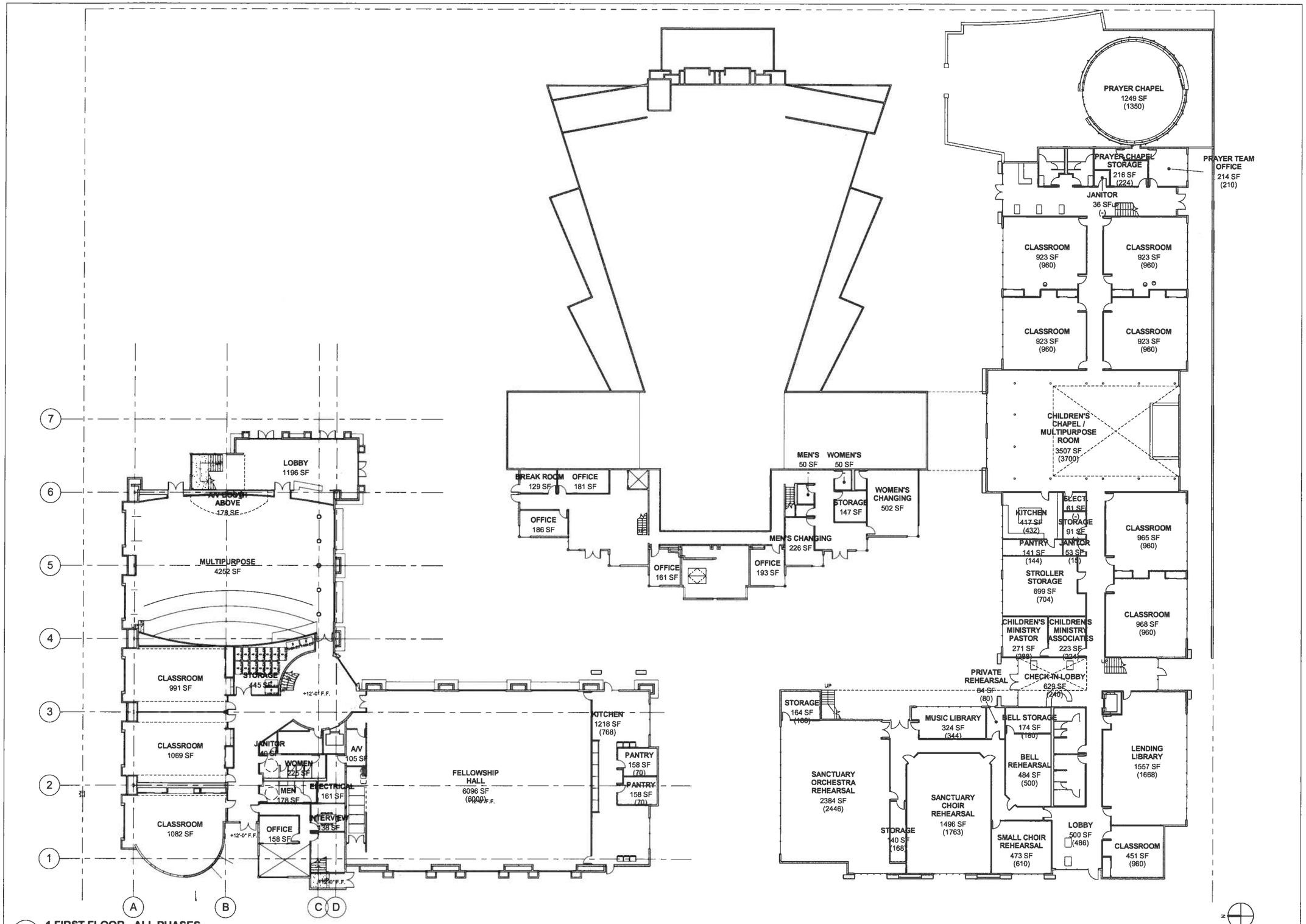
project

FLOOR PLAN - GROUND LEVEL

sheet title

A 2.1

sheet numb



1 FIRST FLOOR - ALL PHASES

1/16" = 1'-0"

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LICENSED ARCHITECT ADRIAN GAUS NO. C-28593 EXPIRES 10-31-15 STATE OF CALIFORNIA

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UNIVERSITY CHURCH NEW MINISTRY BUILDINGS

Revision Date

Revision Date

Date 11/24/14

Job Number LLUC

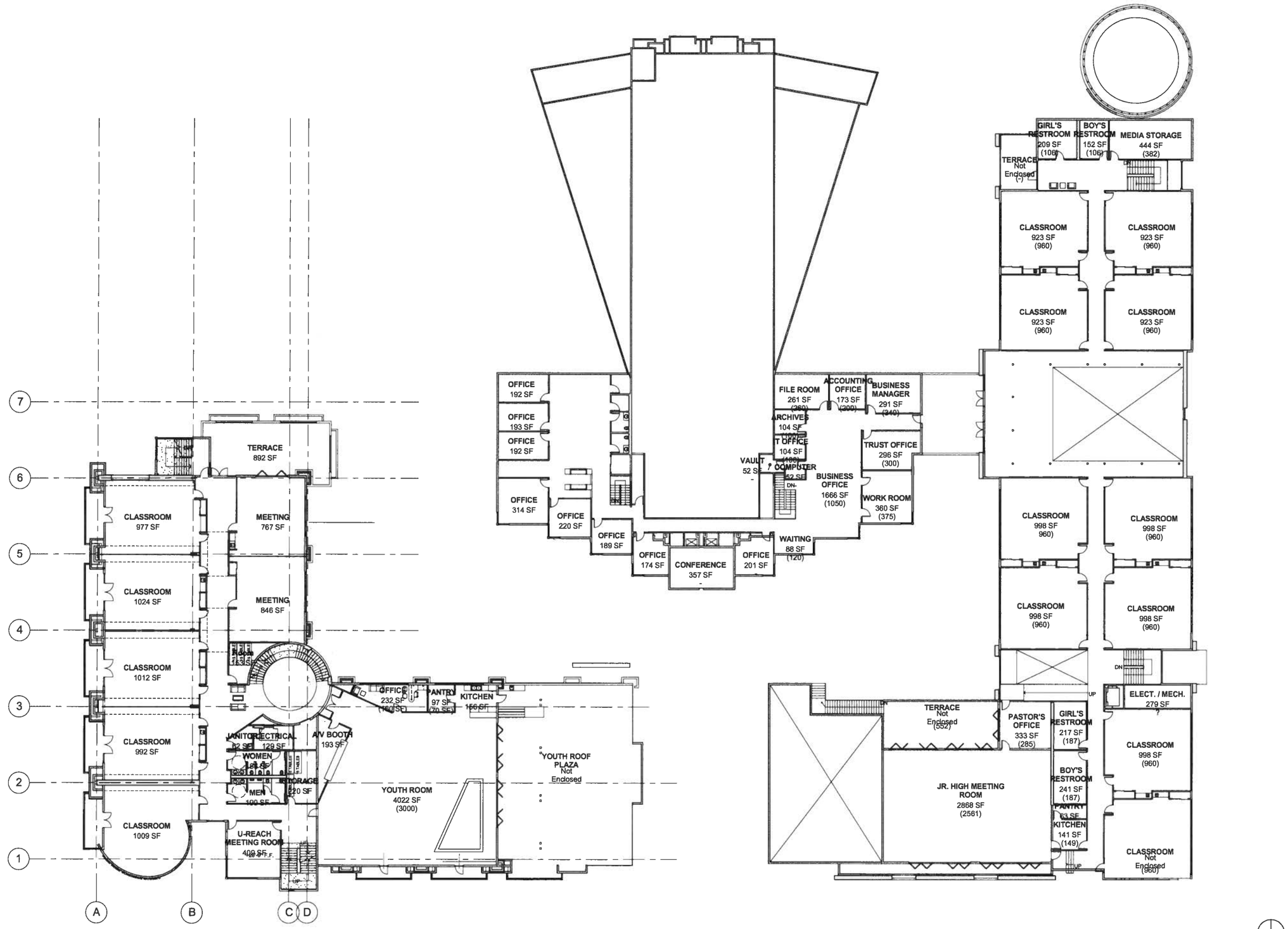
project

FLOOR PLAN - FIRST FLOOR

sheet title

A 2.2

sheet number



1 **2 SECOND FLOOR - ALL PHASES**

1/16" = 1'-0"

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LICENSED ARCHITECT ADRIAN GAUS NO. C-28593 EXPIRES 10-31-15 STATE OF CALIFORNIA

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UNIVERSITY CHURCH NEW MINISTRY BUILDINGS

Revision Date

Revision Date

Date 11/24/14

Job Number LLUC

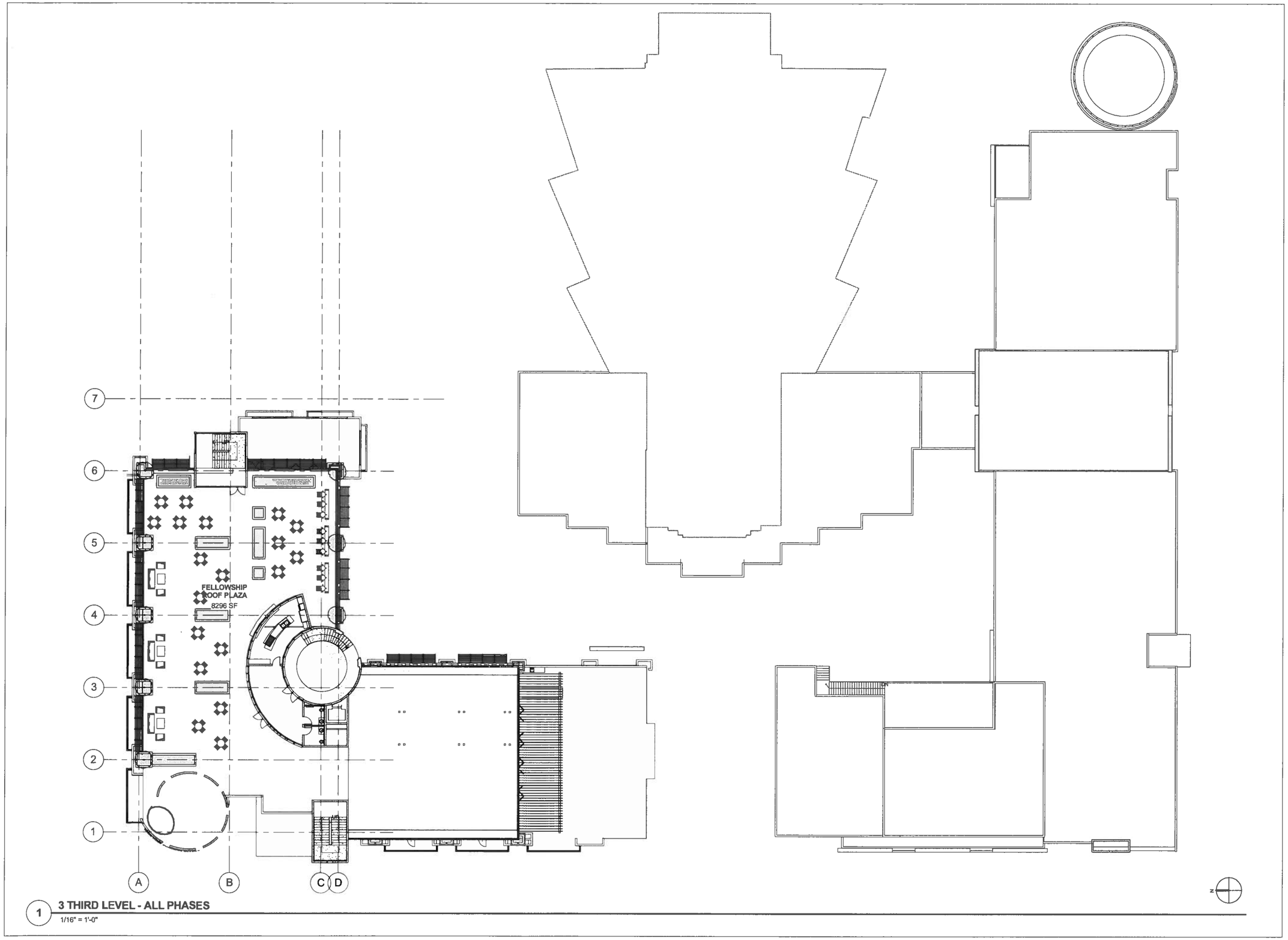
Project

FLOOR PLAN SECOND FLOOR

sheet title

A 2.3

sheet number



1 3 THIRD LEVEL - ALL PHASES
1/16" = 1'-0"

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owner

consultant

approvals

UNIVERSITY CHURCH NEW MINISTRY BUILDINGS

Revision Date

Revision Date

Date 11/24/14

Job Number LLUC

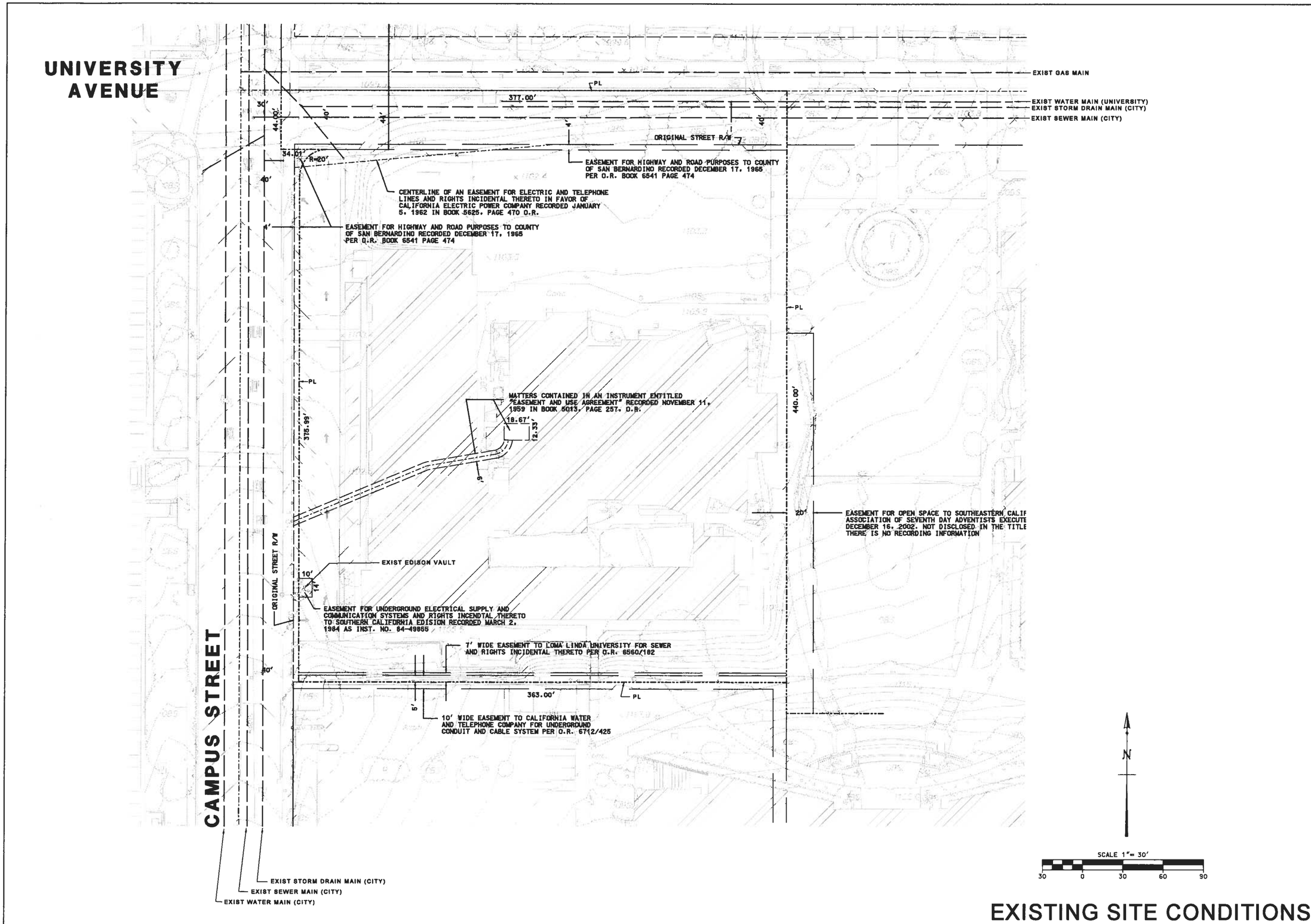
project

FLOOR PLAN THIRD FLOOR

sheet title

A 2.4

sheet numb



EXISTING SITE CONDITIONS

adrian gaus architects, inc.

architect

University Church
11125 Campus Street
Loma Linda, CA 92354

owner

Goodman & Associates
CIVIL ENGINEER - LAND SURVEYOR

consultant

approvals

Loma Linda University Church New Ministry Buildings

revision date

revision date

date 08/21/14

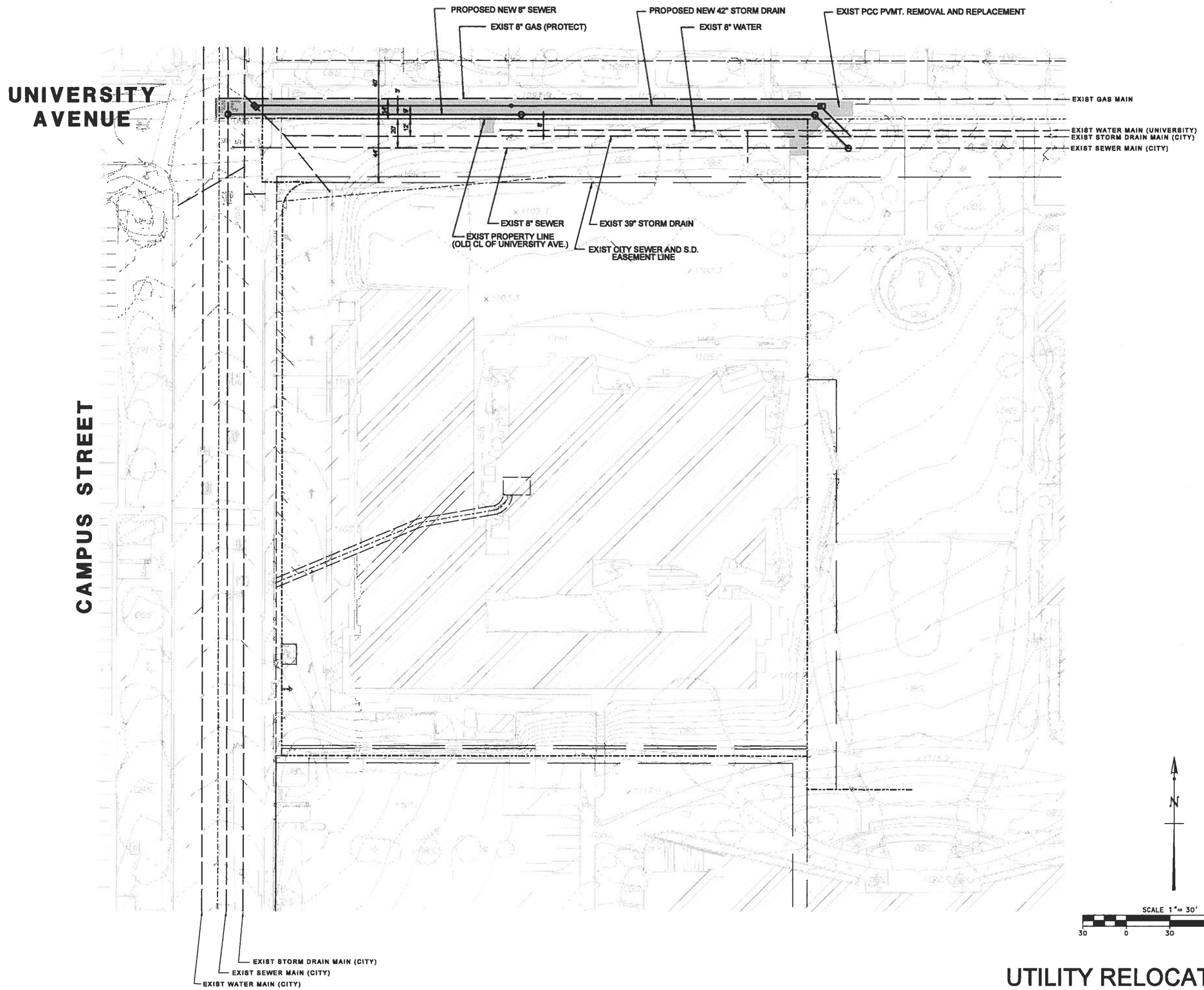
job number LLU-CHURCH

project

sheet title

1 of 4

sheet number



UTILITY RELOCATION PLAN

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University Church
11125 Campus Street
Loma Linda, CA 92354

owner

Goodman & Associates
CIVIL ENGINEER - LAND SURVEYOR
consultant

approvals

Loma Linda University Church New Ministry Buildings

revision date

revision date

date 08/21/14

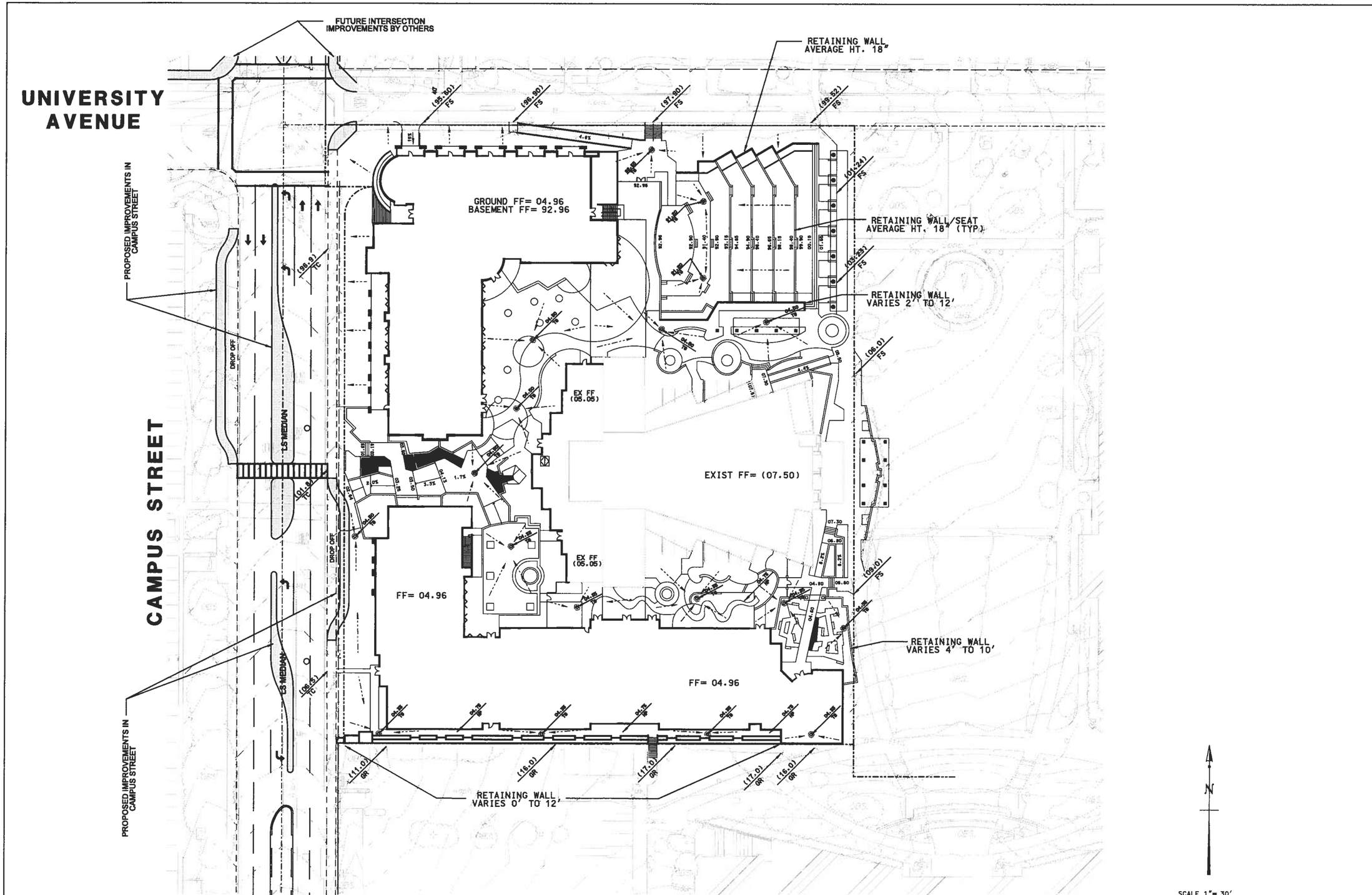
job number LLU-CHURCH

project

sheet title

2 of 4

sheet number



LEGEND

⊕	DRY WELL PER DETAIL SHEET 4 OF 4
FF	FINISH FLOOR
TG	TOP OF GRATE
(XX.XX)	EXIST ELEVATION
XX.XX	NEW FINISH SURFACE
◄- - -	GROUND SURFACE DRAINAGE PATTERN

SEE SHEET 4 OF 4 FOR STORM DRAIN AND WQMP PLAN

PRELIMINARY GRADING PLAN

adrian gaus architects, inc.

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owner

Goodman & Associates
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consultant

approvals

Loma Linda University Church New Ministry Buildings

revision date

revision date

date 08/21/14

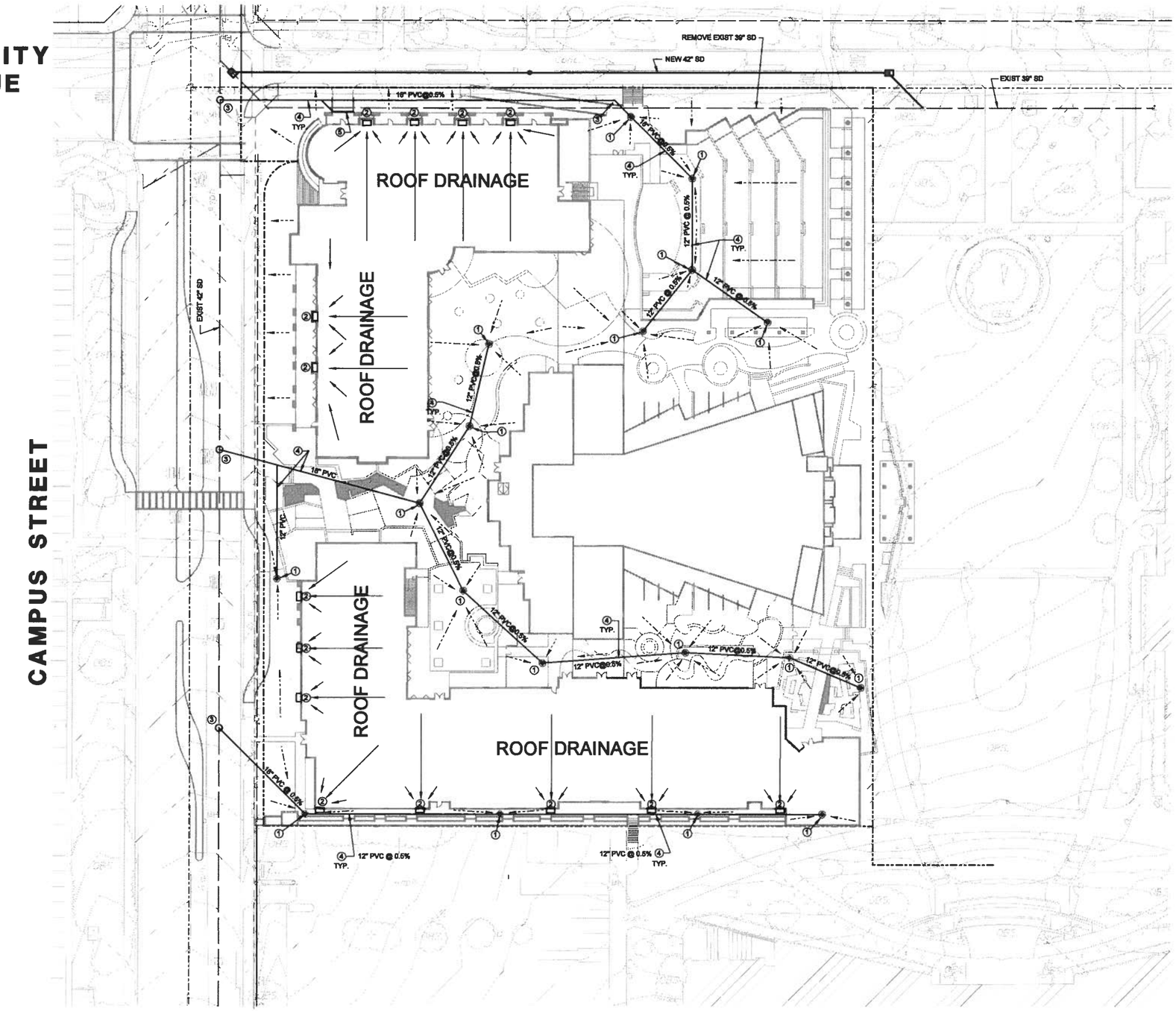
job number LLU-CHURCH

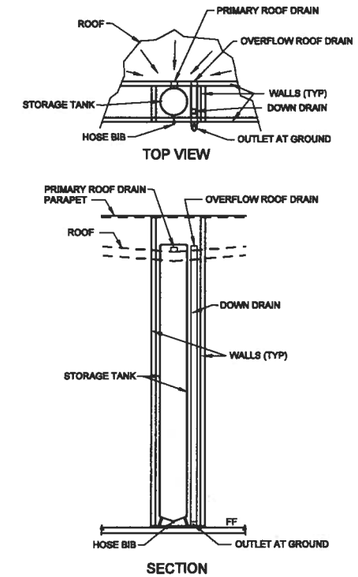
project

sheet title

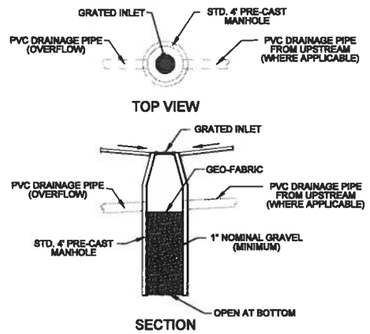
3 of 4

sheet number

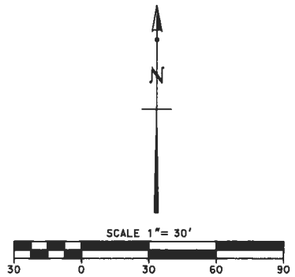




RAIN HARVESTING DETAIL



DRY WELL DETAIL
(WQMP BMP)



CONSTRUCTION NOTES

1. CONSTRUCT DRY WELL PER DETAIL
2. CONSTRUCT RAIN HARVESTING SYSTEM PER DETAIL
3. CONSTRUCT STORM DRAIN MANHOLE/JUNCTION STRUCTURE
4. CONSTRUCT PVC STORM DRAIN
5. CONSTRUCT CHANNEL DRAIN (TRAFFIC RATED)

LEGEND

- DRY WELL PER DETAIL
- RAIN HARVESTING SYSTEM PER DETAIL
- STORM DRAIN MANHOLE/JUNCTION STRUCTURE
- PVC STORM DRAIN PIPE
- ROOF DRAINAGE PATTERN
- GROUND SURFACE DRAINAGE PATTERN

PRELIMINARY STORM DRAIN & WQMP PLAN

adrian gaus architects, inc.

architect

University Church
11125 Campus Street
Loma Linda, CA 92354

owner

Goodman & Associates
CIVIL ENGINEER - LAND SURVEYOR
consultant

approvals

Loma Linda University Church New Ministry Buildings

revision date

revision date

date 08/21/14

job number LLU-CHURCH

project

sheet title

4 of 4

sheet number

Staff Report **City of Loma Linda**

From the Department of Community Development

PLANNING COMMISSION MEETING OF MARCH 4, 2015

TO: PLANNING COMMISSION

FROM: KONRAD BOLOWICH, ASSISTANT CITY MANAGER, COMMUNITY DEVELOPMENT DEPARTMENT

SUBJECT: GENERAL PLAN AMENDMENT NO. 14-060, ZONE CHANGE NO. 14-061; AND PRECISE PLAN OF DESIGN NO. 14-059 – THE APPLICANT IS REQUESTING APPROVAL OF: 1) A GENERAL PLAN AMENDMENT (GPA) TO CHANGE THE EXISTING CITY OF LOMA LINDA GENERAL PLAN DESIGNATION FROM HIGH DENSITY RESIDENTIAL (0-13 DU/AC) TO HEALTH CARE; 2) A ZONE CHANGE APPLICATION TO CHANGE THE MULTI-FAMILY (R-3) ZONE TO INSTITUTIONAL (I) ZONE; AND 3) A PRECISE PLAN OF DESIGN TO CONSTRUCT A 40-UNIT ASSISTED SENIOR LIVING FACILITY ON APPROXIMATLEY ONE ACRE OF LAND LOCATED AT 25405-25417 COLE STREET

SUMMARY

The applicant is requesting approval of: 1) a General Plan Amendment (GPA) to change the existing City of Loma Linda General Plan designation from High Density Residential (0-13 du/ac) to Health Care; 2) a Zone Change application to change the Multi-Family (R-3) Zone to Institutional (I) Zone; and 3) a Precise Plan of design to construct a 40-unit assisted senior living facility on approximately one acre of land generally bound by Cole Street to the north, Benton Street to the west, the VA Hospital to the south, and Willis Drive to the east. The project includes a request for a Zone Change P14-061: Multiple Residence (R-3) to Institutional (I) zone; a General Plan Amendment P14-060: High Density Residential (0-13 du/acre) to Healthcare; Precise Plan of Design (PPD) P14-059. Copies of the Proposed Plans are included in Attachments B.

RECOMMENDATION

Staff recommends that the Planning Commission recommend the following actions to the City Council:

1. Adopt the Mitigated Negative Declaration (Attachment D);
2. Adopt the Mitigation Monitoring Report (Attachment E)
3. Approve and adopt General Plan Amendment No. GPA 14-060, and Zone Change No. ZC P14-061, based on the Findings;

4. Approve Precise Plan of Design No. PPD 14-059, based on the Findings, and subject to the attached Conditions of Approval (Attachment F);

PERTINENT DATA

Owner/Applicant:	Loma Linda Development, LLC.
Current General: Plan:	High Density Residential (0-13 du/acre)
Current Zoning:	Multiple Residence (R-3)
Site:	The rectangular, 0.98-acre project site is bounded by Cole Street to the north, Benton Street to the west, the VA Hospital to the south, and Willis Drive to the east.
Topography:	Relatively flat
Vegetation:	Mature trees
Special Features:	The project site currently contains three single-family residential structures, one two-story duplex, two sheds, a chain link fence, 11 mature trees, and a gravel driveway.

BACKGROUND

On February 2, 2015, the Historic Commission approved a Certificate of Appropriateness to demolish the existing structures on site.

EXISTING SETTING

The project site currently contains three single-family residential structures, one two-story duplex, two sheds, a chain link fence, 11 mature trees, and a gravel driveway. Under current conditions, the residences located at 25405 and 25417 Cole Street and a metal shed are located in the northern portion of the property. The residence located at 25407 Cole Street and the duplex located at 25401-03 Cole Street are situated in the middle third of the property, with the wooden shed. The remaining third of the property is an ungraded portion at the southern end of the parcel, along the parking lot for the Veteran's Hospital. All of the existing uses would be demolished as part of project implementation. The project site is relatively flat and gently slopes to the north

The project site is bound by Cole Street and residential uses to the north, a parking lot to the south, a new senior assisted living facility to the west, and residential uses to the east. The following provides a summary of the land uses surrounding the project site, along with the zoning districts and land use designations associated with each of these neighboring uses.

Existing Use	**Zoning**	**General Plan**
North		
Residential	Multi Family Residence (R-3)	High Density Residential (0 to 13 du/acre)
Cole Street (adjacent)	—	—
East		
Residential	Multi Family Residence (R-3)	Very High Density Residential (0 to 20 du/acre)
Residential (adjacent)	Multi Family Residence (R-3)	High Density Residential (0 to 13 du/acre)
South		
Parking lot (adjacent)	Institutional	Healthcare
Pettis Memorial Veterans Medical Center	Institutional	Healthcare
West		
Assisted Living Facility	Institutional	Healthcare

ENVIRONMENTAL EVALUATION

On February 2, 2015, a Notice of Intent (NOI) to adopt a Mitigated Negative Declaration and Initial Study were prepared and released for public review. The California Environmental Quality Act (CEQA) mandatory 30-day public review began on February 2, 2015 and ends on March 3, 2015. The Initial Study prepared by FirstCarbon Solutions evaluates the potential impacts of the project and identifies appropriate mitigation measures. All of the potential impacts that were identified in the Initial Study can be mitigated to below a level of significance. The mitigation measures are included as project Conditions of Approval and are listed below. Therefore, the project can be approved with a Mitigated Negative Declaration in accordance with the requirements of CEQA.

Mitigation Measures:

MM BIO-1a To avoid any direct and indirect impacts to any migratory birds or raptors, construction activities shall occur outside of the avian nesting season of February through August. If the removal of habitat (trees and shrubs) and/or construction activities within and adjacent to nesting habitat must occur during the breeding season, the project will be required to adhere to the MBTA and CFG Code, and must conduct a pre-construction clearance survey. The applicant shall retain a qualified biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on and within a 500-foot buffer around the project site. The pre-construction survey must be conducted within 30 calendar days prior to the start of construction.

MM BIO-1b If nesting birds are detected by the biologist, a biological monitor shall be present on-site during construction to minimize construction impacts and ensure that no nest is removed or disturbed until all young have fledged.

MM CUL-1 It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried cultural resources. In the event that buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms, and evaluated for significance in terms of CEQA criteria.

If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency, where they would be afforded long-term preservation to allow future scientific study.

MM CUL-2 In the event a fossil is discovered during construction for the proposed project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the

paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

MM CUL-3 In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or
2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:
   - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
   - The descendent identified fails to make a recommendation; or
   - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

MM HAZ-1 In accordance with National Emission Standards for Hazardous Air Pollutants, the four existing residences located on the project site shall be evaluated for the presence of asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB) prior to their demolition. The evaluation shall be conducted by a Cal-OSHA certified ACM, LBP, and PCB contractor. Any ACM or lead identified as a result of the evaluation shall be removed by a Cal-OSHA certified ACBM, LBP, and PCB contractor and be transported and disposed of off-site in accordance with regulatory requirements.

MM NOI-1 Implementation of the following multi-part mitigation measure is required to reduce potential construction period noise impacts:

- The construction contractor shall ensure that all construction equipment have appropriate sound muffling devices, which are properly maintained and used at all times such equipment is in operation.
- The construction contractor shall ensure that "quiet" models of air compressors and other stationary construction equipment are utilized where such technology exists.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes).
- The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site.

MM TRANS-1 The project shall implement the recommendations contained in the Traffic Impact Analysis (Kunzman Associates 2014), including:

- Construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.
- The site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.
- Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

Public Comment

Public notices for this project were posted and mailed to parcel owners and occupants within 300 feet of the project site on February 2, 2015. As of the writing of this report, there have been no written or oral comments received in opposition or in favor of the proposal.

