

**CITY OF PASADENA
PLANNING DIVISION
HALE BUILDING
175 NORTH GARFIELD AVENUE
PASADENA, CA 91101-1704**

INITIAL STUDY

In accordance with the Environmental Policy Guidelines of the City of Pasadena, this analysis, the associated "Master Application Form," and/or Environmental Assessment Form (EAF) and supporting data constitute the Initial Study for the subject project. This Initial Study provides the assessment for a determination whether the project may have a significant effect on the environment.

SECTION I – PROJECT INFORMATION

1. Project Title: **Tentative Parcel Map #061676
Hillside Development Permit #4395**
2. Lead Agency Name and Address: **City of Pasadena- Current Planning Section
175 N. Garfield Avenue
Pasadena CA 91101**
3. Contact Person and Phone Number: **David Sinclair, Associate Planner
(626) 744-6766**
4. Project Location: **720 South San Rafael Avenue**
5. Project Sponsor's Name and Address: **Dennis G. Smith
Buff, Smith, & Hensman Architects
1450 W. Colorado Blvd., Suite 200
Pasadena, CA 91105**
6. General Plan Designation: **Low Density Residential (0-6 dwelling units per net acre)**
7. Zoning: **RS-2-HD (Single-Family Residential- Hillside District Overlay)**
8. **Description of the Project:** The City of Pasadena has received an application for a Tentative Parcel Map to allow the lot split of a 110,642 square foot lot into two lots of 86,172 square feet (Parcel A) and 24,514 square feet (Parcel B). The existing house would remain on Parcel A. A Hillside Development Permit application has also been submitted to allow the construction of a new single-family house on Parcel B. The floor area of the proposed residence totals approximately 4,448 square feet with two attached two-car garages that are 480 square feet and 400 square feet for a total of 5,328 square feet.

The proposed home is three stories and does not exceed a maximum height of 28 feet from any point along existing grade. Due to an area of the property having a slope of greater than 2:1, the maximum allowable gross floor area for the site is reduced to 5,470 square feet. A Hillside Development Permit is required for all new homes in the Hillside Overlay zone. The review of this Hillside Development Permit will also include a determination of compliance with the neighborhood compatibility requirement, in accordance with the Hillside Ordinance.

The applicant has also proposed to remove one protected Toyon (*Heteromeles Arbutifolia*) tree on Parcel B.

9. **Surrounding Land Uses and Setting:** The subject site is a hillside lot with a lot area of 110,642 square feet (2.54 acres) and an average slope of approximately 30%. The lot slopes down to the east to Hillside Terrace. The site is currently developed with a 5,761 square foot single-family residence built in 1955. The lot is surrounded by single-family residences on all sides.
10. **Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement):** The Pasadena Department of Public Works, Pasadena Department of Transportation, Pasadena Building Division, Pasadena Fire Department, and Pasadena Water and Power Department will review the project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would involve at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages:

	Aesthetics		Geology and Soils		Population and Housing
	Agricultural Resources		Hazards and Hazardous Materials		Public Services
	Air Quality		Hydrology and Water Quality		Recreation
	Biological Resources		Land Use and Planning		Transportation/Traffic
	Cultural Resources		Mineral Resources		Utilities and Service Systems
	Energy		Noise		Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project DOES NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	X
I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.	

I find that the proposed project MAY have a significant effect(s) on the environment. -Analysis in the Initial Study shows that one or more impact areas will have a "Potentially Significant Impact" An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that were not analyzed in a previously approved EIR or Negative Declaration for the project at hand.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Signature

Date

Printed Name

Reviewed By / Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 20, "Earlier Analysis," may be cross-referenced).
- 5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. See CEQA Guidelines Section 15063(c)(3)(D). Earlier analyses are discussed in Section 20 at the end of the checklist.
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier documents and the extent to which address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significant



Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

SECTION II - ENVIRONMENTAL CHECKLIST FORM

1. BACKGROUND.

Date checklist submitted: July 13, 2005
 Department requiring checklist: Planning and Development
 Planner assigned: David Sinclair

2. ENVIRONMENTAL IMPACTS. (explanations of all answers are required):

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

3. AESTHETICS. Would the project:

a. *Have a substantial adverse effect on a scenic vista?* ()

WHY? The project site is situated in an area with predominant views to the east of the city. However, the proposed house will not impact any existing views as houses to the north and south will maintain their eastern views, houses to the east are below the proposed house and face east, and the existing house on Parcel A is located approximately 50 feet above the highest point of the proposed house on Parcel B.

