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## I. SUMMARY

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### A. INTRODUCTION

The subject of this Draft Environmental Impact Report (Draft EIR) is the proposed Palisades Landmark Condominiums Project (“proposed project”). The project applicant is Palisades Landmark, LLC, located at 10600 Santa Monica Boulevard, Los Angeles, CA 90025. A detailed description of the proposed project is contained in Section III (Project Description) of this report.

Because the proposed project will require approval of certain discretionary actions by the City of Los Angeles and other governmental agencies, the proposed project is subject to the California Environmental Quality Act, for which the City is the designated Lead Agency. The City of Los Angeles Department of City Planning administers the process by which environmental documents for private projects are prepared and reviewed by the City pursuant to the applicable provisions of the City Municipal Code and the State CEQA Guidelines. On the basis of these procedures, it was determined that the proposed project may have a significant effect on the environment, and that an EIR should be prepared.

As described in Section 15121 (a) and 15362 of the CEQA Guidelines, an EIR is an informational document which will inform public agency decision makers and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The purpose of this Draft EIR, therefore, is to focus the discussion on those potential effects on the environment of the proposed project which the lead agency has determined are or may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce or avoid significant environmental impacts.

This Draft EIR was prepared in accordance with Section 15151 of the CEQA Guidelines which defines the standards for EIR adequacy:

*“An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR would summarize the main points of disagreement among the experts. The courts have looked not for perfection; but for adequacy, completeness, and a good faith effort at full disclosure.”*

## **Notice of Preparation**

Comments from identified responsible and trustee agencies, as well as interested parties on the scope of the Draft EIR, were solicited through a Notice of Preparation (NOP) process. The NOP for the Draft EIR was circulated for a 30-day review period starting on May 16, 2002 and ending on June 18, 2002. Refer to Appendix A of this Draft EIR for a copy of the NOP and Appendix B for written comments submitted to the City of Los Angeles in response to the NOP.

## **Environmental Issues to be Analyzed in Draft EIR**

Based on a review of environmental issues by the Los Angeles City Planning Department, this Draft EIR analyzes the following environmental impact areas:

- Visual Resources
- Air Quality
- Geology and Soils
- Hydrology and Water Quality
- Land Use
- Noise
- Population and Housing
- Public Services
  - Police Protection
  - Fire Protection
  - Schools
  - Recreation/Parks
  - Road Maintenance
- Traffic
- Utilities
  - Sewer
  - Water
  - Solid Waste
- Energy Conservation
  - Electricity
  - Natural Gas

Section IV.A of this report lists the environmental issues that were determined not to be significantly affected by the proposed project, and therefore are not analyzed in detail in this Draft EIR.

### **Environmental Review Process**

The Draft EIR will be circulated for review and comment by the public and other interested parties, agencies, and organizations for 45 days. Public hearings on the proposed project will be held after the review period and the preparation of the Final EIR. Notice of time and location will be published prior to the public hearing date. All comments or questions about the Draft EIR should be addressed to:

Maya Zaitzevsky, Project Coordinator  
City of Los Angeles Department of City Planning  
200 North Spring Street, Room 763  
Los Angeles, CA 90012  
(213) 978-1355

Following public review of the Draft EIR, a Final EIR will be prepared in response to comments received during the public review period. The Final EIR will be available for public review prior to its certification by the City of Los Angeles.

### **Organization of Draft EIR**

This Draft EIR is organized into eight sections as follows:

Section I (Summary): This section provides a summary of the project description, alternatives to the proposed project, environmental impacts and mitigation measures.

Section II (Environmental Setting): An overview of the study area's environmental setting is provided including a description of existing and surrounding land uses, and a list of related projects proposed in the project area.

Section III (Project Description): A complete description of the proposed project including project location, project characteristics, project objectives, and required discretionary actions is presented.

Section IV (Environmental Impact Analysis): The Environmental Impact Analysis section is the primary focus of this Draft EIR. Each environmental issue contains a discussion of existing conditions for the project area, an assessment and discussion of the significance of impacts associated with the proposed project, proposed mitigation measures, cumulative impacts, and level of impact significance after mitigation.

Section V (General Impact Categories): This section provides a summary of significant and unavoidable impacts and a discussion of the potential growth inducement of the proposed project.

Section VI (Alternatives to the Proposed Project): This section includes an analysis of a range of reasonable alternatives to the proposed project. The range of alternatives selected is based on their ability to feasibly attain most of the basic objectives of the project and that would avoid or substantially lessen any of the significant effects of the project.

Section VII (Preparers of the EIR and Persons Consulted): This section presents a list of City and other agencies and consultant team members that contributed to the preparation of the Draft EIR.

Section VIII (List of Acronyms and Abbreviations): This section provides definitions for all of the acronyms and abbreviations used in the Draft EIR.

## **B. PROPOSED PROJECT**

The proposed project is a residential development consisting of 82 condominium units on 3.98 net acres of hillside terrain. Specifically, the 82 units will be split into six buildings: three buildings are proposed to contain three levels and include 25 three-bedroom townhomes with parking below each unit; and three buildings are proposed to include four stories consisting of 57 three-bedroom flats with parking being provided in a subterranean garage. None of the proposed buildings will exceed 45 feet in height and all will correspond with the existing zoning, which is designated as RD2-1 (Multiple Family).

All existing on-site structures would be removed, including two apartment buildings, a swimming pool, and a carport area. The grading for the proposed project will require 130,000 cubic yards (cy) of cut and 80,000 cy of fill. Approximately 100,000 cy of the cut material would be exported off-site and approximately 75,000 cy of fill would be imported to the site for the permanent stabilization of the portion of the Revello Landslide that is located on the project site.

## **C. ALTERNATIVES**

This Draft EIR considers a range of alternatives to the proposed project to provide informed decision-making in accordance with Section 15126(f) of the CEQA Guidelines. The alternatives analyzed in this Draft EIR include: A) No Project Alternative; B) 61-Unit Condominium and Townhouse Alternative; C) 50-Unit Planned Unit Development (PUD) Alternative and D) 102-Unit Density Bonus Alternative.

**Alternative A: No Project Alternative**

Under Alternative A, the proposed project would not be constructed and the project site would remain in its current condition. Two apartment buildings (consisting of a total of 20 dwelling units) known as the Ocean Woods Terrace apartments would remain on the site.

**Alternative B: 61-Unit Condominium And Townhouse Project Alternative**

Under the 61-Unit Condominium Project Alternative (Alternative B), the project site would be developed with 61 multi-family dwelling units, which represents 21 fewer units or a 26 percent decrease in on-site density compared to the proposed project. The design concept would be similar to the proposed 82-unit concept. Similar to the proposed project, access to the townhouse units would be provided by an upper surface road. Access to the apartment flats would be via a subterranean parking structure. The townhouse unit count (25 units) and design for Alternative B would be similar to the townhouse unit layout for the proposed 82-unit project. However, the total number of apartment flats on the lower (southerly) portion of the site would be reduced to 36 units.

**Alternative B: 50-Unit Planned Unit Development (PUD) Alternative**

Under the 50-Unit Planned Unit Development (PUD) Alternative (Alternative C), the project would consist of a PUD of townhouse and single-family style residences. The site plan would be similar to the proposed project, including a single road that would access the northerly (upslope) townhouses or single-family style residences (totaling 25 units). The same surface road would also access the southerly (downslope) units consisting of 25 townhouse or single-family style residences. However, there would be no subterranean garage.

**Alternative C: 102-Unit Density Bonus Alternative**

Under the 102-Unit Density Bonus Alternative (Alternative D), the project would incorporate a density bonus of 25 percent over the proposed project's planned development. The design concept would be similar to the proposed 82-unit concept, however Alternative D would exceed the 45-foot height limit. Alternative D would include 51 townhouse units and 51 apartment flats. Similar to the proposed project, access to the townhouse units would be provided by an upper surface road. Access to the apartment flats would be via a subterranean parking structure.

## **D. AREAS OF CONTROVERSY**

Concerns raised in letters submitted to the City of Los Angeles Planning Department in response to the NOP include: 1) slope stability related to the Revello Landslide; 2) loss of views; 3) the size of the proposed project; and 4) site access/traffic.

## **E. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

### **Summary of Environmental Impacts and Mitigation Measures**

The following pages summarize the various environmental impacts associated with the construction and operation of the proposed project. Mitigation measures are proposed for significant environmental impacts, and the level of impact significance after mitigation is also identified.

### **VISUAL RESOURCES**

#### ***Post-Project Views of and Towards the Project Site***

Visibility of the proposed project from adjacent land uses and roadways, including two City-designated Scenic Major Highways II (PCH and Sunset Boulevard), is not considered to be a significant impact. This is because the project area is highly urbanized with a mix of commercial and single- and multi-family residential uses, including multi-story office, apartment and condominium buildings, and because the proposed project is consistent with the site's zoning and height requirements. The proposed project would not result in the obstruction of any public scenic views.

The proposed project would obstruct and partially obstruct private views of the Pacific Ocean and shoreline as seen from the four-story condominium building located immediately north of the project site. The proposed project would also partially obstruct private views of the shoreline and Pacific Ocean as seen from the single-family homes located immediately north-northwest of the project site along Revello Drive. The project's obstruction and partial obstruction of scenic views from the adjacent private properties is considered to be a significant unavoidable impact.

While the project is consistent with the permitted density and building height for the site, the increase in density and height compared to the existing on-site apartments represent a potentially significant building massing impact in relation to the upslope single-family homes located along Revello Drive. Building massing impacts are considered to be potentially significant but can be mitigated to less than significant levels by implementing the mitigation measures in this section.