Staff received the following request (summarized below) from Omnitrans and has been made a condition of approval:

- The applicant shall include their project design for the most direct possible pedestrian pathways, including a pathway leading from the entrances/exits of the building to ultimately connect to existing public sidewalk. All Government codes relating to pedestrian pathways shall be followed.

ANALYSIS

Project Description

The proposed project consists of a two-story, 37,124-square-foot assisted living facility. The project would include 40 living units, each containing one bedroom and one bathroom. Beyond the 40 units proposed, the facility would also include community spaces such as multipurpose rooms, courtyards, a kitchen, a dining room, and a lobby. The project would operate 24 hours a day, 7 days a week, utilizing various shifts of approximately 30 full-time staff members. The assisted living facility would provide 21 parking spaces (including two Americans With Disabilities Act-accessible spaces) as well as landscaping. The following provides the allocation of space by project component.

Project Component	Size (square feet)
Public Space, Office and Retreat	
1st floor 2nd floor Total	1,638 1,638 3,276
Multi-Purpose Rooms and Restrooms	
1st floor 2nd floor Total	1,218 1,218 2,436
Dining and Kitchen	
1st Floor 2nd Floor Total	2,189 N/A 2,189

Residential Units	
1st Floor 2nd Floor Total	10,201 11,384 21,585
Outdoor Seating, Covered hallways and Stairs	
1st Floor 2nd Floor Total	3,316 4,322 7,638
Landscaping	
10.9% project coverage/10.0% required	4,751
Total	**46,718**

As part of project construction, one major building would be built on-site containing all 40-units. The proposed 40 dwelling units would be located along the western and eastern exteriors of the building; and community spaces including multi-purpose rooms, courtyards, a dining hall, and a kitchen would be located within the center of the two residential wings. The proposed parking areas and a minor internal roadway would be located along the southern and eastern borders of the assisted living facility. The project would provide one access point to the site from Cole Street, located directly east of the project site.

The proposed assisted living building would incorporate design elements, including decorative window shutters and tiles, stone veneer, and a variety of complementary building materials. The project frontage along Cole Street would contain landscaping, including several shrubs and olive trees and decorative groundcover. Along the southern, eastern, and western borders of the site, the project would include California live oak, crape myrtle, and Chinese pistache trees, as well as lavender, California lilacs, and several other plants.

General Plan and Zoning Map Amendments

The project includes a request to amend the East City of Loma Linda General Plan from High Density Residential (0-13 du/ac) to Health Care. The project also includes a request to rezone the project site from Multi-Family (R-3) Zone to Institutional (I) Zone.

The project site is bound by Cole Street and residential uses to the north, a parking lot to the south, a new senior assisted living facility to the west, and residential uses to the east. The following provides a summary of the land uses surrounding the project site, along with the zoning districts and land use designations associated with each of these neighboring uses. The project would comply with land use designations of the General Plan.

Table 1: Surrounding Land Uses

Land Use	Zoning	General Plan Land Use Designation
North		
Residential	Multi Family Residence (R-3)	High Density Residential (0 to 13 du/acre)
Cole Street (adjacent)	—	—
East		
Residential	Multi Family Residence (R-3)	Very High Density Residential (0 to 20 du/acre)
Residential (adjacent)	Multi Family Residence (R-3)	High Density Residential (0 to 13 du/acre)
South		
Parking lot (adjacent)	Institutional	Healthcare
Pettis Memorial Veterans Medical Center	Institutional	Healthcare
West		
Assisted Living Facility	Institutional	Healthcare

FINDINGS

Zone Change Findings

Changes to the zoning ordinance and map are considered legislative acts and do not require findings. State law does require that the zoning be consistent with the General Plan. The proposed to Institutional (I) zone is consistent with the proposed Health Care designation in the General Plan. As stated above, the site is suitable for a Health Care development under the Institutional (I) Zone and would not cause substantial environmental damage or be detrimental to the public welfare.

Precise Plan of Design (PPD)

According to LLMC Section 17.30.290, Precise Plan of Design (PPD), Application Procedure, PPD applications shall be processed using the procedure (but not the grounds) for a variance (as outlined in LLMC Section 17.30.030 through 17.30.060). As

such, no specific findings are required. However, LLMC Section 17.30.280, states the following:

> "If a PPD would substantially depreciate property values in the vicinity or would unreasonably interfere with the use or enjoyment of property in the vicinity by the occupants thereof for lawful purposes or would adversely affect the public peace, health, safety or general welfare to a degree greater than that generally permitted by this title, such plan shall be rejected or shall be so modified or conditioned before adoption as to remove the said objections."

The project is consistent with the General Plan Land Use designation (Health Care) but not in compliance with the "Multi-Family (R-3)" zoning designation, which permits Residential Uses pursuant to the Loma Linda Municipal Code. However, the proposed health care use is compatible with and would enhance the existing and future land uses in the surrounding area. Furthermore, the project is not anticipated to depreciate property values in the vicinity as the development will not create a significant increase in traffic or long term noise impacts. The project is well designed, and will include sufficient parking.

The project will provide improvements in the form of a new Assisted Living Facility with on-site improvements including parking, lighting, landscaping and other related improvements. Staff recommends approval of the project to further facilitate the development of health care opportunities and improve economic and social services as well as resources within the City of Loma Linda. The project will not adversely affect the public peace, health, safety or general welfare of the community.

Development Standards

Institutional Zone Development Standards

	Required	Proposed	Complies
Front			Yes
Side			Yes
Rear			Yes
Maximum building height			Yes
Maximum Lot Coverage			Yes
Parking			Yes
Open Area			

Landscaping**			Yes Yes
Walls/Fencing	[CH1]		No

Site Design

The proposed 40-Unit Assisted Living Project will be located on approximately one acre (43,400 square feet), within the northern portion of the City of Loma Linda, San Bernardino County, California. Regionally, the project site is located just north of the Veterans Affairs (VA) Loma Linda Hospital; east of Loma Linda University; south of Interstate 10; and west of Mountain View Avenue. The project site is generally bound by Cole Street to the north, Benton Street to the west, the VA Hospital to the south, and Willis Drive to the east. The project will provide 21 parking spaces, including the two (2) handicapped accessibly spaces. The proposed assisted living building would incorporate design elements, including decorative window shutters and tiles, stone veneer, and a variety of complementary building materials. The project frontage along Cole Street would contain landscaping, including several shrubs and olive trees and decorative groundcover. Along the southern, eastern, and western borders of the site, the project would include California live oak, crape myrtle, and Chinese pistache trees, as well as lavender, California lilacs, and several other plants.

The developer will also be required to comply with the Loma Linda Fire Department requirement for emergency accessibility. The project site access driveway and internal circulation driveways have been designed in accordance with the Loma Linda standards related to width, clearance and turning radius.

Architectural Design

The proposed project will demolish the existing residential uses found on the project site and replace them with a 40-unit assisted living facility. As required, the proposed project has been designed to comply with the standards contained in the City's Zoning Code (Title 17 of the Loma Linda Municipal Code). The proposed improvements will incorporate traditional architectural design, neutral architectural coatings, and a variety of complimentary building materials.

The modest, health care design of the facility will help serve as a transition between the bordering roadways, the institutional uses to the west, and the residential uses within the project vicinity while providing services appropriate to the area.

The health care facility design incorporates a simple, health care design and includes architectural elements such as the use of stamped concrete around the facility 's building as well as landscaping provided primarily provided around the perimeter of the site.

Landscape Design

The project includes 8,179 square feet of landscaping (10.9 % of the project site). The primary trees on site will include California Oak, Crape Myrtle, Lombardy Popular, and Olive, located within 15" - 36" boxes, as well as a variety of shrubs. Furthermore, the developer will construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

Traffic

All new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, traffic levels of service (LOS) are maintained at a minimum of LOS C throughout the City, Except where the current level of service is lower that LOS C. In any location where mitigation measures shall be imposed on that development project to assure, at a minimum, that the level of traffic service is maintained at levels of service that are no worse than those existing at the time an application for development is filed.

Volume-to-capacity calculations were performed at the project access at Cole Street for Existing plus Project and Opening Year 2015 with Project conditions. The access at Cole Street was operating at LOS C or better during the weekday AM and PM peak hours under existing plus project traffic conditions. Under opening year 2015 with project traffic conditions, project-related traffic will not significantly impact the access at Cole Street. Thus, no traffic mitigation measures are required or recommended for the study intersections under the existing with project conditions.

Although the project will not contribute a significant impact to Cole Street, the Traffic Impact Analysis includes recommendations for on-site and off-site improvements to be implemented in conjunction with development to ensure adequate circulation within the project itself.

The Public Works Department has reviewed the Focused Traffic Analysis prepared by Kunzman Associates (October 2014) and concurs with the recommended mitigation measures, which includes construction of Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary; the site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand; sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits; and on-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project. The project, as conditioned, complies with Principle Six of Measure V, which states that "traffic levels of service throughout the City

of Loma Linda shall be maintained at current levels and new development shall be required to fully mitigate any impact on traffic resulting from that development.

Historic Preservation Issues

The Cultural Resources Assessment prepared by FirstCarbon Solutions, dated November 2014 indicates that of the three single-family residential structures, one two-story duplex, and a metal and wooden shed. The four single-family residences fail to meet any of the four CRHR significance criteria listed above. These residential structures are not associated with significant events or important persons; they do not embody distinctive architectural; nor do the aesthetic characteristics represent the work of an important individual. The residences are also highly unlikely to yield important historical local or state information. As such, the four structures may be demolished.

PUBLIC COMMENTS

Staff received the following request (summarized below) from Omnitrans and has been made a condition of approval:

- The applicant shall include their project design for the most direct possible pedestrian pathways, including a pathway leading from the entrances/exits of the building to ultimately connect to existing public sidewalk. All Government codes relating to pedestrian pathways shall be followed.

CONCLUSION

The proposed project, as conditioned will add value to the subject site and the general area. The project will blend with the transportation related and residential uses found in the general area. Based on the analysis, the proposed project is consistent with the General Plan, “The overall pattern of land use desired for Loma Linda is to focus commercial uses in the northern portion of the near community I-10”.

Furthermore, the project complies with Principle Six of Measure V, which states that “traffic levels of service throughout the City of Loma Linda shall be maintained at current levels and new development shall be required to fully mitigate any impact on traffic resulting from that development. With implementation of included off-site improvements, and mitigation measures, the project would maintain or potentially improve traffic conditions.

The project is in compliance with CEQA and the Mitigation Measures listed in the Initial Study (Attachment D) will reduce any potential environmental impacts to below a level of significance. The Mitigation Measures have been made part of the Conditions of Approval (Attachment F).

Report prepared by:

Guillermo Arreola,
Associate Planner

ATTACHMENTS

A. Site Location Map
B. Proposed General Plan Amendment and Proposed Zoning Map
C. Mitigated Negative Declaration (NOI/Initial Study, Mitigation Monitoring Program)
D. Mitigation Monitoring Program
E. Conditions of Approval
F. Proposed Plans
   A-1 – Proposed Site Plan and 1st Story Floor Plan
   A-1.1 – Roof Plan and 2nd Story Floor Plan
   A-3.0 – Elevations
   L-1 – Preliminary Landscape Plan
   L-2 – Irrigation Plan
   L-3 – Irrigation Plan, cont.
   Preliminary Grading Plan
   Topographic Map

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VICINITY MAP

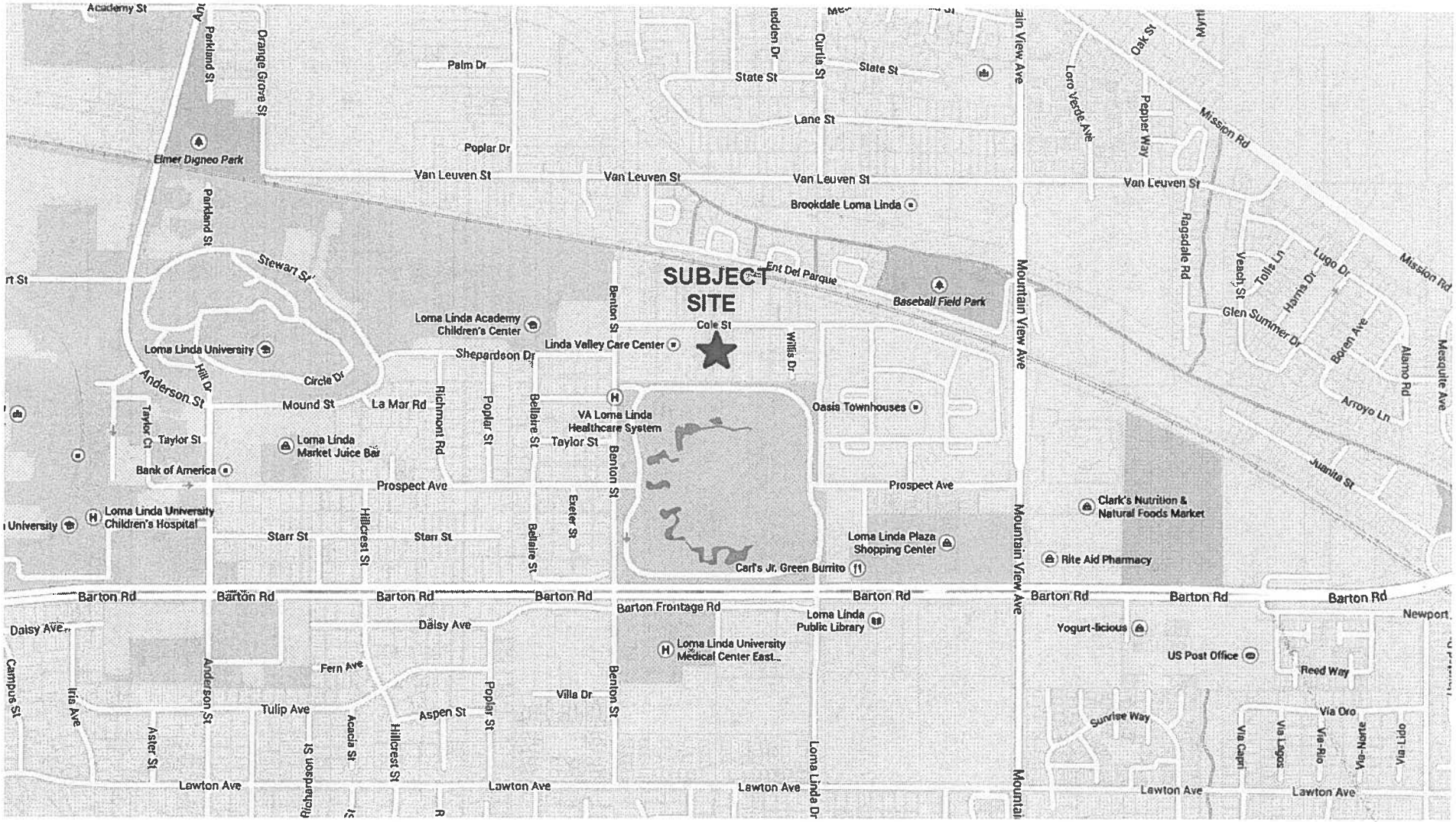
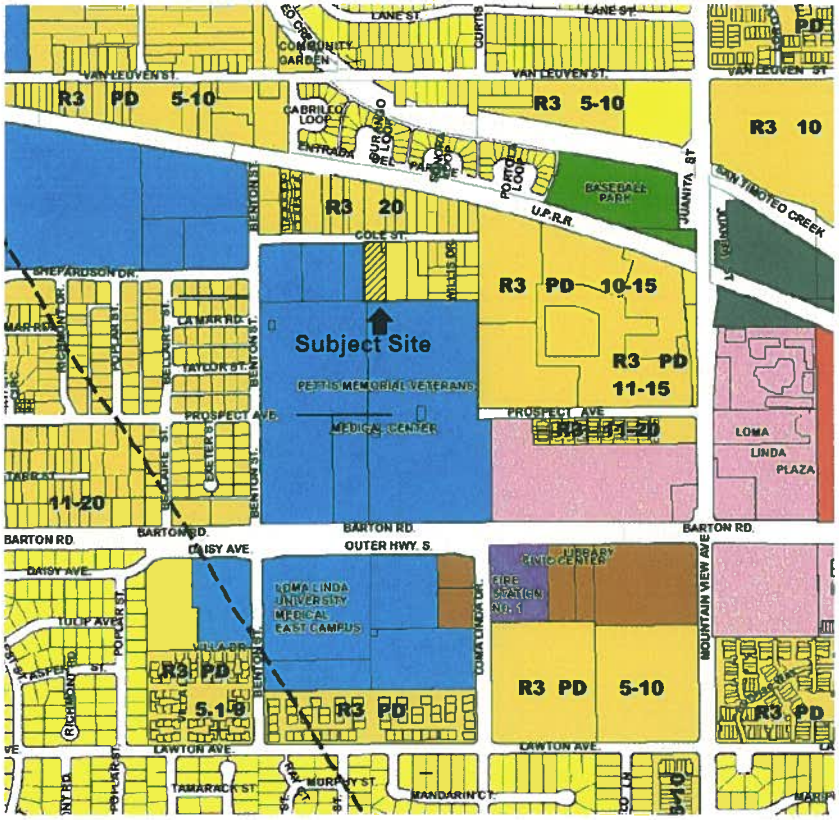


EXHIBIT - A

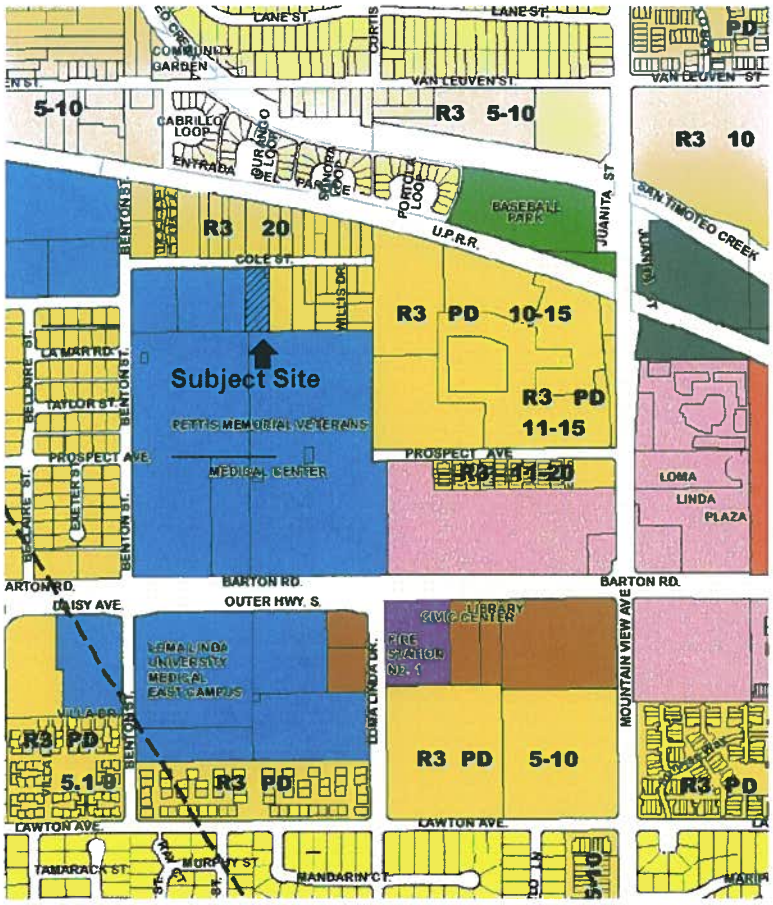
EXISTING ZONING



Zoning Legend

- City Sphere of Influence
- CITY HALL / CORP YARD
- INSTITUTIONAL (I)
- ADMIN. PROFESSIONAL OFFICES (AP)
- NEIGHBORHOOD BUSINESS (C1)
- GENERAL BUSINESS (C2)
- COMMERCIAL MANUFACURING (CM)
- COMMERCIAL INDUSTRIAL
- RESTRICTED MANUFACTURING (MR)
- SINGLE RESIDENCE (R1)
- DUPLEX (R2)
- MULTI FAMILY RESIDENCE (R3)
- MOBILEHOME PARK (R4)
- AGRICULTURAL (A1)
- PLANNED COMMUNITY (PC)
- PARK
- PARK - OPEN SPACE
- HILLSIDE

PROPOSED ZONING



Zoning Legend

- City Sphere of Influence
- CITY HALL / CORP YARD
- INSTITUTIONAL (I)
- ADMIN. PROFESSIONAL OFFICES (AP)
- NEIGHBORHOOD BUSINESS (C1)
- GENERAL BUSINESS (C2)
- COMMERCIAL MANUFACURING (CM)
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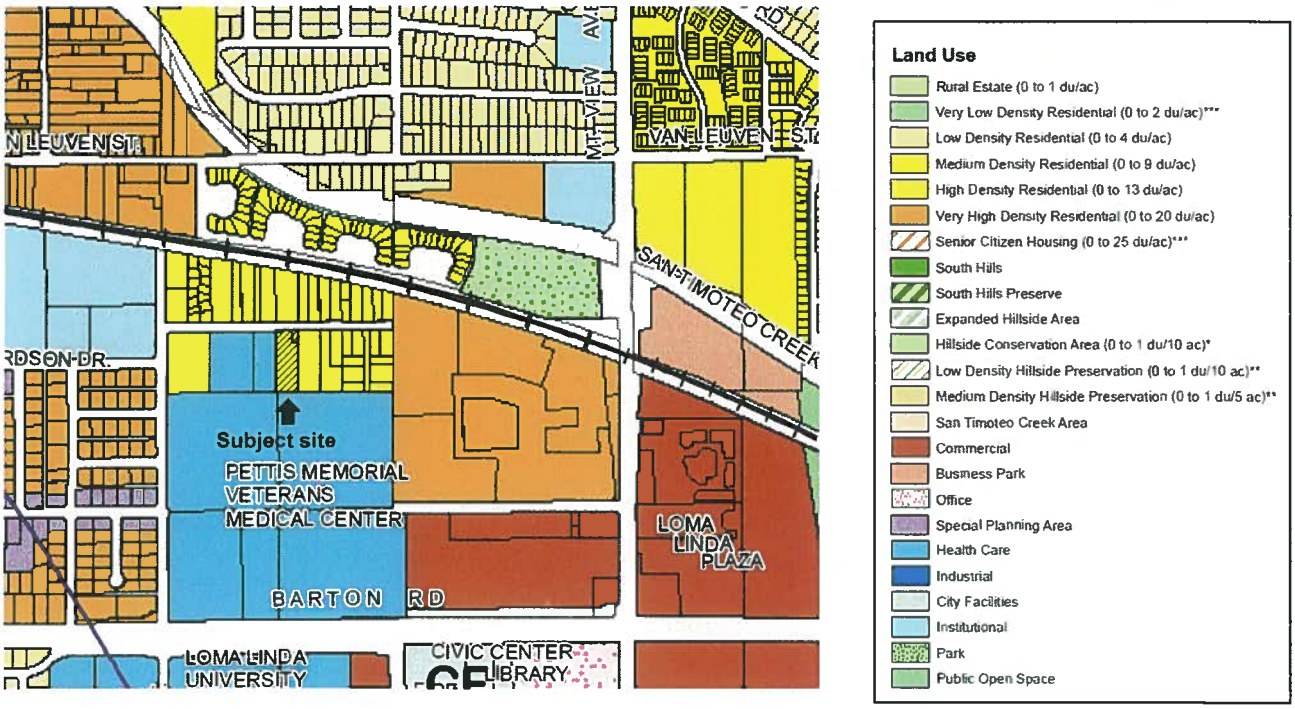
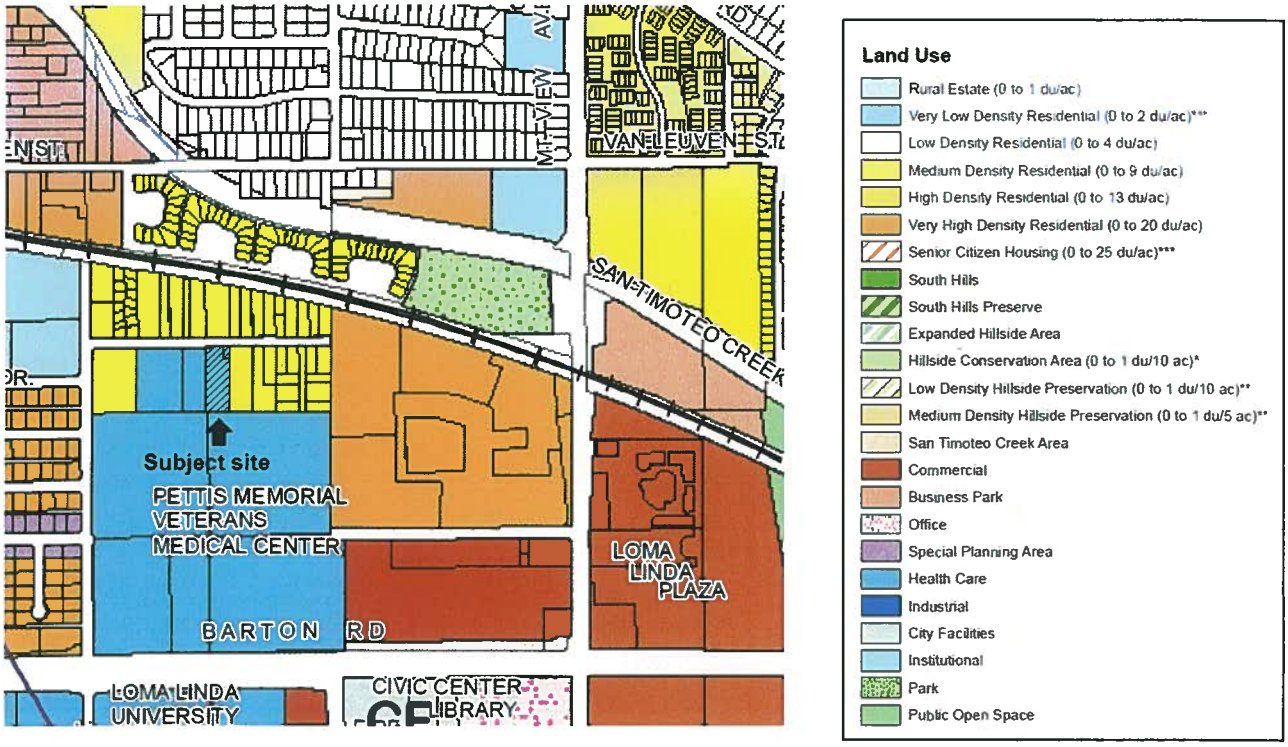
- AGRICULTURAL (A1)
- PLANNED COMMUNITY (PC)
- PARK
- PARK - OPEN SPACE
- HILLSIDE

EXHIBIT B

EXISTING GENERAL PLAN



PROPOSED GENERAL PLAN



FirstCarbon® SOLUTIONS

DRAFT
40-Unit Assisted Living Facility
25401-17 Cole Street, Loma Linda
San Bernardino County, California
Initial Study/Mitigated Negative Declaration
General Plan Amendment No. 14-060
Zone Change No. 14-061
Precise Plan of Design No. 14-059

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Report Date: January 16, 2015

EXHIBIT C

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SECTION 1: INTRODUCTION

1.1 - Purpose

This document has been prepared in accordance with California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 2100-21189.3) and the CEQA Guidelines (California Code of Regulations [CCR] Section 1500, et seq.). An Initial Study (IS) is prepared by a Lead Agency to determine if a project may have a significant effect on the environment (CEQA Guidelines Section 15063[a]), and thus to determine the appropriate level of environmental documentation needed for a project. In accordance with the CEQA Guidelines Section 15070:

> A public agency shall prepare a proposed negative declaration or mitigated negative declaration . . . when: (a) The Initial Study shows that there is no substantial evidence . . . that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the project proponent (applicant) and such revisions would reduce potentially significant effects to a less-than-significant level.

In this circumstance, the City of Loma Linda as the Lead Agency has determined that the proposed 40-Unit Assisted Living project (project) would not have a significant effect on the environment, and therefore does not require the subsequent preparation of an Environmental Impact Report (EIR).

As discussed in Section 2, Environmental Checklist and Environmental Evaluation of this IS, the proposed project would result in certain potentially significant environmental impacts; however, these impacts would be reduced to a less than significant level by implementation of mitigation measures that have been agreed upon and would be implemented by the Lead Agency. Therefore, an IS and Proposed Mitigated Negative Declaration (MND) is the appropriate level of environmental documentation for compliance with the requirements of CEQA. This IS/MND conforms to these requirements and to the content requirements of CEQA Guidelines Section 15071.

The purpose of this IS/MND is to identify the potential environmental impacts associated with the construction and operation of the proposed 40-Unit Assisted Living Project in the City of Loma Linda, California. This IS provides measures that will avoid or mitigate impacts to a less than significant level. Additionally, this IS includes information to substantiate the conclusions made regarding the proposed project's potential to result in significant environmental impacts, and provides the basis for feedback from public agencies, organizations, and the public. Pursuant to Section 15367 of the CEQA Guidelines, the City of Loma Linda is the Lead Agency for the proposed project and has primary responsibility for approval or denial decisions.

1.2 - Project Location

The proposed 40-Unit Assisted Living Project will be located on approximately one acre (43,400 square feet), within the northern portion of the City of Loma Linda, San Bernardino County, California (see Exhibit 1). Regionally, the project site is located just north of the Veterans Affairs (VA) Loma Linda Hospital; east of Loma Linda University; south of Interstate 10; and west of Mountain View Avenue.

The project site is generally bound by Cole Street to the north, Benton Street to the west, the VA Hospital to the south, and Willis Drive to the east. The project site's location corresponds to Township 1 South, Range 4 West (San Bernardino), of the Redlands, California, Quadrangle 7.5 Minute Series Topographical Map published by the U.S.

Geological Survey (see Exhibit 2a and 2b).The project comprises two Assessor's Parcel Numbers (APNs): 0284-142-07 and 0284-142-08.

1.3 - Environmental Setting

The project site currently contains three single-family residential structures, one two-story duplex, two sheds, a chain link fence, 11 mature trees, and a gravel driveway. Under current conditions, the residences located at 25405 and 25417 Cole Street and a metal shed are located in the northern portion of the property. The residence located at 25407 Cole Street and the duplex located at 25401-03 Cole Street are situated in the middle third of the property, with the wooden shed. The remaining third of the property is an ungraded portion at the southern end of the parcel, along the parking lot for the Veteran's Hospital. All of the existing uses would be demolished as part of project implementation. The project site is relatively flat and gently slopes to the north, with on-site elevations ranging from 1,128 feet above mean seal level (amsl) to 1,141 feet amsl.

The City of Loma Linda General Plan's Land Use Map designates the project site as High Density Residential (0–13 du/acre), while the City's Zoning Map identifies the project site as Multiple Residence (R-3). Therefore, the project would require a General Plan Amendment from High Density Residential to Healthcare, and a Zone Change from Multiple Residence to Institutional (I).

The project site is bound by Cole Street and residential uses to the north, a parking lot to the south, a new senior assisted living facility to the west, and residential uses to the east. Table 1 provides a summary of the land uses surrounding the project site, along with the zoning districts and land use designations associated with each of these neighboring uses.

Table 1: Surrounding Land Uses

Land Use	Zoning	General Plan Land Use Designation
North		
Residential	Multi Family Residence (R-3)	High Density Residential (0 to 13 du/acre)
Cole Street (adjacent)	—	—
East		
Residential	Multi Family Residence (R-3)	Very High Density Residential (0 to 20 du/acre)
Residential (adjacent)	Multi Family Residence (R-3)	High Density Residential (0 to 13 du/acre)

Table 1 (cont.): Surrounding Land Uses

Land Use	Zoning	General Plan Land Use Designation
South		
Parking lot (adjacent)	Institutional	Healthcare

Pettis Memorial Veterans Medical Center	Institutional	Healthcare
West		
Assisted Living Facility	Institutional	Healthcare

Source: City of Loma Linda, Zoning Map, ND; City of Loma Linda, General Plan Land Use Map, 2009.

1.4 - Project Description

The proposed project consists of a two-story, 37,124-square-foot assisted living facility. The project would include 40 living units, each containing one bedroom and one bathroom. Beyond the 40 units proposed, the facility would also include community spaces such as multipurpose rooms, courtyards, a kitchen, a dining room, and a lobby (see Exhibit 3a and 3b). The project would operate 24 hours a day, 7 days a week, utilizing various shifts of approximately 30 full-time staff members. The assisted living facility would provide 21 parking spaces (including two Americans With Disabilities Act-accessible spaces) as well as landscaping. Table 2 provides the allocation of space by project component.

Table 2: Project Summary

Project Component	Size (square feet)
Public Space, Office and Retreat	
1st floor	1,638
2nd floor	1,638
Total	**3,276**
Multi-Purpose Rooms and Restrooms	
1st floor	1,218
2nd floor	1,218
Total	**2,436**
Dining and Kitchen	
1st Floor	2,189
2nd Floor	N/A
Total	**2,189**
Residential Units	
1st Floor	10,201
2nd Floor	11,384
Total	**21,585**

Table 2 (cont.): Project Summary

Project Component	Size (square feet)
Outdoor Seating, Covered hallways and Stairs	
1st Floor	3,316
2nd Floor	4,322
Total	**7,638**

Landscaping	
10.9% project coverage/10.0% required	**4,751**
Total	**46,718**
Source: CTMAX, Project Description, Site Plan, and First Floor Plan, July 1, 2012.	

As part of project construction, one major building would be built on-site containing all 40-units. The proposed 40 dwelling units would be located along the western and eastern exteriors of the building; and community spaces including multi-purpose rooms, courtyards, a dining hall, and a kitchen would be located within the center of the two residential wings (see Exhibit 4 and Exhibit 5). The proposed parking areas and a minor internal roadway would be located along the southern and eastern borders of the assisted living facility. The project would provide one access point to the site from Cole Street, located directly east of the project site.

The proposed assisted living building would incorporate design elements, including decorative window shutters and tiles, stone veneer, and a variety of complementary building materials. The project frontage along Cole Street would contain landscaping, including several shrubs and olive trees and decorative groundcover. Along the southern, eastern, and western borders of the site, the project would include California live oak, crape myrtle, and Chinese pistache trees, as well as lavender, California lilacs, and several other plants (Exhibit 6).

1.5 - Intended Uses of this Document

The IS prepared for the proposed project will be used by the City of Loma Linda as supporting environmental documentation for the following discretionary approvals:

- Zone Change: Multiple Residence (R-3) to Institutional (I) zone;
- General Plan Amendment P14-060: High Density Residential (0-13 du/acre) to Healthcare;
- Precise Plan of Design (PPD) P14-059.

Exhibit 1: Regional Location Map

Exhibit 2a: Local Vicinity Map – Topographic Base

Exhibit 2b: Local Vicinity Map - Aerial Base

Exhibit 3a: Site Plan (First Floor)

Exhibit 3b: Site Plan (Second Floor)

Exhibit 4: Building Elevations –North and South

Exhibit 5: Building Elevations – East and West

Exhibit 6: Landscaping Plan

SECTION 2: ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☐	Greenhouse Gas Emissions	☐	Hazards/Hazardous Materials	☐	Hydrology/Water Quality
☐	Land Use/Planning	☐	Mineral Resources	☐	Noise
☐	Population/Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities/Services Systems	☐	Mandatory Findings of Significance

Environmental Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: _____ Signed: _____

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Aesthetics *Would the project:*				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The City of Loma Linda General Plan Conservation and Open Space Element identifies the hillside portions of the City, and particularly the Hillside Conservation Area, as important visual resources within the City (City of Loma Linda 2009). In 1993, the City's residents passed the Hillside Preservation Initiative to preserve the undeveloped hillside areas within the City. The project site is located in a predominantly developed setting, approximately 0.7 mile north of the Hillside Conservation Area (City of Loma Linda 2009). Therefore, the project would not affect the City of Loma Linda Hillside Preservation Initiative.

In addition, the project is bordered by residential and institutional uses, including the City of Loma Linda Veteran's Hospital. The proposed project has been designed to conform to the size and scale of the surrounding development, and would therefore have a less than significant impact to scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

No Impact. The California Department of Transportation (Caltrans) designates State Route 38 (SR-38) from South Fork Campground to State Lane as the only Officially Designated State Scenic Highway in San Bernardino County (Caltrans 2011). This segment of SR-38 is approximately 37 miles northeast of the project site. Because of the extensive distance and the varying topography between the project site and this portion of SR-38, the proposed project will not be located within the view shed of the roadway. Therefore, no impacts associated with State Scenic Highways will occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The project site is located in a predominantly urbanized setting, primarily consisting of residential and institutional uses. As depicted in Appendix A: Site Photographs, the project site currently contains three single-family residential structures, one two-story duplex, two sheds, a chain link fence, 11 mature trees, and a gravel driveway. Implementation of the project would remove the existing buildings and mature trees on-site, and would ultimately replace these with a two-story, 37,124-square-foot assisted living facility. The facility would consist of living units and associated features including courtyards, multi-purpose rooms, landscaping, and other amenities. The proposed assisted living building would also incorporate design elements such as decorative window shutters and tiles, stone veneer, and a variety of complementary building materials. The project frontage along Cole Street would contain landscaping and decorative groundcover and surfaces, including several shrubs and olive trees. Along the southern, eastern, and western borders of the site, the project would establish California live oak, crape myrtle, and Chinese pistache trees; lavender; California lilacs; and several other plants.

The design standards within the Zoning Code have been established by the City to ensure that both new development projects and existing land uses are visually compatible. The City's Zoning Map identifies the project site as Multiple Residence (R-3); thus, the project would require a Zone Change from Multiple Residence to Institutional (I). A Zone Change from Multiple Residence to Institutional (I) and the City's approval of the proposed project's final design plans will ensure that the project's design complements the existing land uses in the project area and is consistent with the design standards contained in the Zoning Code. Therefore, impacts associated with existing visual character or quality would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact. The proposed project design does not include any architectural elements or materials that would produce substantial glare on-site, such as large or dark windows. The project would require the establishment of security, access and parking lot lighting and, as such, would introduce new sources of light to the project area. The Assisted Living Facility would also operate 24-hours a day, which would cause a corresponding increase in lighting within the project vicinity. The proposed parking lot lights would be required to comply with Section 17.50.130-Artificial illumination, of the Loma Linda Municipal Code, which states:

> Artificial illumination of any structure, lot, or open area including, but not limited to, buildings, signs, parking and storage areas, shall be so installed and arranged as to direct light away from adjoining properties. The intensity of illumination provided shall be sufficiently subdued to prevent any nuisance to other properties and uses in the vicinity (Ord. 98 § 46.04.09, 1974).

Therefore, the proposed project's lighting will be located and shielded to prevent light trespass onto surrounding properties. As such, the proposed project's lighting will comply with thresholds and requirements contained in the City's Municipal Code. The proposed lighting would also be consistent with other uses within the vicinity, including the parking lot to the south, residential uses to the north and east, and the assisted living facility to the west. Additionally, any potential spillover light would be limited to the existing right-of-way.