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

WHY? The proposed project is not situated adjacent to any state, county, or locally designated scenic resources and therefore does not substantially impact any Official State Scenic Highway, L.A. County Recommended Scenic Highway or unofficial City Designated Scenic corridor. The proposed project includes the removal of one protected Toyon (*Heteromeles Arbutifolia*) tree located near the Hillside Terrace frontage, but the vast majority of trees on the site would remain. Further, the proposed project would not result in the destruction of any landmark eligible trees, stand of trees, rock outcropping or natural feature recognized as having significant aesthetic value. The applicant must submit landscape plans for review and approval by the Zoning Administrator and Fire Department and grading plans to the Building Official and the Public Works Department for review and approval prior to the issuance of any building permit. Any negative impacts caused by the proposed destruction of trees, rock outcroppings or other desirable aesthetic natural features will be reduced to a level of insignificance by conditions imposed during this review to preserve recognized aesthetic natural features.

The proposed site has not been designated as an historic resource. The site does not have structures that have been designated as historic resources. The project site is not part of a landmark district.

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

Potentially Significant Impact

Significant Unless Mitigation is Incorporated

Less Than Significant Impact

No Impact

WHY? The area where the new lot and new house are proposed is currently undeveloped; therefore any development on the site would change the existing character of the site. However, the site is a relatively steep lot with limited development potential. The area where the residence is proposed is a suitable location for development to maximize building separation from existing residences in the area, as well as to minimize additional grading of the site. The proposed dwelling unit is within the maximum allowable floor area ratio for the lot. All other development standards are also met for the lot (setbacks, encroachment plane, height of the main structure, parking, etc.). Conditions will be added during the discretionary review process with regard to colors, materials, and landscaping to further ensure the residence will blend with its hillside location. The subject site is in a developed hillside neighborhood, with existing residences in the surrounding area. Development of this lot will not degrade the existing visual character of the site and its surroundings.

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

WHY? The project will not have a significant impact on light and glare because it will be required to comply with the standards in the Zoning Code that regulate glare and outdoor lighting, specifically low-level lighting and the use of multiple low profile fixtures is encouraged, as opposed to the use of fewer, but taller fixtures. Exterior lighting shall be properly shielded to avoid glare and the spill of light to surrounding areas. The project does not propose any outdoor recreation courts or other similar sources of light that could cause an adverse effect to surrounding properties. Further, the required landscape plan will be required to show light sources to ensure conformance with Zoning Code requirements. All exterior landscaping or walkway lighting will be minimal and directed downwards.

4. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project

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

WHY? The City of Pasadena is a developed urban area surrounded by hillsides to the north and northwest. The western portion of the City contains the Arroyo Seco, which runs from north to south through the City. It has commercial recreation, park, natural and open space. There is no prime farmland, unique farmland, or farmland of statewide importance, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency.

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

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

WHY? The City of Pasadena has no land zoned for agricultural use other than commercial nurseries being allowed by right in the CG (General Commercial) and IG (General Industrial) zones and conditionally in the CO (Office Commercial), CL (Limited Commercial), OS (Open Space) and PS (Public-Semi Public) Zoning Districts.

c. *Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? ()*

WHY? There is no known farmland in the City of Pasadena; therefore the proposed project would not result in the conversion of farmland to a non-agricultural use.

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

a. *Conflict with or obstruct implementation of the applicable air quality plan? ()*

WHY? The project must comply with the Federal Clean Air Act, the California Clean Air Act and the regional Air Quality Management Plan (AQMP) adopted by the South Coast Air Quality Management District and Southern California Association of Governments. The AQMP contains measures to meet federal and state requirements. The City of Pasadena is also part of the West San Gabriel Valley Planning Council, which adopted the West San Gabriel Valley Air Quality Plan.

b. *Violate any air quality standard or contribute to an existing or projected air quality violation? ()*

WHY? Due to its geographical location and the prevailing off shore daytime winds, Pasadena receives smog from downtown Los Angeles and other areas in the Los Angeles basin. The prevailing winds, from the southwest, carry smog from wide areas of Los Angeles and adjacent cities, to the San Fernando Valley and to Pasadena in the San Gabriel Valley where it is trapped against the foothills. For these reasons the potential for adverse air quality in Pasadena is high.