### ***Lighting***

Due to the increased density of the proposed project compared to the existing apartment buildings, the proposed project would introduce a greater amount of nighttime lighting to the project site. Such lighting sources include interior lighting, exterior security lighting, and headlights associated with motor vehicles using the main driveway off of Tramonto Drive and the townhouse access driveway. Some of the project building materials (i.e., windows) as well as automobile windshields also represent sources of daytime glare. Light and glare impacts would be potentially significant but can be mitigated to less than significant levels by implementing the proposed light and glare mitigation measures below.

The following mitigation measures are required to ensure the proposed project does not result in any significant impacts relative to building massing and lighting. Impacts related to the obstruction and partial obstruction of scenic views from private properties would remain significant and unavoidable.

1. The proposed project shall comply with the City's Hillside Development Guidelines.
2. Prior to the issuance of a grading permit, a plot plan prepared by a reputable tree expert, indicating the location, size, type, and condition of all existing trees on the site shall be submitted for approval by the Department of City Planning and the Street Tree Division of the Bureau of Street Services. All trees in the public right-of-way shall provide per the current Street Tree Division standards.
3. The plan shall contain measures recommended by the tree expert for the preservation of as many trees as possible. Mitigation measures such as replacement by a minimum of 24-inch box trees on the site, on a 1:1 basis, shall be required for the unavoidable loss of desirable trees on the site, and to the satisfaction of the Street Tree Division of the Bureau of Street Services and the Advisory Agency.
4. All open areas not used for buildings, driveways, parking areas, or walkways shall be attractively landscaped and maintained in accordance with a landscape plan, including an automatic irrigation plan, prepared by a licensed landscape architect to the satisfaction of the City Planning Department.
5. Landscape buffers shall be planted between the project site and adjacent residential uses.
6. Outdoor lighting shall be directed on-site and designed and installed with shielding so that the light source can not be seen from adjacent land uses.
7. The exterior of the proposed buildings shall be constructed of non-reflective building materials.

## **AIR QUALITY**

### ***Demolition Impacts***

Given the age of existing structures on the project site, there may be asbestos containing materials (ACMs) in pipe insulation, fire retardant features, roofing, flooring, etc. of the existing residential buildings. If ACMs are present in the structures, they must be removed by licensed contractors using control methods prescribed in South Coast Air Quality Management District (SCAQMD) Rule 1403. This is a potentially significant impact that can be mitigated to a less than significant level via mandatory compliance with SCAQMD Rule 1403, which would ensure safe exposure for both abatement workers as well as the general public.

### ***Construction Impacts***

Construction activities will generate dust from demolition of existing structures, from surface disturbance for new construction, and from equipment exhaust from heavy off-road equipment. The PM<sub>10</sub> emissions rate for demolition (SCAQMD CEQA Handbook) is 420 pounds per million cubic feet of building volume. The 20 existing dwelling units are estimated to comprise 15,000 cubic feet per average dwelling unit. For a reasonable demolition intensity, daily PM<sub>10</sub> emissions will be substantially less than significant.

The project is too limited in scope to cause air quality impact significance thresholds to be exceeded during construction. Whereas total daily emissions of dust or equipment exhaust will be less than significant, the very limited distance between on-site activities and adjacent occupied homes creates a potential for dust deposition soiling nuisance on parked cars, landscaping foliage, or outdoor furniture. It is not a significant impact because the emissions magnitude is less than SCAQMD threshold levels, and the health impact of soil dust is much less than from complex chemical species found in urban atmospheres. Mitigation measures that reduce small-diameter, respirable particulate emissions also reduce larger soiling particles. Mitigation measures for dust control are thus recommended even if the SCAQMD threshold is not exceeded.

### ***Operational Traffic***

Daily site-related travel by project residents will generate approximately an additional 348 vehicle trips per day. For the typical Southern California vehicle fleet, it requires about 2,000 daily vehicle trips for enough exhaust emissions to be generated to equal the SCAQMD significance threshold. The project is less than 20 percent of the size/scope of a project that would create a potentially significant air quality impact.



***On-Site Air Quality Analysis***

One-hour carbon monoxide (CO) concentrations were calculated at a distance of 25 feet from the edge of various project vicinity roadways. If no air pollution "hot spot" exists this close to the roadway, the project site will be unaffected. A one-hour CO "hot spot" may presently exist at the Sunset Boulevard/PCH intersection. Continued vehicular improvements will offset any traffic growth with a slight decline in future localized CO exposures. By 2005, the possible one-hour CO "hot spot" at Sunset Boulevard/PCH intersection will have dissipated.

The project-related CO increment is 0.1 ppm or less. Project impacts are ten percent or less of a substantial addition to localized exposures. The project traffic contribution to local CO exposures is less than significant.

The following mitigation measures are recommended during demolition, grading and construction of the proposed project:

1. Conduct pre-construction assessments for ACMs. Prior to the issuance of the demolition permit, the applicant shall provide a letter to the Department of Building and Safety from a qualified asbestos abatement consultant that no ACMs are present in the building. If ACMs are found to be present, they will need to be abated in compliance with the South Coast Air Quality Management District's Rule 1403 as well as all other state and federal rules and regulations.
2. All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
3. All materials transported off site shall be securely covered to prevent excessive amounts of dust.
4. All clearing, grading, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.
5. General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
6. Cover any on-site stockpiles of debris, dirt or other dusty material.
7. Actively stabilize any cleared area that is planned to remain inactive for more than 30 days after clearing is completed.

8. Establish an on-site construction equipment staging area and construction worker parking lot, located on either paved surfaces or unpaved surfaces subjected to soil stabilization treatments, as close as possible to a public highway.
9. Encourage car-pooling for construction workers.
10. Sweep access points daily.

## **GEOLOGY AND SOILS**

### ***Revello Drive Landslide***

Repair of the existing landslide would help to stabilize the site for the construction of the proposed project. In order to repair the landslide, the landslide debris would be removed down to bedrock. Once the landslide debris is removed, compacted fill would be placed on the bedrock. This compacted fill would be used as primary structural fill to support the proposed buildings.

Soldier piles would be required in order to support vertical excavations along the north, west, and south sides of the removal. These piles would be embedded into the bedrock below the base of the landslide. Additional piles along the upslope property line may also be required to support temporary vertical excavations to construct the required rear yard retaining walls.

The owner of the downslope property (17325 Castellammare Drive) has received City approval to develop a 21-unit condominium complex and also plans to permanently stabilize and develop the toe of the Revello Drive Landslide. Significant geotechnical impacts from the Revello Drive Landslide would be mitigated to less than significant levels provided the mitigation measures listed below are implemented.

### ***Seismic Hazards***

The principal seismic hazard to the proposed project is strong ground shaking from earthquakes produced by local faults. The proposed construction would be consistent with all applicable provisions of the city of Los Angeles Building Code, as well as the seismic design criteria contained within the Uniform Building Code. It is likely that the project site will be shaken by future earthquakes produced in southern California. However, with the incorporation of mitigation measures listed below, these impacts would be less than significant.

### ***Liquefaction***

The proposed project site is not located in an area that is classified as liquefiable or potentially liquefiable. Therefore, liquefaction impacts would be less than significant.

### ***Subsidence***

The proposed project site is not located in an area that is susceptible to subsidence and is not located in an oil field or oil drilling area. Therefore, impacts to the proposed project due to subsidence would be less than significant.

### ***Tsunamis***

The project site ranges in elevation from 85 to 200 feet mean sea level (msl). The site is above the elevations (four to seven feet above mean sea level) that would be impacted by tsunamis. Therefore, impacts to the project site from tsunamis would be less than significant.

### ***Seiches***

A seiche involves the oscillation of a body of water in an enclosed basin. There are no enclosed bodies of water located on or near the project site. Therefore, no impacts to the project site from seiches would occur.

The following mitigation measures are required to reduce geology and soils impacts to less than significant levels:

### **Seismic Hazards**

1. The design and construction of the project shall conform to the Uniform Building Code seismic standards as approved by the Department of Building and Safety.

### **Site Preparation**

#### ***Grading Specifications***

2. The areas to receive compacted fill shall be prepared by removing all vegetation, debris, existing fill, soil, colluvium and slide debris. The exposed excavated area shall be observed by the soils engineer or geologist prior to placing compacted fill. The exposed grade shall be scarified to a depth of six inches, moistened to optimum moisture content, and recompact to 90 percent of the maximum density.
3. The proposed building site for buildings 1 and 2 shall be excavated to a minimum depth of 10 feet below the bottom of all footings. The excavation shall extend a minimum of 10 feet beyond the building footprint. The excavated areas shall be observed by the soils engineer or geologist prior to placing compacted fill.

4. Fill, consisting of soil approved by the soils engineer, shall be placed in horizontal lifts and compacted in six-inch layers with suitable compaction equipment. The excavated on-site materials are considered satisfactory for reuse in the controlled fills. Any imported fill shall be observed by the soils engineer prior to use in fill areas. Rocks larger than six inches in diameter shall not be used in the fill.
5. The fill shall be compacted to at least 90 percent of the maximum laboratory density for the material used. The maximum density shall be determined by American Society for Testing and Materials (ASTM) D 1557-91 or equivalent.
6. Field observation and testing shall be performed by the soils engineer during grading to assist the contractor in obtaining the required degree of compaction and the proper moisture content. Where compaction is less than required, additional compactive effort shall be made with adjustment of the moisture content, as necessary, until 90 percent compaction is obtained. One compaction test is required for each 500 cubic yards or two vertical feet of fill placed.

*Fill Slopes*

7. Compacted fill slopes may be constructed at a 2:1 gradient and shall be keyed and benched into bedrock or supported laterally with retaining walls or soldier piles.

