Attachment 5

CITY OF PASADENA
PLANNING DIVISION
HALE BUILDING
175 NORTH GARFIELD AVENUE
PASADENA, CA 91109-7215

REVISED DRAFT
11/15/06

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: **Mayfield Senior School Master Development Plan**

2. Lead Agency Name and Address: City of Pasadena, Planning and Development Department
   175 North Garfield Avenue
   Pasadena, CA 91101

3. Contact Person and Phone Number: LAURA DAHL
   Phone# (626)744-6767

4. Project Location: 500 Bellefontaine Street, Pasadena, CA 91105

5. Project Sponsor's Name and Address: Mayfield Senior School
   c/o Rita McBride, Head of School
   500 Bellefontaine Street
   Pasadena, CA 91105

6. General Plan Designation: 500 Bellefontaine Street: Institutional, and
   465 Orange Grove Circle: Low-Density Residential

7. Zoning: PS (Public, Semi-Public) and
   RS4-HD (Single-Family Residential, 4 units per acre, Hillside District Overlay)

8. Description of the Project: A new Master Development Plan (MDP) for the Mayfield Senior School, an existing private school (9th through 12th grade) for girls located in the southwest part of the City of Pasadena. The school's original MDP was adopted in November 1986 and has been extended twice: first for an additional five years until November 2001, and then for an additional two years until November 2003.

   The projects included in the original MDP have been completed to date. The proposed new MDP includes a proposal to increase the current student enrollment size of 300 by ten percent. The number of faculty and staff will remain at 68. The various components of the proposed MDP are as follows:

   8.1 **Strub Hall (Eagle Mansion) Renovation** – The main structure in the school campus (built in 1919) consists of four stories and has a total floor area of 39,647 square feet. The central, historic areas of the building on the second and third floors (7,723 square feet) will be preserved. The existing education spaces on the first, second, third and basement (24,834 square feet) will be renovated to state of the art education spaces. The existing fourth floor (attic level 3,340 square feet) will be converted from residential use to educational use and renovated. The fourth

floor will be limited to office use. A new elevator will be added on the west side of the building in a location which is least visible from neighboring properties.

8.2 **New Educational Center** – A new 34,872-square-foot, two-story plus basement building for Fine Arts, Music and Multi-purpose in the location of the existing Carriage House and 465 Orange Grove Circle residence.

8.3 **Demolition of Site Structures** – The two-story, 3,372-square-foot building called Carriage House located on the west side of the campus is in poor condition and is not easily adapted for classrooms and will be removed. The house on 465 Orange Grove Circle will also be removed during Phase III. The area covered by these two buildings will be used for the new Educational Center.

8.4 **Access off Grand Avenue** – The driveway off Grand Avenue will be made into a one-way entrance into the campus. The existing historic gate will remain. A new exit drive with a simple gate will be added just north of the historic gate. The existing campus road will be widened to accommodate two-way traffic and will lead to an expanded parking lot on the north side of the campus (existing 51 spaces to increase to 68 spaces). An existing lower surface parking lot (28 spaces) will remain. The resulting total number of spaces throughout the campus will be 127 spaces, a reduction by 15 spaces from the current 141 existing spaces.

8.5 **New Maintenance Building** – A new one-story 1,000-square-foot structure for maintenance and storage on the northeast corner of the campus, with two parking spaces adjacent.

8.6 **Addition of 465 Orange Circle Drive to the campus** - An adjacent parcel (465 Orange Grove Circle) located on the southeast corner of the campus will be incorporated to the Mayfield campus. This parcel will require a zone change from RS4-HD (Single-Family Residential, 4 units per acre, with Hillside District Overlay) to PS (Public, Semi-Public) and a General Plan Amendment from Low Density Residential to Institutional. The parcel will be used as a residential rental or temporary classrooms and offices during Phase I and II of the Master Development Plan. The incorporation of this parcel will allow the new Educational Center to be built during Phase III.

8.7 **New Driveway Entrance at 500 Bellefontaine** - The existing vehicular circulation on campus will be re-organized to provide for drop-off and pick-up from Bellefontaine and two-way traffic in this part of the campus. A new entrance gate will be located on Bellefontaine Street just west of the existing gate. The existing historic gate will become the exit gate. A circular drive for drop-off and pick-up will be located in this area, along with guest and administration parking spaces.

8.8 **Existing Pergola** – Relocate the existing pergola to the south side of the main court just east of Strub Hall.

9. Surrounding Land Uses and Setting: The Mayfield Senior School campus is surrounded by residential uses as described below:
    - North – single-family residences (RS4 and RS4-HD zoning districts) and
    - East – single-family residences (RS4 and RS4-HD zoning districts) and a few multi-family (condominium and apartment) developments (RM 16-1 zoning district)
    - South – single-family residences (RS4 and RS4-HD zoning districts)
    - West – single-family residences (RS4) and the Brookside Park (OS, Open Space district)

10. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement):

    - The City Council, with recommendation from the lanning Commission, must review and approve the proposed new Master Development Plan, the zone change, and the amendment

to the General Plan land use designation for the additional parcel at the southeast corner of the campus, and adopt the environmental determination.