Pasadena is located in a non-attainment area, an area that frequently exceeds national ambient air quality standards. However, the project itself does not meet the South Coast Air Quality Management District's (SCAQMD) land use threshold for significant air emissions, according to the 1993 updated SCAQMD's CEQA Air Quality Handbook.

c. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? ()*

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
---	--	---	------------------

WHY? The City of Pasadena is within the South Coast Air Basin (SCAB). This basin is a non-attainment area for Nitrogen Dioxide (NO₂) and fine particulates matter (PM₁₀). Projects that contribute to a significant cumulative increase in NO₂ or PM₁₀ will be considered to be significant and require the consideration of mitigation measures. This project may result in temporary short-term increases in particulate matter due to routine construction activities; however the project involves the construction of one-single family residence and will not cause a *cumulatively considerable* increase in NO₂ and/or PM₁₀ during construction and/or operation.

d. *Expose sensitive receptors to substantial pollutant concentrations?* ()

WHY? According to Figure 5-1 and Table 5-1 of the 1993 updated SCAQMD's CEQA Air Quality Handbook, the project is located near sensitive receptors (other single-family residences); however, the proposed use is also a single-family residence and will therefore not generate any significant toxic air emissions.

e. *Create objectionable odors affecting a substantial number of people?* ()

WHY? The proposed single-family residential use is not identified on the 1993 updated SCAQMD's CEQA Air Quality Handbook Figure 5-5 "Land Uses Associated with Odor Complaints." The single-family residential structure will not result in the creation of objectionable odors.

6. BIOLOGICAL RESOURCES. Would the project:

a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*
()

WHY? The Final Environmental Impact Report for the adopted 2004 Land Use and Mobility Elements maps the natural communities within the City's boundaries. The project is not located near any of these communities. All development of the site will require a landscape and tree retention plan to emphasize the use and management of native plants.

There are no known unique, rare or endangered plant or animal species or habitats on or near the site that would be adversely affected by the proposed construction of the homes. There are no bodies of water or wetlands on or near the site. The project will be subject to the Hillside District development standards that are designed to mitigate problems associated with hillside development.

b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?* ()

Potentially Significant Impact
 Significant Unless Mitigation is Incorporated
 Less Than Significant Impact
 No Impact

WHY? See response to 6.a above.

c. *Have a substantial adverse effect of federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ()*

WHY? The project is located in a developed hillside area. This area is not identified in the 2004 Land Use and Mobility Element EIR as a natural community. The Zoning Code requires that new construction be subject to submittal of a landscape plan, which emphasizes the use and management of native plants. The subject site does not contain wetlands or wetland habitat.

d. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ()*

WHY? See response to 6. a

e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ()*

WHY? The site contains 16 trees protected by the Ordinance No. 6896 "City Trees and Tree Protection Ordinance" as detailed in the below table (numbers correlate to the Tree Inventory submitted with the application).

#	Genus & Species	Common Name	Diameter	Remain	Move	Replace	Remove
1	<i>Quercus agrifolia</i>	Coast Live Oak	24"	X			
2	<i>Quercus agrifolia</i>	Coast Live Oak	18"	X			
3	<i>Quercus agrifolia</i>	Coast Live Oak	13"	X			
4	<i>Quercus agrifolia</i>	Coast Live Oak	10"	X			
5	<i>Quercus agrifolia</i>	Coast Live Oak	12"	X			
7	<i>Quercus agrifolia</i>	Coast Live Oak	15"	X			
8	<i>Quercus agrifolia</i>	Coast Live Oak	30"	X			
9	<i>Quercus agrifolia</i>	Coast Live Oak	26"	X			
13	<i>Quercus agrifolia</i>	Coast Live Oak	16"	X			
18	<i>Heteromeles arbutifolia</i>	Toyon	12"				X
21	<i>Quercus agrifolia</i>	Coast Live Oak	10"	X			
25	<i>Quercus agrifolia</i>	Coast Live Oak	18"	X			
26	<i>Quercus agrifolia</i>	Coast Live Oak	8"	X			
27	<i>Quercus agrifolia</i>	Coast Live Oak	18"	X			
30	<i>Quercus agrifolia</i>	Coast Live Oak	15"	X			
34	<i>Quercus agrifolia</i>	Coast Live Oak	12"	X			