*Subdrain*

8. A subdrain system is recommended at the back of the proposed repair. The subdrain shall consist of an eight inch perforated pipe surrounded by five cubic feet of gravel per foot of subdrain. Gravel 'chimney' drains are recommended along the uphill sides of the repair. The gravel chimney drains shall consist of a 12 inch wide strip of 34 inch gravel placed between the compacted fill and the shored excavation. The chimney drains shall have hydraulic connectivity to the main subdrain.

*Excavation Characteristics*

9. In the event a hard cemented layer is encountered during foundation excavation, coring or the use of jackhammers may be necessary. Groundwater and caving zones may also be encountered in soldier pile excavations. Casing and/or drilling muds may be required shall caving zones be encountered.

## Foundation Design

### *Spread Footings*

10. Continuous and/or pad footings may be used to support the proposed buildings and garage retaining walls provided they are founded in bedrock, approved compacted fill (buildings 1 and 2) or alluvial terrace. Continuous footings shall be a minimum of 12 inches in width. Pad footings shall be a minimum of 24 inches square.
11. Increases in the bearing values of the compacted fill, terrace and bedrock are allowable at a rate of 20 percent for each additional foot of footing width or depth to a maximum of 3,000 pounds per square foot for the fill and terrace and 6,000 pounds per square foot for the bedrock. For bearing calculations, the weight of the concrete in the footing may be neglected.
12. The bearing values shown above are for the total of dead and frequently applied live loads and may be increased by one third for short duration loading, which includes the effects of wind or seismic forces. When combining passive and friction for lateral resistance, the passive component shall be reduced by one third.
13. All continuous footings shall be reinforced with a minimum of four #4 steel bars; two placed near the top and two near the bottom of the footings. Footings shall be cleaned of all loose soil, moistened, free of shrinkage cracks and approved by the geologist prior to placing forms, steel or concrete.

### *Deepened Foundations - Friction Piles*

14. Drilled, cast in place concrete friction piles are recommended to support portions of the proposed buildings located over deep fill and adjacent to slopes to achieve the required slope setbacks. Also, piles are recommended to support the southern portion of Building 2 below the 1:1 setback plane. Piles shall be a minimum of 24 inches in diameter and a minimum of eight feet into bedrock or eight feet into fill below the setback plane. Piles may be assumed fixed at three feet into bedrock or three feet into fill below the setback plane. The piles may be designed for a skin friction of 700 and 500 pounds per square foot for that portion of pile in contact with the bedrock and compacted fill, respectively. All piles shall be tied in two horizontal directions with grade beams.

### *Lateral Design*

15. The existing fill and soil on the site are subject to downhill creep. Pile shafts are subject to lateral loads due to the creep forces. Pile shafts shall be designed for a lateral load of 1,000

pounds per linear foot for each foot of shaft exposed to the existing fill and soil. Friction piles supporting the portion of Building 2 within the foundation zone shall be designed for an arbitrary creep force of 5 kips, with a point of application at the ground surface.

16. The friction values are for the total of dead and frequently applied live loads and may be increased by one third for short duration loading, which includes the effects of wind or seismic forces. Resistance to lateral loading may be provided by passive earth pressure within the bedrock.
17. Passive earth pressure may be computed as an equivalent fluid having a density of 380 pounds per cubic foot. The maximum allowable earth pressure is 6,000 pounds per square foot. For design of isolated piles, the allowable passive and maximum earth pressures may be increased by 100 percent. Piles spaced more than 2½ pile diameters on center may be considered isolated.

#### *Foundation Settlement*

18. Settlement of the foundation system is expected to occur on initial application of loading. A settlement of one-quarter to one-half inch may be anticipated. Differential settlement shall not exceed one-quarter inch.

#### *Foundation Setback*

19. The Building Code requires that foundations be a sufficient depth to provide horizontal setback from a descending slope steeper than 3:1. The required setback is ½ the height of the slope with a minimum of five feet and a maximum of 40 feet measured horizontally from the base of the foundation to the slope face.

#### *Toe of Slope Clearance*

20. The Building Code requires a level yard setback between the toe of an ascending slope and the rear wall of the proposed structure of one half the slope height to a maximum 15 feet clearance for slopes steeper than 3:1. For retained slopes, the face of the retaining wall is considered the toe of the slope.

## **Retaining Walls**

### *General Design*

21. Cantilevered retaining walls up to 15 feet high, supporting compacted fill with backslopes between level and 2:1 may be designed for an equivalent fluid pressure of 43 pounds per cubic foot. Cantilevered retaining walls higher than 15 feet will require specific calculations based upon the backslope and surcharge conditions. Restrained basement and parking garage walls, where wall deflection is limited, shall be designed for a pressure of 30H, where H is the height of the restrained wall in feet. Retaining walls shall be provided with a subdrain or weepholes covered with a minimum of 12 inches of 3/4 inch crushed gravel.

### *Backfill*

22. Retaining wall backfill shall be compacted to a minimum of 90 percent of the maximum density as determined by ASTM D 1557-91, or equivalent. Where access between the retaining wall and the temporary excavation prevents the use of compaction equipment, retaining walls shall be backfilled with 3/4 inch crushed gravel to within two feet of the ground surface. Where the area between the wall and the excavation exceeds 18 inches, the gravel must be vibrated or wheel-rolled, and tested for compaction. The upper two feet of backfill above the gravel shall consist of a compacted fill blanket to the surface. Retaining wall backfill shall be capped with a paved surface drain.

### *Foundation Design*

23. Retaining wall footings may be sized per the “Deepened” and “Spread Footings’ mitigation measures listed above.

### *Freeboard*

24. Retaining walls surcharged by a sloping condition shall be provided freeboard for slough protection. For manufactured 2:1 slopes, a minimum of 12 inches of freeboard is recommended. For retaining walls supporting existing or natural slopes, the recommended freeboard is 18 inches. An open “V” drain shall be placed behind the wall so that all upslope flows are directed around the structure to the street or approved location.

## **Temporary Excavations - Soldier Piles**

25. Soldier piles are recommended as part of the stabilization plan to support the compacted fill laterally and to increase the safety factor. Southeast facing vertical excavations are not

recommended in the slide debris. All southeast facing excavations in the slide debris shall be trimmed to 1:1 or along other flatter planes of weakness. Non-southeast facing temporary excavations in the slide debris may be created vertically up to five feet high. Where non-southeast facing vertical excavations in the slide debris exceed five feet in height, the upper portion shall be trimmed to 1:1(45 degrees). Northeast-facing excavations in the bedrock will weaken bedding in the down-dip direction. Northeast-facing excavations shall be trimmed to 1:1, or shored.

26. Soldier piles will be required to support temporary excavations and the landslide along the uphill property line and to support offsite properties. Soldier piles will also be required to support excavations along the downhill (southern) property line. Soldier piles shall be spaced a maximum of 10 feet on center. Piles may be assumed fixed at 10 feet into bedrock below the slide debris, below the 1 1/2: 1 setback plane, or below the base of the excavation, whichever is deeper.
27. The temporary load on soldier piles P1 through P10 is 170 kips per foot. From P17 to P35, the recommended design force is 145 kips per foot. Between piles P10 and P17, the design force shall decrease linearly from 170 to 145 kips per foot. The point of application is assumed to be 1/3 the retained height of the pile. Piles P1 through P35 shall be embedded in the bedrock below the base of the slide.
28. Piles P36 through 40 shall be founded below a 1 1/2: 1 plane projected up from the base of the slide. The recommended design equivalent fluid pressure is 65 pounds per cubic foot for the portion of the pile between the ground surface and the 1 1/2: 1 setback plane. Piles along the upslope property line may also be utilized to support temporary vertical excavations to construct the required rear yard retaining walls.
29. Due to the large forces and high retaining heights, cantilevered piles may not be feasible. Bracing, rakers, tie-back anchors, and additional row(s) of soldier piles, may be used to assist the property line retaining walls. Slopes may be trimmed offsite to reduce the heights of shored excavations with permission from the offsite property owner. The installation of tie-back anchors offsite will also require permission from the offsite property owner.

#### *Lateral Design - Soldier Piles*

30. Resistance to lateral loading may be provided by passive earth pressure within the bedrock. Passive earth pressure may be computed as an equivalent fluid having a density of 380 pounds per cubic foot. The maximum allowable earth pressure is 6,000 pounds per square foot. For design of isolated piles, the allowable passive and maximum earth pressures may be increased



by 100 percent. Piles spaced more than 2½ pile diameters on center may be considered isolated.

#### *Tie-back Anchors*

31. Tie-back earth anchors may be used to assist the soldier piles in resisting the lateral loads. Either friction anchors or belied anchors may be used.
32. For design purposes, the active wedge within the slide debris is defined by the base of the slide as shown in the cross sections. For earth anchors remote to the slide, it is assumed that the active wedge adjacent to the shoring is defined by a plane drawn at 35 degrees with the vertical through the bottom of the excavation. Friction anchors shall extend at least 25 feet beyond the potential active wedge, or to a greater length if necessary to develop the desired capacities.