Therefore, consistency with the City of Loma Linda Municipal Code, Section 17.50.130 would ensure that the project would not adversely impact adjacent land uses associated with lighting and glare would. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Agriculture and Forestry Resources *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Evaluation

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon

measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (ARB).

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) identifies the project site and the immediate project area as Urban and Built-up Land. The nearest property designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is a parcel designated Prime Farmland located approximately 0.5 mile southeast of the project site along Mountain View Avenue, south of Barton Road. Because of the distance between the project site and this property, the proposed project will not impact existing Prime Farmland, Unique Farmland, or Farmland in the project area, and will not result in conversion of such property to non-agricultural uses. Therefore, no impacts associated with conversion of Important Farmland will occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The California Department of Conservation's Williamson Act Map identifies the project site and the project area as Non-Williamson Act Land, Urban and Built-up Land. The closest property designated as under Williamson Act contract is located over 6 miles east of the project site (Department of Conservation 2013). Additionally, the City of Loma Linda's Zoning Map identifies the project site as Multiple Residence (R3), and no parcels zoned as Agricultural (A1) are identified in the project area. Therefore, no impacts associated with agricultural zoning or Williamson Act contracts would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The California Department of Forestry and Fire Protection's (CalFire) Land Cover Map does not identify the project site or the project area as either forestland or timberland. The nearest forested areas are located more than 8 miles northeast of the project site in the San Bernardino National Forest (CalFire 2006). Therefore, no impacts associated with forestland or timberland zoning would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project is located within a developed area, along the south side of Cole Street. Neither the project site nor the project vicinity contains any land identified by CalFire as forest land. Therefore, no impacts associated with conversion of forest land will occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The project site is identified as Urban and Built-up Land by the California Department of Conservation FMMP (Department of Conservation 2011). The closest property designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) is a parcel designated as Prime Farmland located approximately 0.5 mile southeast of the project site. Based on this distance and the nature of the proposed project, the project will not result in the conversion of this Prime Farmland property to non-agricultural use. Therefore, no impacts associated with the conversion of Farmland or forest land will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Air Quality *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:*				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Environmental Evaluation

The following analysis is based in part on CalEEMod modeling conducted by FirstCarbon Solutions (FCS 2014b) and included in this IS as Appendix B.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. According to the 1993 South Coast Air Quality Management District (SCAQMD) Handbook (SCAQMD 1993), there are two key indicators of consistency with the AQMP:

1. Indicator: Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP. Project applicability: applicable and assessed below.
2. Indicator: A project would conflict with the AQMP if it will exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out and phase. The Handbook indicates that key assumptions to use in this analysis are population number and location and a regional housing needs assessment. The parcel-based land use and

growth assumptions and inputs used in the Regional Transportation Model run by the Southern California Association of Governments that generated the mobile inventory used by the SCAQMD for AQMP are not available. Therefore, this indicator is not applicable.

Considering the recommended criteria in the SCAQMD's 1993 Handbook, this analysis utilizes the following criteria to address this potential impact:

- Step 1: Project's contribution to air quality violations (SCAQMD's first indictor).
- Step 2: Assumptions in AQMP (SCAQMD's second indictor).
- Step 3: Compliance with applicable emission control measures in the AQMPs.

Step 1: Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP. As shown in 3b), the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

If a project's emissions exceed the SCAQMD regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$, it follows that the emissions could cumulatively contribute to an exceedance of a pollutant for which the South Coast Air Basin (Air Basin) is in nonattainment (ozone, nitrogen dioxide, PM_{10}, $PM_{2.5}$) at a monitoring station in the Air Basin. An exceedance of a nonattainment pollutant at a monitoring station would not be consistent with the goals of the AQMP—to achieve attainment of pollutants. As shown in Impact 3 c), the project would not exceed the SCAQMD's regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$. Therefore, the project is less than significant for this criterion.

Step 2: Assumptions in AQMP

According to Chapter 12 of the SCAQMD's CEQA Air Quality Handbook, the purpose of the General Plan consistency finding is to determine whether a project is inconsistent with the growth assumptions that are incorporated into the air quality plan, and thus whether the project would interfere with the region's ability to comply with federal and state air quality standards. The project site is designated "High Density Residential" by the City of Loma Linda General Plan. The intent of the High Density Residential designation is to allow uses, which include multi-family uses consisting of town homes, condominiums, and low-rise apartment style developments. The project would be consistent with the land use designation with development of a 40-unit assisted living facility. Therefore, the project is consistent with the growth projections of the General Plan and, by extension, the AQMP. The project is less than significant for this criterion.

Step 3: Control Measures

This step involves assessing the project's compliance with the control measures in the AQMPs.

2003 AQMP. The 2003 AQMP contains a number of land use and transportation control measures including the following: the District's Stationary and Mobile Source Control Measures; State Control Measures proposed by ARB; and Transportation Control Measures provided by Southern California Association of Governments. ARB's strategy for reducing mobile source emissions include the following

approaches: new engine standards; reduce emissions from in-use fleet, require clean fuels, support alternative fuels and reduce petroleum dependency, work with the United States Environmental Protection Agency (EPA) to reduce emissions from national and state sources, and pursue long-term advanced technology measures. Transportation control measures provided by Southern California Association of Governments include those contained in the Regional Transportation Plans, the most current version of which is the 2008 Regional Transportation Plan. The Regional Transportation Plan contains control measures to reduce emissions from on-road sources by incorporating strategies such as high occupancy vehicle, transit, and information-based technology interventions. The project indirectly would comply with the control measures set by ARB and Southern California Association of Governments.

2007 AQMP. The focus of the 2007 AQMP is to demonstrate attainment of the federal $PM_{2.5}$ ambient air quality standard by 2015 and the federal 8-hour ozone standard by 2024, while making expeditious progress toward attainment of state standards. This is to be accomplished by building upon improvements from the previous plans and incorporating all feasible control measures while balancing costs and socioeconomic impacts. The 2007 AQMP indicates that $PM_{2.5}$ is formed mainly by secondary reactions or sources. Therefore, instead of reducing fugitive dust, the strategy for reducing $PM_{2.5}$ focuses on reducing precursor emissions of SO_X, directly emitted $PM_{2.5}$, NO_X, and VOC.

The Final 2007 AQMP control measures consist of four components. The first component is SCAQMD's Stationary and Mobile Source Control Measures. The Final 2007 AQMP includes 30 short-term and mid-term stationary and seven mobile source control measures for SCAQMD implementation. A complete listing of the measures is in the 2007 AQMP and includes measures such as VOC reductions from gasoline transfer and dispensing facilities, further NO_X reductions from space heaters, localized control program for PM emission hot spots, urban heat island, energy efficiency and conservation, etc. Some of the measures will become new rules and some will be amendments to existing rules. When the rules pass, the owner-operator will follow the applicable rules.

The second component is ARB's Proposed State Strategy, which includes short- and mid-term control measures aimed at reducing emissions from sources that are primarily under state jurisdiction, including on-road and off-road mobile sources, and consumer products. These measures are required in order to achieve the remaining emission reductions necessary for $PM_{2.5}$ attainment. ARB's strategy includes measures such as improvements to California's Smog Check Program, expanded passenger vehicle retirement, cleaner in-use heavy-duty trucks, reductions from port related sources, cleaner off-road equipment, evaporative and exhaust strategies, pesticide strategies, etc. When these measures are implemented by the ARB, the project would be required to follow them.

The third component is SCAQMD Staff's Proposed Policy Options to Supplement ARB's Control Strategy. SCAQMD staff believe that a combination of regulatory actions and public funding is the most effective means of achieving emission reductions. As such, the 2007 Final AQMP proposes three policy options for the decision makers to consider in achieving additional reductions. The first option is to incorporate the SCAQMD proposed additional control measures as a menu of selections further reducing emissions from sources primarily under state and national jurisdiction. The second option is to have the State fulfill its NO_X emission reduction obligations under the 2003 AQMP by 2010 for its short-term defined control measures plus additional reductions needed to meet the NO_X emission target between 2010 and 2014. The third option is based on the same rate of progress under Policy Option 1, but it relies heavily on public funding assistance to achieve the needed NO_X reductions via accelerated fleet turnover to post-2010 on-road emission standards or the cleanest off-road engine standards in effect today or after 2010. This strategy does not apply to the project.

The fourth component consists of Regional Transportation Strategy and Control Measures provided by Southern California Association of Governments. Transportation plans within the Air Basin are statutorily required to conform to air quality plans in the region, as established by the 1990 Federal Clean Air Act and reinforced by other Acts. The region must demonstrate that its transportation plans and programs conform to the mandate to meet the federal ambient air quality standards in a timely manner. The Regional Transportation Plan, prepared by the Southern California Association of Governments, is developed every 4 years with a 20-year planning horizon to meet the long-term transportation planning requirements for emission reductions from on-road mobile sources within the Air Basin. The biennial Regional Transportation Improvement Program requires that the short-term implementation requirements of the Transportation Conformity Rule be met by Southern California Association of Governments. The first 2 years of the program are fiscally constrained and demonstrate timely implementation of a special category of transportation projects called Transportation Control Measures. In general, Transportation Control Measures are those projects that provide emission reductions from on-road mobile sources, based on changes in the patterns and modes by which the regional transportation system is used. Strategies are grouped into three categories: high occupancy vehicle strategy, transit and systems management, and information-based technology (traveling during a less congested time of day). Southern California Association of Governments approved the transportation measures in the Regional Transportation Plan, which have been included in the region's air quality plans. The Transportation Control Measures will be implemented and will subsequently reduce emissions in the Air Basin.

2012 AQMP. The 2012 AQMP was adopted December 7, 2012. The purpose of the 2012 AQMP for the Air Basin is to set forth a comprehensive and integrated program that will lead the Air Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update of the Air Basin's projections in meeting the federal 8-hour ozone standards. Similarly to the prior AQMPs, the project would comply with all applicable rules and regulations enacted as part of the AQMP. In addition, as discussed in the Regulatory section, the AQMP relies upon the Southern California Association of Governments regional transportation strategy, which is in its adopted 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and 2011 Federal Transportation Improvement Program. Included in the RTP/SCS are regional transportation strategy and transportation control measures including the following: active transportation (non-motorized transportation - biking and walking); transportation demand management; transportation system management; transit; passenger and high-speed rail; goods movement; aviation and airport ground access; highways; arterials; and operations and maintenance.

Geographical areas in the State that exceed the federal air quality standards are called nonattainment areas. The project area is in nonattainment for ozone, PM_{10}, $PM_{2.5}$, and nitrogen dioxide. State Implementation Plans (SIPs) show how each area will attain the federal standards. To do this, the SIPs identify the amount of pollutant emissions that must be reduced in each area to meet the standard and the emission controls needed to reduce the necessary emissions. On September 27, 2007, ARB adopted its State Strategy for the 2007 SIP. In 2009, the SIP was revised to account for emissions reductions from regulations adopted in 2007 and 2008 and clarifies ARB's legal commitment. There are currently proposed revisions and a 2011 Progress Report. The South Coast is currently 94 percent of the way towards achieving the 2014 emissions levels identified in its $PM_{2.5}$ SIP. The SIP takes into account ARB rules and regulations. The project will comply with applicable rules and regulations.

Summary

In summary, the project would not result in a violation of air quality standards. The project would not exceed the SCAQMD's regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$. In addition, the project is consistent with the growth assumptions in the applicable AQMP and would comply with all applicable

rules and regulations. Therefore, the project would not conflict with the applicable AQMP and would result in a less than significant impact.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. Two criteria are used to assess the significance of this impact: (1) the localized construction analysis and (2) the CO hot spot analysis. Regional impact analysis, including both construction and operational regional impacts, is provided in Impact 3 c).

Localized Construction Analysis

The SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts through localized significance thresholds (also referred to as an LST analysis). Localized significance thresholds represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. Localized significance thresholds were developed in recognition of the fact that criteria pollutants such as CO and NO_X—and PM_{10} and $PM_{2.5}$ in particular—can have local impacts at nearby sensitive receptors as well as regional impacts. The localized significance thresholds are developed for each source receptor area and are applicable to NO_X, CO, PM_{10}, and $PM_{2.5}$.

The localized significance thresholds appropriate to the project area were obtained from the look-up tables in the SCAQMD Final Localized Significance Threshold Methodology for a 1-acre project in Source Receptor Area 35. In addition to the dependence on geographic location within the SCAQMD (e.g., the Source Receptor Area), the localized thresholds also depend on the distance to the impacted receptor from the source of emissions. The distance to the nearest sensitive receptor is within 25 meters from the boundary of the project. The project would be required to comply AQMD Rule 403, CalEEMod has incorporated these construction regulations under mitigation.

Rule 403 sets control requirements and strategies for preventing, mitigating, and controlling the release of airborne particulate matter from earthmoving activities.

The localized assessment methodology limits the emissions in the analysis to those generated from on-site activities. The on-site emissions during construction are compared with the localized significance thresholds and are summarized in Table 3. The on-site emissions were generated as discussed in the regional analysis. On-site emissions are from fugitive dust and off-road diesel exhaust.

Table 3: Localized Significance Analysis (Construction)

	On-site Emissions (pounds per day)			
Activity	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition	29.68	22.06	1.96	1.76
Site Preparation	32.47	18.68	2.28	1.55
Grading	31.26	20.20	4.55	3.13
Building Construction	25.84	17.05	1.76	1.69
Paving	19.75	12.27	1.24	1.14

Activity	On-site Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Architectural Coating	2.57	1.90	0.22	0.22
Maximum Daily Emissions	32.47	22.06	4.55	3.13
Localized Significance Threshold	118	775	4.0	4.0
Exceed Threshold?	No	No	No	No

Notes:
None of the above activities occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.
Source of emissions: CalEEMod 2013.2.2
Source of thresholds: South Coast Air Quality Management District 2009, for Source Receptor Area 35, a project site of 1 acre, at a distance of 25 meters.

The localized construction analysis uses thresholds that represent the maximum project emissions that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. If the project results in emissions that do not exceed the localized significance thresholds, it follows that those emissions would not cause or contribute to a local exceedance of the appropriate ambient air quality standard. As seen in Table 3, the localized construction analysis demonstrates that the project would not exceed the localized significance thresholds. Therefore, the project would result in a less than significant localized criteria pollutant impact during construction activities.

Carbon Monoxide Hot Spot Analysis

Carbon monoxide (CO) "hot spot" thresholds ensure that emissions of CO associated with traffic impacts from a project in combination with CO emissions from existing and forecasted regional traffic do not exceed state or federal standards for CO at any traffic intersection impacted by the project. Project concentrations may be considered significant if a CO hot spot intersection analysis determines that project-generated CO concentrations cause a localized violation of the state CO 1 hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, federal CO 1-hour standard of 35 ppm, or federal CO 8-hour standard of 9 ppm.

A CO hot spot is a localized concentration of CO that is above the state or federal 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. To provide a worst-case scenario, CO concentrations are estimated at project-impacted intersections, where the concentrations would be the greatest.

This analysis follows guidelines recommended by the CO Protocol (University of California, Davis 1997) and the SCAQMD. According to the CO Protocol, intersections with Level of Service (LOS) E or F require detailed analysis. In addition, intersections that operate under LOS D conditions in areas that experience meteorological conditions favorable to CO accumulation require a detailed analysis. The SCAQMD recommends that a local CO hot spot analysis be conducted if the intersection meets one of the following criteria: (1) the intersection is at LOS D or worse and where the project increases the volume-to-capacity ratio by 2 percent, or (2) the project decreases LOS at an intersection from C to D.

A Traffic Analysis (Kunzman Associates, Inc. 2014) for the proposed project included an analysis of traffic volumes on Cole Street existing conditions plus the proposed project. The study found that the project access intersection would operate at acceptable LOS during peak hours after implementation of the recommendations provided by the traffic consultant. For Cole Street, the existing plus project's LOS is expected to be at LOS A levels for both morning and evening peak hours, better LOS levels than the acceptable level of LOS C found within the City's General Plan.

The project would not negatively affect the LOS of intersections in the project area after incorporating proposed improvements suggested within the traffic analysis. Therefore, the project would not significantly contribute to a CO hotspot.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the regional significance thresholds. This is an approach recommended by the SCAQMD in its comment letters.
2. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Note that the voluntary approaches in the SCAQMD's 1993 Handbook are not used in this analysis for the following reasons. The first approach in the 1993 Handbook is a 1-percent-per-year reduction (or 18 percent over 18 years to the year 2010) in project emissions of VOC, NO_X, CO, PM_{10}, and SO_X. This approach is not straightforward and operational reductions are not easy to quantify. The second approach is not applicable because it relies on SCAQMD Regulation XV, which was repealed in 1995 and therefore is not applicable. The third approach is to reduce the rate of growth in vehicle miles traveled and trips. In this approach, the rate of growth in vehicle miles traveled and trips "should be held to the rate of population or household growth." Data that was used by Southern California Association of Governments in the AQMP should be used in this approach; however, that data is not available. Therefore, the approaches in the 1993 SCAQMD Handbook pertaining to cumulative impacts are not used.

Step 1: Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, nitrogen dioxide, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable

impact for those pollutants. If the project exceeds the regional threshold for NO_X or VOC, then it follows that the project would contribute to a cumulatively considerable impact for ozone. If the project exceeds the NO_X threshold, it could contribute cumulatively to nitrogen dioxide concentrations.

Regional emissions include those generated from all on-site and off-site activities. Regional significance thresholds have been established by the SCAQMD because emissions from projects in the Air Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the Air Basin region with regional emissions in excess of any of the thresholds presented in Table 4 (for construction) and Table 5 (for operation) are considered to have a significant regional air quality impact.

Construction Regional Emissions

Table 4 summarizes construction-related emissions. CalEEMod version 2013.2.2 was used to model construction and operational emissions. It was estimated using default values within CalEEMod that construction would begin January 2015, with construction activities occurring over the course of 12-months. Several buildings would also need to be demolished before grading activities. The information shown in Table 4 indicates that the SCAQMD regional emission thresholds would not be exceeded. Short-term construction emissions are considered to have a less than significant regional impact.

Table 4: Construction Air Pollutant Emissions

Source	Summer Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	3.15	30.10	23.29	0.02	2.27	1.83
Site Preparation	2.86	32.52	19.29	0.02	3.28	1.66
Grading	3.02	31.32	20.97	0.02	8.41	5.01
Building Construction	4.24	26.62	20.15	0.02	2.17	1.81
Paving	2.06	19.84	13.42	0.02	1.41	1.19
Architectural Coating	32.31	2.61	2.36	0.00	0.29	0.23
Maximum Daily Emissions	32.31	32.52	23.29	0.02	8.41	5.01
Significance Threshold	75	100	550	150	150	55
Significant Impact?	No	No	No	No	No	No

Notes:
The maximum daily emissions refer to the maximum emissions that would occur in one day; it was assumed that the grading activities do not occur at the same time as the other construction activities; therefore, their emissions are not summed.
VOC = volatile organic compounds NO_X = nitrogen oxides CO = carbon monoxide
SO_X = sulfur oxides PM_{10} and $PM_{2.5}$ = particulate matter
Source of emissions: CalEEMod 2013.2.2.
Source of thresholds: South Coast Air Quality Management District 2011a.

Operational Regional Emissions

Operational emissions from emission sources generated both on-site and off-site as estimated by CalEEMod are shown in Table 5 for the summer season. Both summer and winter seasons operational emissions were modeled, the project was found to produce higher emissions during the summer.

Additionally, the CalEEMod default trip rate was updated to 2.66 trips per thousand square feet (Kunzman Associates, Inc. 2014). As shown in Table 5, the project's emissions do not exceed the SCAQMD's regional thresholds and are less than significant.

Table 5: Operational Emissions

Source	Summer Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	11.63	0.31	23.45	0.03	3.07	3.07
Energy	0.01	0.12	0.05	0.00	0.00	0.00
Mobile	0.44	1.37	5.31	0.01	0.79	0.22
Total	12.08	1.80	28.81	0.04	3.86	3.29
Significance Threshold	55	55	550	150	150	55
Significant Impact?	No	No	No	No	No	No

Table 5 (cont.): Operational Emissions

Source	Summer Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$

Notes:
VOC = volatile organic compounds NO_X = nitrogen oxides CO = carbon monoxide
SO_X = sulfur oxides PM_{10} and $PM_{2.5}$ = particulate matter
Source of emissions: CalEEMod 2013.2.2.
Source of thresholds: South Coast Air Quality Management District 2011a.

The regional significance analysis of construction and operational emissions demonstrates that emissions are below the SCAQMD regional significance thresholds. Therefore, the project does not contribute to a cumulative impact according to this criterion.

Step 2: Cumulative Health Impacts

The Air Basin is in nonattainment for ozone, nitrogen dioxide, PM_{10}, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The regional analysis of construction and operational emissions indicates that the project would not exceed the SCAQMD regional significance thresholds. The project would not result in significant cumulative health impacts.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD

considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities. Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as nitrogen dioxide and CO), commercial and/or industrial facilities would be considered sensitive receptors for those purposes.

The nearest sensitive receptors (Loma Sierra Apartments) are located 7.5 feet to the east of the project site.

Criteria Pollutant Analysis

Project Construction

The localized construction analysis uses thresholds that represent the maximum emissions for a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. Development of the thresholds are based on the ambient concentrations of that pollutant for each source receptor area and on the location of the sensitive receptors. If the project results in emissions under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard. The standards are set to protect the health of sensitive individuals. If the standards are not exceeded at the sensitive receptor locations, it follows that the receptors would not be exposed to substantial pollutant concentrations.

As identified in Impact 3 b), the localized construction impact analysis demonstrated that the project would not exceed the localized thresholds for CO, nitrogen dioxide, PM_{10}, or $PM_{2.5}$. Therefore, during construction, the project would not expose sensitive receptors to substantial pollutant concentrations of CO, nitrogen dioxide, PM_{10}, or $PM_{2.5}$.

Project Operation

Regional emissions of NO_X and VOC (ozone precursors) CO, SO_2, PM_{10}, or $PM_{2.5}$ during operation from the project would not expose sensitive receptors to substantial pollutant concentrations.

As shown in Impact 3 b), the project would not generate a CO hot spot. Therefore, the project would not expose sensitive receptors to substantial CO concentrations.

Toxic Air Pollutants – Construction

Construction equipment would emit diesel particulate matter, which is a carcinogen. However, the diesel particulate matter emissions are short-term in nature. Determination of risk from diesel particulate matter is considered over a 70-year exposure time. Guidance published by the CAPCOA, Health Risk Assessments for Proposed Land Use Projects, does not include guidance for health risks from construction projects addressed in CEQA; risks near construction projects are expected to be included later when the toxic emissions from construction activities are better understood. The main source of diesel particulate matter from project construction would be grading activity, which is anticipated to be completed within 6 working days. The nearest sensitive receptors (Loma Sierra Apartments) are located adjacent to the project site to the east. Considering the dispersion of the emissions and the short time frame, exposure to diesel particulate matter would be less than significant.

Toxic Air Pollutants – Operation

The ARB Air Quality and Land Use Handbook (ARB 2005) contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of

air pollution," including recommendations for distances between sensitive receptors and certain land uses. These relevant recommendations are assessed as follows:

- **Heavily traveled roads**. ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project does not place sensitive receptors within 500 feet of the heavily traveled roads.
- **Distribution centers**. ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The project is not within 1,000 feet of a distribution center.
- **Fueling stations**. ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. The project is not within 50 feet of a typical gas dispensing facility or within 300 feet of a large fueling station.
- **Dry cleaning operations**. ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The project would not is not located within 300 feet of any dry cleaning operation.

During operation of the project, the project site will receive occasional deliveries. However, the volume and frequency of deliveries would be relatively low. Therefore, the project would result in a less than significant impact to sensitive receptors from project operation.

e) Create objectionable odors affecting a substantial number of people?

Less than significant impact.

Background Information

Odors can cause a variety of responses. The impact of an odor results from interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception.

Odor is typically a warning system that prevents animals and humans from consuming spoiled food or toxic materials. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of appetite, stomach ache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation.

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations. The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

The SCAQMD indicates that the number of overall complaints has declined over the last 5 years. Over the last 4 years, odor complaints make up 50 to 55 percent of the total nuisance complaints. Over the past decade, odors from paint and coating operations have decreased from 27 to 7 percent and odors from refuse collection stations have increased from 9 to 34 percent.

Project Analysis

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Diesel exhaust and VOC would be emitted during construction of the project, which are objectionable to some; however, emissions are short-term in nature only lasting as long as the construction equipment operates, would disperse rapidly from the project site, and therefore would not be at a level to induce a negative odor response.

Odors from operation of the project would be limited to the occasional odors from operation of the assisted living facility. Odors typically associated with this type of development include the occasional use of landscaping equipment and from vehicular traffic traveling to and from the project site. Therefore, impacts associated with odors would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. Biological Resources *Would the project:*				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Evaluation

The following section is based on the information contained within the November 2014 Biological Resource Due Diligence Assessment prepared for the proposed project by FirstCarbon Solutions (FCS 2014a). The Biological Resource Due Diligence Assessment is included as Appendix C of this IS.

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. The project site occurs in a residential development and consists of developed habitat, consisting of four residences scattered from north to south. A gravel driveway leads into the project site from Cole Street, with parked cars in front of each house, as well as other items associated with the residences.

A literature review of the California Natural Diversity Database queried for the San Bernardino South topographic map resulted in 22 wildlife species, 21 plant species, and three sensitive plant communities that have the potential to occur within the project site. Of these species, 12 are either threatened or endangered:

- coastal California gnatcatcher (*Polioptila californica californica*)
- Delhi Sands flower-loving fly (*Rhaphiomidas termiantus abdominalis*)
- Gambel's water cress (*Nasturtium gambelii*)
- least Bell's vireo (*Vireo bellii pusillus*)
- marsh sandwort (*Arenaria paludi*cola)
- salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*)
- Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*)
- Santa Ana sucker (*Catostomus santaanae*)
- slender-horned spineflower (*Dodecahema leptoceras*)
- Stephens' kangaroo rat (*Dipodomys stephensi*)
- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*).

Based on the Due Diligence Survey (FCS 2014a), dominant ornamental landscape plant species observed on-site includes pines (*Pinus* sp.), Mexican fan palm (*Washingtonia robusta*), mimosa (*Mimosa* sp.), southern mulberry tree (*Morus* sp.), bird of paradise (*Strelitzia reginae*), silver dollar eucalyptus (*Eucalyptus cinerea*), and Italian cypress (*Cupressus sempervirens*). Non-native grasses and weed species occur in the ornamental planter parallel to Cole Street as well as scattered throughout the project site. These species include red brome (*Bromus rubens*), slender oats (*Avena barbata*), and prickly sow thistle (*Sonchus asper*). The site lacks native vegetation, indicating previous disturbances due to the residential development.

Wildlife species observed within the vicinity of the project site were those typically associated with urban, developed habitat:

- European starling (*Sturnus vulgaris*)
- northern mockingbird (*Mimus polyglottos*)
- house finch (*Carpodacus mexicanus*)
- yellow-rumped warbler (*Dendroica coronata*)
- California towhee (*Melozone crissalis*)
- bushtit (*Psaltriparus minimus*)
- black phoebe (*Sayornis nigricans*)

- Anna's hummingbird (*Calypte anna*)
- house sparrow (*Passer domesticus*)
- western scrub jay (Aphelocoma californica).

The Due Diligence Survey (FCS 2014a) did not identify any habitat suitable for the 12 threatened or endangered species reported to occur in the San Bernardino South topographic quadrangle or any other special-status species.

However, the large ornamental trees located on the project site may provide suitable habitat for nesting avian species protected by the Migratory Bird Treaty Act (MTBA) of 1918. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs. Section 3503 of the CFW Code makes it illegal to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey, such as hawks and owls, and their eggs and nests from any form of take.

As a result, Mitigation Measures (MM) BIO-1a and BIO-1b will be required to reduce impacts to less than significant. Therefore, with implementation of mitigation, impacts associated with sensitive species would be less than significant.

MM BIO-1a To avoid any direct and indirect impacts to any migratory birds or raptors, construction activities shall occur outside of the avian nesting season of February through August. If the removal of habitat (trees and shrubs) and/or construction activities within and adjacent to nesting habitat must occur during the breeding season, the project will be required to adhere to the MBTA and CFG Code, and must conduct a pre-construction clearance survey. The applicant shall retain a qualified biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on and within a 500-foot buffer around the project site. The pre-construction survey must be conducted within 30 calendar days prior to the start of construction.

MM BIO-1b If nesting birds are detected by the biologist, a biological monitor shall be present on-site during construction to minimize construction impacts and ensure that no nest is removed or disturbed until all young have fledged.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The site lacks native vegetation, indicating previous disturbances due to the existing residential development. As previously discussed in Impact 4a), the project site does not contain any sensitive plant species or riparian habitat. The project site is not located within an area identified in local or regional plans, policies, or regulations, including an MSHCP, General Plan, or Municipal Code. Therefore, the project would not impact any riparian or other sensitive natural communities identified in the California Department of Fish and Game or U.S. Fish and Wildlife Service regional plans, policies, and regulations.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. As previously discussed in Impact 4a) and 4b), the project site occurs in a residential development and is surrounded by disturbed and developed habitat in all directions. The project site contains only non-native, ornamental plant species associated with the landscaping of the existing residences.

Furthermore, no drainage features are located on the project site, and a review of the U.S. Geological Survey's Redlands Quadrangle 7.5 Minute topographical map confirms that no "blue line" features occur on-site (City of Loma Linda 2009; USGS 2012). Consequently, no jurisdictional waters of the State or United States are expected to traverse the project site. Therefore, no impacts associated with federal protected wetlands would occur.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

Less Than Significant With Mitigation Incorporated. The project site occurs in a residential development and is surrounded by disturbed and developed habitat in all directions. Based on the Due Diligence Survey (FCS 2014a), no wildlife corridors were observed within or in the vicinity of the project site.

However, the large ornamental trees located on the project site may provide suitable habitat for nesting avian species protected by the Migratory Bird Treaty Act of 1918. As a result, Mitigation Measures BIO-1a and BIO-1b would be required to reduce impacts to less than significant (see Impact 4a for Mitigation Measure BIO-1a and BIO-1b). Therefore, with implementation of mitigation, impacts associated with wildlife nursery and nesting sites would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. Several non-native, ornamental trees are currently located on the project site. To facilitate construction and operation of the proposed project as designed, these existing trees will be removed during the demolition phase of the project, and replaced as part of the project's landscaping plan. Chapter 17.74-Tree Placement, Landscape Materials, and Tree Removal of the Loma Linda Municipal Code regulates the removal of certain trees, including street trees located within the public right-of-way, parkways, and easements, and landmark trees growing on private property. A permit is required to remove any such tree, as established in Section 17.74.070-Permit Required of the Municipal Code:

> To ensure proper street tree selection and protection of the urban forest, no person shall excavate within the drip line or ten feet of a tree (whichever is greater), or install, replace, or alter any tree designated as a landmark (on private property with owner's consent) or any tree located within city parkways, (street rights-of-way), or street tree easements, without first obtaining a permit as specified in Section 17.74.080 - 17.74.100. (Ord. 468 § 1 (part), 1992)

As defined above, none of the trees presently located on the project site would be considered a street tree located within the public right-of-way, parkways, or easements, or a landmark tree growing on private property. Thus, the provisions contained in Chapter 17.74, in particular Section 17.74.070, of the City's Municipal Code, would not apply to the proposed project. Additionally, although the proposed project would remove the existing trees from the project site, the project would ultimately replace these trees with 50 new trees and additional landscaping measures, as shown on Exhibit 6. Therefore, impacts associated with local policies and ordinances protecting biological resources would be less than significant.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site is not located within the boundary of any Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved habitat conservation plan. Therefore, no impacts associated with conservation plans would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. Cultural Resources *Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Environmental Evaluation

The following analysis is based on findings contained in the Phase I Cultural Resources Assessment prepared by FirstCarbon Solutions in November of 2014 (FCS 2014e). The report is included as Appendix D of this Initial Study.

Record Searches

On October 15, 2014, FCS Archaeologist, Sarah Williams, MA, conducted a records search at the Archaeological Information Center (AIC), in Redlands, California, for the project area and a 0.50-mile radius beyond the project boundaries. To identify any historic properties or resources, the current inventories of the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), the California Historical Landmarks (CHL) list, the California Points of Historical Interest (CPHI) list, and the California State Historic Resources Inventory (HRI) were reviewed to determine the existence of previously documented local historical resources.

Results from the AIC indicate that 10 resources have been recorded within 0.5 mile of the project area and that all of the resources are historic in nature (see

Table 6); no prehistoric resources have been recorded within the search radius. Fourteen resources are listed for the record search area on the San Bernardino County HRI, NRHP, CRHR, and CHL; however, none have been determined eligible or listed on the National or California Registers. In addition, 31 reports have been completed within 0.5 mile of the project area, of which 11 are general overview reports.

Table 6: Known Cultural Resources Located Within 0.50-Mile Radius of the Project Area

Site Number	Resource Description
CA-SBR-10330	Southern Pacific Railroad, originally built circa 1883. NRHP 6Z
CA-SBR-8092	Mill Creek Zanja, completed 1820, first irrigation ditch, built by Serrano and Cahuilla Indians.
P-36-016417	San Bernardino-Sonora Road, in use between 1822- 1870s
P-36-012871	10753 Poplar Street, vernacular style single-family residence, built 1920s-1930s. NRHP 6Z
P-36-012872	10763 Poplar Street, minimal traditional style single-family residence, built 1930s-1940s. NRHP 6Z
P-36-012873	10845 Poplar Street, minimal traditional style single-family residence, built late 1940s. NRHP 6Z
P-36-012874	10861 Poplar Street, vernacular style single-family residence, built circa 1925. NRHP 6Z
P-36-024899	Historic age trash deposit found beneath Van Leuven Street: cosmetic, medicine, and alcohol bottles; broken glass; and ceramic sherds.
P-36-015505	Captain Davis House, 11170 Ritchie Circle, Queen Anne influenced single-family residence, built 1895.
P-36-017533	Mound City, established about 1876 along the railroad track as a health resort. Established as a medical college in 1909, renamed Loma Linda. CPHI-SBR-019

Native American Heritage Commission

On October 15, 2014, FCS sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. The response from the NAHC was received on October 23, 2014, and although the letter did not indicate if there were any sacred sites within or near the project area, it did provide a list of seven Native American tribal members who may have additional knowledge of the project area. These tribal members were sent letters on October 29, 2014, asking for any additional information they might have concerning the project area. On November 13, 2014, an email response was received from Daniel McCarthy, MS, RPA, Director, Cultural Resources Management Department, San Manuel Band of Mission Indians, indicating that although the project is located within the Tribe's traditional use area, they do not have any information about significant cultural resources at that location. Mr. McCarthy requested a copy of the cultural report for their information. Once finalized, a copy of the report will be sent to Mr. McCarthy.

Pedestrian Survey

FCS Archaeologist, Sarah Williams, MA surveyed the project area on October 22, 2014. Much of project area is covered with residential structures, concrete driveways and walkways, and landscaped yards. Therefore, typical transects were not conducted in these portions; rather, open ground surface was examined wherever it occurred. The southern third of the property is an ungraded, vegetated area. Most of the ground surface was highly disturbed and visibility was fair to poor. No prehistoric resources were

discovered during the course of the field survey. Four residential structures and a wooden shed of historic age are located within the project area.

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less Than Significant Impact. The record search conducted by FCS Archaeologist, Sarah Williams, for the project area and a 0.50-mile radius beyond the project boundaries, conveyed that 10 resources have been recorded within 0.5 mile of the project area and that all of the resources are historic in nature. Fourteen resources are listed for the record search area on the San Bernardino County HRI, NRHP, CRHR, and CHL (see

Table 6); however, none have been determined eligible or listed on the National or California Registers. The 24 historic resources within 0.5 mile of the project area will not be impacted by development of the senior assisted living facility.

Under current conditions, the existing property contains three single-family residential structures, one two-story duplex, and a metal and wooden shed. A pedestrian survey was conducted on October 22, 2014, which began in the northwestern portion of the project area where the residence at 25405 Cole Street is located. The residence at 25405 Cole Street was built circa 1920, while the remaining four addresses (25401-03, 25407, and 25417) were built circa 1950. No prehistoric or historic age resources were observed during the survey, with exception of the four residential structures and a wooden shed.

In relation to the CEQA Guidelines, a site or structure may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (PRC §5020.1[j]), or if it meets the criteria for listing on either the National Register (NR) or the California Register of Historical Resources (CR) (14 CFR §4850). CEQA allows local historic resource guidelines to serve as the CRHR criteria, if enacted by local legislation, to act as the equivalent of the state criteria. Chapter 17.80, Historic Preservations of the Loma Linda Municipal Code establishes local historic resource designation criteria, while Section 17.80.100 of the City's Municipal Code adopts the State Historical Building Code to provide alternative building regulations for the rehabilitation, preservation, restoration, or relocation of structures designated as cultural resources.

Typically, researchers in California use a 45-year age threshold following State Historic Preservation Office (SHPO) recommendations. If the potentially historical resource has integrity and any one of the four criteria noted below are met at the state level of analysis, the resource would be considered significant and a direct impact to the cultural resource would be considered a significant impact on the environment:

- Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2: Is associated with the lives of persons important in our past;
- Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values; and
- Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

The two-story duplex located at 25401-25403 Cole Street is a circa-1950, Modern-style structure, while the three remaining structures are single-family residences whose styles range from Modern to Folk Vernacular to Spanish Eclectic (the oldest residence). The four existing residences are all in fair condition with some evidence of modification and remodel.

Aside from their age, the four single-family residences fail to meet any of the four CRHR significance criteria listed above. These residential structures are not associated with significant events or important persons; they do not embody distinctive architectural; nor do the aesthetic characteristics represent the work of an important individual. The residences are also highly unlikely to yield important historical local or state information. Consequently, although these buildings are approximately 64 years of age and one single-family residence is approximately 94 years of age, the significant historical resource criteria are not met. Therefore, impacts associated with historical resources would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant With Mitigation Incorporated. Review of the project site shows that the area is highly disturbed by four residential buildings, a wooden shed, and associated landscaping on the property. Archaeological cultural resources exposed on the modern ground surface are unlikely to survive intact under these conditions. Given the highly disturbed condition of the project site and surroundings, the potential for the project to affect an unidentified archaeological resource is considered low. However, it is possible that subsurface earthwork activities may encounter previously undiscovered archaeological resources. Therefore, implementation of mitigation measure MM CUL-1 is required, ensuring that impacts would be less than significant.

MM CUL-1 It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried cultural resources. In the event that buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms, and evaluated for significance in terms of CEQA criteria.

If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts

recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency, where they would be afforded long-term preservation to allow future scientific study.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant With Mitigation Incorporated. The project area is not located in an area that is considered likely to have paleontological resources present. Fossils of plants, animals, or other organisms of paleontological significance have not been discovered at the project site, nor has the site been identified to be within an area where such discoveries are likely. The type of depositional environment at the project area typically does not present favorable conditions for the discovery of paleontological resources. The project site has a disturbed terrain with no outcrops and the land is geologically mapped as Holocene. It appears highly unlikely that project-related excavations will penetrate below the Holocene layer. In this context, the project would not result in impacts to paleontological resources or unique geologic features. However, if significant paleontological resources are discovered, implementation of Mitigation Measure CUL-2 would reduce this potential impact to a level of less than significant.