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

A tree removal application for tree #18 (*Heteromeles arbutifolia*) has been included in the project application. The landscape and tree retention plan that must be submitted prior to the issuance of building permits will be required to emphasize the use and management of native plants.

- f. *Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?*
()

WHY? The project proposes to remove one tree that is protected under the City's Tree Protection Ordinance. A tree removal application has been submitted to allow the removal of tree #18, a 12" Toyon (*Heteromeles arbutifolia*) that is located in the rear of the existing lot (the front of the proposed Parcel B). The applicant is also proposing to remove six trees that are not protected. These trees do not qualify as protected trees due to their size, species, or location on the site.

The project is required to submit a complete landscape plan that emphasizes the use and management native plants. The plan must also show the replacement of the removed trees in the new landscape plan. This plan will be reviewed by the Zoning Administrator and Fire Department prior to the issuance of building permits. Based on review of the preliminary landscape plan that was submitted with the application which includes the replacement of trees and other vegetation there will be no conflict with adopted plans and a less than significant impact

7. CULTURAL RESOURCES. Would the project:

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?* ()

WHY? There are no known buildings, structures, natural features, works of art or similar objects on the site having a significant historic value to the City which are to be demolished, relocated, removed, or significantly altered by the project.

- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?* ()

WHY? There are no known prehistoric or historic archeological sites on the project site. If any such sites are encountered during grading or construction of the project, all grading or construction efforts, which would disturb these sites, shall cease. An archaeologist shall be notified and provisions for recording and excavating the site shall be made in compliance with Section 15064.5 of the California Environmental Quality Act Guidelines.

There are no buildings and/or structures, natural features, works of art or similar objects scheduled for demolition, relocation, removal or significant alteration on the project site, which are of significant archaeological value to the City.

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* ()

WHY? There are no records of any significant paleontological resources in the City of Pasadena. Therefore, there are no known paleontological resources affected by the project. If any such sites are encountered during grading or construction of the project, all grading or construction efforts which would disturb these sites shall cease. An archaeologist shall be notified and provisions for recording and excavating the site shall be made in compliance with Section 15064.5 of the California Environmental Quality Act Guidelines.

d. *Disturb any human remains, including those interred outside of formal ceremonies?* ()

WHY? There are no known human remains on the site. If any remains are encountered during project implementation the Los Angeles County Coroner will be contacted.

8. ENERGY. Would the proposal:

a. *Conflict with adopted energy conservation plans?* ()

WHY? The project does not conflict with the 1983 adopted Energy Element of the General Plan. The proposed intensity of the project is within the intensity allowed by the Zoning Code and envisioned in the City's approved General Plan. Further the project will comply with the energy standards in the California Energy Code, Part 6 of the California Building Standards Code (Title 24). Measures to meet these performance standards may include high-efficiency Heating Ventilation and Air Conditioning (HVAC) and hot water storage tank equipment, lighting conservation features, higher than required rated insulation and double-glazed windows.

b. *Use non-renewable resources in a wasteful and inefficient manner?* ()

Why? Oil-based products: The proposed project will not create a high enough demand for energy to require development of new energy sources. Construction of the project will result in a short-term insignificant consumption of oil-based energy products. However, the additional amount of resources used for a single-family residence will not cause a significant reduction in available supplies.