#### *Testing*

33. The capacities of the anchors shall be determined by testing of the initial anchors. For preliminary design purposes, it is estimated that drilled friction anchors will develop an average value of 400 pounds per square foot. Only the frictional resistance developed beyond the active wedge shall be considered in resisting lateral loads. If the anchors are spaced at least six feet on center, no reduction in the capacity of the anchors need be considered due to group action.
34. The frictional resistance between the soldier piles and the retained earth may be used in resisting a portion of the downward component of the anchor load. The coefficient of friction between the soldier piles and the retained earth may be taken as 0.35. In addition, the soldier piles below the excavated level may be used to resist downward loads. The downward frictional resistance between the concrete soldier piles and the soils below the excavated level may be taken as equal to 700 pounds per square foot.
35. The anchors may be installed at angles of 20 to 40 degrees below the horizontal. Caving and sloughing of the anchor hole shall be anticipated and provisions made to minimize such caving and sloughing. Groundwater and seeps should be anticipated for anchors drilled within the slide debris. The anchors shall be filled with concrete placed by pumping through the auger from the tip out, and the concrete shall extend from the tip of the anchor to the active wedge. To minimize chances of caving and sloughing, that portion of the anchor shaft within the active wedge shall be backfilled with sand before testing the anchor. This portion of the shaft shall be filled tightly and flush with the face of the excavation. The sand backfill shall be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

36. A J. Byer Group representative shall select at least eight of the initial anchors for a 24-hour 200% test and eight additional anchors for quick 200% tests. The anchors shall be tested to develop twice the assumed friction value. Anchor rods of sufficient strength shall be installed in these anchors to support the 200 percent test loading. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length shall be increased until satisfactory test results are obtained. The total deflection during the 24-hour 200% test shall not exceed 12 inches. During the 24-hour test, the anchor deflection shall not exceed 0.75 inch measured after the 200% test load is applied. If the anchor movement after the 200% load has been applied for 12 hours is less than 0.5 inch, and the movement over the previous four hours has been less than 0.1 inch, the 24-hour test may be terminated.
37. For the quick 200% tests, the 200% test load shall be maintained for 30 minutes. The total deflection of the anchor during the 200% quick tests shall not exceed 12 inches; the deflection after the 200% test load has been applied shall not exceed 0.25 inch during the 30-minute period.
38. All of the anchors shall be pretested to at least 150% of the design load; the total deflection during the test shall not exceed 12 inches. The rate of creep under the 150% test shall not exceed 0.1 inch over a 15-minute period for the anchor to be approved for the design loading.
39. After a satisfactory test, each anchor shall be locked-off at the design load. The locked-off load shall be verified by rechecking the load in the anchor. If the locked-off load varies by more than 10% from the design load, the load shall be resent until the anchor is locked-off within 10% of the design load.
40. The installation of the anchors and the testing of the completed anchors shall be observed by the J. Byer Group.

#### *Lagging*

41. Continuous lagging is anticipated for shoring piles supporting slide debris. The soldier piles shall be designed for the full anticipated lateral pressure. However, the pressure on the lagging will be less due to arching in the soils. Lagging shall be designed for the recommended earth pressure, but may be limited to a maximum value of 400 pounds per square foot.

#### *Rakers*

42. Rakers may be used to internally brace the soldier piles. The raker bracing could be supported laterally by temporary concrete footings (deadmen) or by the permanent interior footings. For design of temporary footings or deadmen, poured with the bearing surface normal to rakers

inclined at 45 degrees, a bearing value of 4,000 pounds per square foot may be used, provided the shallowest point of the footing is at least one foot below the lowest adjacent grade.

### *Deflection*

43. Some deflection of the shored embankment shall be anticipated. If excessive deflection occurs during construction, additional bracing may be necessary to minimize deflection. If desired to reduce the deflection of the shoring, a greater active pressure could be used in the shoring design. Monitoring of the performance of the shoring system is recommended. The monitoring shall consist of periodic surveying of the lateral and vertical locations of the tops of all the soldier piles. Also, some means of periodically checking the load on selected anchors may be necessary.
44. The geologist shall be present during grading to see temporary slopes. All excavations shall be stabilized within 30 days of initial excavation. Water shall not be allowed to pond on top of the excavations or to flow toward it. No vehicular surcharge shall be allowed within three feet of the top of the cut.

### **Floor Slabs, Decking and Paving**

45. Concrete floor slabs and concrete decking shall be cast over bedrock or approved compacted fill and reinforced with a minimum of #4 bars on 16 inch centers, each way. Slabs which will be provided with a floor covering shall be protected by a polyethylene plastic vapor barrier. The barrier shall be covered with a thin layer of sand, about one inch, to prevent punctures and aid in the concrete cure.
46. Decking which caps a retaining wall shall be provided with a flexible joint to allow for the normal one to two percent deflection of the retaining wall. Decking which does not cap a retaining wall shall not be tied to the wall. The space between the wall and the deck will require periodic caulking to prevent moisture intrusion into the retaining wall backfill.
47. It shall be noted that cracking of concrete floor slabs is very common during curing. The cracking occurs because concrete shrinks as it dries. Crack control joints which are commonly used in exterior decking to control such cracking are normally not used in interior slabs. The reinforcement recommended above is intended to reduce cracking and its proper placement is critical to the slab's performance. The minor shrinkage cracks which often form in interior slabs generally do not present a problem when carpeting, linoleum, or wood floor coverings are used. The slab cracks can, however, lead to surface cracks in brittle floor coverings such as ceramic tile. A mortar bed or slip sheet is recommended between the slab and tile to limit, the potential for cracking.

### *Paving*

48. Paving shall be placed over bedrock, terrace, or approved compacted fill. Base course shall be compacted to at least 95 percent of the maximum dry density. Trench backfill below paving shall be compacted to 90 percent of the maximum dry density. Irrigation water shall be prevented from migrating under paving.

### **Drainage**

49. Roof gutters are recommended for the proposed structures. Pad and roof drainage shall be collected and transferred to the street or approved location in non-erosive drainage devices. Drainage shall not be allowed to pond on the pad or against any foundation or retaining wall. Drainage shall not be allowed to flow uncontrolled over any descending slope. Planters located within retaining wall backfill shall be sealed to prevent moisture intrusion into the backfill. Planters located next to raised floor type construction shall be sealed to the depth of the footings. Drainage control devices require periodic cleaning, testing and maintenance to remain effective.

### **Waterproofing**

50. Interior and exterior retaining walls are subject to moisture intrusion, seepage, and leakage and shall be waterproofed. Waterproofing paints, compounds, or sheeting can be effective if properly installed. Equally important is the use of a subdrain that daylights to the atmosphere. The subdrain shall be covered with 34 inch crushed gravel to help the collection of water. Yard areas above the wall shall be sealed or properly drained to prevent moisture contact with the wall or saturation of wall backfill.
51. Construction of raised floor buildings where the grade under the floor has been lowered for joist clearance can also lead to moisture problems. Surface moisture can seep through the footing and pond in the underfloor area. Positive drainage away from the footings, waterproofing the footings, compaction of trench backfill and subdrains can help to reduce moisture intrusion.

### **Plan Review**

52. Formal plans ready for submittal to the Building Department shall be reviewed by The J. Byer Group. Any change in scope of the project may require additional work.

**Site Observations During Construction**

53. The Building Department requires that the geotechnical company provide site observations during construction. The observations include foundation excavations, tie-back excavations, shoring piles, keyways for fill, benching, and temporary slopes. All fill that is placed shall be tested for compaction and approved by the soils engineer prior to use for support of engineered structures. The City of Los Angeles requires that all retaining wall subdrains be observed by a representative of the geotechnical company and the City Inspector.
54. The J. Byer Group, Inc. shall be advised at least 24 hours prior to any required site visit. The agency approved plans and permits shall be at the jobsite and available to the J. Byer Group. The project consultant will perform the observation and post a notice at the jobsite of their visit and findings. This notice shall be given to the agency inspector.

**Final Inspection**

55. Final geologic and soils engineering reports shall be prepared upon completion of the grading and shall be approved by the City Department of Building and Safety.

**Construction Site Maintenance**

56. It is the responsibility of the contractor to maintain a safe construction site. When excavations exist on a site, the area shall be fenced and warning signs posted. All pile excavations must be properly covered and secured. Soil generated by foundation and subgrade excavations shall be either removed from the site or properly placed as a certified compacted fill. Soil must not be spilled over any descending slope. Workers shall not be allowed to enter any unshored trench excavations over five feet deep.

**Department of Building and Safety, Grading Section Letter dated December 5, 2001**

57. Prior to the recordation of the final map, a grading permit shall be obtained from the Department of Building and Safety.
58. Prior to issuance of a permit, the owners shall record a sworn affidavit with the Office of the County Recorder which attests to their knowledge that the western portion of the site (buildings 1 & 2) will still be bordered by active landslide on three sides after the completion of the development, and that they are aware of the potential for debris to collect behind the rear property line wall and the western property line wall, affecting the surface drain system, and that there is the potential for the landslide to remove support from the lower property line which could require the future construction of walls between the piles to provide support, and that the owner and future homeowners association agrees to assume the responsibility to keep

the surface drain system behind the retaining walls clear of debris, to take responsibility for any future maintenance/repairs, and to inform all future owners of these conditions. The owner and future homeowners association shall provide proof of compliance with this mitigation measure to the Department of Building and Safety on an annual basis.

59. All existing landslide debris shall be removed and replaced as certified compacted fill, as recommended.
60. The following piles shall be designed for a minimum thrust, times pile spacing, as recommended:
  - Piles P1 to P10 – 175 Kips
  - Piles P11 to P17 – decreasing from 175 to 145 Kips
  - Piles P17 to P35 – 145 Kips
  - Piles P36 to P40 and all other pile supported retaining wall structures shall be designed for a minimum EFP of 65 PCF and 30 PCF, respectively, times pile spacing, as recommended.
61. Piles P1 through P40 shall be designed so that the deflection at the top of the piles is a maximum of 1 (one) inch as recommended.
62. Pile supporting building 2 shall derive support from below the 1:1 set back plane projected up from the bottom of the fill along the southern property line. Also, the piles shall be embedded a minimum of 8 feet into bedrock or compacted fill, as recommended.
63. The structures shall be supported entirely either on compacted fill or bedrock.
64. Seismic design shall be based on Soil Profile Type Sc, as recommended.
65. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.
66. The soils engineer shall review and approve the shoring plans prior to issuance of the permit. Installation of shoring shall be performed under the continuous inspection and approval of the soils engineer.
67. Pile shafts shall be designed for a lateral load of 1000 pounds per linear foot of shaft exposed to the existing fill, soil and weathered bedrock. Friction piles supporting the portion of building 2 shall be designed for a minimum of 5 kips creep, with a point of application at the ground surface, as recommended.