MM CUL-2 In the event a fossil is discovered during construction for the proposed project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact With Mitigation Incorporated. No human remains are known to exist within the project area and none were observed during the pedestrian survey. However, there is always the possibility that subsurface construction activities associated with the project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. However, if human remains are discovered, implementation of Mitigation Measure CUL-4 would reduce this potential impact to a less than significant level.

MM CUL-3 In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American.

The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:
   - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
   - The descendent identified fails to make a recommendation; or
   - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. Geology and Soils *Would the project:*				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. According to the California Division of Mines and Geology's Special Studies Zones Map for the Redlands Quadrangle, two Alquist-Priolo Earthquake Fault Zones are located in the general project area, one associated with the San Jacinto Fault that occurs approximately 1.6 miles southwest of the project site, and the other associated with the San Andreas Fault located roughly 6 miles northeast of the site (California Division of Mines and Geology 1977). Consequently, the project site is located outside of an Alquist-Priolo Zone.

Therefore, because of the distance of the faults to the project site, the project would not expose people or structures to potential adverse effects from fault rupture. Impacts would be less than significant.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As a whole, the Southern California region is a very active seismic area, with much of the region subject to earthquakes of moderate to high magnitude. The City of Loma Linda General Plan's Public Health and Safety Element identifies major faults that have the potential to affect the City. According to Table 10.A in the Public Health and Safety Element, the Loma Linda Fault, San Jacinto Fault, Rialto-Colton Fault, Reche Canyon Fault, and the San Timoteo Fault are the nearest faults to the project site, and have the potential to produce earthquakes between 6.5 and 8.25 magnitude on the Richter Scale (City of Loma Linda 2009). The nearest fault to the project site is the Loma Linda fault, which was formerly included as an Alquist-Priolo Zone, but trenching showed no evidence of Holocene rupture of the fault, and it was removed from the Alquist-Priolo Zone. The Loma Linda fault displaces the Plio-Pleistocene San Timoteo Formation south of the City of Loma Linda and has been traced along a northwest trend by magnetic and seismic evidence. The elevated topography of Loma Linda Hill, located northwest of the site, in relation to surrounding areas is apparently the result of ancient movement along this fault. The northeast-facing descending hillside, located southwest of the site, is probably a highly modified (eroded) scarp of the Loma Linda fault. South of Loma Linda, the Loma Linda fault displaces the sediments of the Pleistocene-age San Timoteo Formation. North of Loma Linda, this fault forms a partial barrier to groundwater movement but is apparently overlain by more than 100 feet of unfaulted alluvial sediments.

The San Jacinto fault zone is a system of northwest-trending, right-lateral, strikeslip faults and is the closest known active fault to the project site; it is located approximately 1 mile southwest of the project site; and it is considered the most important fault to the site with respect to the hazard of seismic shaking and ground rupture . More large, historic earthquakes have occurred on the San Jacinto fault than any other fault in Southern California. Therefore, severe seismic shaking can be expected during the lifetime of the project. A number of smaller and/or less active faults also occur in the general project area. As a

result, and like all other development projects in the City and throughout the Southern California Region, the proposed project will be required to comply with all applicable standards contained in the 2010 California Building Code (CBC), including Section 1613-Earthquake Loads. Construction of the assisted living facility, in accordance with applicable requirements for development within Seismic Zone 4 (as listed within the CBC) would ensure that potential impacts are reduced to the maximum extent possible. Therefore, impacts associated with strong ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The City of Loma Linda General Plan's Public Health and Safety Element identifies Liquefaction Zones located in the City. According to Figure 10.1 of the Public Health and Safety Element, the project site is located within an area with potential susceptibility to liquefaction. However, according to the Engineering Investigation of the Bunker Hill Basin, prepared by the San Bernardino Valley Water Conservation District (2010–2011), the proposed project site is located within an area where water levels are at approximately 54 to 110 feet below the existing ground surface. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Therefore, impacts from liquefaction are considered less than significant. In addition, Action 6 under the Goal 1 of the Safety Element states that even areas containing low susceptibility to liquefaction would require a liquefaction assessment in accordance with the guidelines published by the California Geological Survey (Special Publication 117) and the Southern California Earthquake Center's recommended procedures for implementation of Special Publication 117 guidelines. Thus, as required by the City, a geotechnical assessment would be prepared for the project that will recommend project design features based on the particular geological characteristics of the project site. These project design features would adhere to design requirements regarding site preparation; grading, excavation, and shoring; removal and recompaction of soil; and foundation and retaining wall design. Many of these recommended project design features would likely conform to design requirements already set forth in the California Building Code, while other recommendations may exceed these established requirements based on the specific geological characteristics of the project site. Compliance with these design requirements would reduce the potential risk to both people and structures due to seismic ground failure and liquefaction. Therefore, impacts associated with liquefaction would be less than significant.

iv) Landslides?

No Impact. The project site is relatively flat and gently slopes to the northwest. Geological features typically associated with landslides, such as hillsides or riverbanks, are not located in the immediate project area. Additionally, Figure 10.1 of the City of Loma Linda General Plan's Public Health and Safety Element identifies Steep Slopes and Slope Instability Areas. The project site is located outside of an area susceptible to landslides (City of Loma Linda 2009). Therefore, the project's location precludes impacts associated with landslides, and no impacts would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. According to the Soil Survey of San Bernardino County (Southwestern Part, Sheet NO.9 – Redlands Quadrangle), on-site soils occur within the San Emigdio series, specifically, the San Emigdio fine sandy loam (SCc), a gently sloping to moderately sloping soil that occupies alluvial fans. Also included are areas of Hanford coarse sandy loam. Runoff for this soil series is slow, and the hazard of erosion is slight if the soil is left unprotected.

The State of California is authorized to administer various aspects of the National Pollutant Discharge Elimination System (NPDES). Construction activities covered under the State's General Construction permit include removal of vegetation, grading, excavation, or any other activity that causes the disturbance of one acre or more. Construction activities will be required to implement Best Management Practices (BMPs) to prevent construction of the project from potentially polluting surface waters from soil erosion. This is a standard condition of approval that the City will require of this project; impacts would therefore be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact.

Landslides

As previously discussed in Impact 6a) iii., the project site is relatively flat and does not contain features typically associated with landslides. Additionally, Figure 10.1 of the City of Loma Linda General Plan's Public Health and Safety Element identifies the site as outside the areas susceptible to landslides (City of Loma Linda 2009).

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form. However, there are no open faces within the general project area where lateral spreading could occur.

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface caused by subsurface movement of earth materials. Subsidence is most often attributed to human activity, mainly from the removal of subsurface water. More than 80 percent of the identified subsidence throughout the United States is a result of exploitation of groundwater, with the increasing development of land and water resources threatening to exacerbate existing land subsidence problems and initiate new ones (U.S. Geological Survey 2013). Other principal causes of subsidence are aquifer system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost (U.S. Geological Survey 2000).

Compaction of soils in some aquifer systems can accompany excessive groundwater pumping and is the single largest cause of subsidence. Excessive pumping of such aquifer systems has resulted in permanent subsidence and related ground failures. In some systems, when large amounts of water are pumped, the subsoil compacts, thus reducing in size and number the open pore spaces in the soil the previously held water. This can result in a permanent reduction in the total storage capacity of the aquifer system.

According to the City of Loma Linda General Plan, the City is located above the Bunker Hill Basin, a vast aquifer underlying the eastern San Bernardino Valley. Groundwater in this basin is replenished from rainfall and snowmelt from the San Bernardino Mountains and the basin is considered a reliable source of water. The estimated safe yield of this basin is many times greater than current water extraction. As a result, land subsidence, which is often a byproduct of the exploitation of groundwater, would also not be

considered a substantial issue in the project area. Therefore, impacts associated with subsidence would be less than significant.

Liquefaction

As previously discussed in Impact 6a) iii, according to the Engineering Investigation of the Bunker Hill Basin, prepared by the San Bernardino Valley Water Conservation District (2010–2011), the proposed project site is located within an area where water levels are at approximately 54 to 110 feet below the existing ground surface. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Therefore, impacts from liquefaction are considered less than significant. In addition, as required by the City, a geotechnical assessment would be prepared for the project which will recommend project design features based on the particular geological characteristics of the project site. These project design features would include design requirements regarding site preparation; grading, excavation, and shoring; removal and recompaction of soil; and foundation and retaining wall design. Many of these recommended project design features would likely reiterate design requirements already set forth in the California Building Code, while other recommendations may exceed these established requirements based on the specific geological characteristics of the project site. Compliance with these design requirements would reduce the potential risk to both people and structures due to liquefaction. Therefore, impacts associated with liquefaction would be less than significant.

Collapse

The project site is not underlain by natural or manmade subsurface features that are typically associated with collapse, including mining or extraction operations or karst topography. Therefore, no impacts associated with collapse will occur.

The proposed project would not be located on an unstable or potentially unstable geologic unit or soils that would potentially result in landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils typically consist of clay and other similar, poorly drained soils. According to the Natural Resources Conservation Service's (NRCS) Web Soil Survey, the entirety of the project site is underlain by San Emigdio fine sandy loam, 2 to 9 percent slopes (ScC), which consists of only a small percentage of clay soils and is considered well-drained (NRCS 2014). Therefore, impacts associated with expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project would connect to the City's sewer collection system that provides service to the surrounding vicinity and would not require an alternative method of wastewater conveyance. Therefore, no impacts associated with septic or alternative wastewater disposal systems would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. Greenhouse Gas Emissions *Would the project:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. The project may contribute to climate change impacts through its contribution of greenhouse gases. The project would generate a variety of greenhouse gases during construction, including several defined by Assembly Bill (AB) 32, such as CO_2, methane (CH_4), and nitrous oxide (N_2O) from the exhaust of equipment, and the exhaust of vehicles for employees and construction hauling trips. The project may also emit greenhouse gases that are not defined by AB 32. For example, the project may generate aerosols from diesel particulate matter exhaust. Aerosols are short-lived greenhouse gases, as they remain in the atmosphere for approximately one week. The project would emit NO_x and VOCs, which are ozone precursors. Ozone is a greenhouse gas. However, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and is being reduced in the troposphere on a daily basis.

Certain greenhouse gases defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Specifically, sulfur hexafluoride is typically used in electronics manufacturing, electrical utilities facilities, and magnesium production industries. Perfluorocarbons are typically associated with alumni production and manufacturing of semiconductors. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

The SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration; however, the SCAQMD's Board has not approved the thresholds as of the date of this document (SCAQMD 2010). The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 $MTCO_2e$ per year
  - Based on land use type: residential: 3,500 $MTCO_2e$ per year; commercial: 1,400 $MTCO_2e$ per year; or mixed use: 3,000 $MTCO_2e$ per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$/SP/year for projects and 6.6 $MTCO_2e$/SP/year for plans;
  - Option 3, 2035 target: 3.0 $MTCO_2e$/SP/year for projects and 4.1 $MTCO_2e$/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

To determine whether the project would have a significant impact with respect to the generation of greenhouse gas emissions, this analysis utilizes the SCAQMD's draft local agency tiered threshold. The threshold is as follows:

- Tier 1: The project is not exempt under CEQA; go to Tier 2.
- Tier 2: There is no greenhouse gas reduction plan applicable to the project; go to Tier 3.
- Tier 3: Project greenhouse gas emissions compared with the residential threshold of 3,500 $MTCO_2e$ per year.

CalEEMod version 2013.2.2 was used to estimate greenhouse gas emissions from project construction and operation. The emissions detailed modeling output are provided as Appendix A to this IS/MND. The project's greenhouse gas emissions are provided in Table 7. As shown in Table 7, the project's operational and amortized construction emissions are less than the significance threshold at of 3,500 $MTCO_2e$. Therefore, the project would generate a less than significant impact.

Table 7: Project Greenhouse Gas Emissions

Source	Annual $MTCO_2e$
Area	13.46
Energy	72.18

Table 7 (cont.): Project Greenhouse Gas Emissions

Source	Annual $MTCO_2e$
Mobile	161.56
Waste	16.60
Water	18.22
Subtotal Construction (averaged over 30 years)	11.05
Total	293.06
Threshold	3,500
Significant Impact?	No

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
Source: CalEEMod output (Appendix A).
Source of thresholds: SCAQMD 2011b.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The City of Loma Linda is in the process of establishing a Climate Action Plan; therefore, in order to evaluate consistency with an applicable greenhouse gas plan this analysis will use the SCAQMD significance threshold, which was designed to ensure compliance with statewide targets that are identified in AB 32 and Executive Order S-3-05.

As the project would emit 293.06 $MTCO_2e$ (less than 3,500 $MTCO_2e$ threshold for residential projects), the project would not conflict with the state's ability to achieve the reduction targets defined in AB 32. Furthermore, the project would be developed in a manner that is consistent with Title 24 of the California Building Code, which establishes energy efficiency requirements for new development. The project would have a less than significant impact and would not conflict with any applicable policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. Hazards and Hazardous Materials *Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Short-Term Construction Impacts

Less Than Significant With Mitigation Incorporated. During construction of the proposed project, hazardous or potentially hazardous materials would be routinely handled in small quantities on the project site. These hazardous materials would include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment and vehicles. This handling of hazardous materials will be a temporary activity and coincide with the short-term construction phase of the proposed project. Any handling of hazardous materials will be limited in both quantities and concentrations. Hazardous materials associated with operation and maintenance of construction equipment and vehicles may be stored on the project site, although only the amounts needed are expected to be kept on-site, and excessive amounts are not expected to be stored. Removal and disposal of hazardous materials from the project site will be conducted by a permitted and licensed service provider. Any handling, transporting, use, or disposal would comply with all applicable federal, state, and local agencies and regulations, including the EPA; the California Department of Transportation (Caltrans); the California Department of Toxic Substances Control (DTSC); the California Department of Industrial Relations (Cal/OSHA); the Resource Conservation and Recovery Act (RCRA); and the San Bernardino County Fire Department (SBCFD) (the Certified Unified Program Agency [CUPA] for San Bernardino County).

Because of the age of the four existing residences located on the project site, there is a possibility that potentially hazardous buildings materials such as asbestos-containing materials (ACM), lead-based paint (LBP), or polychlorinated biphenyls (PCBs) may be encountered during demolition of these structures. ACMs are natural fibers used in the manufacturing of many building materials; however, they were mostly banned (in building materials) in the 1970s. LBP is considered a potential health risk and was frequently used in homes before the 1970s. PCBs were banned for commercial use in 1979 and are typically associated with materials such as fluorescent lights, electrical transformers, and power lines (EPA 2013).

If present, removal of these materials from the project site would be conducted by contractors licensed and permitted to handle these materials in accordance with all applicable federal, state, and local regulations. As such, Mitigation Measure HAZ-1 would be required to reduce potential impacts to acceptable levels of significance. Therefore, with the implementation of mitigation, short-term construction impacts associated with the handling of hazardous materials would be less than significant.

Long-Term Operational Impacts

Less Than Significant Impact. During the operational phase of the project, hazardous or potentially hazardous materials would not be routinely handled, stored, or dispensed on the project site in substantial quantities. The project would construct a 40-unit assisted living facility, and activities that would occur at the site (e.g., building and landscape maintenance) would involve the use of limited quantities of hazardous materials. Cleaning and degreasing solvents, fertilizers, pesticides, and other materials used in the regular maintenance of buildings and landscaping would be utilized on-site.

However, these potentially hazardous materials would not be of a type or occur in sufficient quantities to pose a significant hazard to the public and safety or the environment. Businesses are required by law to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to works that handle hazardous materials, and adequately training workers. The project would be required to comply with applicable federal, state, and local requirements related to the handling of hazardous materials. Therefore, hazardous materials used during project operation by maintenance and landscaping staff would not pose any substantial public health risk or safety hazards, and impacts are less than significant.

MM HAZ-1 In accordance with National Emission Standards for Hazardous Air Pollutants, the four existing residences located on the project site shall be evaluated for the presence of asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB) prior to their demolition. The evaluation shall be conducted by a Cal-OSHA certified ACM, LBP, and PCB contractor. Any ACM or lead identified as a result of the evaluation shall be removed by a Cal-OSHA certified ACBM, LBP, and PCB contractor and be transported and disposed of off-site in accordance with regulatory requirements.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant With Mitigation Incorporated. As addressed in Impact 8a), any handling, storing, or dispensing activities associated with hazardous or potentially materials would comply with all applicable federal, state, and local agencies and regulations. Adherence with the applicable policies and programs of these agencies will ensure that any interaction with hazardous materials would occur in the safest possible manner, reducing the opportunity for the accidental release of hazardous materials into the environment. Any handling of hazardous materials will be limited in both quantities and concentrations. As mandated by the U.S. Occupational Safety and Health Administration (OSHA), all hazardous materials stored on-site will be accompanied by a Material Safety Data Sheet (MSDS), which, in the case of accidental release, will inform on-site personnel as to the necessary remediation procedures.

However, because of the age of the four residences located on the project site, there is a possibility that potentially hazardous buildings materials such as ACM, LBP, or PCBs may be encountered during demolition of these structures. As discussed in Impact 8a), if present, the removal of these materials from the project site would be conducted by contractors licensed and permitted to handle these materials in accordance with all applicable federal, state, and local regulations. As such, Mitigation Measure HAZ-1 shall be required to reduce potential impacts to acceptable levels of significance should such substances be discovered during demolition. Therefore, with the implementation of mitigation, impacts associated with the release of hazardous materials would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The nearest school to the project site is RUSD's Bryn Mawr Elementary School, which is located approximately 2.2 miles southeast of the site. Therefore, the project site is not within one-quarter mile of Bryn Mawr Elementary School and no impacts would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. According to a records search using the DTSC's EnviroStor database, the project site is not identified as a hazardous materials site (DTSC 2007). Additionally, no such site is located adjacent to the project site or within the general project area. Therefore, no impacts associated with hazardous materials sites would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located within an airport land use plan and is not within two miles of a public airport (City of Loma Linda 2009). The nearest airports to the project site are the San Bernardino International Airport, located approximately 3 miles north of the project site, and the Redlands Municipal Airport located approximately 6 miles northeast of the project site. The San Bernardino International Airport is currently operating as a general aviation and cargo airport and does not presently support commercial aviation; thus, an Airport Land Use Compatibility Plan (ALUCP) has not been adopted for the airport. However, the airport is more than 2 miles from the project site. Therefore, the project would not create a safety hazard to the people residing or working in the project area, and no impacts would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no private airstrips located within the project vicinity. Therefore, no impact associated with private airstrip hazards would occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The project would not interfere with the City's Emergency Operations Plan because it does not contain any features that would prohibit the execution of such plans. The project would provide access via Cole Street, and would contain adequate access and circulation for emergency equipment on-site. Evaluation and approval of the proposed site plan by the Loma Linda Fire Department would be required to ensure adequacy of emergency access. Thus, impacts to an emergency response plan would be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. According to Figure 10.3 of the City of Loma Linda General Plan Public Health and Safety Element, the project site is located away from an urban wildland interface area and well outside of a hazardous wildland fire area (City of Loma Linda 2009). Therefore, impacts associated with wildlands fire would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Hydrology and Water Quality *Would the project:*				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Short-Term Construction Impacts

Less Than Significant Impact. The State of California is authorized to administer various aspects of the NPDES General Construction Permit. The General Construction permit requires developments of one-acre or more to reduce or eliminate non-storm water discharges into storm water systems, and to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). Since the project site is less than 1 acre (0.9-acre) in size, a SWPPP will not be required. However, project implementation will require coverage under General Permit for Construction Activities, and therefore, project development must comply with the requirements of the permit. Appropriate structural and non-structural BMPs will also be required to be implemented during project construction. Some of the BMPs the project shall be required to implement include the following:

- Erosion Control. Employ measures to prevent the movement of soil by wind or water during construction and may include watering, and physical barriers to the movement of soil particles.
- Sediment Control. Employ features to prevent the off-site conveyance of sediments, including on-site catch basin inlet protection.
- Tracking of Soil. Employ measures to effectively minimize the tracking of soil by vehicles and may include gravel driveways, wheel washes and street sweeping.
- Wastes and Cleanup. The project must also address storage and disposal related to debris, trash, concrete, asphalt, paint, coatings, solvents, and other materials applicable to preparation and construction at the project site.
- Other Reasonable BMPs. The project must also implement other applicable BMPs as needed to keep pollutants away from stormwater. The project must also identify additional applicable measures taken during the storm season and when storms are anticipated.

These BMPs, through years of field testing and field use, have been demonstrated to reduce construction runoff impacts to less than significant levels. Based on the various regulatory requirements, potential short-term construction impacts would be considered less than significant.

Long-Term Operation Impacts

Less Than Significant Impact. In order to minimize pollutants of concern in stormwater discharges from the project site, site design BMPs and source control BMPs will be included as part of the project. The inclusion of BMPs, as well as the provision of other post-construction stormwater BMPs would mitigate the impacts associated with stormwater runoff to levels deemed acceptable by both the Santa Ana Regional Water Quality Control Board (RWQCB) and the City of Loma Linda. Therefore, potential impacts would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?

Groundwater Supplies

Less Than Significant Impact. According to the San Bernardino Valley Municipal Water District's 2010 San Bernardino Valley Urban Water Management Plan (UWMP), the City of Loma Linda depends on groundwater from six wells to supply 100 percent of its total water supply. The UWMP contains existing and projected water supplies and demands for the City of Loma Linda during normal and dry-year scenarios. Table 8 provides projected multiple-dry year supplies and demands, which represent water supplies and demands during extended periods of drought conditions when supplies would be reduced.

Table 8: Projected Multiple-Dry Year Supplies and Demands (afy)

Description		2015	2020	2025	2030	2035
Multiple-Dry Year First Year Supply	Supply Totals	8,822	9,422	9,922	10,222	10,622
	Demand Totals	6,392	6,026	6,401	6,799	7,221
	Difference	2,430	3,395	3,521	3,423	3,401
	Difference as Percent of Supply	28%	36%	35%	33%	32%
	Difference as Percent of Demand	38%	56%	55%	50%	47%
Multiple-Dry Year Second Year Supply	Supply Totals[a]	8,823	9,423	9,923	10,223	10,623
	Demand Totals[b]	6,392	6,026	6,401	6,799	7,221
	Difference	2,432	3,397	3,523	3,425	3,402
	Difference as Percent of Supply	28%	36%	35%	33%	32%
	Difference as Percent of Demand	38%	56%	55%	50%	47%
Multiple-Dry Year Third Year Supply	Supply Totals	8,809	9,409	9,909	10,209	10,609
	Demand Totals[1]	6,392	6,026	6,401	6,799	7,221
	Difference	2,417	3,382	3,508	3,410	3,387
	Difference as Percent of Supply	27%	36%	35%	33%	32%
	Difference as Percent of Demand	38%	56%	55%	50%	47%

Notes:
[1] In dry periods, demands assume to increase 10 percent above normal Year demands.
Source: San Bernardino Valley Municipal Water District, Urban Water Management Plan (UWMP), 2010.

The General Plan's Land Use Element and the compliance water use target found in Table 8-12 of the UWMP project a goal of achieving a 20 percent reduction in water use over a span of 10 years. Thus, the project would have a target water use of 204 gallons per capita per day (GPCD) resulting in a total water use of 14,280 GPCD. This estimate is based on an extremely conservative calculation that includes 40 units, with one person per unit, as well as 30 around-the-clock staff members. During operation, all 30 staff members would not be on-site 24-hours a day, but would instead take shifts, thereby representing a reduction in water consumption compared with the estimated total GPCD. This conservative, estimated water demand of 14,280 GPCD would be equivalent to 16.01 acre-feet per year (afy). Therefore, as shown in Table 8, the project's water usage would represent only a nominal percentage of projected surplus (projected supply minus project demand) for the multiple dry year scenarios (conservative).

The project would also utilize groundwater for irrigation purposes. In accordance with the project's Irrigation Plan, the total maximum applied water allowance is approximately 197,363 gallons per year. The project's total estimated irrigation water use per year is approximately 118,884 gallons per year, which complies with the maximum allowed water use. The project will include a water-efficient irrigation system utilizing apparatuses such as remote control valves, automatic rain sensors, and reduced pressure backflow preventers. Additionally, automatic irrigation systems would be adjusted seasonally and have watering hours between 10:00 p.m. and 6:00 p.m. in order to prevent water loss due to evaporation. Using the project's anticipated water use of 118,884 gallons per year (0.36 acre feet per year [afy]) combined with residential water use listed above, the project would require approximately 16.37 afy.

Therefore, impacts associated with groundwater supplies would be less than significant.

Groundwater Recharge

Less Than Significant Impact. Currently, the existing residential buildings found on the project site create an impervious development footprint of approximately 3,450 square feet. Under the proposed project, 28,738 square feet of the project site's 43,400 square feet would consist of impervious improvements such as the two-story building and 21 parking spaces, while the remaining square footage would consist of mostly pervious surfaces such as landscaping. Thus, the proposed project would decrease the amount of pervious areas found on the project site. However, under current conditions, the City obtains groundwater from the Bunker Hill Basin, which is recharged by mountain snowmelt. The project site is not located within the recharge area and would not substantially influence groundwater recharge. Therefore, impacts would be less than significant.

c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The project site is currently virtually flat (or gently sloping), and runoff on-site drains as sheet flow from a westerly to easterly direction. The project site does not contain any discernable streams, rivers, or other drainage features. The proposed improvements will not significantly alter the drainage pattern of the existing site; however, the project will implement BMPs to reduce erosion from stormwater runoff. In addition, the imposition of BMPs ensure that federal and state water quality standards will not be violated and are considered less than significant without mitigation. The inclusion of the aforementioned BMPs will reduce impacts to the existing drainage pattern of the site or area to a level of less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. As addressed in Impact 9c), the project would not involve significant changes in the site's drainage patterns and does not involve altering a discernable drainage course. Consequently, implementation of the proposed project is not expected to cause flooding. Since the project does not involve alteration of a discernable watercourse and post-development runoff discharge rates are required to not exceed pre-development rates, the proposed project does not have the potential to alter drainage patterns or increase runoff that would result in flooding. Therefore, the proposed project would not cause flooding and would have a less than significant impact.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. As addressed in Impacts 9a) and 9c), project implementation will require coverage under General Permit for Construction Activities, and therefore, project development must comply with the requirements of the permit. Appropriate structural and non-structural BMPs will also be required to be implemented during project construction. Some of the BMPs the project shall be required to implement include the following:

- Erosion Control. Employ measures to prevent the movement of soil by wind or water during construction and may include watering, and physical barriers to the movement of soil particles.
- Sediment Control. Employ features to prevent the off-site conveyance of sediments, including on-site catch basin inlet protection.
- Tracking of Soil. Employ measures to effectively minimize the tracking of soil by vehicles and may include gravel driveways, wheel washes and street sweeping.
- Wastes and Cleanup. The project must also address storage and disposal related to debris, trash, concrete, asphalt, paint, coatings, solvents, and other materials applicable to preparation and construction at the project site.
- Other Reasonable BMPs. The project must also implement other applicable BMPs as needed to keep pollutants away from stormwater. The project must also identify additional applicable measures taken during the storm season and when storms are anticipated.

These BMPs, through years of field testing and field use, have been demonstrated to reduce construction runoff impacts to less than significant levels. The inclusion of BMPs, as well as the provision of other post-construction stormwater BMPs would mitigate the impacts associated with stormwater runoff to levels deemed acceptable by both the Santa Ana RWQCB and the City of Loma Linda. Therefore, potential impacts would be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. The State and RWQCBs assess water quality data for California's waters every 2 years to determine if they contain pollutants at levels that exceed protective water quality criteria

and standards. This biennial assessment is required under Section 303(d) of the Federal Clean Water Act. Within the general project area, three water bodies have been identified by the Santa Ana RWQCB as impaired under Section 303(d). These water bodies include Lytle Creek, located approximately 3.1 miles northwest of the project site; Santa Ana River (Reach 4), located roughly 3.1 miles to the southwest; and Mill Creek (Reach 1), located approximately 8.2 miles northeast of the site (State Water Resources Control Board 2010).

As addressed in Impacts 9a) and 9c), project implementation will require coverage under General Permit for Construction Activities, and, therefore, project development must comply with the requirements of the permit. Appropriate structural and non-structural BMPs will also be required to be implemented during project construction. Some of the BMPs the project shall be required to implement include the following:

- Erosion Control. Employ measures to prevent the movement of soil by wind or water during construction and may include watering, and physical barriers to the movement of soil particles.
- Sediment Control. Employ features to prevent the off-site conveyance of sediments, including on-site catch basin inlet protection.
- Tracking of Soil. Employ measures to effectively minimize the tracking of soil by vehicles and may include gravel driveways, wheel washes and street sweeping.
- Wastes and Cleanup. The project must also address storage and disposal related to debris, trash, concrete, asphalt, paint, coatings, solvents, and other materials applicable to preparation and construction at the project site.
- Other Reasonable BMPs. The project must also implement other applicable BMPs as needed to keep pollutants away from stormwater. The project must also identify additional applicable measures taken during the storm season and when storms are anticipated.

These BMPs, through years of field testing and field use, have been demonstrated to reduce construction runoff impacts to less than significant levels. The inclusion of BMPs, as well as the provision of other post-construction stormwater BMPs would mitigate the impacts associated with water quality to levels deemed acceptable by both the Santa Ana RWQCB and the City of Loma Linda. Based on the preceding, neither construction nor operation of the proposed project would substantially degrade water quality, including the water quality of the three water bodies listed above. Therefore, impacts associated with the degradation of water quality would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to the Federal Emergency Management Agency's (FEMA's) Flood Rate Insurance Map (FIRM) FEMA Flood Insurance Rate Map for the project area, (FIRM Community Panel Number 06071C8692H), the project site is located within Zone X, which has been determined by FEMA to be located within an area outside the 0.2% annual chance floodplain. According to FEMA's National Flood Insurance Program, Zone X is an area of minimal flood hazard, and is an area determined to be outside the 500-year flood and protected by levee from 100-year flood. Therefore, no impacts associated with placing housing within a 100-year flood hazard area will occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less Than Significant Impact. According to FEMA's Flood Rate Insurance Map (FIRM) for the project area (FIRM Map #06071C8692H), the project site is located within Zone X and this designation identifies areas outside the 0.2% annual chance floodplain. According to FEMA's National Flood Insurance Program, Zone X is an area of minimal flood hazard, and is an area determined to be outside the 500-year flood and protected by levee from 100-year flood. Therefore, the project would not impede or redirect flood flows, and impacts would be less than significant.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. According to the City of Loma Linda General Plan's Public Health and Safety Element, the northern portion of the City is located within the inundation area of the Seven Oaks Dam, the failure of which while not likely could potentially impact the City. However, the Seven Oaks Dam is a dry dam that serves to decrease peak water flows during spring runoff and storm events. In the unlikely event of dam failure, potential inundation effects would be decreased as a result of the dam only holding large amounts of water during substantial storm events, which are infrequent within the predominantly dry climate of the Southern California region. Furthermore, the dam is routinely inspected by the County of San Bernardino to ensure structural integrity, which further reduces the potential for dam failure. Furthermore, according to FEMA's Flood Rate Insurance Map (FIRM) for the project area (FIRM Map #06071C8692H), the project site is located within Zone X and this designation identifies areas outside the 0.2% annual chance floodplain. According to FEMA's National Flood Insurance Program, Zone X is an area of minimal flood hazard, and is an area determined to be outside the 500-year flood and protected by levee from 100-year flood. Therefore, impacts associated with flooding, including flooding as a result of the failure of a levee or dam, would be less than significant.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. Because of the project site's inland location, relatively flat on-site and adjacent topography, and lack of adjacent water body, the proposed project would not be susceptible to seiche, tsunami, or mudflow. Therefore, no impacts associated with seiche, tsunami, or mudflow would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. Land Use and Planning *Would the project:*				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Physically divide an established community?

No Impact. The physical division of an established community typically refers to the construction of a linear feature, such as a major highway or railroad tracks, or removal of a means of access such as a local road or bridge that would impair mobility within an existing community or between a community and outlying area. The project would not contain any of these features, and would be consistent with the existing residential and institutional uses within the area. No impacts would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The City of Loma Linda General Plan's Land Use Map has designated the project site High Density Residential (0-13 du/acre), while the City's Zoning Map identifies the project site as Multiple Residence (R-3).

Since the General Plan identifies the project site as High Density Residential, the proposed project would require a General Plan Amendment, as well as other discretionary approvals by the City, as part of the project approval process:

- General Plan Amendment P14-060: High Density Residential (0-13 du/acre) to Healthcare;
- Zone Change: Multiple Residence (R-3) to Institutional (I) zone;

- Precise Plan of Design (PPD) P14-059.

The proposed project is required to comply with all applicable goals and policies of the City's General Plan, and all applicable provisions of the Municipal Code, which includes the City's Zoning Code (Title 17 of the Loma Linda Municipal Code). Compliance with the City's General Plan, Municipal Code, and Zoning Code will be reviewed by the City prior to final project approval. Therefore, impacts associated with land use plans, policies, or regulations would be less than significant.

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

No Impact. The project site is not located within the boundary of any Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved habitat conservation plan. Therefore, no impacts associated with conservation plans will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. Mineral Resources *Would the project:*				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. According to the California Geological Survey, Updated Mineral Land Classification Map for San Bernardino and Riverside Counties, the project site and surrounding area are designated Mineral Resource Zone 3 (MRZ-3). This designation is given for areas containing known or inferred mineral occurrences of undetermined mineral resource significance. The project site is located within an existing urban area that has minimal accessibility for mining. In addition, a review of aerial photographs of the project site and surrounding vicinity show no current or historic indication of aggregate operations currently occurring in the area. Evidence of historical aggregate mining operations in the vicinity is also not apparent. In addition, mineral extraction at the project site is infeasible due to the surrounding residential/commercial/industrial uses, which are not compatible with a mining operation. Aggregate mining operations generally produce particulate matter, which could significantly impact the sensitive receptors and surrounding residential, industrial, commercial, and mixed-use facilities within the project area. Noise from such an operation would also be incompatible with sensitive receptor and surrounding residential, industrial, commercial, and mixed-use facilities land uses. Because the project site is not a feasible candidate for mining because of its surrounding uses, the project is not likely to impact to these resources. Consequently, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State. Therefore, no impacts associated with mineral resources will occur.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The project site is not identified by the City of Loma Linda General Plan's Land Use Map or the City's Zoning Map as a mineral recovery site. Additionally, as addressed in Impact 11a) above, the project site and surrounding area are designated Mineral Resource Zone 3 (MRZ-3) and no mineral extraction operations occur on or near the site. Therefore, no impacts associated with mineral resources will occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Noise *Would the project result in:*				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Evaluation

The following analysis is based in part on ambient noise monitoring conducted by FCS and outputs from the Federal Highway Administrations (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), which are both included in this IS as Appendix D (FCS 2014c;FCS 2014d).

Characteristics of Noise

Noise is defined as unwanted sound. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. Noise is typically generated by transportation, specific land uses, and ongoing human activity.

The standard unit of measurement of the loudness of sound is the decibel (dB). The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3

dB or less are only perceptible in laboratory environments. A change of 3 dB is the lowest change that can be perceptible to the human ear in outdoor environments. While a change of 5 dBA is considered to be the minimum readily perceptible change to the human ear in outdoor environments.

Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA) was derived to relate noise to the sensitivity of humans, it gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for a number of various sound level metrics, including the day/night sound level (L_{dn}) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night.[1] In addition, the equivalent continuous sound level (L_{eq}) is the average sound energy of time-varying noise over a sample period and the L_{max} is the maximum instantaneous noise level occurring over a sample period.

Existing Noise Sources

Noise monitoring was performed using an Extech Model 407780 Type 2 integrating sound level meter. The Extech meter was programmed in "slow" mode to record the sound pressure level at one second intervals in "A" weighted form. The sound level meter and microphone was mounted approximately five feet above the ground and was equipped with a windscreen during all measurements. The sound level meter was calibrated before monitoring using an Extech calibrator, Model 407766. The noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

The noise monitoring locations were selected in order to document existing daytime ambient noise levels on the project site and to determine compatibility of the proposed recreational land use development with the City's land use compatibility standards. The results of the noise level measurements are provided below in Table 9. The noise monitoring locations are shown in Exhibit 7. The short-term noise measurement data is provided in Appendix D of this document.

The noise measurements were recorded for 15-minute durations, between 2:00 p.m. and 3:00 p.m., on Thursday, October 23, 2014. During noise monitoring, the sky was sunny with a few clouds, and calm winds from the west (averaging 1.4 miles per hour). The average temperature during the short-term noise measurements was 93 degrees Fahrenheit.

[1] L_{dn} is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. CNEL is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. (Harris 1998)

Exhibit 7: Noise Monitoring Locations

Table 9: Short-Term Noise Monitoring Summary

Site Location	Location Description	L_{eq}	L_{MAX}	L_{MIN}
Location 1	Eastern project property line by adjacent pool area	53.3	66.6	49.1
Location 2	Center of southern project property line	50.8	68.0	41.0
Source: FirstCarbon Solutions, 2014.				

A long-term ambient noise measurement was also conducted on the project site from approximately 4:00 p.m. on Thursday, October 23, 2014 to 3:00 p.m., Saturday, October 25, 2014. The long-term measurement location was taken at the north-central portion of the project site, adjacent to power pole. This location is the closest to Union Pacific Railroad (UPRR) rail line located approximately 400 feet north of the project site, and is the most exposed location on the project site to potential noise impacts from railroad activity. The noise measurement location is shown in Exhibit 7; the long-term noise measurement data is provided in Appendix D of this document.

The results show that the weekday 24-hour weighted average day/night noise level at this location is 64 dBA CNEL; the 24-hour average was 57.7 dBA L_{eq}; the maximum recorded noise level was 85.6 dBA L_{max}; and the minimum recorded noise level was 41.2 dBA L_{min}. When the long-term noise measurement was started, the sky was mostly clear, the temperature was approximately 91 degrees Fahrenheit, the relative humidity was 91 percent, and wind speeds averaged 1.1 miles per hour.

As observed by the technician at the time of the noise measurements, the dominant noise sources in the project vicinity were distant construction noise, traffic on local roadways, and parking lot noise from the parking lot of the Loma Linda Veterans Affairs Health Care facility located immediately south of the project site.

Regulatory Framework

The project site is located within the City of Loma Linda. The City of Loma Linda addresses noise in the Noise Element of the General Plan (City of Loma Linda 2009) and in the Municipal Code (City of Loma Linda 2009).

The City has established land use noise compatible thresholds for new land use development. According to Table 7.C of the General Plan, noise environments up to 70 dBA CNEL are considered "normally acceptable" for new nursing home type land use developments. This policy is also shown in Section 9.20.040 of the Municipal Code's Land Use Compatibility for Community Noise Environments discussion. According to section 7.8.1.1 of the noise element, new projects within 250 feet of sensitive receptors that have the potential to result in an increase of 5 dBA or more in the background ambient noise levels should be discouraged.

The noise ordinances of the Municipal Code also require that all construction equipment utilize noise-reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. Section 9.20.070 of the City's noise ordinance permits exceedance of the noise performance standards by construction activities between the hours of 7:00 a.m. and 8:00 p.m., Monday through Friday, provided that all equipment is properly equipped with noise muffling apparatus specifically for such equipment. However, heavy construction activities are not permitted on weekends and national holidays.