Energy: The long-term impact from increased energy use by this project is not significant in relationship to the number of customers currently served by the electrical and gas utility companies. Supplies are available from existing mains, lines and substations in the area. Occupation of the project will result in an insignificant increase in the consumption of natural gas. This consumption will be lessened by adherence to the performance standards of California Energy Code, Part 6 of the California Building Standards Code Title 24. This project will result in the increased consumption of approximately 21 net kilowatt-hours of electrical energy per day (based on a single-family residence with a gas kitchen). This increased consumption will be reduced to an insignificant level by meeting the above referenced energy standards. Measures to meet

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

these performance standards may include high efficiency Heating Ventilation and Air Conditioning (HVAC) and hot water storage tank equipment, lighting conservation features, higher than required rated insulation and double-glazed windows. The energy conservation measures will be prepared by the developer and shown on a building plan(s). This plan will be submitted to the Water and Power Department and Building Official for review and approval prior to the issuance of a building permit. Installation of energy-saving features will be inspected by a City Inspector prior to issuance of a Certificate of Occupancy.

Water: This project will result in an increase of approximately 260 gallons per day in water consumption. However, this impact will be mitigated during drought periods by the applicant complying with the Water Shortage Procedures Ordinance, which restricts water consumption to 90% of expected consumption during each billing period. Installation of plumbing will be inspected by a Building Division Inspector prior to issuance of a Certificate of Occupancy.

9. GEOLOGY AND SOILS. Would the project:

- a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ()*

WHY? According to the 2002 adopted Safety Element of the City of Pasadena's General Plan, the San Andreas Fault is a "master" active fault and controls seismic hazard in Southern California. This fault is located approximately 21 miles north of Pasadena.

The County of Los Angeles and the City of Pasadena are both affected by Alquist-Priolo Earthquake Fault Zones. Pasadena is in four USGS Quadrants, the Los Angeles, and the Mt. Wilson quadrants were mapped for earthquake fault zones under the Alquist-Priolo Act in 1977. The Pasadena and Condor Peak USGS Quadrangles have not yet been mapped per the Alquist-Priolo Act.

Adjacent to and partially in the City of Pasadena are two faults, considered active, the Sierra Madre primarily north of the City and the Raymond Fault primarily south of the City. The 2002 Safety Element of the General Plan considers the Sierra Madre Fault to be in a Fault Hazard Management Zone and the Raymond Fault to be in an Alquist-Priolo Earthquake Fault Zone. Within the southwest part of the City, the Eagle Rock Fault is considered potentially active. The proposed project is approximately 5 miles south of the Sierra Madre Fault, 2 ½ miles south of a potentially active strand of the Sierra Madre Fault, 1 mile north of the Raymond Fault and approximately 850 feet south of the Eagle Rock Fault.

The potential exists for people and property to be exposed to the hazards of seismic activity in most of California. This project will not increase the potential occurrence of earthquakes. The risk of earthquake damage is minimized because the new structure shall be built according to the Uniform Building Code and other applicable codes, and is subject to inspection during construction. Structures for human habitation must be designed to meet or exceed California Uniform Building Code standards for Seismic Zone 4.

- ii. *Strong seismic ground shaking? ()*

Potentially Significant Impact

Significant Unless Mitigation is Incorporated

Less Than Significant Impact

No Impact

WHY? See response to 9.a.i.

As the City of Pasadena is within a larger area traversed by active fault systems, such as the San Andreas and Newport-Inglewood. Any major earthquake along these systems will cause seismic ground shaking in Pasadena. At a minimum the earthquake-resistant design and materials of new projects must meet or exceed the current seismic engineering standards of the California Uniform Building Code Seismic Zone 4 requirements. Much of the City is on sandy, stony or gravelly loam formed on the alluvial fan adjacent to the San Gabriel Mountains. This soil is more porous and loosely compacted than bedrock and thus subject to greater impacts from seismic ground shaking than bedrock.

iii. Seismic-related ground failure, including liquefaction as delineated on the most recent Seismic Hazards Zones Map issued by the State Geologist for the area or based on other substantial evidence of known areas of liquefaction? ()

WHY? According to Plate P-1 of the Cities Safety Element of the General Plan (as based on the State's Seismic Hazard Zone Maps) or Plate 1-3 of the Technical background Report to the Cities Safety Element of the General Plan, the project site is not in an area subject to liquefaction.

The site has an approximate 30% average slope with a relatively flat pad where the existing house is located. Existing City Municipal Code and Building Code regulations will control any slope instability; therefore there will be no impact.