68. The pile excavations shall be logged by the geologist to verify that the geologic conditions are not different than presented in the reports; the data shall be submitted to the Department prior to beginning the grading of the landslide.
69. All friction pile drilling and installation shall be performed under the continuous inspection and approval of the soils engineer.
70. The grading of the landslide shall not begin until it is verified that groundwater levels are below the bottom of the landslide. Additionally, the grading of the landslide shall not begin unless there is adequate time to complete the grading before the start of the rainy season.
71. A minimum of ten feet of freeboard shall be provided along the northern property line, above soldier pile Nos. P17 to P29; the freeboard shall be designed for a minimum EFP of 65 pcf, as recommended. The freeboard shall also be extended along the western property line.
72. Prior to the issuance of any permit which authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation.
73. A registered grading deputy inspector approved by and responsible to the project geotechnical engineer shall be required to provide continuous inspection for the proposed shoring.
74. Tie-backs are currently not proposed or approved.
75. Subdrain systems shall be installed between the soldier piles in the landslide and along the bottom of the landslide removal. A minimum of three continuous drains shall be provided beneath the proposed fill, as shown on the cross-sections in the reports and a continuous drain shall be provided at the bottom of the fill along the western property line. The water from the subdrain systems shall be conducted by gravity flow to an acceptable location at Castellammare Drive.
76. The 20-foot-wide strip of the property that extends up from Castellammare Drive shall be stabilized, as recommended in the reports.
77. All new slopes shall be no steeper than 2:1.
78. Adequate temporary erosion control devices acceptable to the Department, and if applicable the Department of Public Works, shall be provided and maintained during the rainy season.

79. All recommendations of the reports dated 08/16/00, 11/29/00, 06/29/01, 08/28/01 and 10/02/01, prepared by Jon Irvine (CEG 1691, RCE 55005) of the J. Byer Group, which are in addition or more restrictive than the conditions contained herein shall be incorporated into the plans.
80. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the State Construction Safety Orders enforced by the State Division of Industrial Safety.
81. A grading permit shall be secured and a grading bond posted.
82. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans. Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
83. The geologist and soil engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading.
84. Any recommendations prepared by the consulting geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Department for approval prior to utilization in the field.
85. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557; or 95 percent where less than 15 percent fines passes 0.005mm.
86. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill.
87. All roof and pad drainage shall be conducted to the street in an acceptable manner.
88. Retaining walls shall be designed for a minimum EFP as specified on page 28 of the report dated 08/16/2000.
89. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted to the street in an acceptable manner and in a non-erosive device.
90. Prior to issuance of the building permit, the design of the subdrainage system required to prevent possible hydrostatic pressure behind retaining walls shall be approved by the soils engineer and accepted by the Department. Installation of the subdrainage system shall be inspected and approved by the soils engineer and by the City grading inspector.



91. Footings adjacent to a descending slope steeper than 3:1 in gradient shall be located a distance of one-third the vertical height of the slope but need not exceed 40 feet measured horizontally from the face of the slope.
92. Buildings adjacent to ascending slopes shall be set back from the toe of the slope a level distance equal to one half the vertical height of the slope, but need not exceed 15 feet in accordance with Code Section 91.1806.5.2.
93. Pile caisson and/or isolated foundation ties are required by Code Section 91.1807.2. Exceptions and medication to this requirement are provided in Rule of General Application 662.
94. For grading involving import or export of more than 1000 cubic yards of earth materials within the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Grading Section. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.
95. Prior to the placing of compacted fill, a representative of the consulting Soils Engineer shall inspect and approve the bottom excavations. He shall post a notice on the job site for the City Grading Inspector and the Contractor stating that the soil inspected meets the conditions of the report, but that no fill shall be placed until the City Grading Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be filed with the Department upon completion of the work. The fill shall be placed under the inspection and approval of the Foundation Engineer. A compaction report shall be submitted to the Department upon completion of the compaction.
96. The consulting geologist shall periodically inspect the grading and upon completion submit a final report stating that the completed work complies with his recommendations. Geological data shall be obtained from grading exposure, particularly at back slope cuts for fills and buttress and on cut surfaces. This data shall be presented on a final geological map and as-graded plan.
97. Prior to the pouring of concrete, a representative of the consulting Soil Engineer shall inspect and approve the footing excavations. He shall post a notice on the job site for the City Building Inspector and the Contractor stating that the work so inspected meets the conditions of the report, but that no concrete shall be poured until the City Building Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Department upon completion of the work.
98. When water over 3 inches in depth is present in drilled pile holes, a concrete mix with a strength pounds per square inch (p.s.i.) of 1000 over the design p.s.i. shall be tremied from the

bottom up; an admixture that reduces the problem of segregation of paste/aggregates and dilution of paste shall be included.

99. The dwellings shall be connected to the public sewer system.

100. Prior to excavation, an initial inspection shall be called at which time sequence of shoring, protection fences, and dust and traffic control will be scheduled.

### **HYDROLOGY AND WATER QUALITY**

Watersheds 1 and 2 produce a slightly increased flow in the proposed conditions (0.3 cubic feet per second (cfs) from Watershed 1 and 1.5 cfs from Watershed 2). This increase is attributable to the slightly larger area for Watershed 2 and the increased imperviousness of Watershed 1. The flow is immediately accepted by the proposed on-site storm drains and conveyed to the existing storm drains located in public streets. Surface flow from Watersheds 1 and 2 will decrease. In order to comply with the water quality standards of the City and the Clean Water Act, runoff from Watersheds 1 and 2 will be treated prior to being discharged into the public storm drain.

Runoff from the Watersheds 3 and 4 will be decreased (0.7 cfs decrease from Watershed 3 and 0.4 cfs decreased from Watershed 4) thus reducing impacts on the adjacent properties and streets. Runoff from Watershed 5 would not change. Therefore impacts on the adjacent properties as a result of this watershed would remain the same as the existing baseline.

Proposed improvements will significantly decrease erosion of the slopes which is observed in the present conditions. Additionally, proposed improvements will eliminate sheet flow across Castellammare Drive, increasing public safety. Providing additional capacity of the on-site storm drain to accommodate "emergency" flow from the Revello Drive protects adjacent properties and provides benefits to public safety. Total increase in runoff due to the proposed development is 0.7 cfs. This increase is negligible and will not change flow conditions in the main line in Sunset Boulevard. Therefore, no significant impacts to adjacent properties would occur as a result of the runoff from the watersheds on the project site.

### **Water Quality - Construction Related Impacts**

The project construction site will contain a variety of construction materials that are potential sources of stormwater pollution, such as adhesives, cleaning agents, landscaping, plumbing, painting, heat/cooling, masonry materials, floor and wall coverings; and demolition debris. Construction material spills can also be a source of stormwater pollution and/or soil contamination.

Grading and brush clearing activities can greatly increase erosion processes. Appropriate dust suppression techniques, such as watering or tarping, are used in areas that must be exposed. Erosion control devices, including temporary diversion dikes/berms, drainage swales, and siltation basins, are typically required around construction areas to insure that sediment is trapped and properly removed. When properly designed and implemented, these Best Management Practices (BMPs) will ensure that short-term construction related water quality impacts are not significant.

### **Water Quality - Long-Term Operational Impacts**

Two basic areas of concern related to the long-term operation of the proposed project are stormwater quality and quantity. BMPs, such as regular sweeping of paved areas, can be used to address quality concerns. BMPs that address design considerations, such as channeling runoff from paved areas into landscaped areas, can effectively address both quality and quantity considerations. BMPs to be implemented as a part of the proposed project are listed below in the mitigation measures section.

Compliance with the BMPs listed below and other NPDES requirements for controlling stormwater pollution will reduce the proposed project's impacts on water quality (both short-term construction impacts and long-term operational impacts) to insignificant levels.

While the proposed project will be required to submit site drainage plans to the City Engineer and other responsible agencies for review and approval prior to development of any drainage improvements, no additional mitigation measures are required. However, the project's required compliance with the NPDES program would further ensure that no significant water quality impacts will be generated by the proposed project.

- All waste shall be disposed of properly. Use appropriately labeled recycling bins to recycle construction materials including: solvents, water-based paints, vehicle fluids, broken asphalt and concrete; wood and vegetation. Non-recyclable materials/wastes must be taken to an appropriate landfill, such as the Calabasas Sanitary Landfill, the Azusa Landfill, or the Bradley Landfill Toxic wastes must be discarded at a licensed regulated disposal site.
- Clean up leaks, drips and spills immediately to prevent contamination soil on paved surfaces that can be washed away into the storm drains.
- Do not hose down pavement at material spills. Use dry cleanup methods whenever possible.
- Cover and maintain dumpsters. Place uncovered dumpsters under a roof or cover with tarps or plastic sheeting.