Would the project:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-than-Significant with Mitigation Incorporated. Noise levels in the project area would be influenced by construction activities and from the ongoing operation of the proposed project.

Short-Term Construction Impacts

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. Although there would be a relatively high single event noise exposure potential causing intermittent noise nuisance, the effect on longer term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 10 lists typical construction equipment noise levels, based on a distance of 50 feet between the equipment and a noise receptor. Because the noisiest construction equipment is earthmoving equipment, the site preparation phase is expected to be the loudest phase of construction. The site preparation construction phase is expected to require the use of front-end loaders, compactors, hydraulic backhoes, and haul trucks. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Impact equipment such as pile drivers is not expected to be used during construction of this project.

Table 10: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pickup Truck	No	55
Pumps	No	77
Air Compressors	No	80

Table 10 (cont.): Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)

Backhoe	No	80
Front-End Loaders	No	80
Portable Generators	No	82
Dump Truck	No	84
Tractors	No	84
Auger Drill Rig	No	85
Concrete Mixer Truck	No	85
Cranes	No	85
Dozers	No	85
Excavators	No	85
Graders	No	85
Jackhammers	Yes	85
Man Lift	No	85
Paver	No	85
Pneumatic Tools	No	85
Rollers	No	85
Scrapers	No	85
Concrete/Industrial Saws	No	90
Impact Pile Driver	Yes	95
Vibratory Pile Driver	No	95
Source: FHWA, 2006.		

Some of the loudest equipment that construction of the proposed project is expected to require includes graders, bulldozers, pavers, concrete mixer trucks, roller compactors, backhoes, and front loaders. A characteristic of noise is that each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from an active construction area.

The nearest off-site noise sensitive land use are the Loma Sierra Apartments located approximately 10 feet from the project's eastern boundary. If multiple pieces of construction equipment operate simultaneously at some distance from each other, construction noise levels during the loudest phase of construction could range up to 96 dBA L_{max} when construction activities occur near these off-site receptors.

Section 7.8.1.1 and Section 9.20.070 of the City's noise ordinance permits exceedance of the noise performance standards by construction activities between the hours of 7:00 a.m. and 8:00 p.m., Monday through Friday, provided that all equipment is properly equipped with noise muffling apparatus that are no less effective than those originally installed by the manufacturer. Heavy construction activities are not permitted on weekends and national holidays. Although there would be single event noise exposure potential

causing intermittent noise nuisance from project construction activity, the effect on longer term (hourly or daily) ambient noise levels would be small. However, implementation of the best management noise reduction techniques and practices outlined in Mitigation Measure NOI-1 would ensure potential short-term construction noise levels would be reduced to a less than significant impact on sensitive receptors in the project vicinity.

Mitigation Measures

MM NOI-1: Implementation of the following multi-part mitigation measure is required to reduce potential construction period noise impacts:

- The construction contractor shall ensure that all construction equipment have appropriate sound muffling devices, which are properly maintained and used at all times such equipment is in operation.
- The construction contractor shall ensure that "quiet" models of air compressors and other stationary construction equipment are utilized where such technology exists.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes).
- The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site.

Long-Term Operational Impacts

Mobile-Source Noise Impacts

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. Traffic data used in the model was obtained from the traffic impact analysis prepared by Kunzman Associates, Inc., dated October 28, 2014. The resultant noise levels were weighed and summed over a 24-hour period in order to determine the L_{dn} values. The traffic noise modeling input and output files are included in Appendix D of this document.

The traffic noise model results show that traffic noise levels along Cole Street adjacent to the project site, average 53.22 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane under existing conditions without the project. With implementation of the project, the modeling results show that traffic noise levels would average 53.74 dBA CNEL as measured at 50 feet from the centerline of the nearest travel

lane. These noise levels are within the City's normally acceptable range for new nursing home land use development.

Other mobile noise sources in the project vicinity include railroad activity along the UPRR rail line located approximately 400 feet north of the project site. The long term noise measurement captured all of these existing noise sources in the project vicinity. The results show that the weekday 24-hour weighted average day/night noise level at this location is 64 dBA CNEL. These existing ambient noise levels are below the City's normally acceptable threshold of 70 dBA CNEL for new nursing home land use development.

Therefore, ambient noise levels on the project site are considered acceptable for the proposed land use development, and existing traffic and railroad noise impacts on the proposed project would be less-than-significant.

Stationary-Source Noise

The proposed project would include new stationary noise sources, such as typical parking lot activities. Typical parking lot activities such as people conversing, doors slamming or vehicles idling generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet. The proposed parking areas would be located at the southern end of the project site and are approximately 50 feet from the nearest off-site existing sensitive receptor. These noise levels would occur periodically throughout the day as people arrive and leave the project site. Existing background ambient noise levels are documented to range from 50.8 dBA to 53.3 dBA L_{eq} throughout the project site, with a 24-hour noise level average of 64 dBA CNEL. Therefore, noise generated by project-related parking lot activities, when averaged over an hour or a 24-hour period, would not exceed existing ambient noise levels and, thus, would not expose persons to noise levels in excess of established standards.

The proposed project would also include new mechanical system noise sources. These systems would include wall-mounted individual units for each dwelling unit, and would include rooftop mechanical ventilation units for the project's common areas. At the time of preparation of this analysis, specific equipment details were not available for the proposed rooftop and wall unit ventilation systems. Therefore, a reference noise level for typical rooftop mechanical ventilation systems was used, and a worst-case scenario of locating the equipment at the closest point possible to off-site receptors was assumed. Noise levels from typical rooftop mechanical ventilation equipment range up to approximately 60 dBA L_{eq} at a distance of 25 feet. The closest that rooftop mechanical ventilation systems could be located to off-site sensitive receptors is approximately 50 feet. At this distance, noise generated by rooftop mechanical ventilation equipment would attenuate to less than 54 dBA L_{eq}, as measured at the nearest off-site sensitive receptors. Existing background ambient noise levels are documented to range from 50.8 dBA to 53.3 dBA L_{eq} throughout the project site, with a 24-hour noise level average of 64 dBA CNEL. Therefore, noise generated by rooftop mechanical ventilation equipment would not exceed existing hourly ambient noise levels by 5 dBA or greater; and, when averaged over a 24-hour period, would not exceed the existing background 24-hour noise level average of 64 dBA CNEL. Therefore, operation of the project's mechanical ventilation systems would not expose persons to noise levels above established standards. Impacts would less than significant, and no mitigation measures are required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB."

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project related impacts are expressed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 11

Table 11: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer – small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81

Table 11 (cont.): Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer - Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94

Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112
Source: Compilation of scientific and academic literature, generated by FTA and FHWA.		

Propagation of vibration through soil can be calculated using the following vibration reference equation:

$$PPV = PPV\ ref * (25/D)^n\ (in/sec)$$

Where:
PPV = reference measurement at 5 feet from vibration source
D = distance from equipment to property line
N = vibration attenuation rate through ground

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment manual (2006), an "n" value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document (FTA 2006). The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 12.

Table 12: Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced – Concrete, Steel or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Non Engineer Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90
Source: FTA, 2006.		

Of the variety of equipment used during construction, the small vibratory rollers that are anticipated to be used in the site preparation phase of construction would produce the greatest groundborne vibration levels. Impact equipment such as pile drivers is not expected to be used during construction of this project. Small vibratory rollers produce groundborne vibration levels ranging up to 0.101 inches per second (in/sec) PPV at 25 feet from the operating equipment. The nearest off-site structures are the Loma Linda apartment buildings located approximately 10 feet from the project's eastern boundary and approximately 15 feet from the nearest construction boundaries where this equipment would operate. At this distance groundborne vibration levels could range up to 0.217 PPV from operation of a small vibratory roller. This is below the industry standard vibration damage criteria of 0.3 PPV for this type of structure, a building of engineered concrete and masonry construction (see Table 12). Therefore, construction-related groundborne vibration impacts would be considered less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Significant noise impacts to off-site receptors would occur if the project would result in a substantial increase in ambient noise levels compared with noise levels existing without the project. According to section 7.8.1.1 of the City's noise element, new projects within 250 feet of sensitive receptors that have the potential to result in an increase of 5 dBA or more in the background ambient noise levels should be discouraged. Therefore, for purposes of this analysis, a substantial increase is considered 5 dBA or greater in ambient noise levels in the project vicinity above levels existing without the project.

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. A characteristic of the FHWA RD-77-108 traffic noise model is that it rounds traffic volumes to the nearest hundred trips. Therefore, while the traffic input values were 755 average daily trips for existing conditions and 770 average daily trips for future no-project conditions, they both were rounded to 800 average daily trips. Therefore, the results for existing and future no-project conditions are both 53.22 dBA CNEL at 50 feet from the centerline of the outermost travel lane. Similarly, the existing plus project trips and the future plus project trips of 861 and 876, respectively, were both rounded to 900 average daily trips. Therefore, the traffic noise modeling results for existing and future plus-project conditions are both 53.74 dBA CNEL at 50 feet from the centerline of the outermost travel lane. Therefore, the plus project scenarios would result in a less than 1 dBA increase in traffic noise levels along Cole Street compared with conditions existing without the project. Therefore, project-related traffic would not result in a perceptible substantial increase in existing ambient noise levels, and project-related traffic noise impacts on off-site sensitive land uses would be less than significant.

The proposed project would also include stationary noise sources such as parking lot activities. As shown in the discussion under Impact 12a), the proposed parking activities could result in noise levels ranging up to 70 dBA L_{max} as measured at the nearest off-site existing sensitive receptors. These noise levels would occur periodically throughout the day as people arrive and leave the project site. Existing background ambient noise levels are documented to range from 50.8 dBA to 53.3 dBA L_{eq} throughout the project site, with a 24-hour noise level average of 64 dBA CNEL. Therefore, noise generated by project-related parking lot activities, when averaged over an hour or a 24-hour period, would not exceed existing ambient noise levels and, thus, would not result in a substantial increase in ambient noise levels compared with noise levels existing without the project.

As shown in the discussion under Impact 12a), noise levels from project-related rooftop mechanical ventilation equipment would attenuate to less than 54 dBA L_{eq}, as measured at the nearest off-site sensitive receptors. These noise levels would not exceed existing hourly ambient noise levels by 5 dBA or greater, and when averaged over a 24-hour period would not exceed the existing background 24-hour noise level average of 64 dBA CNEL. Therefore, noise generated by rooftop mechanical ventilation equipment would not exceed existing ambient noise levels nor result in a substantial permanent increase in ambient noise levels compared with conditions existing without the project. Impacts would be less than significant, and no mitigation is required.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant with Mitigation Incorporated. As addressed in Impact 12a), project-related construction activities could result in high intermittent noise levels of up to 96 dBA L_{max} at the closest noise sensitive land uses. Although there would be a relatively high single event noise exposure potential causing intermittent

noise nuisance, the effect on longer term (hourly or daily) ambient noise levels would be small. In addition, the project will comply with the City's policies establishing permissible hours of construction and required use of equipment that is properly equipped with noise muffling apparatus that are no less effective than those originally installed by the manufacturer. Furthermore, implementation of the best management noise reduction techniques and practices outlined in Mitigation Measure NOI-1 would further reduce potential short-term construction noise levels to result in a less than significant impact on sensitive receptors in the project vicinity.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less Than Significant Impact. The nearest airport to the project site is San Bernardino International Airport, located approximately 3 miles north of the project site, and the Redlands Municipal Airport located approximately 6 miles northeast of the project site. The project site is located outside of the 60 dBA CNEL airport noise contours of the airport (City of Loma Linda 2009). While aircraft noise is occasionally audible on the project site from aircraft flyovers, aircraft noise associated with nearby airport activity would not expose people residing or working in the project area to excessive noise levels. Therefore, impacts associated with public airport noise would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. There are no private airstrips located in the project vicinity. Therefore, no impacts associated with private airstrip noise would occur.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. Population and Housing *Would the project:*				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. A temporary labor force would be required to construct the proposed project. The short-term nature of this temporary construction workforce would not induce substantial population growth. Additionally, the project would provide housing for approximately 40 people (40 units with 40 beds), and a permanent labor force equivalent to 30 full-time employees would be needed to operate the proposed project. With the addition of 40 persons, the potential population growth would be nominal, representing a less than 0.2-percent increase over the City's existing 2010–2012 population of 23,434 persons. Therefore, impacts associated with inducement of population growth would be less than significant.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. The project site currently contains three single-family residences, a two-story duplex, and a wooden shed. There is a portion of undeveloped but previously disturbed land in the southern portion of the site. To facilitate construction of the proposed project, the four existing single-family residences, duplex, and shed currently found on the project site would be demolished. However, the existing residences would be replaced with 40-units of housing that would reduce the City's need for additional senior housing. Furthermore, the City currently contains roughly 849 available housing units that would compensate for the removal of on-site residences. Impacts would be less than significant.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Less Than Significant Impact. As addressed in Impact 13b) above, removal of the four residential buildings from the project site will account for only a nominal percentage (approximately 0.03 percent) of the 8,657 housing units located in the City. It is assumed that the loss of the four single-family residences will not represent a substantial burden on the City's total housing inventory, since roughly 849 housing units are vacant and available in the City. Thus, those residing in the four single-family residences located on the project site have numerous existing housing options available within the City without the need for construction of replacement housing units. Therefore, impacts associated with displacement of existing housing would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. Public Services *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less Than Significant Impact. Fire protection services in the City of Loma Linda are provided by the Fire and Rescue Division of the Department of Public Safety. Fire and Rescue Division personnel serving the City consists of two Chief Officers, six Captains, six Engineers, six Firefighter/Paramedics, and 10 part-time Firefighters participating in the Paid Call Program. Fire Station No. 251 (11325 Loma Linda Drive) serves the City, housing two triple-combination engines, one aerial multi-purpose ladder truck, one brush engine, one water tender, one paramedic fire/rescue squad, one portable lighting/rehab trailer, and one rescue/backup paramedic squad.

According to the General Plan's Public Services and Facilities Element, the City has established a response time goal of 5 minutes (including 3-minute running time) to be maintained for 80 percent of emergency fire, medical, and hazardous materials calls on a citywide response area basis. The proposed project would demolish the existing residential uses found on the project site and replace them with a 40-unit, two-story, senior assisted living facility. Thus, the project site is currently developed and presently served by the Fire and Rescue Division. As a result, the proposed project would not introduce development to an area not currently served by the Fire and Rescue Division and, as such, would not impede the Fire and Rescue Division from meeting its established response goal. The proposed project would be served by the existing Fire and Rescue Division facilities and construction of new or expansion of current Fire and Rescue Division facilities would not be required. In addition, the required payment of development impact fees by the project applicant would help offset incremental impacts to fire department resources by helping to fund capital improvements and

expenditures. Furthermore, the as part of project approval the site plan shall be reviewed by the Fire Department to ensure adequate emergency access. The project would also include the construction of sprinkler systems to further aid the fire department in the event of an emergency. Therefore, impacts associated with Fire Protection would be less than significant.

b) Police protection?

Less Than Significant Impact. Police protection services in the City of Loma Linda are provided by the San Bernardino Sheriff's Department. Sheriff's Department serving the City currently consists of 12 sworn officers and five non-sworn (civilian) employees. Loma Linda has an approximate population of 23,434 persons, which provides a ratio of approximately one sworn officer per 1,953 persons. Sheriff's Department Headquarters, Central Station (655 East Third Street) serves the City, although the City also provides a workstation at City Hall, which provides Sheriff's deputies with an area for completing reports, conducting interviews, and crime prevention.

According to the General Plan's Public Services and Facilities Element, the City has established a response time goal of 3.25 minutes from the time of dispatch. The proposed project will demolish the existing residential uses found on the project site and replace them with a 40-unit, two-story, senior assisted living facility. Assuming that the all of the 30 full-time jobs and 40 units would be filled by new residents, this increased demand for police services would account for only a nominal percentage (less than 0.3 percent) of the population (in order to maintain the City's current level of service). The project site is currently developed and presently served by the Sheriff's Department. As a result, the proposed project would not introduce development to an area not currently served by the Sheriff's Department and, as such, would not impede the Sheriff's Department from meeting its established response goal. The proposed project will be served by the existing Sheriff's Department facilities and construction of new or expansion of current Sheriff's Department facilities would not be required. In addition, the required payment of development impact fees by the project applicant would help offset incremental impacts to Sheriff's Department resources by helping to fund capital improvements and expenditures. Therefore, impacts associated with Sheriff's Department facilities would be less than significant.

c) Schools?

Less Than Significant Impact. Public education services in the City of Loma Linda are provided by the Redlands Unified School District (RUSD) and the Colton Joint Unified School District (CJUSD). The nearest school to the project site is RUSD's Bryn Mawr Elementary School, which is located approximately 2.2 miles southeast of the site. The City of Loma Linda implements the collection of development fees to mitigate impacts on school services.

AB 2926, passed in 1986, allows school districts to collect impact fees from developers of new residential and commercial/industrial building space. Senate Bill 50 (SB 50) and Proposition 1A, both of which passed in 1998, provided a comprehensive school facilities financing and reform program. The provisions of SB 50 prohibit local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate, and reinstates the school facility fee cap for legislative actions (e.g., General Plan amendments, specific plan adoption, zoning plan amendments). According to Government Code Section 65995, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." Therefore, with payment of the appropriate development fees, impact to school facilities would result in a less than significant impact.

d) Parks?

Less Than Significant Impact. There are approximately 73 acres of open space and parkland in the City, of which 64 acres are developed. The City's standard for permanent public open space is 5.0 acres per 1,000 residents.

The project does not propose new or physically altered park facilities. The project involves construction of a 40-unit, senior assisted living facility in place of the four residences currently on the property. Project implementation would result in a net increase of 36 dwelling units, with a resultant population increase of approximately 36 persons. This estimate is conservative, considering that more than one person would likely occupy each of the existing residences. Based on a parkland demand factor of 5.0 acres per 1,000 residents, project implementation assuming 30 new full-time employees and 36 (net) new residents would generate a demand for approximately 0.33 acre of parkland. However, with Loma Linda's population at approximately 23,434 persons, the current parkland ratio of 2.73 acres per 1,000 residents falls short of the City's standards of 5.0 acres per 1,000 residents.

Loma Linda Municipal Code (LLMC) Ti17.20.070, establishes procedures for requiring park and recreational facilities in conjunction with residential subdivisions, on a dwelling-unit basis. More specifically, LLMC 17.20.070, Park in lieu fees, specifies that "Park in lieu fees shall be established by resolution not by ordinance." As permitted by LLMC 17.20.070, the Applicant would pay this Parkland Impact Fee in lieu of dedication of 0.33 acres of parkland. Compliance with CMMC 17.20.070 would ensure that project implementation would result in a less than significant impact involving parkland demand.

e) Other public facilities?

Less than significant impact. There is one public library within the City of Loma Linda. The Loma Linda Branch Library is located approximately 0.8 mile southeast of the project site, at 25581 Barton Road, Loma Linda, California 92354. The project site is also located within the boundaries of the San Bernardino County Public Library, Loma Linda Branch. The project does not propose new or physically altered library facilities. Project implementation would result in a (conservative) net increase of 36 dwelling units, with a resultant population increase of approximately 36 persons. Given the project's nominal growth in population (less than 0.2 percent over existing conditions), construction of new or physically altered library facilities would not be required.

The Loma Linda General Plan anticipates growth in the City from 23,434 residents to 26,700 residents by the Year 2020. The County of San Bernardino released a facilities study in November 2001 that analyzed future needs of library facilities in San Bernardino County, including the City of Loma Linda, through the year 2021. According to this facilities study, the City of Loma Linda Branch Library will need to expand and renovate the existing facility to accommodate future growth. This study proposed a building size of 14,974 square feet, requiring 75 public and staff parking spaces. It was estimated that the expanded facility would increase the square footage per capita from the present 0.33 to 0.39 by the year 2021 (City of Loma Linda 2009).

Thus, the City has planned to accommodate the increase in population. The project would not create a substantial increase in demand for other public services including libraries, and the Applicant would pay appropriate local and regional development fees as adopted by the City Council, thereby reducing any potential impacts. Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental Evaluation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than significant impact. The project does not propose new or physically altered park facilities. The project involves construction of a 40-unit, assisted living facility in place of four residences currently on-site. Project implementation would result in a net increase of 40-dwelling units, with a resultant net population increase of approximately 36 persons. Based on a parkland demand factor of 5.0 acre per 1,000 residents, project implementation assuming 30 new full-time employees and 40 new residents would generate a demand for approximately 0.33 acre of parkland.

Project implementation would not increase the use of existing recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Any increased demands for recreational facilities would be mitigated through compliance with LLMC requirements; refer to Impact 14 d), above.

The provision of on-site open space would further minimize potential impact to recreational facilities, and impacts are less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less than Significant Impact. The project does not include or require construction or expansion of recreational facilities; refer to Impact 14 d). Impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Transportation/Traffic *Would the project:*				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Environmental Evaluation

The following section is based on the information contained in the October 2014 Traffic Impact Analysis prepared for the proposed project by Kunzman Associates, Inc. The Traffic Impact Analysis is included as Appendix F of this Initial Study.

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact. The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our lifestyles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic and morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 13 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

Table 13: Project Trip Generation[1]

			Peak Hour						
			Morning			Evening			
Land Use	Quantity	Units[2]	Inbound	Outbound	Total	Inbound	Outbound	Total	Daily
Trip Generation Rates – Assisted Living	—	BED	0.09	0.05	0.14	0.10	0.12	0.22	2.66
Trips Generated – Assisted Living	40	BED	4	2	6	4	5	9	106

Notes:
1 Source: Kunzman Associates, Inc., Appendix F.
2 BED = Patient Beds

The project would generate up to 106 daily trips during a typical weekday, including up to 6 trips in the AM peak hour (4 inbound and 2 outbound) and up to 9 trips in the PM peak hour (4 inbound and 5 outbound).

A scoping discussion was conducted with the City of Loma Linda to define the desired analysis locations for each future analysis year. In addition, staff from the City of Loma Linda has also been contacted to discuss the project and its associated travel patterns. Based upon the scoping discussion with staff from the City of Loma Linda, only the project access at Cole Street was studied in the Traffic Impact Analysis (Appendix F).

The definition of an intersection deficiency has been obtained from the City of Loma Linda General Plan and Measure V. The City's General Plan and Measure V state that peak hour intersection operations of Level of Service (LOS) C or better are generally acceptable. To assure the adequacy of various public services and prevent degradation of the quality of life experienced by the residents of Loma Linda, all new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, LOS is maintained at a minimum of LOS C throughout the City, except where the current LOS is lower than LOS C. In any location where the LOS is below LOS C at the time an application for a development project is submitted,

mitigation measures shall be imposed on that development project to assure, at a minimum, that the LOS is maintained at LOS that are no worse than those existing at the time an application for development is filed. In any location where the LOS is LOS F at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the volume-to-capacity ratio is maintained at a level that is no worse than that existing at the time an application for development is filed. Projects where sufficient mitigation to achieve the above stated objectives is infeasible shall not be approved unless and until the necessary mitigation measures are identified and implemented.

Volume-to-capacity calculations were performed at the project access at Cole Street for Existing plus Project and Opening Year 2015 with Project conditions. The access at Cole Street was operating at LOS C or better during the weekday AM and PM peak hours under existing plus project traffic conditions, refer to Table 14. As shown in Table 15, under opening year 2015 with project traffic conditions, project-related traffic will not significantly impact the access at Cole Street. Thus, no traffic mitigation measures are required or recommended for the study intersections under the existing with project conditions.

Table 14: Existing Plus Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Project Driveway (NS) at: Cole Street (EW)	Loma Linda	CSS	0	1	0	0	0	0	0	1	0	0	1	0	8.9-A	9.0-A

Notes:
1 Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Code 254.
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 CSS= Cross Street Stop.

Table 15: Opening Year (2015) With Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Project Driveway (NS) at: Cole Street (EW)	Loma Linda	CSS	0	1	0	0	0	0	0	1	0	0	1	0	8.9-A	9.0-A

Notes:
1 Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Code 254.
2 Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.
3 CSS= Cross Street Stop.

Although the project will not contribute a significant impact to Cole Street, the Traffic Impact Analysis includes recommendations for on-site and off-site improvements to be implemented in conjunction with development to ensure adequate circulation within the project itself.

Mitigation Measure

MM TRANS-1 The project shall implement the recommendations contained in the Traffic Impact Analysis (Kunzman Associates 2014), including:

- Construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.
- The site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.
- Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

Based on the above analysis, the project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. In addition, consistency with the above recommended mitigation measure will further reduce impacts to traffic/circulation and the surrounding roadway network to a level of less than significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact. The purpose of the Congestion Management Program (CMP) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use, and air quality planning programs throughout the County, consistent with that of the Southern California Association of Governments. The CMP requires review of substantial individual projects, which might on their own impact the CMP transportation system. Specifically, the CMP Traffic Impact Analysis (TIA) measures impacts of a project on the CMP Highway System.

The project does not generate 250 two-way peak-hour trips, nor does it add 50 peak-hour trips during either the morning or evening peak hours to any intersection. In addition, the project does not add 100 peak-hour trips during either the morning or evening peak hours to a mainline freeway location. Thus, a San Bernardino County CMP traffic analysis is not required for the proposed project. No impacts would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. As addressed in Impact 8e), the nearest public airport to the project site is the San Bernardino International Airport (formerly Norton Air Force Base), which is located approximately 3.1 miles north of the project site, just north of the Santa Ana River. The airport is currently operating as a general aviation and cargo airport and does not presently support commercial aviation. An Airport Land Use Compatibility Plan (ALUCP) has not been adopted for the airport. As such, compatibility/safety zones have yet to be identified around the airport. In addition, the project involves development of a 40-unit assisted living facility in the City of Loma Linda. Because of the nature and scope of the proposed development, project implementation would not result in a change in air traffic patterns that results in substantial safety risks. No impacts would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. As provided in Table 14 and Table 15, the project driveway at Cole Street would operate at acceptable LOS for Existing plus Project and Opening Year (2015) with Project traffic conditions. As such, the location of this driveway would not contribute to potential traffic or queuing impacts that could be considered a hazardous design feature. Therefore, impacts from hazards due to a design feature are considered less than significant.

e) Result in inadequate emergency access?

Less Than Significant Impact. The internal circulation within the proposed project site does not provide a secondary access for emergency vehicles. However, the Assisted Living Project does not exceed 30 feet in height or 62,000 square feet in an area, which would require at least two means of fire apparatus access. As recommended in the Traffic Impact Analysis, internal circulation access for the project should be reviewed by the Fire Authority for the following items:

- Fire Department access shall be provided with an unobstructed approved access road capable of supporting fire apparatus. Specific provisions to ensure that access roadways will remain unobstructed may be required.
- Width of the access road adjacent to structures to the rear of the site.
- Length of access road adjacent to structures to the rear of the site.
- Proximity of access road to structures.
- Access road turnaround at the rear of the site.

Thus, prior to project approval the Loma Linda Fire Department would review the site plan and ensure that emergency access is adequate. Impacts would be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact. The project site is served by Omnitrans, a public transit agency serving the San Bernardino Valley. Omnitrans currently operates local and express bus routes as well as OmniLink, a general public dial-a-ride service, and Access, and a paratransit service for the disabled. The nearest bus lines are

located within 0.2 mile of the project site along Benton Street, near the intersection of Benton Street and Prospect Avenue, southwest of the project site.

Project-related transit trips can be accommodated by the existing transit services in the project vicinity. Therefore, project implementation would not conflict with adopted policies, plans, or programs regarding public transit and project-related transit impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. Utilities and Service Systems *Would the project:*				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The City of Loma Linda receives wastewater treatment from the San Bernardino Municipal Water Department Water Reclamation Plant (WRP), which is operated by the City of San Bernardino. The WRP is a regional secondary treatment facility that employees primary and secondary treatment processes to meet the discharge standards of the NPDES issued to the facility by the State of California RWQCB. Although the WRP is permitted to treat up to 41 million gallons per day (mgd) of wastewater, the

facility currently receives closer to 33 mgd, equating to approximately 8 mgd of surplus treatment capacity. Secondary treated wastewater from the WRP discharges to an off-site tertiary treatment facility operated jointly by the City of San Bernardino and the City of Colton. The Rapid Infiltration and Extraction (RIX) facility within the WRP receives approximately 33 mgd of secondary treated wastewater from the WRP and the City of Colton's treatment facility. Natural bio-filtration is employed through the use of percolation basins, and ultraviolet (UV) disinfection is used to meet the State of California Title 22 tertiary standards, in addition to the discharge standards specified in a separate NPDES permit issued to the RIX facility. RIX treated wastewater consistently meets or exceeds required discharge standards.

The proposed project consists of 40 living units, each containing one bedroom and one bathroom. Beyond the 40 units proposed, the project would also include community spaces such as multipurpose rooms, courtyards, kitchen, dining room, and a lobby. Wastewater generated from the project site would mainly consist of wastewater effluent from typical residential apartment units. This wastewater production will represent only a nominal percentage of the 41 mgd of permitted wastewater treatment capacity, especially when considering that the WRP currently has approximately 8 mgd of surplus treatment capacity and will not cause the WRP to exceed its permitted capacity. Therefore, impacts associated with wastewater treatment requirements would be less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water Facilities

Less Than Significant Impact As previously discussed in Impact 9b), the project would rely on the City's existing, available water supplies. The proposed project would connect to the City's water facilities, similar to the existing residential uses on-site. Both the General Plan's Land Use Element and the compliance water use target found in Table 8-12 of the UWMP project a goal of achieving a 20 percent reduction in water use over a span of 10 years. Thus, the project would have a target water use of 204 gallons GPCD, resulting in a total water use of 14,280 GPCD. This estimate is based on an extremely conservative calculation that includes 40 units, with one person per unit, as well as 30 around-the-clock staff members. During operation, all 30 staff members would not be on-site 24-hours a day but would instead take shifts, thereby representing a reduction in water consumption compared with the estimated total GPCD. This conservative estimate of water demand of 14,280 GPCD would be equivalent to 16.01 afy. Therefore, as shown in Table 8, the project's water usage would represent only a nominal percentage of projected surplus (projected supply minus project demand) for the multiple dry year scenarios (conservative). Thus, the project would not require the construction of new or expanded water facilities, and impacts would be less than significant.

Wastewater Treatment Facilities

Less Than Significant Impact. The proposed project consists of 40 living units, each containing one bedroom and one bathroom. Beyond the 40 units proposed, the project would also include community spaces such as multipurpose rooms, courtyards, kitchen, dining room, and a lobby. Wastewater generated from the project site would mainly consist of wastewater effluent from typical residential apartment units. Generally, water consumption is slightly higher than wastewater generation for residential/institutional uses. As discussed in Impact 9d), the project would consume a total of 14,280 gallons of water per capita day. Therefore, the project would generate less than 14,280 gallons per day of wastewater. The project would also comply with CALGreen standards, which would further reduce impacts related to water consumption and the associated wastewater production.

This wastewater production will represent only a nominal percentage of the 41 million gallons a day of permitted wastewater treatment capacity, especially when considering that the WRP currently has approximately 8 mgd of surplus treatment capacity and will not cause the WRP to exceed its permitted capacity. Therefore, impacts associated with wastewater treatment requirements would be less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. As previously discussed in Impact 9a), the State of California is authorized to administer various aspects of the NPDES General Construction Permit. The General Construction permit requires developments of one-acre or more to reduce or eliminate non-stormwater discharges into stormwater systems, and to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). Since the project site is less than 1 acre (0.9 acre) in size, a SWPPP will not be required. However, in order to minimize pollutants of concern in stormwater discharges from the project site during operation of the project, site design BMPs and source control BMPs will be included as part of the project. These BMPs, through years of field testing and field use, have been demonstrated to reduce construction runoff impacts to less than significant levels. The inclusion of BMPs, as well as the provision of other stormwater BMPs would mitigate the impacts associated with stormwater runoff to levels deemed acceptable by both the Santa Ana RWQCB and the City of Loma Linda. Therefore, impacts associated with new or expanded storm water drainage facilities would be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. As previously discussed in Impact 9b), the project would utilize existing entitlements and resources to provide water to the site. As previously discussed in Impact 9b) the project would rely on the City's existing, available water supplies. The proposed project would connect to the City's water facilities, similar to the existing residential uses on-site. The General Plan's Land Use Element, and compliance water use target found in Table 8-12 of the UWMP, projects a goal of achieving a 20 percent reduction in water use over a span of 10 years. Thus, the project would have a target water use of 204 gallons GPCD resulting in a total water use of 14,280 GPCD. This estimate is based on an extremely conservative calculation that includes 40 units, with one person per unit, as well as 30 around-the-clock staff members. During operation, all 30 staff members would not be on-site 24-hours a day but would instead take shifts, thereby representing a reduction in water consumption compared with the estimated total GPCD. This conservative, estimated water demand of 14,280 GPCD would be equivalent to 16.01 afy. Therefore, as shown in Table 8, the project's water usage would represent only a nominal percentage of projected surplus (projected supply minus project demand) for the multiple dry year scenarios (conservative). The projected water supplies discussed and demands in Impact 9b) are based on the assumption of existing facilities, capacities, and entitlements, and do not take into account new or expanded facilities, capacities, and entitlements.

In addition, in accordance to the project's Irrigation Plan, the total maximum applied water allowance is approximately 197,363 gallons per year. The project's total estimated irrigation water use per year is approximately 118,884 gallons per year, which complies with the maximum allowed water use. The project will include a water efficient irrigation system utilizing apparatuses such as remote control valves, automatic rain sensors, and reduced pressure backflow preventers. Additionally, automatic irrigation systems would be

adjusted seasonally and have watering hours between 10 p.m. and 6 p.m. in order to prevent water loss due to evaporation. Therefore, impacts associated with water supplies would be less than significant

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. The proposed project consists of 40 living units, each containing one bedroom and one bathroom. Beyond the 40 units proposed, the project would also include community spaces such as multipurpose rooms, courtyards, kitchen, dining room, and a lobby. Wastewater generated from the project site would mainly consist of wastewater effluent from typical residential apartment units. As previously discussed in Impact 17b), this wastewater production will represent only a nominal percentage of the 41 mgd of permitted wastewater treatment capacity, especially when considering that the WRP currently has approximately 8 mgd of surplus treatment capacity and will not cause the WRP to exceed its permitted capacity. Therefore, impacts associated with wastewater treatment capacity would be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Solid waste produced in the City of Loma Linda is collected and transported by Republic Services to the County of San Bernardino's 366-acre San Timoteo Sanitary Landfill, located just south of the City of Redlands. The San Timoteo landfill has 114 acres permitted for disposal, a permitted daily throughput of 2,000 tons, and a remaining total capacity of 13,605,488 cubic yards. Solid waste generation rates published by the California Department of Resources Recycling and Recovery (CalRecycle) states that institutional uses, such as the proposed project, can produce 5 pounds of refuse per person per day. Based upon this solid waste generation rate and the proposed project's 40 living units (each containing one bedroom and one bathroom), the project will produce approximately 200 pounds of refuse per day. This solid waste production will represents only a nominal percentage (roughly 0.00005 percent) of the San Timoteo Sanitary Landfill's daily permitted capacity.

In addition, construction demolition solid waste would comply with the 2013 California Green Building Code Standards (CalGreen). Thus, the project applicant would comply with the CALGreen standards that pertain the construction and demolition debris recycling. Adherence to CALGreen standards for the diversion of construction and operational waste would further reduce impacts relating to solid waste disposal needs. Impacts would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. All collection, transportation, and disposal of any solid waste generating by the proposed project will comply with provisions stated in the 2013 CalGreen Building Code, as well as all applicable federal, state, and local statutes and regulations. Solid waste produced in the City of Loma Linda is collected and transported by Republic Services, who is permitted and licensed to collect and transport solid waste in the City of Loma Linda. Once collected, solid waste is transported to the County of San Bernardino's San Timoteo Sanitary Landfill, which has the 114 acres permitted for disposal. Both Republic Services' and the County's facilities and operations are periodically inspected by regional and state agencies for compliance with all applicable statutes and regulations.

Furthermore, consistent with provisions stated in the 2013 CalGreen Building Code, any hazardous materials collected on the project site during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider at a facility permitted to accept such hazardous materials. Therefore, impacts associated with solid waste statutes and regulations would be less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
18. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Environmental Evaluation

Would the project:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact With Mitigation Incorporated. The proposed project would demolish four residences, and construct an assisted living facility with 40-units. As described above, the proposed project would result in several potentially significant project-level impacts including biological resources and cultural resources. The project site does not contain any known historical resources, and does not support habitat for any special-status animals or plant communities. Furthermore, the site does not contain riparian habitat. However, development of the proposed project would require ground disturbance, which would have the potential to uncover cultural resources. In addition, construction of the proposed project would result in the removal of trees that could be potentially utilized by nesting birds.

However, mitigation measures have been developed that would reduce these impacts to less than significant levels. The project area is surrounded by a mix of residential and institutional uses and would not threaten or eliminate plant or animal communities. No important examples of major periods of California history or prehistory are located on the project site. Impacts would be less than significant with the implementation of mitigation.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant Impact With Mitigation Incorporated. The project would contribute minimally to cumulative development impacts within the region, similar to other future developments. The project would create several potentially significant impacts relating to biological and cultural resources, hazards, hydrology, public services, and transportation. However, the project would adequately mitigate any potential impacts to less than significant levels, thereby reducing the project's cumulative impacts. Therefore, cumulative impacts would be less than significant.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact With Mitigation Incorporated. As discussed, the proposed project would result in several potentially significant project-level impacts. However, mitigation measures have been identified that would reduce these impacts to less than significant. The proposed mitigation measures would reduce project noise during construction, and ensure a safe, internal circulation design for future residents, visitors, and staff members. Therefore, the project would not cause substantial adverse effects on human beings directly or indirectly. Impacts would be less than significant.

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SECTION 4: LIST OF PREPARERS

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Project Manager ..... Charles Holcombe
Air Quality Specialist ..... Chryss Meier
Noise Specialist ..... Phil Ault
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Biological Specialist ..... Scott Crawford
Environmental Analyst ..... Elizabeth Westmoreland
Air Quality Analyst ..... Ian McIntire
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Site Photographs

Appendix B:
Air Quality and Greenhouse Gases

Biological Resources

Appendix D:
Cultural Resources

Noise Data

Appendix F:
Transportation and Traffic

DRAFT
40-Unit Assisted Living Project
Mitigation Monitoring and Reporting Program
Loma Linda, San Bernardino County, California

Prepared for:
City of Loma Linda
Community Development Department
25541 Barton Road
Loma Linda, CA 92354
909.799.2895
Contact: Konrad Bolowich, Assistant City Manager

Prepared by:
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Date: February 25, 2015

EXHIBIT D

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SECTION 1: INTRODUCTION

The following is a Mitigation Monitoring and Reporting Program (MMRP) for the 40-Unit Assisted Living Project, which has been prepared pursuant to Section 15097 of the CEQA Guidelines and Section 21081.6 of the Public Resources Code. This MMRP lists all applicable mitigation measures from the Initial Study/Mitigated Negative Declaration (IS/MND). The appropriate timing of implementation and responsible party are identified to ensure proper enforcement of the mitigation measures from the IS/MND to reduce project impacts to less than significant levels.