Due to these codes and inspections there will be no increased exposure to seismic ground failure including liquefaction.

iv. Landslides as delineated on the most recent Seismic Hazards Zones Map issued by the State Geologist for the area or based on other substantial evidence of known areas of landslides? ()

WHY? According to Plate P-1 of the City's Safety Element of the General Plan (as based on the State's Seismic Hazard Zone Maps), a portion of the project site is in a Landside Hazard Zone. According to the Slope Instability Map (Plate 2-4 of the Technical Background Report of the adopted 2002 Safety Element of the General Plan) the project is an area with a "low" slope instability rating. According to these same sources there is not any known historic evidence of landslides on the project site or adjacent properties. Existing City regulations will control any slope instability; therefore there will be no impact. In addition the Seismic Hazard map does not show this project to be located in an area where there is geologic evidence of past landslides.

b. Result in substantial soil erosion or the loss of topsoil? ()

WHY? (Excavation and Grading) Construction of the project will lead to 200 cubic yards of fill and 2,250 cubic yards of cut with a total of 2,050 cubic yards being exported. The proposed house will cover approximately 2% of the existing property (9% of the new Parcel B) as compared to the present use, which

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

occupies 5% of the existing property (7% of the new Parcel A). The existing building regulations and property site inspections ensure that construction activities do not create unstable earth conditions.

The displacement of soil through cut and fill will be controlled by the City's grading ordinance, Appendix Chapter 33 of the 2001 California Building Code relating to grading and excavation, the Hillside Development Overlay District regulations, other applicable building regulations and standard construction techniques; therefore there will be a less than significant impact.

(Erosion) According to the Final Environmental Impact Report certified for the adoption of the 2004 Land Use and Mobility Elements, the natural water erosion potential of soils in Pasadena is low, unless these soils are disturbed during the wet season. Both the Ramona and Hanford soils associations, which underlay much of the City, have high permeability, low surface runoff and slight erosion hazard due to the gravelly surface layer and low topographic relief away from the steeper foothill areas of the San Gabriel Mountains.

Water erosion during construction will be minimized by limiting construction to dry weather, covering exposed excavated dirt during periods of rain and protecting excavated areas from flooding with temporary berms. Erosion that may occur during periods of rain will also be controlled by proper grading techniques as specified in the grading ordinance, a grading plan submitted to the Building Official and Public Works Department for review and approval prior to the issuance of a building permit and by city inspections and condition monitoring after the issuance of a building permit.

Soil erosion after construction will be controlled by implementation of an approved landscape and irrigation plan. This plan shall be submitted to the Zoning Administrator for review and approval prior to the issuance of a building permit.

- c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?* ()

WHY? The City of Pasadena rests primarily on an alluvial plain. To the north the San Gabriel Mountains are relatively new in geological time. These mountains run generally east-west and have the San Andreas Fault on the north and the Sierra Madre Fault to the south. The action of these two faults in conjunction with the north south compression of the San Andreas tectonic plate is pushing up the San Gabriel Mountains. This uplifting combined with erosion has helped form the alluvial plain. According to the geotechnical report prepared by Robert D. Cousineau, Consulting Geotechnical Engineer (2004), the site is underlain by silty clay colluvial soil and bedrock. The report concluded that these materials will support the proposed project.

According to State of California Seismic Hazard Zone Map (Pasadena Quadrangle) and the Seismic Hazards Map (Plate 1-3) and Slope Instability Map (Plate 2-4 of the adopted 2002 Safety Element of the General Plan) the project is located where slopes have low slope instability. In addition, the Seismic Hazard map and the referenced geotechnical engineering report show this project to not be in an area where there is geologic evidence of past landslides.

- d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?* ()

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

WHY? According to the 2002 adopted Safety Element of the City's General Plan the project site is underlain by alluvial material from the San Gabriel Mountains. This soil consists primarily of sand and gravel and is in the low to moderate range for expansion potential.

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ()*

WHY? The City of Pasadena allows septic tanks to be used for only specified areas in the hillsides per regulations found in Ordinances 3881 and 4170 and codified in Pasadena Municipal Code. The proposed project is not in any of these specified areas. New construction must be hooked up to a sewer if it is available. If the sewer is at a higher elevation than the project, the sewage is to be pumped up to the sewer.

10. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

- a. *Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? ()*

WHY? The project does not involve the use or storage of hazardous substances other than the small amounts of pesticides, fertilizers and cleaning agents required for normal maintenance of the structure and landscaping. The project must adhere to applicable zoning and fire regulations regarding the use and storage of any hazardous substances. Further there is no evidence that the site has been used for underground storage of hazardous materials.

- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ()*

WHY? The project does not involve hazardous materials therefore there is no significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions, which could release hazardous material.

- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ()*

WHY? The project does not emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste and is not within one-quarter mile of an existing or proposed school?

- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ()*

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

WHY? The project site is not located on the State of California Hazardous Waste and Substances Sites List of sites published by California Environmental Protection Agency (CAL/EPA).

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? ()

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

WHY? The project site is not within an airport land use plan or within two miles of a public airport or public use airport. As of July 2005 the nearest public use airport is in Burbank, which is operated by a Joint Powers Authority with representatives from the Cities of Burbank, Glendale and Pasadena. Helipads are required on many high-rise buildings for evacuating occupants in case of emergency. The police heliport is located at the eastern edge of the Arroyo Seco near the City's border with Altadena. This heliport is not open for public use.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ()

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

WHY? The project site is not within the vicinity of a private airstrip. Presently, there are no private airstrips within the City of Pasadena.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ()

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

WHY? The project is located within an urban area and will not change the logistical nature of the area. To ensure compliance with zoning, building and fire codes the applicant is required to submit appropriate plans for plan review prior to the issuance of a building permit. Adherence to these requirements ensures that the project will not have a significant impact on emergency response and evacuation plans.

The City of Pasadena maintains a citywide emergency response plan, which goes into effect at the onset of a major disaster (e.g., a major earthquake). The Fire Marshall maintains the disaster plan. In case of a disaster, the Fire Marshall is responsible for implementing the plan, and the Pasadena Police Department devises evacuation routes based on the specific circumstance of the emergency.

The City has pre-planned evacuation routes for dam inundation areas associated with Devil's Gate Dam, Eaton Wash, and the Jones Reservoir. According to the adopted 2002 Safety Element of the General Plan, the project site is not within any of these dam inundation areas.

There are no areas in the City designated as eligible for flood insurance by the Federal Emergency Management Administration (FEMA).

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact
--------------------------------------	--	------------------------------------	-----------

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ()

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

WHY? According to the 2002 adopted Safety Element (plates 4-1 and 4-2) the project site is in a very high fire hazard area. The project is in a developed hillside area; however the subject site is presently vacant and has significant vegetation in some areas. The proposed development will clear any vegetation that is presently determined to be a fire hazard. Further, the structure (including roof materials) must meet all Building and Fire Department regulations and all landscaping must be reviewed and approved by the Zoning Administrator and the Fire Department. As a result, the new structure and landscaping will not pose a significant fire hazard.

11. HYDROLOGY AND WATER QUALITY. Would the project:

a. Violate any water quality standards or waste discharge requirements? ()

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

WHY? The project will not violate any water quality standards or waste discharge requirements. The project must comply with federal Water Pollution Control Act (Clean Water Act) National Pollution Disposal Elimination System (NPDES) permit requirements and the City's Storm Water and Urban Runoff Control Regulations.

There are no bodies of water near the project, whose surface waters would receive any discharge from the project. However, if there is water runoff from the site, this runoff may be discharged via Los Angeles County Flood Control Channels into the San Pedro Bay. The project is not located near any significant body of fresh or marine water.

Pasadena has adopted the Standard Urban Storm Water Mitigation Plan (SUSMP) to help implement the National Pollutant Discharge Elimination System (NPDES). The proposed project is required to submit a plan for implementing Best Management Practices. This plan will be reviewed by and approved by the Building Department.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? ()

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

WHY? The project will use the existing water supply system provided by the Pasadena Department of Water and Power and the existing sewer provided by the Public Works Department. Therefore, there will be no direct additions or withdrawals from the ground waters. Moreover there is no known aquifer condition in the project site or in the surrounding area, which could be intercepted by excavation for the project.