- Use gravel approaches where truck traffic is frequent to reduce soil compaction and limit the tracking of sediment into streets.
- Conduct all vehicle/equipment maintenance, repair, and washing away from storm drains. All major repairs are to be conducted off-site. Use drip pans or drop cloths to catch drips and spills.
- The project shall comply with Ordinance No. 172,176 to provide for Stormwater and Urban Runoff Pollution Control which requires the application of BMPs, including the following mitigation measures:
  - Any connection to the sanitary sewer must have authorization from the Bureau of Sanitation.
  - Reduce impervious surface area by using permeable pavement materials where appropriate, including: pervious concrete/asphalt; unit pavers, i.e. turf block; and granular materials, i.e. crushed aggregates, cobbles.

## **LAND USE**

### ***Consistency with City Zoning Classifications and Requirements***

The zoning of the project site was changed in June 1998 to RD2-1 (Multiple Family). In accordance with Section 12.09 of the City of Los Angeles Planning and Zoning Code, the proposed project is permitted within the RD2-1 zone. The Height District 1 designation requires that the total floor area not exceed three times the buildable area of the lot and that structures not exceed a height of 45 feet above grade. The total floor area of the proposed project (200,000 square feet) does not exceed three times the buildable area of the lot (520,106 square feet). In addition, none of the new buildings proposed for the project site would exceed the maximum 45-foot building height. The project provides 205 parking spaces: two for every dwelling unit and 0.5 guest spaces for every dwelling unit. Therefore, no zoning inconsistencies would occur and impacts would be less than significant.

### ***Consistency with the Brentwood-Pacific Palisades District Plan***

The Citywide General Plan Framework Element generally refers to the Community Plans for specific land use locations and entitlements. The Brentwood-Pacific Palisades District Plan designates the project site as Multiple Family, Low Medium II Density. The proposed project is consistent with this land use designation and thus impacts would be less than significant.

### ***Consistency with Coastal Act Policies and Requirements***

The Coastal Act includes several basic goals and policies to ensure that development within the Coastal Zone is consistent and compatible with the unique characteristics of coastal resources. The proposed project would be consistent with these basic policies and goals. Specifically, the proposed project would not interfere with the public's access to the sea, significantly interfere with the traffic circulation system, affect marine resources, or environmentally sensitive habitat area. In addition, the proposed project would not result in any significant impacts to the scenic and visual qualities of the coast. The proposed project would also minimize the alteration of natural landforms; however, permanent stabilization of the on-site portion of the Revello Landslide would be required.

The entire project site lies within the dual permit zone of the Coastal Zone. Therefore, the project site is under the jurisdiction of both the City of Los Angeles and the Coastal Commission. With procurement of a Coastal Development Permit from the City of Los Angeles and approval from the Coastal Commission, development of the proposed project would be considered consistent with the Coastal Act Policies and requirements.

### ***Land Use Compatibility***

The proposed project consists of an 82-unit condominium project that would develop below the allowable residential density currently permitted on the project site. The proposed residential project would be consistent with the existing land use pattern in this area of the Pacific Palisades and with adjacent properties, which consist of multi-family and single-family residential uses, and various commercial retail and office uses along Sunset Boulevard. Therefore, no significant impacts would result from the proposed Palisades Condo project with regard to land use compatibility.

As the proposed project is consistent with existing land use regulations and adjacent land uses, no mitigation measures are required.

## **NOISE**

### ***Demolition/Construction Noise Impacts***

Point sources of noise emissions are atmospherically attenuated by a factor of 6 decibels (dB) per doubling of distance. The loudest construction activities would thus require almost 280 feet of distance between the source and a nearby receiver to reduce the peak 90 dB source strength to the generally acceptable 75 dB exterior exposure level specified in Section 112.05 of the City Building Code. Complex terrain around the project site may intermittently shield some nearby receivers from direct line of sight noise propagation such that the construction equipment noise "envelope" may be considerably smaller than 280 feet in many areas. If hillside echo effects are involved, the zone of impact might

exceed 280 feet for brief periods of time. Echo effects tend to occur infrequently unless the work area is within a hard-surfaced, parabolic bowl, which is not the case at the project site.

When construction such as excavation, pouring concrete or similarly noisy activities occur during the three-year window of heavy construction, they may occur for many days in a month. The "10 day per 3 month" significance threshold would apply. This threshold would allow for a +5 dB increase above ambient noise levels before a significant impact would occur. Baseline noise levels in yards surrounding the project site are estimated to be 45 dB (LEQ). A noise level of 50 dB LEQ or more would constitute a potentially significant noise impact. For purposes of analysis, an 85 dB (LEQ) reference noise level was assumed during daytime construction. The distance of the 50 dB LEQ contour, assuming various line-of-sight conditions, is as follows:

Clear line-of-sight	-	2,800 feet from source
Moderately terrain-obstructed	-	890 feet from source
Heavily terrain - obstructed	-	280 feet from source

Even with intervening barriers and other noise protection features, reduction of construction noise levels to 50 dB or less in the closest residential rear yards is not feasible. Construction activities will have a significant, unmitigable noise impact during parts of the three-year construction cycle. Because not every construction day will necessarily entail heavy equipment operations, the actual number of days of a potentially significant impact is a small fraction of the total construction period.

In addition to on-site equipment noise generation, truck traffic to/from the site would affect the off-site noise environment. Heaviest truck traffic will occur for four to six months during landslide repair and slope stabilization. Peak truck activity and associated noise generation would occur during soil export. Vehicle noise/land use compatibility is expressed in terms of the community noise equivalent level, or CNEL. Haul trucks will not be allowed on-site until after 7 A.M. such that all haul traffic will have only a daytime impact. CNELs due to haul traffic will be much lower than the hourly average noise level when the late afternoon, evening and nocturnal periods of zero construction traffic are averaged in with the daytime haul hours.

The City of Los Angeles CEQA Threshold Guidelines specify that that a noise increase of five dB or greater for ten days in a three-month period would be a significant impact. If soil hauling activity exceeds 70 loads per day (10/hour), a significant noise impact may result along Tramonto Drive because the noise level would increase by five dB. If soil hauling activities exceed 112 loads per day (16/hour), truck noise impacts would be significant along both Tramonto Drive and Los Liones Drive. Because the excavation phase of the proposed project may involve up to 128 truck loads per day, noise impacts from soil truck hauling activities are considered to be significant.

### ***Operational Traffic Noise Impacts***

Long term noise concerns from the increased development intensity of the project site relative to the City of Los Angeles CEQA threshold significance criteria derive primarily on mobile source emissions on the roadways. Nine identified roadway links were selected for analysis. The maximum noise increases (CNEL) from project implementation along each of the area streets compared to the cumulative growth no-project scenario is +1 dB CNEL. The maximum cumulative noise increase along Los Liones Drive is +3 dB, but noise levels will remain well below 60 dBA CNEL at the 50-foot reference distance along this street.

At +1 dB for a project-related traffic noise impact, such an increase will be undetectable even under laboratory conditions. A +3 dB cumulative noise impact will not exceed City of Los Angeles significance thresholds, nor will it create any noise exposure exceeding the most stringent City noise/land use compatibility guideline. Operational traffic noise impacts are individually and cumulatively less than significant.

The project site does not exceed 60 dBA CNEL which would trigger any possible noise mitigation requirements for meeting usable exterior space standards, or for achieving an interior level of 45 dBA CNEL. The State Building Code requires that shared walls and floor/ ceiling assemblies in multi-unit dwellings meet noise and impact transmission standards between adjacent or stacked units. Verification of structural compliance will be made at the plan check level.

On-site construction activities were shown to have a potentially significant and unavoidable noise impact at the nearest neighbors due to heavy equipment operations. Dirt hauling noise impacts were also found to be significant and unavoidable.

Standard noise abatement conditions will be required by the City of Los Angeles as part of any grading/construction permits. These measures include:

1. The project shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574, and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible.
2. Construction shall be restricted to the hours of 7:00 A.M. to 6:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 on Saturday.
3. The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.

## **POPULATION AND HOUSING**

### ***Construction Impacts***

Employment opportunities provided by construction of the proposed project would not likely result in household relocation by construction workers to the vicinity of the project site. Additionally, construction workers will likely be drawn from the construction employment labor force already resident in the City of Los Angeles and surrounding community. It is not likely that construction workers would relocate their place of residence as a consequence of working on the proposed project. Therefore, impacts on population and housing resulting from the construction of proposed project would be less than significant.

### **Local Growth Forecasts**

#### ***Housing***

The City's General Plan Framework Element assumed a multi-family housing rate increase of 2,606 dwelling units or approximately 19 percent for the Brentwood-Pacific Palisades Community Plan Area (CPA) between the years of 1990 to 2010. The proposed project proposes to add 82 units to the Brentwood-Pacific Palisades CPA, representing approximately 3.15 percent of the City's projected housing unit increase for the same period. Since the proposed project does not exceed the growth projections, it is consistent with City's housing projections. Impacts related to housing projections would therefore be less than significant.

#### ***Population***

The City's General Plan Framework Element assumed a population rate increase of 9,739 persons, or approximately 15 percent for the Brentwood-Pacific Palisades CPA between the years 1990 to 2010. The proposed project would add approximately 199 persons to the Brentwood-Pacific Palisades CPA, which represents approximately 2.04 percent of the City's projected population increase for the same period. Since the proposed project would not exceed the projected growth rate for the area, the project is consistent with City's population projections. Impacts related to local population growth projections would therefore be less than significant.

### **Regional Growth Forecasts**

#### ***Housing***

Southern California Association of Government (SCAG) assumed a housing increase by 141,352 dwelling units (a growth rate of approximately 11 percent), for the City of Los Angeles Subregion



between the years of 2000 to 2010. The increase in housing units on the project site would represent 0.06 percent of SCAG's projected housing unit increase for this Subregion during the same period. Because the proposed project would not exceed the projected growth rates for the area, the project would be consistent with regional housing projections. Impacts related to housing projections would therefore be less than significant.