SECTION 2: PROJECT DESCRIPTION

2.1 - Onsite Development

The proposed 40-Unit Assisted Living Project consists of a two-story, 37,124-square-foot assisted living facility. The project would include 40 living units, each containing one bedroom and one bathroom. Beyond the 40 units proposed, the facility would also include community spaces such as multipurpose rooms, courtyards, a kitchen, a dining room, and a lobby. The project would operate 24 hours a day, 7 days a week, utilizing various shifts of approximately 30 full-time staff members. The assisted living facility would provide 21 parking spaces (including two Americans with Disabilities Act-accessible spaces) as well as landscaping. Table provides the allocation of space by project component.

Table 1: Project Summary

Project Component	Size (square feet)
Public Space, Office and Retreat	
1st floor *2nd floor* *Total*	1,638 1,638 **3,276**
Multi-Purpose Rooms and Restrooms	
1st floor *2nd floor* *Total*	1,218 1,218 **2,436**
Dining and Kitchen	
1st Floor *2nd Floor* *Total*	2,189 N/A **2,189**
Residential Units	
1st Floor *2nd Floor* *Total*	10,201 11,384 **21,585**

Table 1 (cont.): Project Summary

Project Component	Size (square feet)
Outdoor Seating, Covered hallways and Stairs	
1st Floor *2nd Floor* *Total*	3,316 4,322 **7,638**
Landscaping	
10.9% project coverage/10.0% required	**4,751**
Total	**46,718**
Source: CTMAX, Project Description, Site Plan, and First Floor Plan, July 1, 2012.	

As part of project construction, one major building would be built on-site containing all 40-units. The proposed 40 dwelling units would be located along the western and eastern exteriors of the building; and community spaces including multi-purpose rooms, courtyards, a dining hall, and a kitchen would be located within the center of the two residential wings. The proposed parking areas and a minor internal roadway would be located along the southern and eastern borders of the assisted living facility. The project would provide one access point to the site from Cole Street, located directly east of the project site.

The proposed assisted living building would incorporate design elements, including decorative window shutters and tiles, stone veneer, and a variety of complementary building materials. The project frontage along Cole Street would contain landscaping, including several shrubs and olive trees and decorative groundcover. Along the southern, eastern, and western borders of the site, the project would include California live oak, crape myrtle, and Chinese pistache trees, as well as lavender, California lilacs, and several other plants.

To facilitate construction of the proposed project, three single-family residential structures, one two-story duplex, and a metal and wooden shed currently found on the project site will be demolished.

SECTION 3: MITIGATION MONITORING AND REPORTING PROGRAM

Table Mitigation Monitoring Reporting Program, will be used by the City of Loma Linda to enforce mitigation measures during each phase of the project pursuant to Section 15097 of the State CEQA Statues and Guidelines and Section 21081.6 of the Public Resources Code Section. The City of Loma Linda will be responsible for the implementation for all the mitigation measures listed in Table 2 and shall maintain monitoring documentation on each measure within the Loma Linda files at the address listed below. The entity responsible for monitoring will change based on the specific requirements identified in each mitigation measure. The phase of the project and monitoring period are also listed. Lastly, while monitoring of a specific measure is being conducted for several project phases, the Notes/Initial column is used to record compliance for each phase. When compliance with a mitigation measure for each project phase has been demonstrated, documentation on the Notes/Initial column is provided and monitoring of the measure will be deemed to be satisfied. No further monitoring will be required for the completed mitigation measure. For measures that require monitoring during operation of the project, annual documentation on the notes/initial column or a separate letter/memorandum shall be provided in the monitoring file that is kept at the City of Loma Linda.

The Mitigation Monitoring and Reporting Program will be kept on file at the following address:

City of Loma Linda
Community Development Department
25541 Barton Road
Loma Linda, CA 92354
909.799.2895
Konrad Bolowich, Assistant City Manager

Table 2: Mitigation Monitoring Reporting Program

Mitigation Measure	Implementation	Monitoring	Notes/Initials
Biological Resources			
MM BIO-1a: To avoid any direct and indirect impacts to any migratory birds or raptors, construction activities shall occur outside of the avian nesting season of February through August. If the removal of habitat (trees and shrubs) and/or construction activities within and adjacent to nesting habitat must occur during the breeding season, the project will be required to adhere to the MBTA and CFG Code, and must conduct a pre-construction clearance survey. The applicant shall retain a qualified biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on and within a 500-foot buffer around the project site. The pre-construction survey must be conducted within 30 calendar days prior to the start of construction.	**Responsible Party(s)** City of Loma Linda Community Development Department, Building Division **Implementation Phase** Prior to issuance of grading permit; 30 days prior to site disturbance; during site construction	**Responsible Party(s)** City of Loma Linda Community Development Department, Building Division **Monitoring Period** Verify inclusion in project specifications; site inspections	
MM BIO-1b: If nesting birds are detected by the biologist, a biological monitor shall be present on-site during construction to minimize construction impacts and ensure that no nest is removed or disturbed until all young have fledged.	**Responsible Party(s)** City of Loma Linda Community Development Department, Building Division; **Implementation Phase** Prior to issuance of grading permit; and after previous surveys are conducted	**Responsible Party(s)** City of Loma Linda Community Development Department, Building Division; **Monitoring Period** Verify inclusion in project specifications; site inspections	
Cultural Resources			
MM CR-1: It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried cultural	**Responsible Party(s)** City of Loma Linda	**Responsible Party(s)** City of Loma Linda	

Mitigation Measure	Implementation	Monitoring	Notes/Initials
resources. In the event that buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms, and evaluated for significance in terms of CEQA criteria. If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency, where they would be afforded long-term preservation to allow future scientific study.	Community Development Department, Planning Division **Implementation Phase** During site grading	Community Development Department, Planning Division **Monitoring Period** Verify inclusion in grading plan notes and construction contract; site inspections	
MM CR-2: In the event a fossil is discovered during construction for the proposed project, excavations within 50 feet of the find shall be	**Responsible Party(s)** City of Loma Linda	**Responsible Party(s)** City of Loma Linda	

Mitigation Measure	Implementation	Monitoring	Notes/Initials
temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.	Community Development Department, Planning Division **Implementation Phase** During site grading	Community Development Department, Planning Division **Monitoring Period** Verify inclusion in grading plan notes; site inspection	
MM CR-3: In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or 2. Where the following conditions occur, the landowner or his/her	**Responsible Party(s)** City of Loma Linda Community Development Department, Planning Division **Implementation Phase** During site grading	**Responsible Party(s)** City of Loma Linda Community Development Department, Planning Division **Monitoring Period** Verify inclusion in grading plan notes; site inspection	

Mitigation Measure	Implementation	Monitoring	Notes/Initials
authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance: • The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission; • The descendent identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner			
Hazardous Materials			
MM HAZ-1: In accordance with National Emission Standards for Hazardous Air Pollutants, the four existing residences located on the project site shall be evaluated for the presence of asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB) prior to their demolition. The evaluation shall be conducted by a Cal-OSHA certified ACM, LBP, and PCB contractor. Any ACM or lead identified as a result of the evaluation shall be removed by a Cal-OSHA certified ACBM, LBP, and PCB contractor and be transported and disposed of off-site in accordance with regulatory requirements.	**Responsible Party(s)** City of Loma Linda Community Development Department, Building Division **Implementation Phase** Prior to issuance of building permit; prior to construction	**Responsible Party(s)** City of Loma Linda Community Development Department, Building Division **Monitoring Period** Verify inclusion in project specifications; site inspections	
Noise			
MM NOI-1: Implementation of the following multi-part mitigation measure is required to reduce potential construction period noise	**Responsible Party(s)** City of Loma Linda Community	**Responsible Party(s)** City of Loma Linda Community	

Mitigation Measure	Implementation	Monitoring	Notes/Initials
impacts: • The construction contractor shall ensure that all construction equipment have appropriate sound muffling devices, which are properly maintained and used at all times such equipment is in operation. • The construction contractor shall ensure that "quiet" models of air compressors and other stationary construction equipment are utilized where such technology exists. • The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. • The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes). • The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site.	Development Department, Planning Division **Implementation Phase** Verify inclusion in project specifications; site inspection	Development Department, Planning Division **Monitoring Period** Prior to project approval; prior to demolition activities on site	

Mitigation Measure	Implementation	Monitoring	Notes/Initials
Traffic and Transportation			
MM TRAN-1: The project shall implement the recommendations contained in the Traffic Impact Analysis (Kunzman Associates 2014), including: • Construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary. • The site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand. • Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits. • On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.	**Responsible Party(s)** City of Loma Linda Community Development Department, Planning Division **Implementation Phase** Verify inclusion in project specifications; site inspection	**Responsible Party(s)** City of Loma Linda Community Development Department, Planning Division **Monitoring Period** Prior to site plan approval; prior to issuance of building permit; during construction	

Appendix F: Transportation and Traffic

EXHIBIT E

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Thursday, October 16, 2014 | CITY: Loma Linda | PROJECT: SC0296

ADT 25405 Cole Street | Prepared by: Field Data Services of Arizona, | **Prepared by AimTD tel.** 951 249 3226

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:30			0		0			12:00			9		13		
00:15			1		0			12:15			4		6		
00:30			0		0			12:30			4		8		
00:45			0	1	1	1	2	12:45			2	19	7	34	53
01:00			0		0			13:00			3		8		
01:15			0		0			13:15			4		6		
01:30			0		0			13:30			7		9		
01:45			0	0	0	0		13:45			5	19	6	29	48
02:00			0		0			14:00			4		6		
02:15			0		0			14:15			6		2		
02:30			0		0			14:30			2		5		
02:45			0	0	0	0		14:45			6	18	8	21	39
03:00			0		0			15:00			6		6		
03:15			0		0			15:15			5		8		
03:30			0		0			15:30			6		4		
03:45			0	0	0	0		15:45			6	23	5	23	46
04:00			0		0			16:00			4		3		
04:15			0		0			16:15			11		10		
04:30			2		3			16:30			6		8		
04:45			0	2	1	4	6	16:45			9	30	3	24	54
05:00			0		0			17:00			12		5		
05:15			0		1			17:15			5		20		
05:30			1		1			17:30			13		7		
05:45			2	3	4	6	9	17:45			5	35	8	40	75
06:00			0		2			18:00			9		2		
06:15			1		2			18:15			10		3		
06:30			2		4			18:30			7		7		
06:45			4	7	6	14	21	18:45			9	35	4	16	51
07:00			5		7			19:00			6		2		
07:15			8		12			19:15			5		5		
07:30			6		6			19:30			6		5		
07:45			4	23	11	36	59	19:45			11	28	6	18	46
08:00			2		9			20:00			8		2		
08:15			7		4			20:15			8		1		
08:30			3		4			20:30			4		1		
08:45			7	19	5	22	41	20:45			6	26	2	6	32
09:00			3		3			21:00			4		2		
09:15			1		3			21:15			6		1		
09:30			5		7			21:30			5		2		
09:45			3	12	5	18	30	21:45			4	19	1	6	25
10:00			5		3			22:00			2		1		
10:15			5		4			22:15			4		2		
10:30			5		9			22:30			1		0		
10:45			9	24	7	23	47	22:45			1	8	1	4	12
11:00			2		8			23:00			2		2		
11:15			4		10			23:15			1		2		
11:30			7		8			23:30			2		0		
11:45			5	18	4	30	48	23:45			1	6	1	5	11
Total Vol.				109		154	**263**					266		226	**492**

												Daily Totals			
											NB	SB	EB	WB	**Combined**
													375	380	**755**
			AM										**PM**		
Split %				41.4%		58.6%	**34.8%**						54.1%	45.9%	**65.2%**
Peak Hour	00:30	00:30		11:15		07:15	**11:15**						16:45	17:00	**17:00**
Volume				25		38	**60**						39	40	**75**
P.H.F.				0.69		0.79	**0.68**						0.75	0.50	**0.75**

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

October 28, 2014

Ms. Angela Pan
FIRSTCARBON SOLUTIONS
220 Commerce, Suite 200
Irvine, CA 92602

Dear Ms. Pan:

INTRODUCTION

The firm of Kunzman Associates, Inc. is pleased to provide this focused traffic analysis for the 25405 Cole Street project in the City of Loma Linda. The project site is located at 25405 Cole Street in the City of Loma Linda. A vicinity map showing the project location is provided on Figure 1. The project site is proposed to be developed with 40 units of assisted living use. The existing buildings on the property are to be demolished. The proposed project will have access to Cole Street. Figure 2 illustrates the project site plan.

The City of Loma Linda is the lead agency responsible for preparation of the traffic impact analysis, in accordance with California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development in Opening Year 2015, at which time it will be generating trips at its full potential.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

TRIP GENERATION

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic and morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

1111 TOWN & COUNTRY ROAD, SUITE 34
ORANGE, CALIFORNIA 92868
(714) 973-8383

WWW.TRAFFIC-ENGINEER.COM

As shown in Table 1, the proposed development is projected to generate approximately 106 vehicle trips, 6 of which occur during the morning peak hour and 9 of which occur during the evening peak hour.

STUDY AREA

According to the Congestion Management Program for San Bernardino County, the guidelines state that a traffic impact analysis is required when "a group of projects are forecast to equal or exceed the CMP threshold of 250 two-way peak hour trips generated." In such a case, the study area must include "all freeway links with 100 or more peak-hour project trips (two-way) and other CMP roadways with 50 or more peak-hour project trips (two-way)." The project does not generate 250 two-way peak hour trips nor does it add 50 peak hour trips during either the morning or evening peak hours to any intersection; thus the criteria is not met. In addition, the project does not add 100 peak hour trips during either the morning or evening peak hours to a mainline freeway location; thus the criteria is not met.

A scoping discussion was conducted with the City of Loma Linda to define the desired analysis locations for each future analysis year. In addition, staff from the City of Loma Linda has also been contacted to discuss the project and its associated travel patterns. Based upon the scoping discussion with staff from the City of Loma Linda, only the project access at Cole Street has been studied (see Figure 1).

ANALYSIS METHODOLOGY

Existing traffic conditions were established through 24-hour traffic counts obtained by Kunzman Associates, Inc. in October 2014 (see Appendix B). In addition, truck classification counts were conducted at the study area location. The existing percent of trucks was used in the conversion of trucks to Passenger Car Equivalent's.

Project traffic volumes for all future projections were estimated using the manual approach. Trip generation has been based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

The distribution of the project trips were based on peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area (see Figure 3).

To account for areawide growth on roadways, Opening Year (2015) traffic volumes have been calculated based on a 2.0 percent annual growth rate of existing traffic volumes over a one-year period. The areawide growth rate is considered conservative because the surrounding land is currently developed and because of the characteristics of Cole Street (e.g. not a through street). Areawide growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to trips generated by the project.

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method based on the Highway Capacity Manual – Transportation Research Board Special Report 209. To calculate delay, the volume of traffic using the intersection is compared with the

capacity of the intersection. A more detailed explanation is provided in Appendix C.

Definition of Deficiency

The definition of an intersection deficiency has been obtained from the City of Loma Linda General Plan and Measure V. The General Plan and Measure V state that peak hour intersection operations of Level of Service C or better are generally acceptable. To assure the adequacy of various public services and prevent degradation of the quality of life experienced by the residents of Loma Linda, all new development projects shall assure by implementation of appropriate mitigation measures that, at a minimum, traffic Levels of Service are maintained at a minimum of Level of Service C throughout the City, except where the current Level of Service is lower than Level of Service C. In any location where the Level of Service is below Level of Service C at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the level of traffic service is maintained at Levels of Service that are no worse than those existing at the time an application for development is filed. In any location where the Level of Service is F at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the volume to capacity ratio is maintained at a volume to capacity ratio that is no worse than that existing at the time an application for development is filed. Projects where sufficient mitigation to achieve the above stated objectives is infeasible shall not be approved unless and until the necessary mitigation measures are identified and implemented.

EXISTING PLUS PROJECT ANALYSIS[1]

The Existing Plus Project delay and Level of Service for the study area roadway network with the proposed project are shown in Table 2. Table 2 shows delay values based on the proposed geometrics at the study area intersection. Existing Plus Project delay calculation worksheets are provided in Appendix C.

For Existing Plus Project traffic conditions, the project access intersection is projected to operate at acceptable Levels of Service during the peak hours with proposed improvements.

OPENING YEAR (2015) WITH PROJECT ANALYSIS

The Opening Year (2015) With Project delay and Level of Service for the study area roadway network with the proposed project are shown in Table 3. Table 3 shows delay values based on the proposed geometrics at the study area intersection. Opening Year (2015) With Project delay calculation worksheets are provided in Appendix C.

For Opening Year (2015) With Project traffic conditions, the project access intersection is projected to operate at acceptable Levels of Service during the peak hours with proposed improvements.

[1] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time. This scenario is provided for informational purposes only, and will not be used for impact determinations or mitigation.

INTERNAL CIRCULATION AND EMERGENCY VEHICLE ACCESS

The internal circulation within the proposed project site does not provide a secondary access for emergency vehicles. The internal circulation access should be reviewed by the Fire Authority for the following items:

- Fire Department access shall be provided with an unobstructed approved access road capable of supporting fire apparatus. Specific provisions to ensure that access roadways will remain unobstructed maybe required.
- Width of the access road adjacent to structures to the rear of the site.
- Length of access road adjacent to structures to the rear of the site.
- Proximity of access road to structures.
- Access road turnaround at the rear of the site.

The 25405 Cole Street assisted living project does not exceed 30 feet in height or 62,000 square feet in area, which would require at least two means of fire apparatus access.

RECOMMENDATIONS

On-site improvements and improvements adjacent to the site will be required in conjunction with the proposed development to ensure adequate circulation within the project itself (see Figure 4).

Construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

The site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.

Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

CONCLUSIONS

1. The project site is located at 25405 Cole Street in the City of Loma Linda.

2. The project site is proposed to be developed with 40 units of assisted living use.

3. The proposed development is projected to generate approximately 106 vehicle trips, 6 of which occur during the morning peak hour and 9 of which occur during the evening peak hour.

4. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours and the project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips.

5. Based upon scoping discussions with staff from the City of Loma Linda, only the project access at Cole Street has been studied.

6. For Existing Plus Project traffic conditions, the project access intersection is projected to operate at acceptable Levels of Service during the peak hours with proposed improvements.

7. For Opening Year (2015) With Project traffic conditions, the project access intersection is projected to operate at acceptable Levels of Service during the peak hours with proposed improvements.

8. Circulation recommendations are provided on Figure 4.

It has been a pleasure to service your needs on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 973-8383.

Sincerely,

KUNZMAN ASSOCIATES, INC.

Perrie Ilercil, P.E.
Principal Associate

#5810

REGISTERED PROFESSIONAL ENGINEER
WILLIAM A. KUNZMAN
No. TR0056
TRAFFIC
STATE OF CALIFORNIA

KUNZMAN ASSOCIATES, INC.

William Kunzman

William Kunzman, P.E.
Principal

Table 1

Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Assisted Living		BED	0.09	0.05	0.14	0.10	0.12	0.22	2.66
Trips Generated									
Assisted Living	40	BED	4	2	6	4	5	9	106

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Code 254.

[2] BED = Patient Beds

Table 2

Existing Plus Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Project Driveway (NS) at: Cole Street (EW)	Loma Linda	CSS	0	1	0	0	0	0	0	1	0	0	1	0	8.9-A	9.0-A

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Code 254.

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS= Cross Street Stop.

Table 3

Opening Year (2015) With Project Intersection Delay and Level of Service

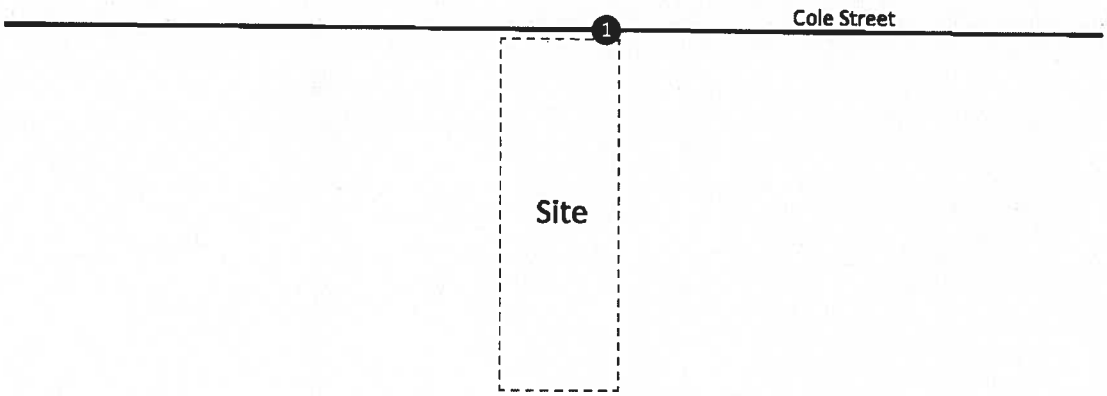
Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Project Driveway (NS) at: Cole Street (EW)	Loma Linda	CSS	0	1	0	0	0	0	0	1	0	0	1	0	8.9-A	9.0-A

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Code 254.

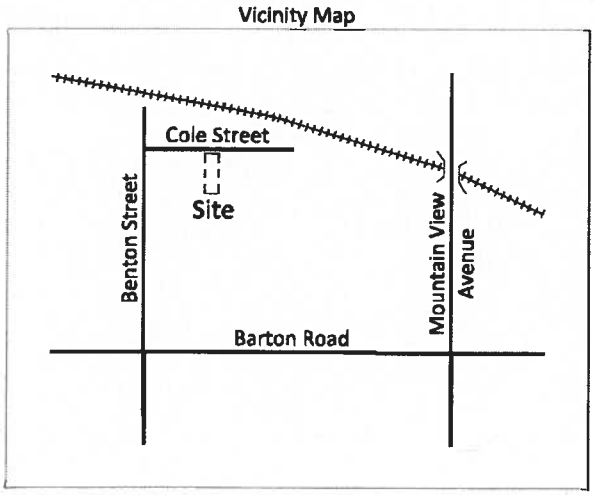
[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average for intersection delay and level of service are shown for intersections with traffic signal or all way stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS= Cross Street Stop.

Figure 1
Project Location Map



Vicinity Map



Legend

1 = Study Area Intersection

N

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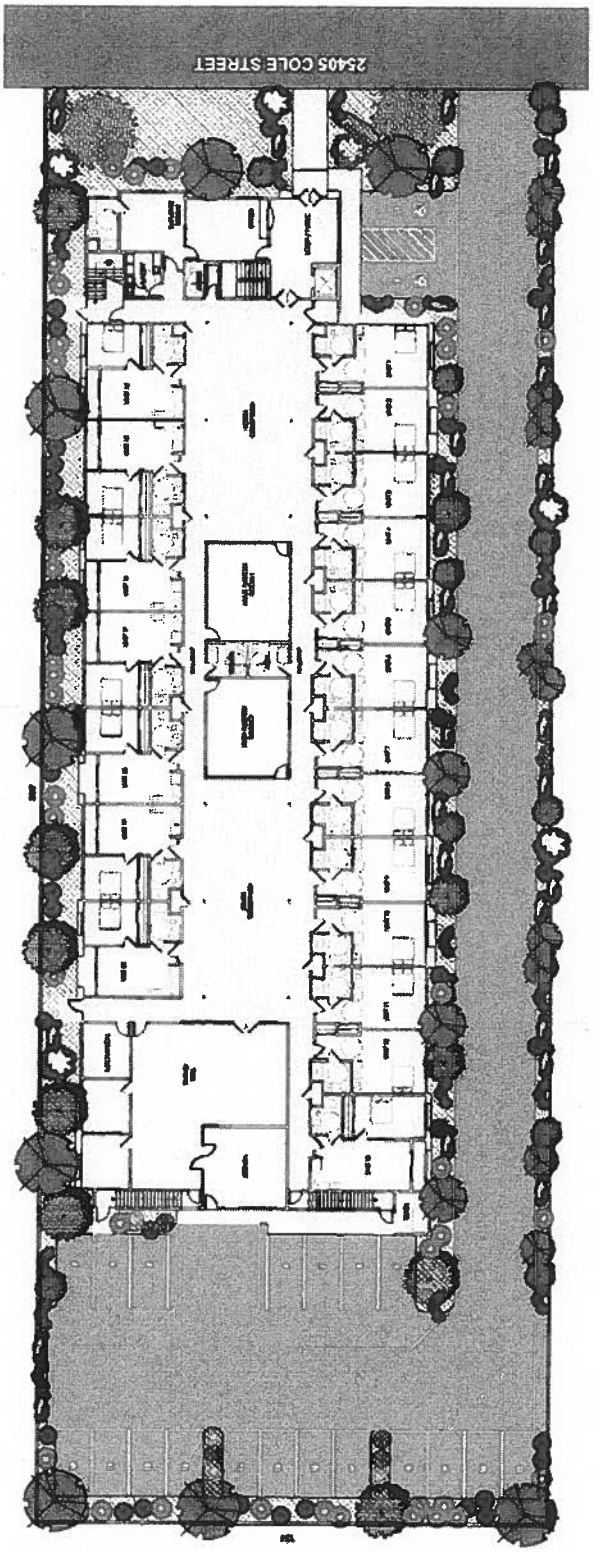
OVER 35 YEARS OF EXCELLENT SERVICE

5810/1

Figure 2
Site Plan



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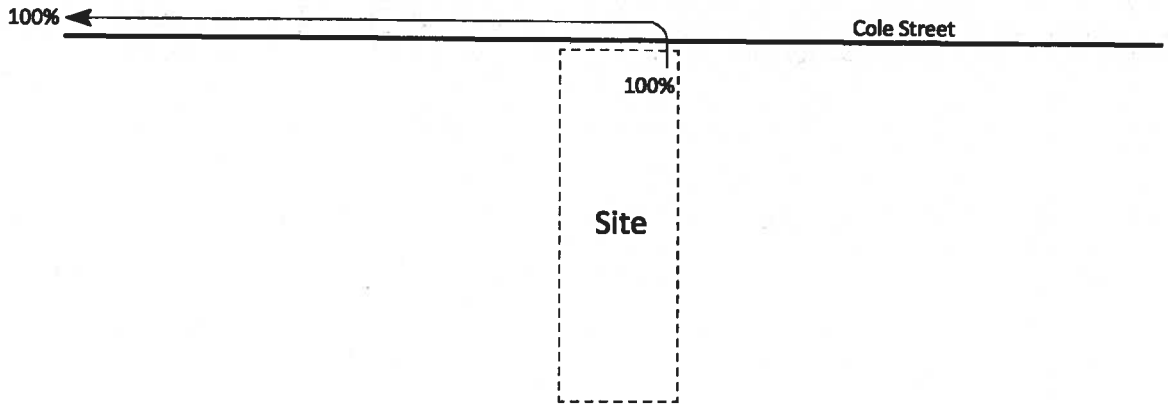
OVER 35 YEARS OF EXCELLENT SERVICE

5810/2

Figure 3
Project Trip Distribution



Legend

100% = Percent To/From Project

N

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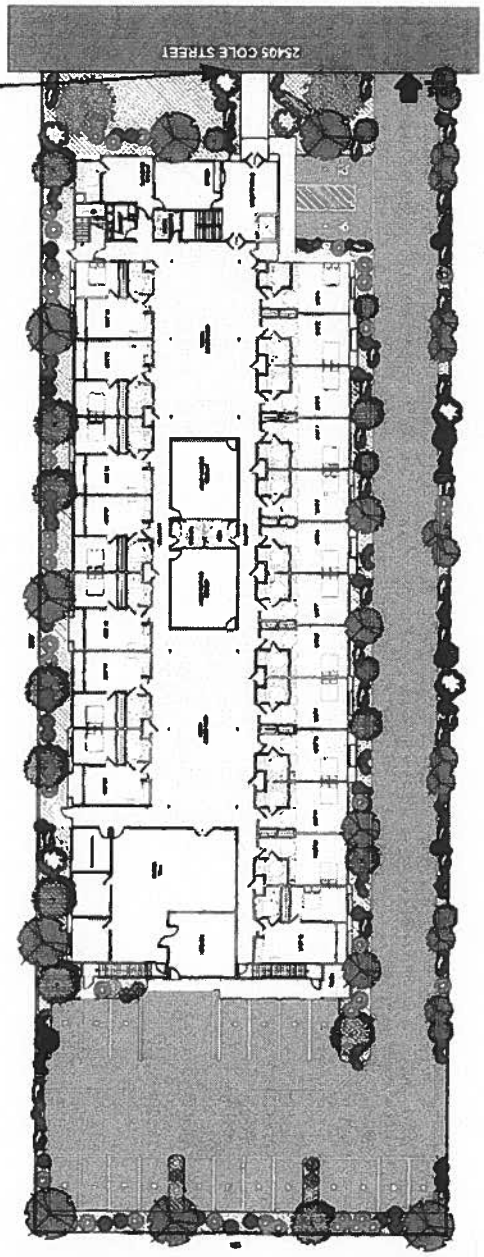
OVER 35 YEARS OF EXCELLENT SERVICE

5810/3

Figure 4
Circulation Recommendations



Construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

Legend

= Stop Sign

= Full Access Driveway

The site should provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.

Sight distance at the project access should be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

N

NTS

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OVER 35 YEARS OF EXCELLENT SERVICE

5810/4

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Traffic Count Worksheets

Thursday, October 16, 2014 | CITY: Loma Linda | PROJECT: SC0296

ADT 25405 Cole Street | Prepared by: Field Data Services of Arizona, | **Prepared by AimTD tel.** 951 249 3226

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:30			0		0			12:00			9		13		
00:15			1		0			12:15			4		6		
00:30			0		0			12:30			4		8		
00:45			0	1	1	1	2	12:45			2	19	7	34	53
01:00			0		0			13:00			3		8		
01:15			0		0			13:15			4		6		
01:30			0		0			13:30			7		9		
01:45			0	0	0	0		13:45			5	19	6	29	48
02:00			0		0			14:00			4		6		
02:15			0		0			14:15			6		2		
02:30			0		0			14:30			2		5		
02:45			0	0	0	0		14:45			6	18	8	21	39
03:00			0		0			15:00			6		6		
03:15			0		0			15:15			5		8		
03:30			0		0			15:30			6		4		
03:45			0	0	0	0		15:45			6	23	5	23	46
04:00			0		0			16:00			4		3		
04:15			0		0			16:15			11		10		
04:30			2		3			16:30			6		8		
04:45			0	2	1	4	6	16:45			9	30	3	24	54
05:00			0		0			17:00			12		5		
05:15			0		1			17:15			5		20		
05:30			1		1			17:30			13		7		
05:45			2	3	4	6	9	17:45			5	35	8	40	75
06:00			0		2			18:00			9		2		
06:15			1		2			18:15			10		3		
06:30			2		4			18:30			7		7		
06:45			4	7	6	14	21	18:45			9	35	4	16	51
07:00			5		7			19:00			6		2		
07:15			8		12			19:15			5		5		
07:30			6		6			19:30			6		5		
07:45			4	23	11	36	59	19:45			11	28	6	18	46
08:00			2		9			20:00			8		2		
08:15			7		4			20:15			8		1		
08:30			3		4			20:30			4		1		
08:45			7	19	5	22	41	20:45			6	26	2	6	32
09:00			3		3			21:00			4		2		
09:15			1		3			21:15			6		1		
09:30			5		7			21:30			5		2		
09:45			3	12	5	18	30	21:45			4	19	1	6	25
10:00			5		3			22:00			2		1		
10:15			5		4			22:15			4		2		
10:30			5		9			22:30			1		0		
10:45			9	24	7	23	47	22:45			1	8	1	4	12
11:00			2		8			23:00			2		2		
11:15			4		10			23:15			1		2		
11:30			7		8			23:30			2		0		
11:45			5	18	4	30	48	23:45			1	6	1	5	11
Total Vol.				109		154	**263**					266		226	**492**

Daily Totals

NB	SB	EB	WB	**Combined**
		375	380	**755**

			AM					**PM**		
Split %			41.4%	58.6%	**34.8%**			54.1%	45.9%	**65.2%**
Peak Hour	00:30	00:30	11:15	07:15	**11:15**			16:45	17:00	**17:00**
Volume			25	38	**60**			39	40	**75**
P.H.F.			0.69	0.79	**0.68**			0.75	0.50	**0.75**

APPENDIX C

Explanation and Calculation of Intersection Delay

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The levels of service at the unsignalized and signalized intersections are calculated using the delay methodology in the Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane time's 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking
7. Bus stops at intersections
8. Area type (CBD or other)
9. Right turns
10. Left turns
11. Pedestrian activity
12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the Highway Capacity Manual. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay method and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the Highway Capacity Manual, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length
2. Amount of red time faced by a lane group
3. Amount of yellow time for that lane group
4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied, calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

LEVEL OF SERVICE DESCRIPTION[1]

Level Of Service	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2000.

Existing Plus Project

25405 Cole Street - Assisted Living Facility
Existing Plus Project
Morning Peak Hour

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

Intersection #1 Project Access (NS) at Cole Street (EW)

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: A[8.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 0	0 0		0 0 0	0 0		0 0 0	1 0		0 0 1	0 0	
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	20	0	0	36	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	20	0	0	36	0
Added Vol:	2	0	0	0	0	0	0	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	0	0	0	0	0	0	20	4	0	36	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
PHF Volume:	3	0	0	0	0	0	0	27	5	0	49	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	0	0	0	0	0	0	27	5	0	49	0
Critical Gap Module:												
Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	79	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	929	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	929	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		8.9			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	

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

25405 Cole Street - Assisted Living Facility
Existing Plus Project
Evening Peak Hour

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

****

Intersection #1 Project Access (NS) at Cole Street (EW)

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.0]

****

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	35	0	0	40	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	35	0	0	40	0				
Added Vol:	5	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	5	0	0	0	0	0	0	0	0	0	0	35	4	0	40	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75				
PHF Volume:	7	0	0	0	0	0	0	0	0	0	0	47	5	0	53	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	7	0	0	0	0	0	0	0	0	0	0	47	5	0	53	0				
Critical Gap Module:																				
Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	103	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	900	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	900	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT										
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	9.0			xxxxxx			xxxxxx			xxxxxx										
ApproachLOS:	A			*			*			*										

****

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

****

Opening Year (2015) With Project

25405 Cole Street - Assisted Living Facility
Opening Year (2015) Plus Project
Morning Peak Hour

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

****

Intersection #1 Project Access (NS) at Cole Street (EW)

****

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: A[8.9]

****

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	20	0	0	36	0				
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02				
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	20	0	0	37	0				
Added Vol:	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	2	0	0	0	0	0	0	0	0	0	0	20	4	0	37	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74				
PHF Volume:	3	0	0	0	0	0	0	0	0	0	0	28	5	0	50	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	3	0	0	0	0	0	0	0	0	0	0	28	5	0	50	0				
Critical Gap Module:																				
Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	80	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	927	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	927	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	8.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	8.9			xxxxxx			xxxxxx			xxxxxx										
ApproachLOS:	A			*			*			*										

****

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

****

25405 Cole Street - Assisted Living Facility
Opening Year (2015) Plus Project
Evening Peak Hour

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

****

Intersection #1 Project Access (NS) at Cole Street (EW)

****

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.0]

****

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	40	0		
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02		
Initial Bse:	0	0	0	0	0	0	0	36	0	0	41	0								
Added Vol:	5	0	0	0	0	0	0	0	.4	0	0	0								
PasserByVol:	0	0	0	0	0	0	0	0	0	0	.0	0								
Initial Fut:	5	0	0	0	0	0	0	36	4	0	41	0								
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75								
PHF Volume:	7	0	0	0	0	0	0	48	5	0	54	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	7	0	0	0	0	0	0	48	5	0	54	0								
Critical Gap Module:																				
Critical Gp:	6.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
FollowUpTim:	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	105	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Potent Cap.:	898	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Move Cap.:	898	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*								
ApproachDel:	9.0			xxxxxx			xxxxxx			xxxxxx										
ApproachLOS:	A			*			*			*										

****

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

****

Table 1

Project Trip Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Assisted Living		BED	0.09	0.05	0.14	0.10	0.12	0.22	2.66
Trips Generated									
Assisted Living	40	BED	4	2	6	4	5	9	106

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 254.

[2] BED = Patient Beds

EXHIBIT F

CONDITIONS OF APPROVAL
PRECISE PLAN OF DESIGN (PPD) No. P14-059
GENERAL PLAN AMENDMENT (GPA) No. P14-060
ZONE CHANGE (ZC) No. P14-061

COMMUNITY DEVELOPMENT DEPARTMENT

General

1. Within one year of this approval, the Conditional Use Permit shall be exercised by substantial construction or the permit/approval shall become null and void. In addition, if after commencement of construction, work is discontinued for a period of two years, the permit/approval shall become null and void.

PROJECT:	EXPIRATION DATE:
PPD P14-059; GPA P14-060, AND ZC P14-061	TBD

2. The review authority may, upon application being filed 30 days prior to the expiration date and for good cause, grant a one-time extension not to exceed 12 months. The review authority shall ensure that the project complies with all current Development Code provisions.

3. In the event that this approval is legally challenged, the City will promptly notify the applicant of any claim or action and will cooperate fully in the defense of the matter. Once notified, the applicant agrees to defend, indemnify, and hold harmless the City, Redevelopment Agency (RDA), their affiliates officers, agents and employees from any claim, action or proceeding against the City of Loma Linda. The applicant further agrees to reimburse the City and RDA of any costs and attorneys fees, which the City or RDA may be required by a court to pay as a result of such action, but such participation shall not relieve applicant of his or her obligation under this condition.

4. Construction shall be in substantial conformance with the plan(s) approved by the Planning Commission. Minor modification to the plan(s) shall be subject to approval by the Director through a minor administrative variation process. Any modification that exceeds 10% of the following allowable measurable design/site considerations shall require the refilling of the original application and a subsequent hearing by the appropriate hearing review authority if applicable:

    a. On-site circulation and parking, loading and landscaping;
    b. Placement and/or height of walls, fences and structures;
    c. Reconfiguration of architectural features, including colors, and/or modification of finished materials that do not alter or compromise the previously approved theme; and,
    d. A reduction in density or intensity of a development project.

5. No vacant, relocated, altered, repaired or hereafter erected structure shall be occupied or no change of use of land or structure(s) shall be inaugurated, or no new business commenced as authorized by this permit until a Certificate of Occupancy has been issued by the Building Division. A Temporary Certificate of Occupancy

may be issued by the Building Division subject to the conditions imposed on the use, provided that a deposit is filed with the Community Development Department prior to the issuance of the Certificate, if necessary. The deposit or security shall guarantee the faithful performance and completion of all terms, conditions and performance standards imposed on the intended use by this permit.

6. This permit or approval is subject to all the applicable provisions of the Loma Linda Municipal Code, Title 17 in effect at the time of approval, and includes development standards and requirements relating to: dust and dirt control during construction and grading activities; emission control of fumes, vapors, gases and other forms of air pollution; glare control; exterior lighting design and control; noise control; odor control; screening; signs, off-street parking and off-street loading; and, vibration control. Screening and sign regulations compliance are important considerations to the developer because they will delay the issuance of a Certificate of Occupancy until compliance is met. Any exterior structural equipment, or utility transformers, boxes, ducts or meter cabinets shall be architecturally screened by wall or structural element, blending with the building design and include landscaping when on the ground.