***Population***

SCAG assumed a population rate increase of 387,791 persons, (a population growth rate of approximately 10 percent), for the City of Los Angeles Subregion between the years of 2000 to 2010. The proposed project would add approximately 199 persons to the Subregion, representing Approximately 0.05 percent of SCAG's regional projected population increase for the same period. Because the proposed project would not exceed the growth rate anticipated for the area, the project would be consistent with regional population projections. Impacts upon regional population policies would therefore be less than significant.

***Relocation of Residents***

Prior to construction of the proposed project, all on-site uses would be demolished, including approximately 20 multi-family units. Demolition of these residential units would result in the displacement of the estimated 33 occupants and would therefore constitute a significant impact. However, the proposed project would be subject to the resident relocation and displacement requirements of the City of Los Angeles. Compliance with City of Los Angeles relocation and displacement requirements would reduce potentially significant impacts to less than significant levels.

Based on a conversation with the City of Los Angeles Housing Department, the following mitigation measure is recommended to reduce the project's significant impact regarding the displacement of existing on-site residents:

1. The applicant shall comply with all applicable Mello Act Ordinance Guidelines that are in affect at the time the permits for the proposed project are processed.
2. The applicant shall comply with the City of Los Angeles Housing Department's relocation assistance requirements.

## **PUBLIC SERVICES**

### ***Police Protection***

According to the Los Angeles Police Department (LAPD), development of the proposed project would potentially result in a significant impact to police protection services provided by the West L.A. Community Police Station. The various construction phases of the proposed project could also result in increased response times the LAPD responding to other calls in the Castellammare area. Upon completion of the proposed project, the number of permanent residents and site visitors within the project site would generate a potential increase in the level of police service calls from the project site. However, project compliance with the mitigation measures listed below would reduce the significant impact upon police services to a less than significant level.

The following mitigation measures are required to reduce the project's impacts to police protection services to less than significant levels:

1. The project applicant shall consult with the LAPD's Crime Prevention Unit (CPU) on the design and implementation of a security plan for the proposed project and, which shall consider the following elements:
  - Design entryways, the lobby, and parking areas with lighting that eliminates areas of concealment;
  - Landscaping should be designed so as to not conceal potential criminal activities near windows or doors
  - Outdoor night lighting should be provided to aid crime prevention and enforcement efforts;
  - All garages should be enclosed;
  - Provide solid core doors with deadbolt locks to all units;
  - The use of louvered windows should be prohibited
2. Upon the completion of the project, it is recommended that site plans for the property be provided to the West Los Angeles area commanding officer to help facilitate any police response.

### ***Fire Protection***

The demolition, grading and construction phases of the proposed project would add construction employee vehicles and heavy trucks on the project area roadways, including Tramonto Drive which fronts the project site. Such activities could increase response times for emergency calls further uphill on Tramonto Drive and in the Castellammare area. These are considered to be potentially significant impacts that can be mitigated to less than significant levels via the implementation of the traffic mitigation measures.

Implementation of the proposed project would increase the need for fire protection and emergency medical services in the project area due to the increased number of residents and visitors to the project site. The proposed project site is located 0.3 miles from the nearest fire station. Because this response distance is within City Fire Code requirements, there are no impacts with respect to distance criteria. However, the proposed project would incorporate a number of fire safety features in accordance with applicable City fire-safety code and ordinance requirements for construction, access, fire flows, and fire hydrants.

According to the Los Angeles Fire Department (LAFD), the existing staffing levels and facilities could accommodate the proposed project's increased demand for fire protection service. Therefore, impacts to fire protection services by the proposed project would be less than significant.

The proposed project shall comply with all applicable State and local codes and ordinances, and the guidelines found in the Fire Protection and Fire Prevention Plan, as well as the Safety Plan, both of which are elements of the City of Los Angeles C.P.C 19708. Additionally, the following recommendations of the Fire Department relative to fire safety shall be incorporated into building plans, which includes the submittal of a plot plan for approval by the Fire Department either prior to the recordation of a final map or the approval of a building permit. The plot plan shall include the following minimum design features:

- Adequate off-site public and on-site private fire hydrants may be required. Their number and location to be determined after the Fire Department's review of the plot plan;
- Construction of a private roadway in the proposed development shall not exceed 15 percent in grade;
- Private development shall conform to the standard street dimensions shown on Department of Public Works Standard Plan D-22549;

- Fire lane width shall not be less than 20 feet. When a fire lane must accommodate the operation of Fire Department aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width;
- Fire lanes, where required, and dead-ending streets shall terminate in a cul-de-sac or other approved turning area;
- No proposed development utilizing cluster, group, or condominium design of one or two family dwellings shall be more than 150 feet from the edge of the roadway of an improved street, access road, or designated fire lane;
- All access roads, including fire lanes, shall be maintained in an unobstructed manner, removal of obstructions shall be at the owner's expense. The entrance to all required fire lanes or required private driveways shall be posted with a sign no less than three square feet in area in accordance with Section 57.09.05 of the Los Angeles Municipal Code;
- Standard cut-corners will be used on all turns;
- Where above ground floors are used for residential purposes, the access requirement shall be interpreted as being the horizontal travel distance from the street, driveway, alley, or designated fire lane to the main entrance, or exit of individual units;
- The entrance or exit of all ground apartment units shall not be more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane;
- No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane;
- Where access for a given development requires accommodation of Fire Department apparatus, overhead clearance shall not be less than 14 feet; and
- Where fire apparatus will be driven onto the road level surface of the subterranean parking structure, that structure shall be engineered to withstand a bearing pressure of 8,600 pounds per square foot.

### ***Schools***

The increase in the number of permanent residents on the project site and the potential need to enroll any school-aged children into Los Angeles Unified School District (LAUSD) schools would result in an increased demand for school services. It is probable that some of the future residents of the proposed

project already reside within the service boundaries of the LAUSD with their school-aged children enrolled in the LAUSD schools serving the project site. Therefore, this would have little impact on the LAUSD upon completion of the project. However, to provide for a worst-case scenario, it is assumed that all of the students projected to be generated by the proposed project are not currently enrolled in the LAUSD schools near the project site and would be enrolled upon relocation to the project site. Given the worst-case student generation factors, the total number of elementary, middle school, and high school students would be 36. The schools serving the project site would have adequate space to accommodate the students projected to be generated by the project without going over capacity. Provided the applicant pays the required school fees to the LAUSD, no significant impacts are anticipated.

The following mitigation measure is required to ensure that the proposed project does not result in any significant impacts to schools:

1. The applicant shall pay the required school fees to the LAUSD.

### ***Recreation/Parks***

Typically, residential developments have the greatest potential to result in impacts to parks and recreation facilities. This impact is a result of residential developments generating a permanent increase in the population. The proposed project would result in an increase of 199 permanent residents. This increase in population would only further exacerbate the need for parks and recreational services, which is experienced throughout the City of Los Angeles. The project residents would have use of the Topanga State Park and beaches along Pacific Coast Highway for their recreational needs, in addition to the City Parks.

Because the proposed project would not provide any recreational sites for its residents, the proposed project would have a significant impact on parkland. However, the impact could be mitigated with the payment of the Quimby fee.

1. Per Section 17.12-A of the Los Angeles Municipal Code, the applicant shall pay all applicable Quimby fees for the construction of the proposed project.

### ***Road Maintenance***

Due to the weight of the various trucks in the transportation of construction debris, soil, heavy equipment, and building materials (particularly the number of trips necessary for the soil exportation), roads used for the proposed truck haul route (i.e. Tramonto Drive, Los Liones Drive, Sunset Boulevard, and the Pacific Coast Highway) could be damaged, increasing the demand for road maintenance services provided by the Bureau of Street Services. Additionally, the extent to which the

roads could be damaged would also depend upon the condition of the roads prior to usage by the trucks. As a condition of each grading permit required of the project applicant by the City, the applicant would be responsible for the repair of any damage to roads from the heavy trucks used for the proposed project. Compliance with such conditions would ensure potentially significant road maintenance impacts are less than significant.

The City of Los Angeles Bureau of Engineering will require that Tramonto Drive be dedicated and improved with standard street improvements by the applicant. The Bureau of Engineering will also require that a strip of land adjacent to Castellammare Drive be dedicated for future street improvements to comply with the standard street width of the Bureau's Standard Street Dimensions guidelines.

The following mitigation measures are required to further reduce road maintenance impacts.

1. As a condition of each grading permit required of the project applicant by the City, the applicant would be responsible for the repair of any damage to roads resulting from the delivery of heavy machinery, equipment, and building materials to or from the project site, as well as the import and export of soil to and from the project site. Such roadway repair shall be to the satisfaction of the City of Los Angeles Bureau of Street Services.
2. If construction or haul trucks driving to and/or from the project site cause any substantial damage to private driveways in the immediate vicinity of the project site, such damage shall be repaired by, or paid for by, the project applicant.
3. Tramonto Drive shall be dedicated and improved with standard street improvements by the applicant. A strip of land adjacent to Castellammare Drive shall also be dedicated for future street improvements to comply with the standard street width of the City of Los Angeles Bureau of Engineering's Standard Street Dimensions guidelines.

## **TRAFFIC**

### ***Analysis of Future (2005) Traffic Conditions ("Without" and "With Project")***

The analysis of future traffic conditions at the four study intersections for the year 2005 was performed using the Critical Movement Analysis (CMA) methodology. The CMA and level of service (LOS) results of the future 2005 "Without Project" and "With Project" analysis indicate the proposed project would not significantly impact any of the four study intersections. Therefore, no intersection mitigation is required.

### ***Local/Residential Street Impact Analysis***

Both Tramonto Drive and Los Liones Drive were requested to be analyzed by LADOT. The results exceed the related impact percentages; therefore, LADOT has concluded that the project would cause a significant residential street traffic impact on both Tramonto Drive and Los Liones Drive.

### ***Driveway Visibility***

Adequate driveway visibility is provided at the project site. However, existing visibility for the inbound (uphill) left-turn motorists from Tramonto Drive onto the project site driveway is partially obstructed by existing vegetation located on the north-northwest side of Tramonto Drive. The existing vegetation is located on the convex side of the curve at Tramonto Drive, within a City of Los Angeles slope easement and on undeveloped private property. LADOT conducted a field investigation of the project site and concluded that existing visibility for the inbound left-turn motorists from Tramonto Drive onto the project driveway “appears to be inadequate due to the hairpin curve protruding from across the street.” This is considered to be a potentially significant traffic hazard impact that can be mitigated to a less than significant level via implementation of the mitigation measures recommended below.

### ***Project Construction Traffic***

Construction of the project buildings will take the longest time, approximately 18 to 19 months. The number of construction-related trips generated during this period will fluctuate as the number of workers needed for the different steps of construction will vary. The peak times for construction traffic are expected to occur during the final completion of construction for each building, when electrical, mechanical, plumbing, painting, etc., contractors are on-site. At these times, it is estimated that up to approximately 100 construction workers will be on-site during these times. It is estimated that the following will be occurring for project construction:

- Approximate 18 to 19-month duration;
- 25 inbound and 25 outbound delivery truck trips per day (peak times); and
- 85 inbound and 85 outbound construction worker and miscellaneous trips per day (peak times).

It is anticipated that the trucks bringing building materials to the site will use Tramonto Drive, Los Liones Drive, Sunset Boulevard, Pacific Coast Highway (including possibly Pacific Coast Highway to the west) and the Santa Monica Freeway.

Although construction traffic is a temporary condition, it is recognized that it may contribute to traffic congestion on Tramonto Drive and Los Liones Drive. The mitigation measures listed below are required to minimize the disruption and inconvenience to residents, businesses and other traffic in the vicinity.

The following mitigation measures are required to reduce the potentially significant traffic hazard impact on Tramonto Drive at the project driveway to a less than significant level:

1. The City of Los Angeles, with the assistance of the project applicant, shall remove the existing vegetation located within the convex curve of Tramonto Drive across the project site to provide a clear line of sight uphill. Alternatively, the vegetation shall be periodically trimmed to provide a clear line of sight uphill. The trimming schedule and amount shall be subject to the review and approval of the Los Angeles City Planning Department.

and/or

The applicant shall install additional traffic warning devices near the project entrance, such as additional traffic visibility mirrors, “rumble strips” on Tramonto Drive, a flashing yellow beacon on Tramonto Drive that warns motorists of the curve and driveway, etc.

2. As an alternative to the mitigation measure proposed above, the applicant shall pay a fair share of the costs associated with the installation of a stop sign (3-way stop sign) on Tramonto Drive at the project driveway.

In addition, as stated above, the project applicant shall implement the following measures in order to minimize the disruption and inconvenience to residents, businesses and other traffic in the vicinity:

- No construction equipment shall be started in or in operation on-site outside the allowable construction hours of 8:00 a.m. – 4:30 p.m.
- Trucks and construction equipment shall not be staged in adjacent residential areas during the overall period of construction.
- Temporary “Truck Crossing” warning signs shall be placed approximately 300 feet in advance of the construction driveway in each direction on Tramonto Drive.
- Up to two flag persons shall be used at the project site to assist the truck operators in and out of the project area, as well as minimize conflicts with motorists.
- Construction workers shall not be allowed to park on Sunset Boulevard or any residential or local street in the vicinity, except Los Liones Drive.



- A construction worker ridesharing plan shall be implemented in order to reduce construction-related trips and parking demand.

## UTILITIES

### *Sewer*

The proposed project is anticipated to generate 17,150 gallons per day (gpd), a net increase of 13,150 gpd of wastewater. The existing sewer lines are not experiencing any problems or deficiencies and would be able to handle the additional flow of sewage from the proposed project. Sewage generated by the proposed project would continue to flow to the Hyperion Treatment Plant, which will have adequate capacity to accommodate the increase in sewage flow. Water conservation measures, as required by City ordinance (e.g., installation of low flow toilets and plumbing fixtures that prevent water loss, limitations on hose washing of driveways and parking areas, etc.), would be implemented as part of the proposed project and would help to reduce the amount of wastewater. The proposed project would have a less than significant impact upon sewer services.

Because the proposed project would not result in any significant impacts relative to sewer service, no mitigation measures are required.

### *Water*

The proposed project is expected to generate a demand of approximately 20,580 gpd. According to the Los Angeles Department of Water and Power (LADWP), any project consistent with the City's General Plan has been taken into account in the planned growth of the Water System and will be served by the previously mentioned water sources the City draws water from. The estimated water consumption for the proposed project is expected to be able to be accommodated by the existing water infrastructure serving the proposed project area and thus, service will be provided routinely in accordance with the LADWP's Rules and Regulations. Therefore, the proposed project will have a less than significant impact upon water service.

Because the proposed project would not result in any significant impacts to water supply or distribution, no mitigation measures are required. However, the following measures are recommended to reduce the less than significant water impacts of the proposed project:

- Automatic sprinkler systems should be set to irrigate landscaping during early morning hours or during the evening to reduce water losses from evaporation. Care must be taken to reset sprinklers to water less often in cooler months and during the rainfall season to avoid wasting water by excessive landscape irrigation.

- Selection of native, drought-tolerant, low water consuming plant varieties should be used to reduce irrigation water consumption.
- Adherence to the provisions within the Water Conservation Ordinance of April 1988.

### ***Solid Waste***

Much of the solid waste generated during the demolition and construction phase such as wood, metal scrap, and formed construction board (cement and dry wall board) could be recycled and salvaged to the maximum feasible extent. Materials not recycled would be disposed of at local landfills. Construction plans and specifications bid packages should require the construction contractor to work with the County Recycling Coordinator to ensure that source reduction techniques and recycling measures are incorporated into project construction and that building materials made of recycled materials be considered for use to the extent feasible and economically practical.

The landfills that would serve the project site, Calabasas, Azusa and Bradley, would all have sufficient capacity to accommodate the solid waste generated by the project's construction phase. Therefore, solid waste impacts during the demolition and construction of the proposed project would be insignificant.

Upon full occupancy of the proposed project, daily solid waste generated by the residents is estimated to be approximately 2,870 pounds per week. Solid waste generated on-site would be disposed of in accordance with all applicable federal, state, and local regulations related to solid waste.

Although existing landfills in Los Angeles County are near capacity, potential expansion could accommodate the potential growth projected for the region. There is additional capacity available within Los Angeles County through the proposed expansions of the Puente Hills Landfill and the Sunshine Canyon Landfill, and outside of Los Angeles County through the use of waste-by-rail at the proposed Eagle Mountain Landfill in Riverside County and the proposed Mesquite Regional Landfill in Imperial County. Therefore, no significant solid waste impacts would be created by the proposed project.

Because the proposed project would not result in any significant solid waste impacts, no mitigation measures are required. However, the following recommendations are suggested to reduce the project's less than significant solid waste impacts:

- The project applicant should demonstrate that construction and demolition debris, to the maximum extent feasible, would be salvaged and recycled in a practical, available, and accessible manner during the construction phase.

- The applicant shall institute a recycling program to the satisfaction of the Deputy Advisory Agency to reduce the volume of solid waste going to landfills in compliance with the City's goal of a 70 percent reduction in the amount of solid waste going to landfills by the year 2020.
- Recycling bins shall be provided at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material.

## **ENERGY CONSERVATION**

### *Electricity*

Development of the proposed project would increase the demand for electricity consumption in the project area. The estimated net increase in electricity consumption by the proposed project is approximately 956 kilowatt hours per day. The LADWP has indicated that there are no service problems in the project area and that they can accommodate the electricity demands of the proposed project with the existing infrastructure. Therefore, no significant impacts related to electricity would occur.

The proposed project would not result in any significant electricity impacts; therefore no mitigation measures are required. However, the following recommendations are suggested in order to reduce long-term electricity consumption by the proposed project:

- The applicant should consult with LADWP during the design process of the proposed project regarding potential energy conservation measures for the project. Examples of such energy conservation measures include:
  - Design windows (i.e., tinting, double pane glass, etc.) to reduce thermal gain and loss and thus cooling loads during warm weather, and heating loads during cool weather.
  - Install thermal insulation in walls and ceilings that meets or exceeds the requirements of the State Administrative Code Title 24.
  - Install high-efficiency lamps for outdoor security lighting.
  - Time control exterior lighting. These systems should be programmed to account for variations in seasonal daylight times.
  - Limit outdoor lighting while still maintaining minimum security and safety standards.

- Built-in appliances, refrigerators, and space-conditioning equipment should exceed the minimum efficiency levels mandated in the California Code of Regulations.
- Use natural ventilation wherever possible.

*Natural Gas*

Development of the proposed project would increase the existing demand for natural gas service in the project area. The estimated net increase in natural gas consumption by the proposed project is approximately 8,291 cubic feet/day. According to the Southern California Gas Company (SCG), the demand for natural gas of the proposed project could be accommodated by the existing natural gas mains in the project area (i.e., two-inch main in Tramonto Drive). In addition, new on-site gas lines would be designed to meet the project's peak demand for natural gas. Therefore, natural gas impacts from the development of the proposed project would be less than significant.

As no significant natural gas service impacts have been identified, no mitigation measures are required.