7. Signs are not approved as a part of this permit. Prior to establishing any new signs, the applicant shall submit a Master Sign Permit Application, and receive approval from the Planning Commission (pursuant to LLMC, Chapter 17.18) and a Building Permit for construction of the signs from the Building Division, as applicable.

8. The applicant shall comply with all of the Public Works Department requirements for recycling prior to issuance of a Certificate of Occupancy.

9. A Final Phasing Plan shall be submitted to the Community Development Department for review and approval prior to issuance of any Building or Construction Permits.

10. The Site shall be developed in compliance with all current model codes as adopted by the State of California and the City of Loma Linda.

11. Health Care Facility on the site shall be accessible per CBC 11B.

12. Separate submittals and permits are required for all accessory structures such as but not limited to, trash enclosures, patios, block walls and storage buildings.

13. All Development Impact fees shall be paid to the City of Loma Linda prior to the issuance of the Certificate of Occupancy.

14. Prior to issuance of any Building and/or Construction Permits, the applicant shall submit to the Community Development Department proof of payment or waiver from both the City of San Bernardino for sewer capacity fees and Redlands Unified School District for school impact fees.

15. The applicant to pay all required development impact fees to cover 100 percent of the pro rata share of the estimated cost of public infrastructure, facilities, and services.

16. The developer shall provide infrastructure for the Loma Linda Connected Community Program, which includes providing a technologically enabled development that includes coaxial, cable and fiber optic lines to all outlets in each unit of the development. Plans for the location of the infrastructure shall be provided with the precise plan of design, which includes providing a technologically enabled development that includes coaxial, cable, and fiber optic lines to all outlets in each unit of the development. Plans for the location of the infrastructure shall be provided with the precise grading plans and reviewed and approved by the City of Loma Linda prior to issuing grading permits.

17. The project shall comply with the City Art in Public Places Ordinance (LLMC Chapter 17.26), which establishes grounds for compliance for new enterprises to facilitate public art. The establishment of artistic assets will be financed and/or constructed by the development community as part of the development requirements.

18. Mitigation Measure. To avoid any direct and indirect impacts to any migratory birds or raptors, construction activities shall occur outside of the avian nesting season of February through August. If the removal of habitat (trees and shrubs) and/or construction activities within and adjacent to nesting habitat must occur during the breeding season, the project will be required to adhere to the MBTA and CFG Code, and must conduct a pre-construction clearance survey. The applicant shall retain a qualified biologist to conduct a pre-construction survey to determine the presence or absence of nesting birds on and within a 500-foot buffer around the project site. The pre-construction survey must be conducted within 30 calendar days prior to the start of construction.

19. Mitigation Measure. If nesting birds are detected by the biologist, a biological monitor shall be present on-site during construction to minimize construction impacts and ensure that no nest is removed or disturbed until all young have fledged.

20. Mitigation Measure. It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried cultural resources. In the event that buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms, and evaluated for significance in terms of CEQA criteria.

    If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation

measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency, where they would be afforded long-term preservation to allow future scientific study.

21. Mitigation Measure. In the event a fossil is discovered during construction for the proposed project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

22. Mitigation Measure. In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

23. Mitigation Measure. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or

24. Mitigation Measure. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:
    - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
    - The descendent identified fails to make a recommendation; or
    - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

25. Mitigation Measure. In accordance with National Emission Standards for Hazardous Air Pollutants, the four existing residences located on the project site shall be evaluated for the presence of asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB) prior to their demolition. The evaluation shall be conducted by a Cal-OSHA certified ACM, LBP, and PCB contractor. Any ACM or lead identified as a result of the evaluation shall be removed by a Cal-OSHA certified ACBM, LBP, and PCB contractor and be transported and disposed of off-site in accordance with regulatory requirements.

26. Mitigation Measure. The construction contractor shall ensure that all construction equipment have appropriate sound muffling devices, which are properly maintained and used at all times such equipment is in operation.

27. Mitigation Measure. The construction contractor shall ensure that "quiet" models of air compressors and other stationary construction equipment are utilized where such technology exists.

28. Mitigation Measure. The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

29. Mitigation Measure. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.

30. Mitigation Measure. The construction contractor shall prohibit unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes).

31. Mitigation Measure. The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site.

Landscaping

32. The applicant shall submit three sets of the final landscape plan prepared by a state licensed Landscape Architect, subject to approval by the Community Development Department, and by the Public Works Department for landscaping in the public right-of-way. Landscape plans for the Landscape Maintenance District shall be on separate plans.

33. Final landscape and irrigation plans shall be in substantial conformance with the approved conceptual landscape plan and these conditions of approval. Any and all fencing shall be illustrated on the final landscape plan.

34. Landscape plans shall depict the utility laterals, concrete improvements, and tree locations. Any modifications to the landscape plans shall be reviewed and approved by the Public Works and Community Development Departments prior to issuance of permits.

35. The applicant, property owner, and/or business operator shall maintain the property and landscaping in a clean and orderly manner and all dead and dying plants shall be replaced with similar or equivalent type and size of vegetation.

FIRE DEPARTMENT

36. All construction shall meet the requirements of the editions of the 2007 California Building Code (CBC) and the 2007 California Fire Code (CFC)/International Fire Code (IFC) as adopted and amended by the City of Loma Linda and legally in effect at the time of issuance of building permit.

37. Pursuant to CFC Section 903, as amended in Loma Linda Municipal Code (LLMC) Sections 15.28.230-450, the building(s) shall be equipped with automatic fire sprinkler system(s). Pursuant to CFC Section 901.2, plans and specifications for the fire sprinkler system(s) shall be submitted to Fire Prevention for review and approval prior to installation. Fire flow test data for fire sprinkler calculations must be current within the last 6 months. Request flow test data from Loma Linda Fire Prevention at (909) 799-2859.

38. Pursuant to CFC 907.2, a Fire Alarm System is required in new buildings. Plans and specifications to be submitted the Fire Prevention Bureau for review and approval prior to installation;

39. The site address shall be as assigned by the Fire Marshal in a separate document, following approval of the project, and upon submittal of a working copy of the final approved site plan.

40. On-site civil engineering improvement plans shall be submitted to the Fire Prevention Bureau for review and approval prior to the construction. Plans shall show the proposed location for water mains and fire hydrants; driveways, drive aisles and access roadways for fire apparatus;

41. Fire Department Impact Fees shall be assessed according to the rate legally in effect at the time of building permit issuance. Pursuant to LLMC Chapter 3.28, plan check and inspection fees shall be collected at the rates established by the City manager's Executive Order.

42. The applicant shall meet the Fire Departments requirements regarding emergency access to the site. The site circulation shall meet the performance requirements of all emergency vehicles.

43. Complete access around structures with a minimum 26-foot clearance;

44. Provide NFPA List of Requirements to City of Loma Linda Fire Department as well as the needed requirements of the San Bernardino County (CUPA) Hazardous Materials Division (the approving agency for underground tanks);

45. Provide all information and specifications on underground fuel tanks; venting system, capacities, etc. Must comply with all the requirements set forth in the CBC and CFC as well as NFPA30 for underground storage of flammable or combustible liquids.

PUBLIC WORKS DEPARTMENT

46. The developer shall submit an engineered grading plan for proposed project.

47. All onsite utilities shall be underground. The City of Loma Linda shall be the sewer purveyor.

48. All public improvement plans shall be submitted to the Public Works Department for review and approval.

49. Any damage to existing improvements as a result of this project shall be repaired by the applicant to the satisfaction of the City Engineer.

50. Mitigation Measure. Prior to the demolition of the tree single-family residential structures, one two-story duplex, and a metal and wooden shed located on the project site, the structures shall be evaluated for the presence of asbestos-containing material (ACM), lead-based paints, PCBs, or mercury prior to their demolition. The evaluation shall be conducted by a Cal-OSHA certified ACM and lead-based paint contractor. Any ACM or lead identified as a result of the evaluation shall be removed by a Cal-OSHA certified ACBM and lead-based paint contractor and be transported and disposed of offsite in accordance with regulatory requirements.

51. Mitigation Measure. The project shall construct Cole Street from the west project boundary to the east project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

52. Mitigation Measure. The project shall provide sufficient parking spaces to meet City of Loma Linda parking code requirements in order to service on-site parking demand.

53. Mitigation Measure. Sight distance at the project access shall be reviewed with respect to California Department of Transportation/City of Loma Linda standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

54. Prior to the issuance of certificate of occupancies, all organizational documents for the project including any deed restrictions, covenants, conditions, and restrictions shall be submitted to and approved by the Community Development Department and City Attorney's office. Costs for such review shall be borne by the applicant/developer. A copy of the final documents shall be submitted to the Community Development Department after their recordation.

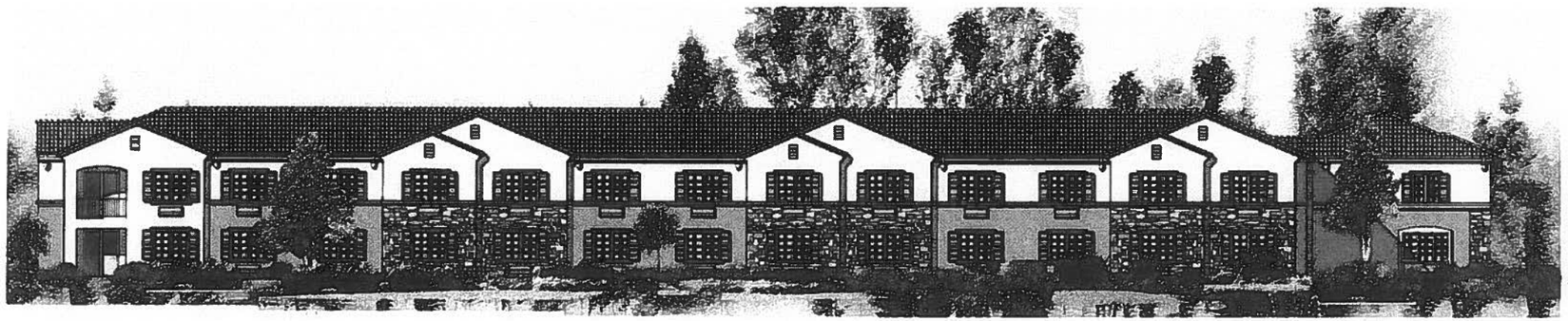
55. The project shall comply with all applicable Federal, State, County, and City laws and regulations.

Applicant signature	Date
Owner signature	Date

End of Conditions

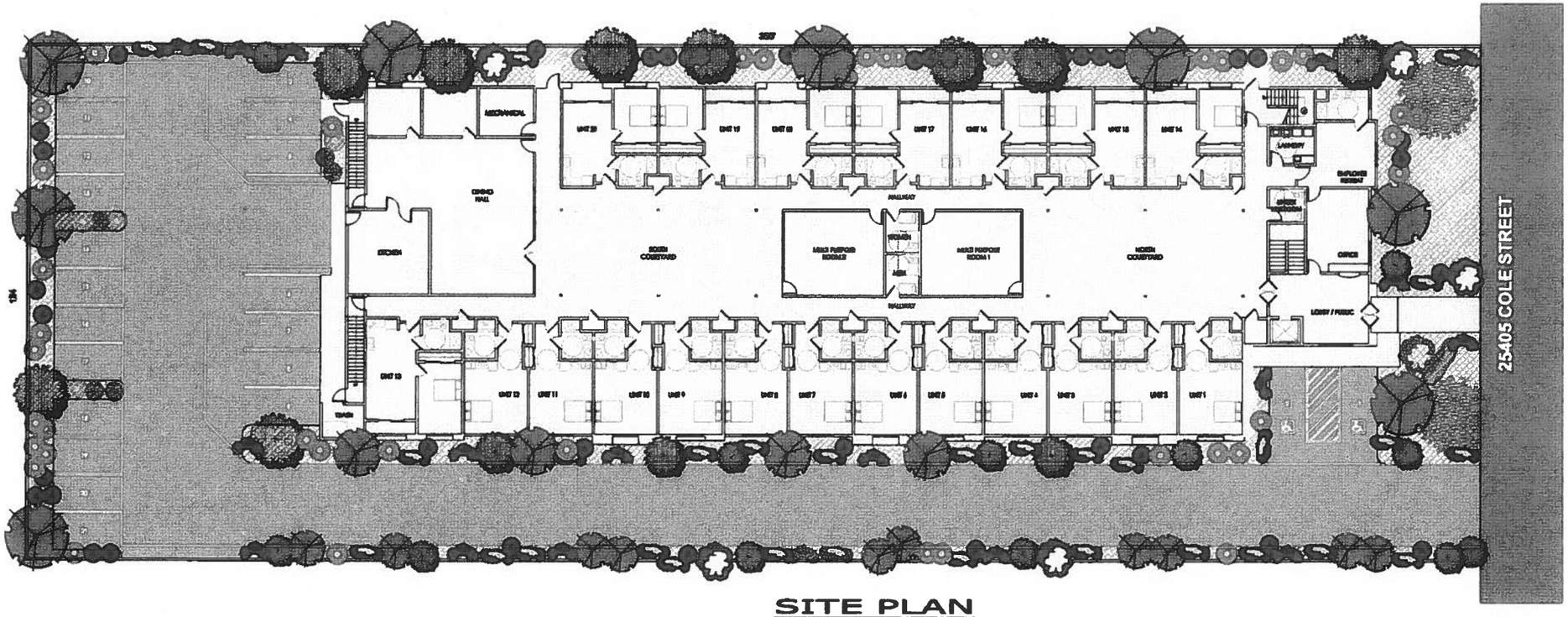
ASSISTED LIVING FACILITY

25405 COLE STREET, LOMA LINDA, CA 92354



SIDE ELEVATION

STREET VIEW ELEVATION

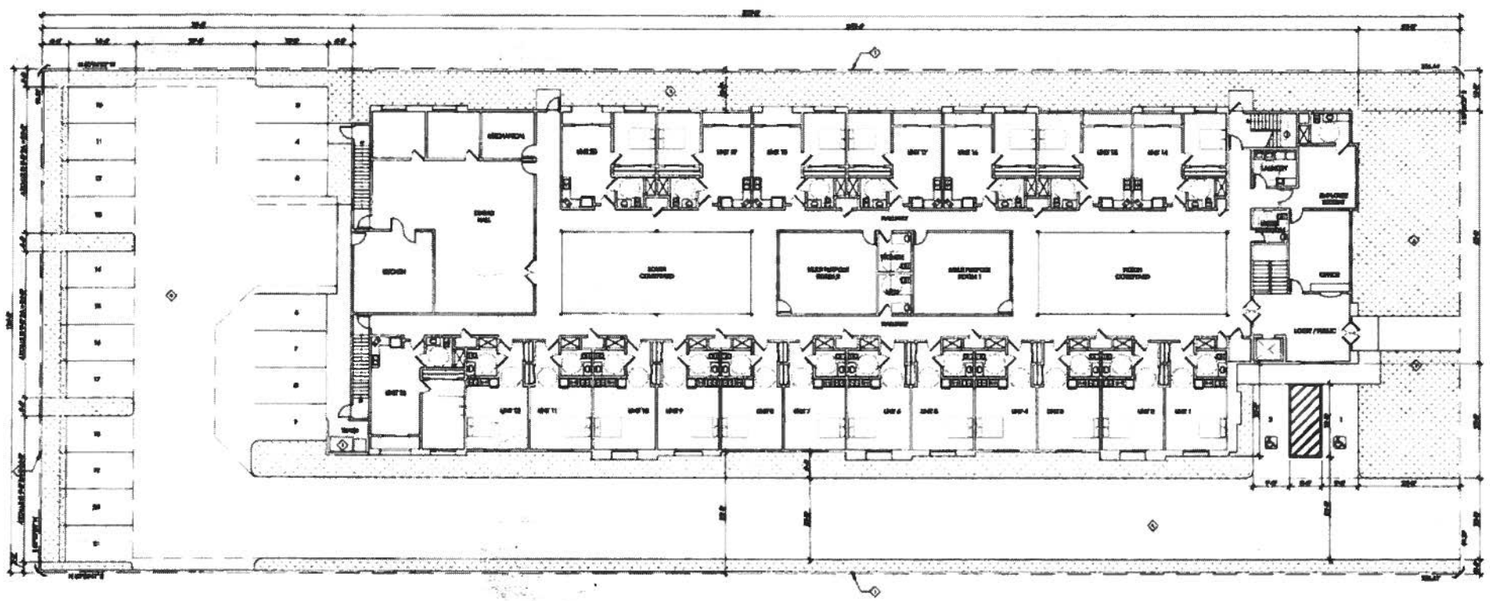


SITE PLAN

CTMAX

112 NORTH EARLE STREET,
SAN GABRIEL, CA 91775
TEL: 626-285-3408
FAX: 626-286-2037

EXHIBIT G



1 SITE PLAN
SCALE: 1/16" = 1'-0"

N

PROJECT DESCRIPTION

1. PROJECT: ASSISTED LIVING FACILITY
2. OWNER: LOMA LINDA DEVELOPMENT, INC.
3. LEGAL DESCRIPTION: TRACT NO 2303 BUENA VISTA PARK LOT 17 EX E 30 FT N 65 FT.
4. ACCESSOR ID NO: 0284-142-08,07
5. ZONING: CURRENT: R-3
   REQUIRED: ZONE CHANGE TO INSTITUTIONAL (I).
   GENERAL PLAN AMENDMENT TO HEALTHCARE
6. CODE: 2010 CBC, CEC, CMC, CPC, CGBC AND LOCAL AMENDMENTS
7. TYPE OF CONSTRUCTION: V-A WITH FIRE SPRINKLER THROUGHOUT. FIRE SPRINKLER UNDER SEPARATE PERMIT
8. OCCUPANCY: R-2.1 (FOR RESIDENTIAL AREA); A-2 (FOR DINING ROOM * MULTI-PURPOSED ROOMS); & B (FOR OFFICE/ADMINISTATION AREA)
9. OCCUPANCY SEPARATION: R-2.1/A-2 : TWO-HOUR
   R-2.1/B : TWO-HOUR
10. LOT SIZE: 350' x 124' = 43,400 SF
11. NUMBER OF STORY: TWO
12. FLOOR AREA TABULATION:

BASIC ALLOWABLE FLOOR AREA:	10,500 SF
MAX. ALLOWABLE FLOOR AREA: (10500 + 10500x2) x2 (WITH FIRE SPRINKLER SYSTEM) = 63,000 SF > 37,124 SF (O.K.)	
EACH STORY ALLOWABLE FLOOR AREA:	31,500 SF
1ST STORY PROPOSED FLOOR AREA:	18,562 SF
2ND STORY PROPOSED FLOOR AREA:	18,562 SF
TOTAL BUILDING FLOOR AREA:	37,124 SF
1ST FLR. PUBLIC SPACE, OFFICE AND RETREAT:	1,638 SF
1ST FLR. DINING AND KITCHEN:	2,189 SF
1ST FLOOR MULTI-PURPOSE ROOMS & RESTROOMS:	1,218 SF
1ST FLOOR RESIDENTIAL UNITS:	10,201 SF
1ST FLR. OUTDOOR COVERED HALLWAYS AND STAIRS:	3,316 SF
TOTAL 1ST FLOOR BUILDING AREA:	18,562 SF
INTERIOR COURTYARD (NORTH SIDE):	930 SF
INTERIOR COURTYARD (SOUTH SIDE):	930 SF
2ND FLR. PUBLIC SPACE, MEDICAL OFFICE AND RETREAT:	1,638 SF
2ND FLOOR MULTI-PURPOSE ROOMS & RESTROOMS:	1,218 SF
2ND FLOOR RESIDENTIAL UNITS:	11,384 SF
2ND FLR. OUTDOOR SEATING, COVERED HALLWAYS AND STAIRS:	4,322 SF
TOTAL 2ND FLOOR BUILDING AREA:	18,562 SF

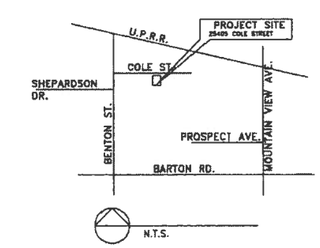
13. LOT COVERAGE: 18,562/43,400 =42.7% (MAX 50%, O.K.)
14. PARKING REQUIREMENT:
    NO OF PARKING STALL REQUIRED: 1 PARKING STALLS PER 2 BEDS
    40 BEDS X 1 STALL/2 BEDS= 20 STALLS REQUIRED
    NO. OF PARKING STALL PROPOSED: 21 TOTALS
    (INCLUDES 2 ACCESSIBLE PARKING)
15. LANDSCAPE AREA:

FRONT PARKING AREA:	30' x 23' = 690 S.F.
REAR PARKING AREA:	124' x 76.5' = 9,485 S.F.
TOTAL PARKING AREA:	10,175 S.F.
LANDSCAPE @ PARKING AREA:	1,668 S.F./10175 S.F. = 16.4% (10% REQUIRED, O.K.)

TOTAL LANDSCAPE AREA PROVIDED (NOT INCLUDED FRONT & SIDE SETBACK):

AT PARKING AREA:	1,668 S.F. (3.8%)
AT EAST SIDE OF BUILDING:	1,223 S.F. (2.9%)
INTERIOR COURTYARD (NORTH SIDE):	930 S.F. (2.1%)
INTERIOR COURTYARD (SOUTH SIDE):	930 S.F. (2.1%)
TOTAL LANDSCAPE AREA:	4,751 S.F.

4,751 S.F. / 43,400 S.F. = 10.9% (10% REQUIRED, O.K.)



SITE PLAN KEYNOTES

1. NEW 6'-0" HIGH CONCRETE BLOCK WALL
2. 4" THICK CONCRETE WALKWAY
3. LANDSCAPE AREA PER LANDSCAPE PLAN
4. CONCRETE DRIVEWAY

SITE PLAN NOTES

1. ALL EXISTING STRUCTURES SHALL BE DEMOLISHED UNDER SEPARATE PERMIT.
2. SEE APPROVED GRADING AND DRAINAGE PLAN FOR FINISH FLOOR ELEVATION AND GRADE ELEVATIONS.
3. SEPARATE PERMITS SHALL BE OBTAINED FOR FENCE WALLS.

CTMAX

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DATE	JULY 1, 2012
DRAWN BY	
CHECKED BY	
JOB NUMBER	CTM2012-001

REVISION

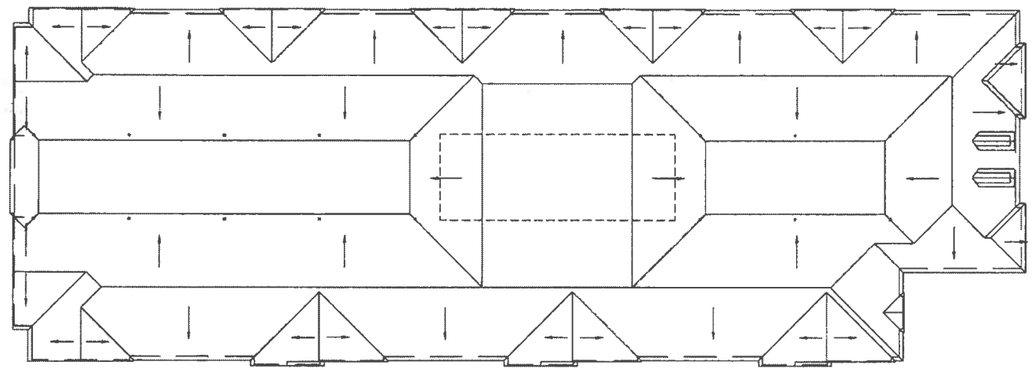
ASSISTED LIVING FACILITY

25405 COLE STREET,
LOMA LINDA, CA 92354

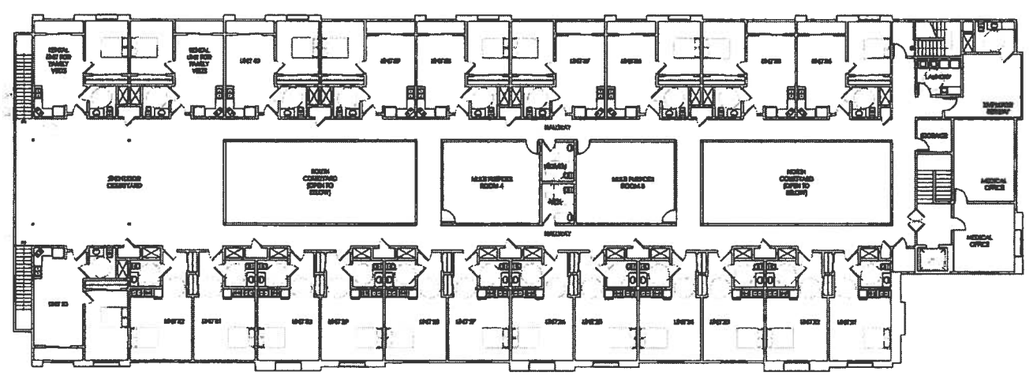
PROJECT DESCRIPTION, SITE PLAN & FIRST FLOOR PLAN

A1.0

OF SHEETS



2 ROOF PLAN
SCALE: 1/16" = 1'-0"



1 SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"

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REVISION

ASSISTED LIVING FACILITY

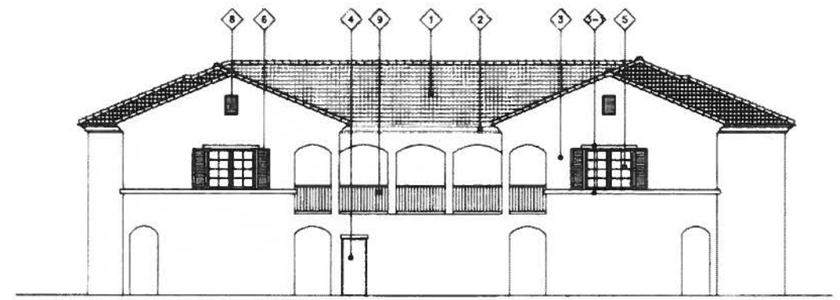
25405 COLE STREET,
LOMA LINDA, CA 92354

SECOND FLOOR PLAN & ROOF PLAN

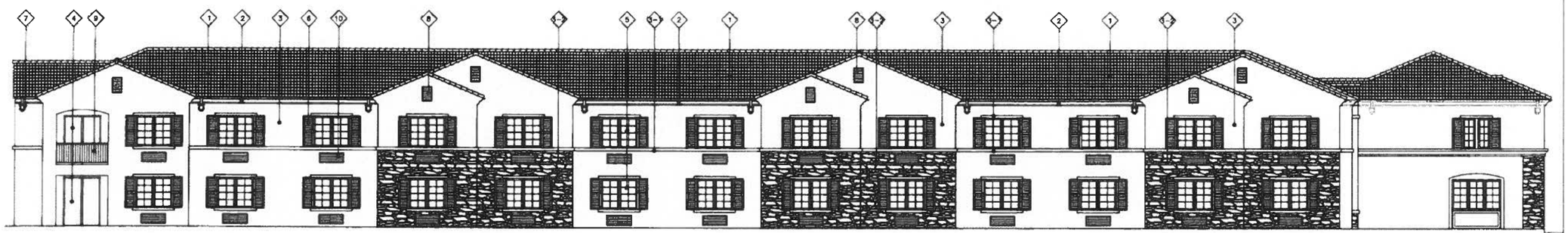
A1.1

OF SHEETS

1 NORTH ELEVATION
SCALE: 1/8"= 1'-0"



2 SOUTH ELEVATION
SCALE: 1/8"= 1'-0"



3 EAST ELEVATION
SCALE: 1/8"= 1'-0"

4 WEST ELEVATION
SCALE: 1/8"= 1'-0"

EXTERIOR FINISH SCHEDULE

#	MATERIAL	FINISH	COLOR	
1	CONCRETE TILES ROOFING			
2	2x FASCIA BOARD			
3	EXTERIOR CEMENT PLASTER			
3-1	EXTERIOR CEMENT PLASTER TRIM			
3-2	STONE VENEER			
3-3	DECORATIVE TILES			
4	EXTERIOR DOOR			
5	WINDOW			
6	DECORATIVE WINDOW SHUTTER			
7	METAL SCUPPER			
8	DECORATIVE GABLE-END VENT			
9	METAL RAILING			
10	A/C VENT GRILLE			

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REVISION

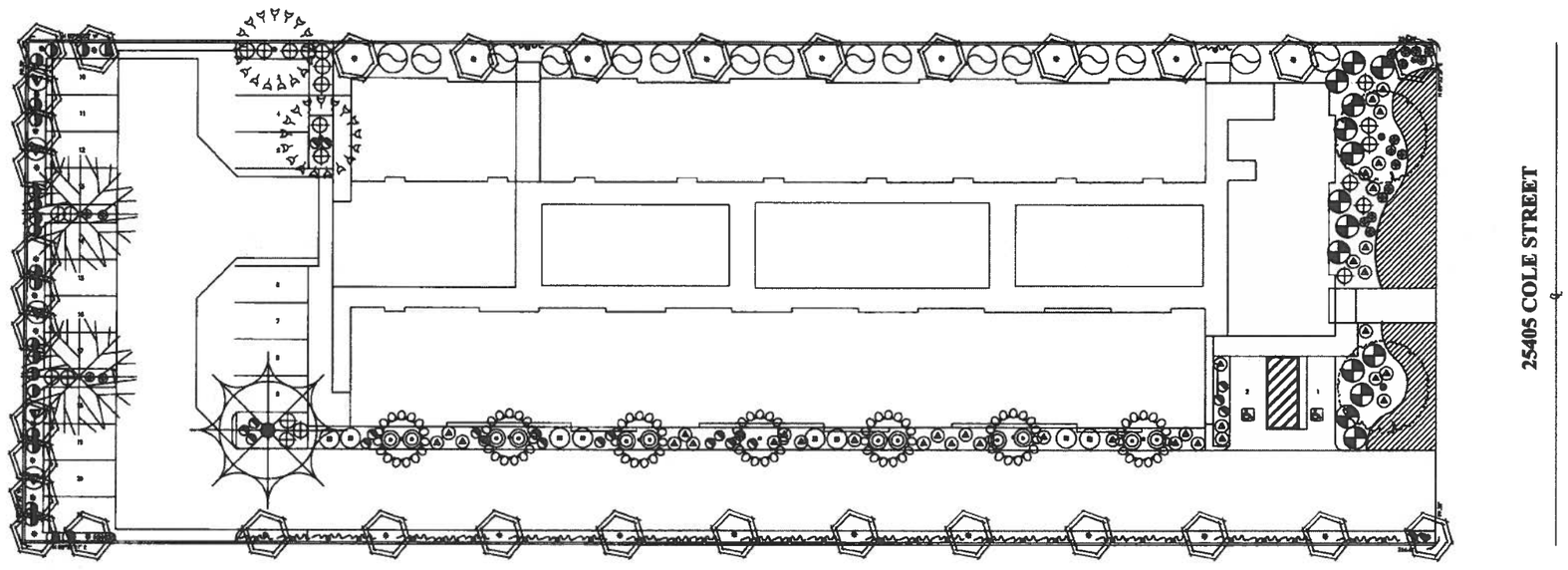
ASSISTED LIVING FACILITY

25405 COLE STREET,
LOMA LINDA, CA 92354

ELEVATIONS

A3.0

OF SHEETS

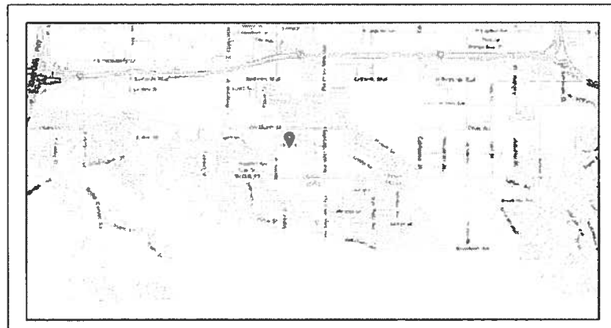


PLANT LEGEND

SYMBOL	ITEM NO.	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	TYPE	RATING
	1	QUERCUS AGRIFOLIA	CALIFORNIA LIVE OAK	36" BOX	4	TREE	L
	2	LAGERSTROEMIA INDICA 'MUSKOGEE'	CRAPE MYRTLE	24" BOX	7	TREE	L
	3	POPULUS NIGRA 'ITALICA' WITH ROOT BARRIER	LOMBARDY POPULAR	15 GAL.	35	TREE	L
	4	PISTACIA CHINENSIS	CHINESE PISTACHE	24" BOX	2	TREE	L
	5	OLEA EUROPAEA	OLIVE	24" BOX	2	TREE	L
	6	PYRUS CALLERYANA	CALLERY PEAR	24" BOX	2	TREE	L
	7	BOUGAINVILLEA 'BARBARA' KARST'	BOUGAINVILLEA	5 GAL.	50	ESPALIER	L
	8	CISTUS HYBRID 'INCANUS'	ROCK ROSE	5 GAL.	22	SHRUBS	L
	9	VIBURNUM TINUS 'COMPACTUM'	SPRING BOUQUET	5 GAL.	5	SHRUBS	M
	10	MORAEA IRIDIOIDES	AFRICAN IRIS	5 GAL.	21	SHRUB	L
	11	HEMEROCALLIS HYBRIDS	DAYLILY	5 GAL.	24	SHRUB	M
	12	ABELIA GRANDIFLORA	GLOSSY ABELIA	5 GAL.	8	SHRUB	L
	13	PHORIUM TENAX 'YELLOW WAVE'	FLAX	5 GAL.	22	SHRUBS	L
	14	BOUGAINVILLEA 'ASSORTED'	BOUGAINVILLEA	5 GAL.	12	SHRUB	L
	15	LAVENDULA AGUSTINA	LAVENDER	5 GAL.	34	SHRUB	L
	16	CEANOTHUS 'JULEA PHELPS'	CALIFORNIA LILAC	5 GAL.	13	SHRUB	L
	17	PHOTINIA FRASERI	PHOTINIA	5 GAL.	16	SHRUBS	L
	18	LAMPRANTHUS PRODUCTUS	PURPLE ICEPLANT	FLATS	8"O.C.	GROUND COVER	L

3" MULCH IN ALL PLANTER BEDS.

NORTH
1/16" = 1'-0"



VICINITY MAP

PLANTING PLAN

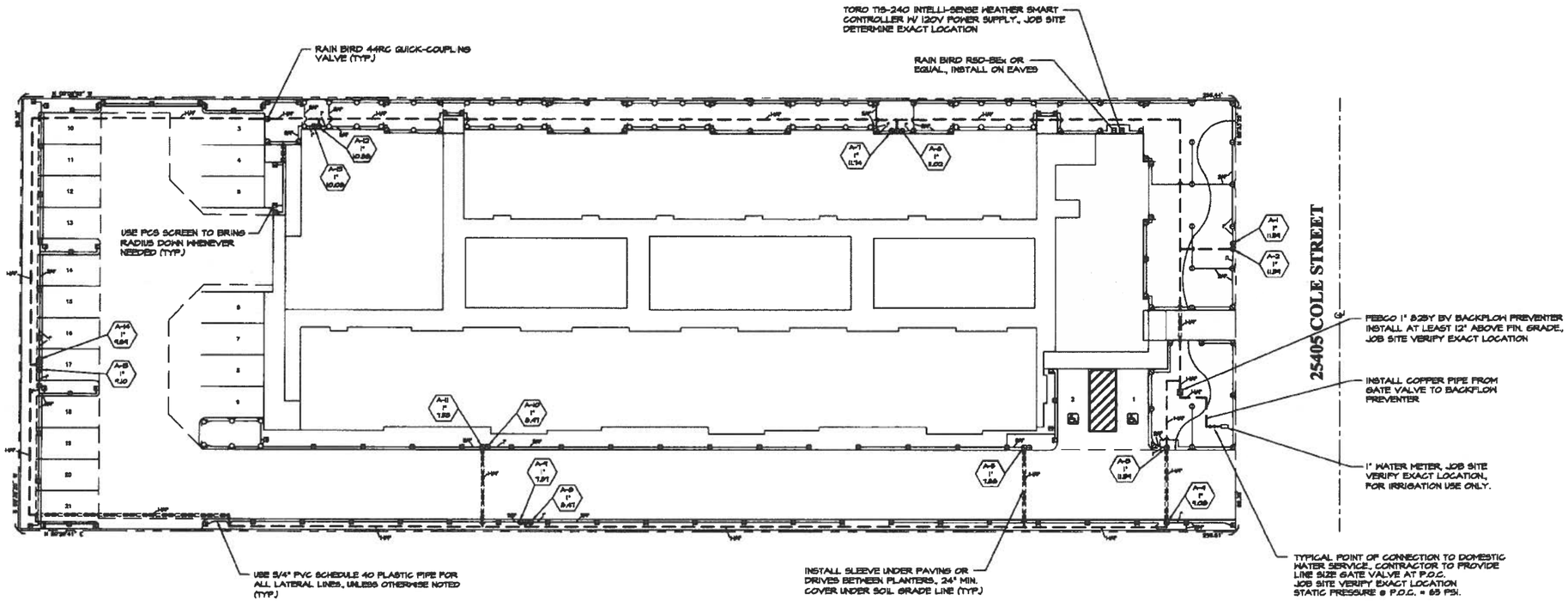
PREPARED BY:
BEN LUNDGREN AND ASSOCIATES
2605 FAIRFIELD PLACE
SAN MARINO, CALIFORNIA 91108
TEL.: (626) 535-9544 FAX: (626) 535-9534

PROJECT:
LOMA LINDA SENIOR ASSISTED LIVING CENTER
25405 COLE STREET
LOMA LINDA, CALIFORNIA

REVISIONS:

Sheet Title: PLANTING PLAN
Date: 4 - 09 - 14
Scale: 1/16" = 1'-0"
Drawn: B.L.
FILE NO. 2796

Sheet: L - 1



WATER EFFICIENT WORK SHEET

PROJECT NAME: LOMA LINDA SENIOR ASSISTED LIVING CENTER
PROJECT LOCATION: 25405 COLE ST., LOMA LINDA, CA 92354
TOTAL LANDSCAPE AREA: 8,179 SQ. FT.

MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

MAWA = (ETO) (0.62) (0.7 X LA) + (0.3 X SLA)

MAWA = MAXIMUM APPLIED WATER ALLOWANCE (GALLON PER YEAR)
ETO = REFERENCE EVAPOTRANSPIRATION (INCH PER YEAR) = 55.60
0.62 = CONVERSION FACTOR (TO GALLONS PER SQUARE FOOT)
0.7 = ET ADJUSTMENT FACTOR (ETAF)
LA = LANDSCAPE AREA INCLUDES SPECIAL LANDSCAPE AREA (SQUARE FEET) = 8,179
0.3 = THE ADDITIONAL ET ADJUSTMENT FACTOR FOR SPECIAL LANDSCAPE AREA (1.0 - 0.7 = 0.3)
SLA = PORTION OF THE LANDSCAPE AREA IDENTIFIED AS SPECIAL LANDSCAPE AREA (SQUARE FEET) = 0

55.60	ETO [REFERENCE EVAPOTRANSPIRATION (INCH PER YEAR)]
8,179	LANDSCAPE AREA INCLUDES SPECIAL LANDSCAPE AREA (SQUARE FEET)
0	PORTION OF THE LANDSCAPE AREA IDENTIFIED AS SPECIAL LANDSCAPE AREA (SQUARE FEET)

	ETO		ETAF		AREA (S.F.)		CONVERSION		MAWA
MAWA FOR LA	55.60	X	0.7	X	8,179	X	0.62	=	197,362.54
MAWA FOR SLA	50.98	X	0.3	X	0	X	0.62	=	0
TOTAL MAWA									197,362.54 (GALLON PER YEAR)

ESTIMATED TOTAL WATER USE (ETWU)

ETWU = (ETO) (0.62) [(PF X HA) / IE + SLA]

ETWU = ESTIMATED TOTAL WATER USE PER YEAR (GALLON PER YEAR)
ETO = REFERENCE EVAPORTRANSPIRATION (INCH PER YEAR) = 55.60
0.62 = CONVERSION FACTOR (TO GALLONS PER SQUARE FOOT)
PF = PLANT FACTOR FROM WUCOLS (MODERATE) = 0.50
HA = HYDROZONE AREA (HIGH, MEDIUM AND LOW WATER USE AREAS] (SQUARE FEET) = 8,179
IE = IRRIGATION EFFICIENCY (MINIMUM 0.71)
SLA = PORTION OF THE LANDSCAPE AREA IDENTIFIED AS SPECIAL LANDSCAPE AREA (SQUARE FEET) = 0

ETWU ARRIVED FROM HYDROZONE TABLE BELOW = 119,394.33 (GALLON PER YEAR)

HYDROZONE TABLE

HYDROZONE	PLANT WATER USE TYPE	PLANT FACTOR (PF)	HYDROZONE AREA (HA) (SQUARE FT.)	PF X HA (SQUARE FT.)	% OF LANDSCAPE AREA (LA)	IRRIGATION EFFICIENCY (IE)	HYDROZONE ETWU
L	LOW WATER	0.3	8,179	2,456.10	100 %	0.71	119,394.49
		TOTAL	8,179		100 %		

IRRIGATION LEGEND

SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	PSI	RAD.	GPM
	RAIN BIRD	1806 15 F, H, T, Q	SPRAY POPUP	50	15'	3.70, 1.85, 1.23, 0.92
	RAIN BIRD	1806 12 F, H, T, Q	SPRAY POPUP	50	12'	2.60, 1.30, 0.87, 0.65
	RAIN BIRD	1806 10 F, H, T, Q	SPRAY POPUP	50	10'	1.58, 0.79, 0.53, 0.39
	RAIN BIRD	1806 8 F, H, T, Q	SPRAY POPUP	50	8'	1.03, 0.52, 0.35, 0.26
	RAIN BIRD	1806 5 F, H, T, Q	SPRAY POPUP	50	5'	0.41, 0.20, 0.13, 0.10
	RAIN BIRD	1806 15 SST, EST	SPRAY POPUP	50	4'x30', 4'x15'	1.21, 0.61
	RAIN BIRD	100-PEB-PRS	REMOTE CONTROL VALVE W/ PRESSURE REGULATOR			
	RAIN BIRD	44RC	QUICK-COUPLING VALVE			
	RAIN BIRD	RSD-BEx	AUTOMATIC RAIN SENSOR			
	TORO	TIS-240	INTELLI-SENSE WEATHER SMART CONTROLLER			
	FEBCO	1" 825Y-BV	REDUCED PRESSURE BACKFLOW PREVENTER			
	APPROVED	PVC SCH 40	1-1/4" MAIN LINE- 18" MIN. COVER, 24" UNDER PAVING., U.O.N.			
	APPROVED	PVC SCH 40	3/4" LATERAL LINE- 12" MIN. COVER, 24" UNDER PAVING., U.O.N.			
	APPROVED	PVC SCH 40	SLEEVE- 24" MIN. COVER USE 2X DIA. SIZE OF MAIN OR LATERAL LINE			

STATION NO.
VALVE SIZE
G.P.M.

IRRIGATION CONTROLLER NOTE:

CONTRACTOR IS TO INFORM PROPERTY OWNER THAT THE SPECIFIED CONTROLLER REQUIRES A WEATHER DATA SUBSCRIPTION SERVICE IN ORDER TO AUTOMATICALLY ADJUST IRRIGATION FOR THE MOST EFFICIENT AND WATER-SAVING OPERATION.

NOTES:

1. AUTOMATIC IRRIGATION SYSTEM TO BE ADJUSTED SEASONALLY AND WITH WATERING HOURS BETWEEN 10:00 P.M. AND 6:00 A.M.
2. WIRE CROSSINGS UNDER PAVED SURFACES SHALL BE SLEEVED SEPARATELY IN SCH. 40 CONDUIT.
3. ALL PRESSURIZED IRRIGATION LINES SHALL BE BACKFILLED WITH 3" OF SAND ABOVE AND BELOW LINE (6" TOTAL).
4. USE 1-1/4" SIZE PVC SCHEDULE 40 PLASTIC PIPE FOR ALL MAIN LINES & 3/4" PVC SCHEDULE 40 PLASTIC PIPE FOR ALL LATERAL LINES, UNLESS OTHERWISE NOTED.
5. IRRIGATION CONTRACTOR TO BUILD THE LONGEST LINE VALVE, TEST IT AND IF IT DOESN'T PERFORM PROPERLY, TO SPLIT IT UP INTO 2 VALVES.

IRRIGATION PLAN

NORTH
1/16" = 1'-0"

PREPARED BY:
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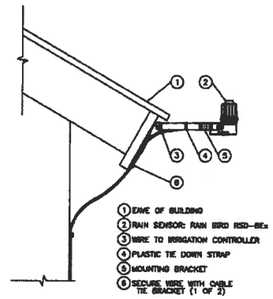
PROJECT:
LOMA LINDA SENIOR ASSISTED LIVING CENTER
25405 COLE STREET
LOMA LINDA, CALIFORNIA

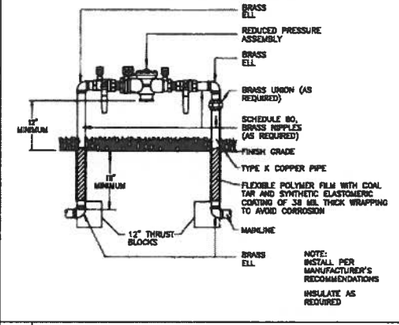
REVISIONS:

Sheet Title: IRRIGATION PLAN
Date: 4-09-14
Scale: 1/16" = 1'-0"
Drawn: B.L.
FILE NO. 2796

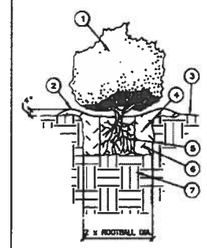
Sheet: L - 2



13 AUTOMATIC RAIN SENSOR



9 REDUCED PRESSURE ASSEMBLY



1. SHRUB OR VINE PER PLAN
2. EARTH WATERING BASIN (RAKE SMOOTH AT END OF PLANT ESTABLISHMENT PERIOD FOR ALL REMAINING BASINS)
3. FINISH GRADE
4. BACKFILL PER SOIL TEST RECOMMENDATIONS
5. ROOTBALL (SET CROWN +/- 3" ABOVE FINISH GRADE)
6. NATIVE BACKFILL WITH NO ROCKS GREATER THAN 3" DIAMETER.
7. UNDISTURBED NATIVE SOIL

5 SHRUB PLANTING

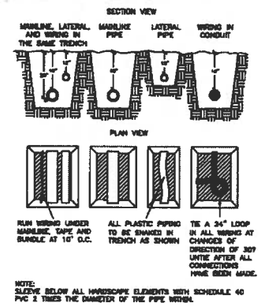
1. CONTRACTOR SHALL VERIFY PLANT COUNT FOR BIDDING PURPOSES.
2. ROOT BARRIERS SHALL BE PROVIDED FOR ALL TREES WITHIN 5' OF HARDSCAPE.
3. CONTRACTOR TO PROVIDE DRAINAGE SYSTEM FOR ALL PLANTING AREAS, SEE CIVIL ENGINEER'S GRADING & DRAINAGE PLANS.
4. SEE ARCH. & CIVIL PLANS FOR EXACT DIM. & SPECIFICATIONS.
5. EXIST'G TREE INDICATE TO REMAIN SHALL BE PRESERVED & PROTECTED DURING THE COURSE OF CONSTRUCTION.
6. ALL PLANTING AREAS SHALL RECEIVE 3" MIN. MULCH COVER AS A GROUND COVER.
7. CONTRACTOR SHALL GUARANTEE PLANT MATERIAL FOR ONE YEAR AFTER INSTALLATION AND REPLACE ANY DISEASED OR DAMAGED MATERIAL DURING THAT ONE YEAR PERIOD.
8. CONTRACTOR SHALL HAVE SOIL TEST TO DETERMINE PROPER SOIL AMENDMENTS.

   THE FOLLOWING AMENDMENTS IS FOR BID PURPOSES ONLY:

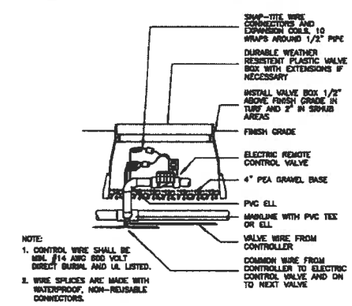
   8 CU. YD. (2") NITROGEN STABILIZED ORGANIC AMENDMENT DERIVED FROM REDWOOD SAWDUST, FIR SAWDUST, OR FINELY GROUND BARK, 8 LBS. AMMONIUM SULFATE. THOROUGHLY INCORPORATED TO A DEPTH OF 12" MIN. BY ROTOTILLER EQUAL AMOUNT PER 1,000 SQ. FT.

   NOTE: THIS FORMULA IS A STD. MIX AND WILL CHANGE IF THERE ARE ANY UNUSUAL SOIL CONDITIONS AT THE SITE. COMPACTED BACKFILL SHALL BE 100 % ON SITE SOIL.

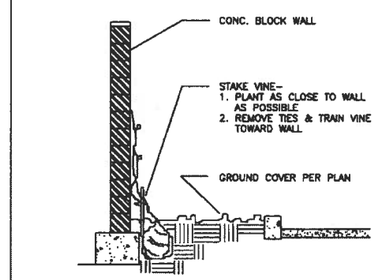
1 LANDSCAPE NOTES



14 PIPE & WIRE TRENCHING



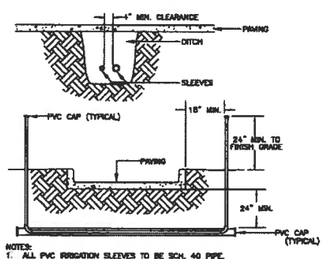
10 REMOTE CONTROL VALVE



6 VINE PLANTING

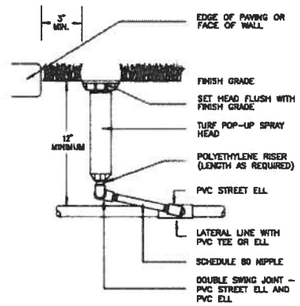
1. TOTAL PRESSURE REQUIRED BY THE IRRIGATION SYSTEM: 52.75 PSI.
   STATIC PRESSURE AVAILABLE TO THE SITE: 65.00 PSI.
   & MAX. DESIGN DEMAND: 11.74 GPM.
2. ALL WORK SHALL COMPLY WITH THE LATEST UNIFORM PLUMBING CODE AS WELL AS LOCAL ORDINANCES.
3. ALL IRRIGATION LINES UNDER DRIVES TO BE INSTALLED IN PVC SLEEVE @ 24" DEPTH MIN.
4. LOCATE ALL RCVS & HB'S IN PLANTING AREAS. (TYP.)
5. COMPACT ALL LINES AND TRENCHES UNDER PAVING 95 % MIN. COMPACTION, ALL BACKFILLS SHALL BE COMPACTED TO A MIN. OF 90 %.
6. INSTALL REMOTE CONTROL VALVE IN AMETEK 12" BOX OR EQUAL (ONE VALVE PER BOX) & MARKED " IRRIGATION ". LOCATED BOXES IN GROUND COVER AREAS WHENEVER POSSIBLE AND A MIN. 12' FROM PAVING OR CURBS.
7. THE CONTRACTOR SHALL PROVIDE OWNER WITH A COMPLETELY OPERATING SYSTEM AND CLEAN SET OF MARKED PRINTS AS " AS- BUILT " DRAWINGS. REFERENCE ALL TRENCHES WITH DIMENSIONS TO NEAREST BUILDING OR PAVING.
8. THE CONTRACTOR SHALL WARRANT THAT THE SYSTEM WILL BE FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR. ALL REPAIRS NECESSARY SHALL BE MADE AT NO COST TO THE OWNER.

2 IRRIGATION NOTES

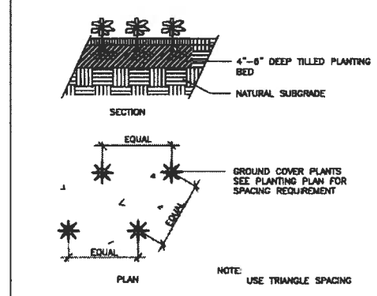


NOTES:
1. ALL PVC IRRIGATION SLEEVES TO BE SCH. 40 PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.
4. MECHANICALLY TAMP TO 95% PROCTOR.

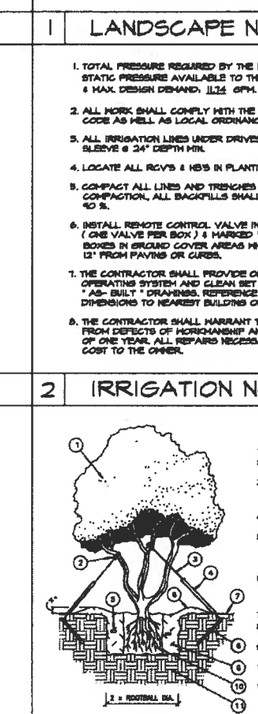
15 SLEEVING



11 POP-UP SPRINKLER HEAD



7 GROUND COVER PLANTING



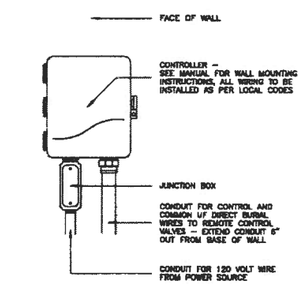
1. TREE PER PLAN
2. 1/2" DIA. BLACK RUBBER HOSE WHERE WIRE CONNECTS TO TREE
3. GALVANIZED WIRE (NO SPLICES)
   3 GAL SIZE MINIMUM PER TREE
   12 GA. WIRE MINIMUM FOR 24"-36" BOX
   10 GA. WIRE MINIMUM FOR 42" + BOX
4. 1/8" DIA. x 36" LONG WHITE PVC SLEEVE 1 PER GAV WIRE
5. 7 GRAM PLANT TABLETS
   24" BOX = 12, 30" BOX = 15
   36" BOX = 19, 42" BOX = 21
   48" BOX = 24, 54" BOX = 27
   60" BOX = 30, 72" BOX = 33
6. EARTH WATERING BASIN (RAKE SMOOTH AT END OF PLANT ESTABLISHMENT PERIOD FOR ALL REMAINING BASINS)
7. FINISH GRADE
8. ANCHOR STAKES (2x2x36" REDWOOD OR 1" DIA. x 36" GALVANIZED PIPE)
9. WATER BACKFILL WITH NO ROCKS GREATER THAN 3" DIAMETER.
10. ROOTBALL (SET CROWN +/- 3" ABOVE FINISH GRADE
11. UNDISTURBED NATIVE SOIL

3 TREE GUYING - 36" BOX & LARGER

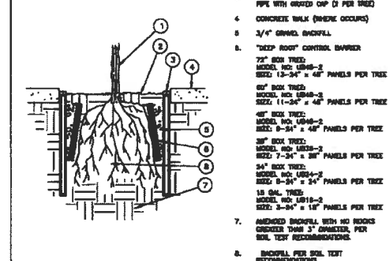
PRESSURE LOSS CALCULATION FOR WORST CASE VALVE A-14 AT 9.69 GPM

PRESSURE NEEDED AT SPRINKLER	= 30 PSI +	
PRESSURE LOSS:		
FOR 3.70 GPM THROUGH 18' OF 3/4" SCH 40 PVC PIPE	= 0.2556	+
FOR 4.82 GPM THROUGH 13' OF 3/4" SCH 40 PVC PIPE	= 0.2795	+
FOR 9.07 GPM THROUGH 13' OF 1" SCH 40 PVC PIPE	= 0.3107	+
FOR 9.69 GPM THROUGH 10' OF 1" SCH 40 PVC PIPE	= 0.3350	+
FOR 9.69 GPM THROUGH A 100-PEB-PRS-D ELECTRIC VALVE	= 4.5000	+
FOR 9.69 GPM THROUGH 400' OF 1-1/4" SCH 40 PVC PIPE	= 3.5200	+
FOR 9.69 GPM THROUGH A 1" 825Y-BV BACKFLOW UNIT	= 8.5000	+
ESTIMATE FOR FITTING LOSS: 10 % OF ALL PIPE LOSSES	= 0.4701	+
PRESSURE LOSS DUE TO ELEVATION RISE OR DROP	= 4.5800	+
TOTAL PRESSURE REQUIRED BY THE SYSTEM	= 52.7509 PSI	
EXISTING PRESSURE AT P.O.C.	= 65 PSI	
RESIDUAL PRESSURE	= 12.2491 PSI	

16 PRESSURE LOSS CALCULATION

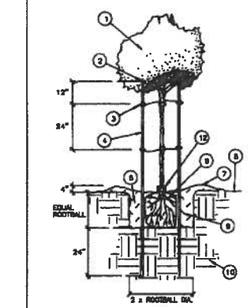


12 CONTROLLER - WALL MOUNT



1. TREE (PER PLAN)
2. FINISH GRADE
3. 3" DIA. x 6'-0" PERFORATED DRAIN PIPE WITH GRATED CAP (1 PER TREE)
4. CONCRETE WALK (WHERE OCCURS)
5. 3/4" GRAVEL BACKFILL
6. "DEEP ROOT" CONTROL BARRIER
   72" BOX TREE:
   MODEL NO: UB48-2
   SIZE: 13-24" x 48" PANELS PER TREE
   60" BOX TREE:
   MODEL NO: UB48-3
   SIZE: 11-24" x 48" PANELS PER TREE
   48" BOX TREE:
   MODEL NO: UB48-2
   SIZE: 9-24" x 48" PANELS PER TREE
   36" BOX TREE:
   MODEL NO: UB36-2
   SIZE: 7-24" x 36" PANELS PER TREE
   24" BOX TREE:
   MODEL NO: UB24-2
   SIZE: 5-24" x 24" PANELS PER TREE
   15 GAL. TREE:
   MODEL NO: UB18-2
   SIZE: 3-24" x 18" PANELS PER TREE
7. AMENDED BACKFILL WITH NO ROCKS GREATER THAN 3" DIAMETER, PER SOIL TEST RECOMMENDATIONS.
8. BACKFILL PER SOIL TEST RECOMMENDATION

8 ROOT BARRIER



1. TREE PER PLAN
2. TRIM TOP OF STAKES BELOW LOWEST BRANCHES TO PREVENT DAMAGE
3. (X MEASURED) "V.I.T." TREE BRACES SECURE TO LODGE POLES WITH GALVANIZED SCREWS OR 5-GRADE TIES CAN BE USED WITH GALVANIZED SCREWS
4. 3" DIA. x 10' LONG LODGE POLE STAKES (INSTALL OUTSIDE OF ROOTBALL)
5. BACKFILL PER SOIL TEST RECOMMENDATIONS
6. ROOTBALL (SET CROWN +/- 3" ABOVE FINISH GRADE)
7. EARTH WATERING BASIN (RAKE SMOOTH AT END OF PLANT ESTABLISHMENT PERIOD FOR ALL REMAINING BASINS)
8. FINISH GRADE
9. WATER BACKFILL WITH NO ROCKS GREATER THAN 3" DIAMETER.
10. UNDISTURBED NATIVE SOIL
11. PLANT PIT 2X DIAMETER EQUAL DEPTH OF ROOTBALL
12. ARBOR GUARD FOR TREES IN TURF AREA

4 TREE PLANTING - 24" BOX & SMALLER

PREPARED BY:
BEN LUNDGREN AND ASSOCIATES
2605 FAIRFIELD PLACE
SAN MARINO, CALIFORNIA 91108
TEL: (626) 535-9544 FAX: (626) 535-9534

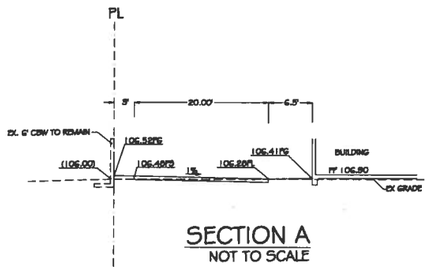
PROJECT:
LOMA LINDA SENIOR ASSISTED LIVING CENTER
25405 COLE STREET
LOMA LINDA, CALIFORNIA

REVISIONS:

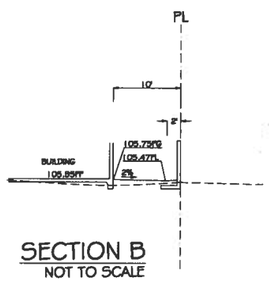
Sheet Title	NOTES & DETAILS
Date	4-09-14
Scale	NONE
Drawn	B.L.
FILE NO.	2796

Sheet
L - 3

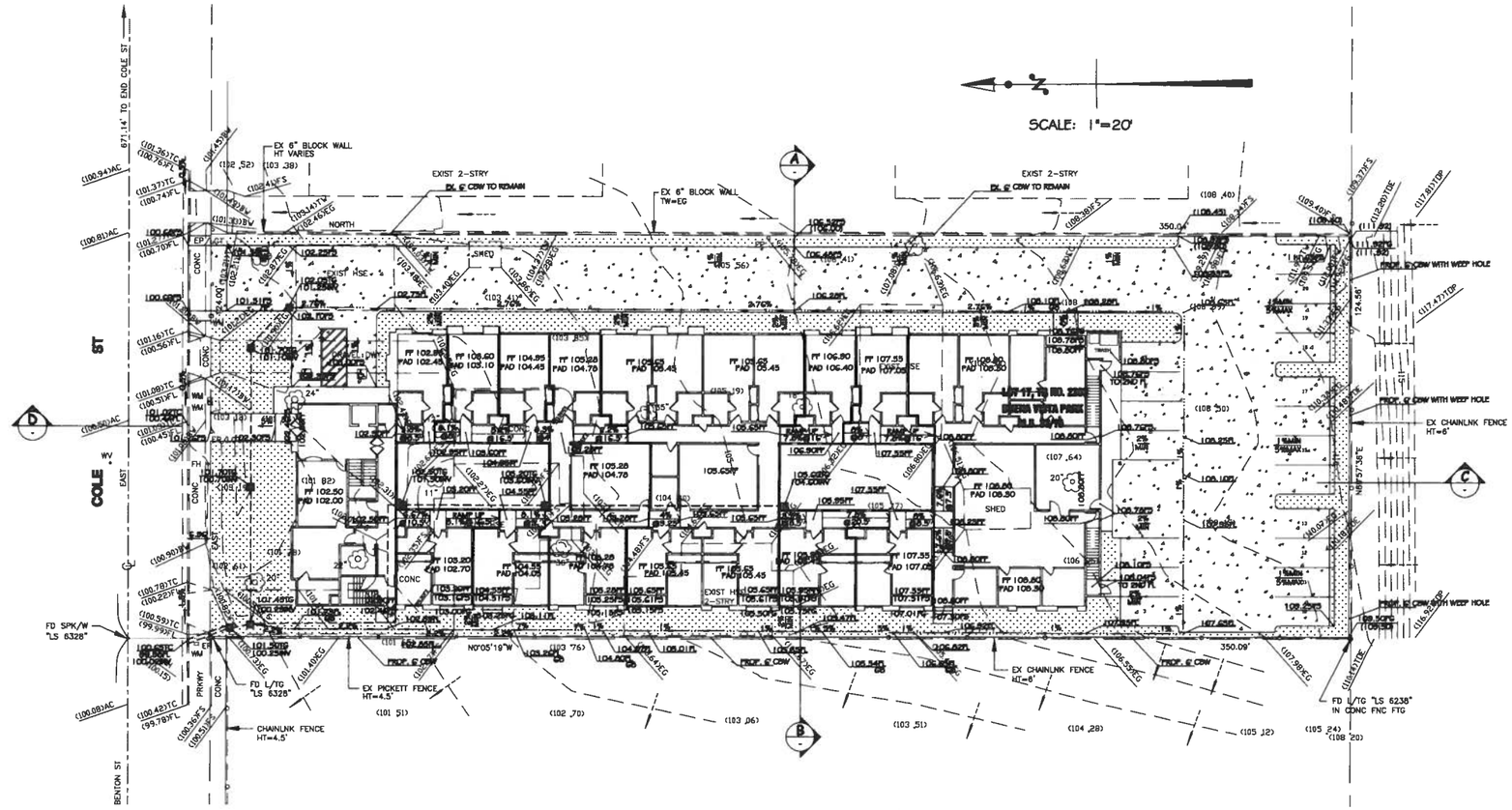
CONCEPTUAL GRADING PLAN

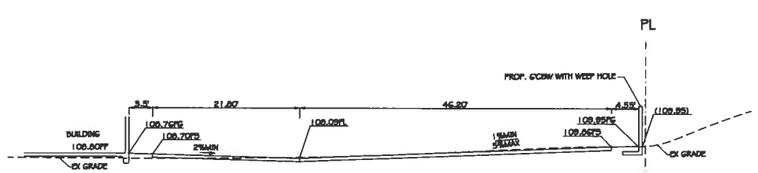


SECTION A
NOT TO SCALE

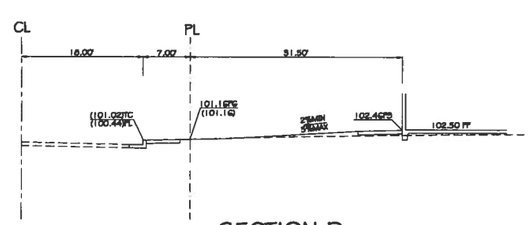


SECTION B
NOT TO SCALE





SECTION C
NOT TO SCALE



SECTION D
NOT TO SCALE

EARTHWORK QUANTITIES:

CUT AND FILL AMOUNT IS ESTIMATED ONLY. ACTUALLY AMOUNT MAY VARY DUE TO OTHER UNKNOWN FACTORS. (SITE CONDITION, SOIL ENGINEER'S RECOMMENDATION)

CUT: 312.6 C.Y.; FILL 443.8 C.Y.
TOTAL: 746.4 C.Y.;
EXPORT: 0 C.Y.; IMPORT 121.2 C.Y.

ABBREVIATIONS:

C/B ..... Catch Basin[]
CBW ..... Conc. Block Wall[]
C/G ..... Curb and Gutter[]
CLF ..... Chain Linked Fence[]
CONC. ..... Concrete
D/A ..... Driveway Apron
EP ..... Edison Pole[]
EX. ..... Existing[]
FF ..... Finish Floor Elevation[]
FG ..... Finish Grade Elevation[]
FL ..... Flow Line Elevation[]
FS ..... Finish Surface Elevation[]
GB ..... Grade Break Elevation[]
HP ..... High Point Elevation[]
INV. ..... Invert Elevation[]
LS ..... Land Scaping[]
PFL ..... Pipe Flow Line
SMH ..... Sewer Manhole[]
SW ..... Sidewalk[]
TDR ..... To Be Removed[]
TC ..... Top of Curb Elevation[]
TF ..... Top of Footing Elevation[]
TG ..... Top of Grade Elevation[]
TW ..... Top of Wall Elevation[]
WF ..... Wooden Fence[]
WM ..... Water Meter[]

LEGEND:

100.56 ..... Design Elevation[]
(100.10) ..... Existing Elevation
(880) ..... Ex.-Ground Contour Line
—S— ..... Sewer Line
..... Prop. Flow Line for Swale
..... Prop. Sheet Flow
..... Ex. Flow
—X—X— ..... Chain Link Fence[]
..... Ex. Structure
..... Ex. Structure T.B.R.
..... Fire Hydrant[]
..... Street Light
..... Guywire
(0710) ..... Trees, Deciduous/Conifers
..... Ex. Tree, T.B.R.
..... Landscape Area
..... Concrete Area

APN# : 0284-142-07, -08

BASIS OF BEARINGS:

BEARINGS BASED ON AN ASSUMED BEARING OF EAST FOR THE CENTERLINE OF COLE STREET.

LEGAL DESCRIPTION:

LOT 17 OF TRACT NO. 2303 IN THE CITY OF LOMA LINDA, RECORDED IN MAP BOOK 33, PAGE 19, SAN BERNARDINO COUNTY RECORDS.

BENCH MARK:

B.M. NUMBER NONE

ELEVATIONS ARE BASED ON AN ASSUMED DATUM OF 100.00 FT.

TRITECH ENGINEERING ASSOCIATES

SUBDIVISION
LAND SURVEY
CIVIL ENGINEERING
& DESIGN

135 N. SAN GABRIEL BLVD.
SAN GABRIEL, CA 91775
TEL: (626) 570-1918 FAX: (626) 737-6786
EMAIL: info@tritechassociates.com

CONCEPTUAL GRADING PLAN

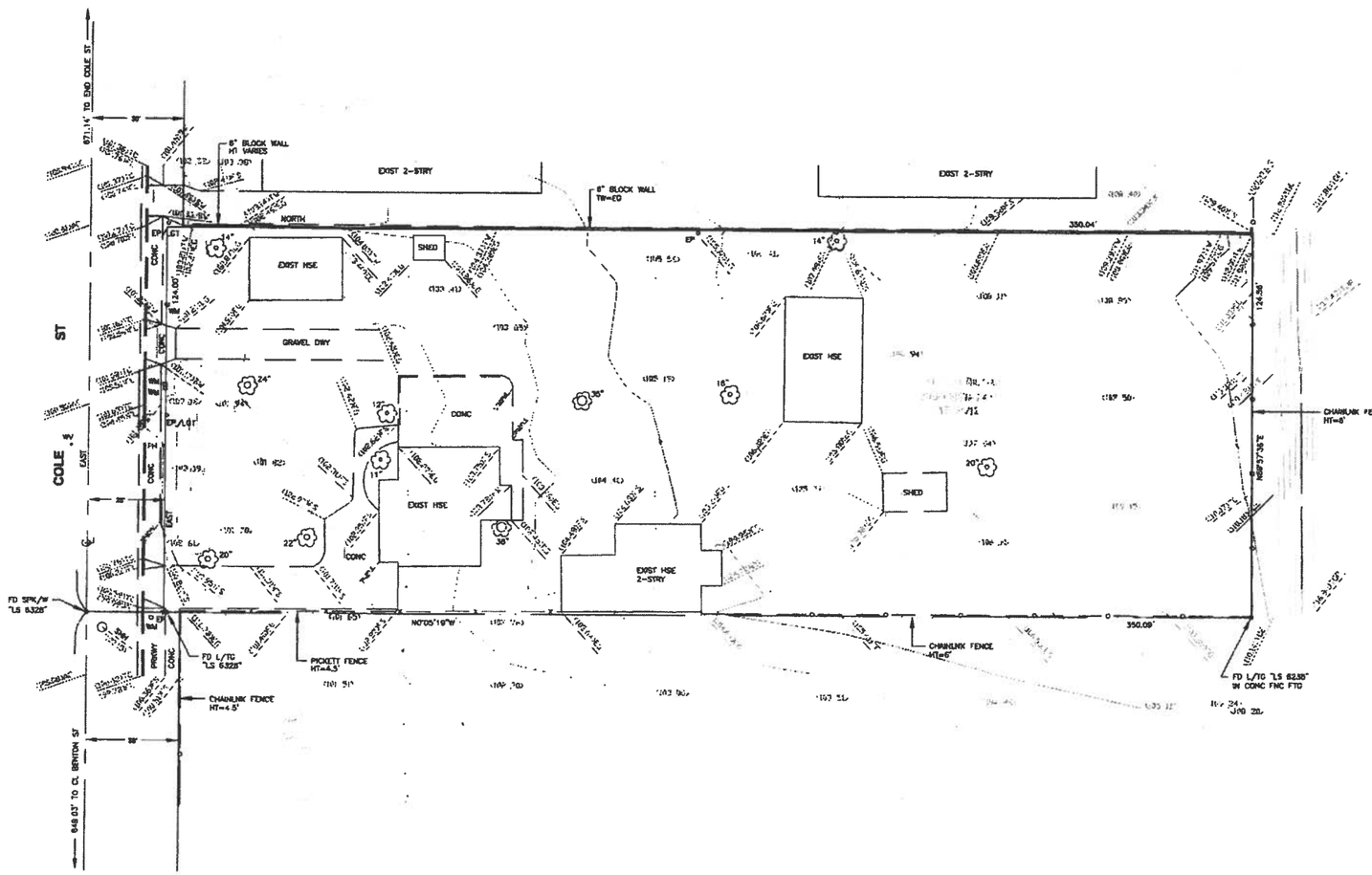
SCALE: 1"=20'		DRAWN BY: SMITH
DATE: 5/12/14		REVISED:

25405 COLE STREET
LOMA LINDA, CA

SHEET 1 OF 1

JOB NO. 140321

TOPOGRAPHIC MAP



SCALE: 1"=10'

ABBREVIATIONS:

AC ..... Asphalt Concrete
CONC. ..... Concrete
D/A ..... Driveway Appron
DWY. ..... Driveway
EP ..... Edison Pole
EX. ..... Existing
FL ..... Flow Line Elevation
P/L ..... Property Boundary Line
PVMT. ..... Pavement
RW ..... Retaining Wall
SMH ..... Sewer Manhole
TC ..... Top of Curb Elevation
WF ..... Wooden Fence
WM ..... Water Meter
WV ..... Water Valve

LEGEND:

(100.25) ..... Existing Elevation
— — 101 — ..... Ex. Ground Contour Line
..... Chain Link Fence
..... Ex. Structure
..... Street Light
..... Ex. Tree, Diameter
..... Palm Tree

BASIS OF BEARINGS

BEARINGS BASED ON AN ASSUMED BEARING OF EAST FOR THE CENTERLINE OF COLE STREET.

LICENSED LAND SURVEYOR
No. 5336
CSP 12/31/13
STATE OF CALIFORNIA

LEGAL DESCRIPTION:

LOT 17 OF TRACT NO. 2303 IN THE CITY OF LOMA LINDA, RECORDED IN MAP BOOK 33, PAGE 19, SAN BERNARDINO COUNTY RECORDS.

BENCH MARK

B.M. NUMBER NONE

ELEVATIONS ARE BASED ON AN ASSUMED DATUM OF 100.00 FT.

TRITECH ENGINEERING ASSOCIATES

SUBDIVISION
LAND SURVEY
CIVIL ENGINEERING
& DESIGN

135 N. SAN GABRIEL BLVD.
SAN GABRIEL, CA 91775
TEL: (626) 570-1918 FAX: (626) 737-5756
EMAIL: info@tritechassociates.com

TOPOGRAPHIC MAP

SCALE: 1"=20'	APN# : 0284-142-07, -08	DRAWN BY:
DATE: 04/19/14		REVISED:

25405 COLE STREET
LOMA LINDA, CA

SHEET 1 OF 1

JOB NO. 140321

Minutes City of Loma Linda

Community Development

Planning Commission

Regular Meeting of January 07, 2015

A regular meeting of the Planning Commission was called to order by Vice- Chairman Khatibi at 7:00 p.m., Wednesday, January 07, 2015, in the City Council Chambers, 25541 Barton Road, Loma Linda, California.

Commissioners Present: Nikan Khatibi, Vice Chairman
Ryan Gallant
Jay Nelson

Commissioners Absent:

Staff Present: Konrad Bolowich, Assistant City Manager
Richard Holdaway, City Attorney

Vice-Chairman Khatibi led the Pledge of Allegiance. No items were added or deleted; no public participation comments were offered upon invitation of the Vice-Chairman.

1. **GENERAL PLAN AMENDMENT (GPA 14-075), PRE-ZONE (ZMA 14-076); ANNEXATION (ANX 14-074) AND TENTATIVE TRACT MAP (TTM 14-073)**

   The Project Site is currently located within the County of San Bernardino and Loma Linda's Sphere of Influence on the east side of California Street, between Orange Avenue and Citrus Avenue.

   The Project Proponent is requesting approval of:

   1) A General Plan Amendment (GPA) to change the existing City of Loma Linda General Plan designation from Business Park to Low Density Residential for the Bell Property;

   2) A Pre-Zone application to establish the Single Family Residence (R-1) Zone for the Bell property and the General Business (C-2) Zone for the Ramirez property;

   3) An Annexation application to annex the entire Project Site (both properties) into the City of Loma Linda for water and sewer service; and

   4) Approval of Tentative Tract Map (TTM) to subdivide the approximate 9.5-acre Bell property into 35 single-family residences and four (4) common lettered lots.

   Motion by Gallant, seconded by Nelson and carried to continue GENERAL PLAN AMENDMENT (GPA 14-075), PRE-ZONE (ZMA 14-076); ANNEXATION (ANX 14-074) AND TENTATIVE TRACT MAP (TTM 14-073) to the Planning Commission meeting of March 04, 2015

2. **VARIANCE NO. VA – 14-157**

   A variance request for relief from Section 17.18.030(36) of the Loma Linda Municipal Code (LLMC) which limits the height of a monument sign to six feet, and Section 17.18.140 (Permitted Signs), amount of wall signage allowed. The proposed monument sign will have a maximum height of 8-feet measured from the ground up. The proposed

signage is for the Holiday Inn Express, which is currently under construction at 25222 Redlands Blvd, in the East Valley Corridor Specific Plan – General Commercial Zone.

ACM Bolowich presented the staff report into evidence, reviewing the site plan, existing setting, and the requested change. Applicant is requesting to install an 8-foot high, 32-square foot monument sign at the entrance of the subject site. Due to the unique lot configuration, the hotel will not have adequate street presence along Redlands Boulevard. Construction of the sign will not impede any existing access points to the site nor will it take away parking for the existing use. The sign will be located within a recently approved landscape planter area. Relative to the size of the lot and the building, the proposed monument sign would not look out of scale

Vice-Chairman Khatibi opened the Public Hearing.

Public speaker Dick Wiley shared his concern with vandalism-graffiti on the sign. He suggested that the sign be made in a material that can easily be cleaned.

Vice-Chairman Khatibi closed the Public Hearing.

Discussion ensued with Planning Commissioners, Staff and applicant, Hiral Patel – Holiday Inn Express/Loma Linda. Commissioner Nelson mentioned that the proposed sign will give the project identity and great visibility.

Motion by Gallant seconded by Nelson and carried unanimously to approve VARIANCE No. 14-142 subject to the conditions of approval.

APPROVAL OF MINUTES – December 03, 2014

Motion by Nelson, seconded by Gallant and carried unanimously to approve the minutes of December 03, 2014.

REPORTS BY STAFF

No report from staff.

The meeting adjourned at 7:15 p.m.

_____
Nataly Alvizar
Administrative Specialist I