- The Urban Forestry Commission will review the proposed removal of one public (street) tree, a 7-inch diameter Camphor, prior to its removal.
- Historic Preservation staff will review the and approve a Certificate of Appropriateness prior to demolition of the Carriage House.
- Design staff will review new buildings over 5,000 square feet. New buildings over 25,000 square feet will be reviewed by the Design Commission: New Educational Center building (34,872 sf).
- Building permits will be issued by the Planning and Development Department after the required plan review process.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

	Aesthetics		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	X	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.	
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.	X
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.	

Prepared By/Date

Reviewed By/Date

ANNABELLA ATENDIDO
Printed Name

JENNIFER PAIGE-SAEKI
Printed Name

Negative Declaration adopted on: _____

Adoption attested to by: _____
Printed Name/ Signature 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: October 3, 2006
Department requiring checklist: Planning and Development Department
Planner assigned: Annabella Atendido

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? ( )*

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WHY? The project site is in an area, which has views of the Lower Arroyo to the west. The school campus generally slopes down towards the west. Strub Hall is a four-story building located in the far south of the campus, and is the primary or dominant structure among six existing buildings in the campus. The other buildings, e.g., Pike Auditorium, Library and Science building, a gymnasium, Carriage House are all two stories in height, and the recently acquired building at 465 Orange Grove Circle is single-story. The surrounding area has structures ranging from one to two stories in height. There are also trees, which to some extent obstruct the scenic view towards the Lower Arroyo to the west. However, the proposed future new buildings are limited to one and two stories and meet the height and mass limitations of the Zoning Code.

The entire Master Development Plan will be subject to the Design Commission's advisory review. The Design Commission's comments will be forwarded to the Planning Commission. One of the four new buildings that are proposed in the Master Development Plan are subject to Design Commission review: a new Educational Center building with two stories and a basement (34,872 square feet gross floor area). Based on their location and heights, there is no potential obstruction of any scenic vista or view.

The project does not *substantially* impact any scenic vista including those defined in the 1994 final EIR for the Land Use and Mobility Elements of the City of Pasadena General Plan.

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

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WHY? State Scenic Highway: The project site is located to the west of South Orange Grove Boulevard, which is unofficially a Los Angeles County recommended scenic highway, according to the *Conservation Element of the General Plan, page IV-13.* However, Orange Grove Boulevard is at a higher elevation than the project site. The existing and proposed new buildings on the project site will not have any substantial impact on South Orange Grove Boulevard.

The proposed MDP 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.

Trees: The project site is surrounded by residential districts with Hillside District Overlay zoning to the north, east and southeast. The project site consists of mild differences in grade, sloping down westward. An inventory of all existing trees within the project site and all the street (public) trees shows that there are a total of 14 public trees and 238 private trees on the project site. All public trees but one will be retained. A 7-inch diameter camphor tree will need to be removed in order to install a new entrance gate and driveway at the Bellefontaine frontage. Approval by the Urban Forestry Commission will be required prior to its removal.

At the time of inventory, there are 47 Native species, 20 Protected species and 171 Non-protected trees (total of 238 private trees). Among the 238 private trees, 35 are proposed to be removed; two of these 35 are of protected specimen specie: one 15-foot tall Senegal date palm (Phoenix reclinata), which is located in the 465 Orange Grove Circle property, and one 46-foot tall California Fan palm tree located at the east side of Strub Hall. The other 33 trees proposed for removal are either non-protected species or are protected species that have not reached their protected sizes. They are located throughout the 7.75-acre school campus. The proposed removal of each tree shall be evaluated according to the criteria provided by the City of Pasadena's Tree Protection Ordinance. A comprehensive campus-wide landscape plan is part of the project application in concert with the reconfiguration of the driveways. The Phase III site plan indicates that there will be approximately 140 new trees in the campus. The Tree Protection Ordinance allows removal of a protected tree if the proposed project includes a landscape plan that will result in a tree canopy coverage of greater significance than the tree canopy coverage being removed, within a reasonable time after completion of the project. Furthermore, a condition of approval requiring tree protection plans for all 47 Native and 18 protected Specimen trees that will remain will be required for the proposed MDP.

Moreover, the applicant must submit landscape plans for review and approval by the Zoning Administrator, the Design and Historic Preservation staff and the Water Division of the Water and Power Department, and grading plans to the Building Official for review and approval prior to the issuance of any building permit. Based on review of the landscape and grading plans, and the required compliance with the Tree Protection Ordinance, there will be no significant aesthetic impacts related to tree removal.

Landmark District designation: The Bellefontaine frontage of the project site is part of the designated Bellefontaine Neighborhood Landmark District. The Landmark District was designated through Ordinance #7039, which was adopted on May 1, 2006. This block of Bellefontaine Street and Bellefontaine Place has excellent examples of early- and mid-Twentieth Century residential architecture. Any exterior alterations and new construction visible from the street, as well as demolitions and relocations is subject to a design review process.

Components of the proposed MDP that will occur in this part of the campus include a new driveway entrance at 500 Bellefontaine Street. The existing historic gate at 500 Bellefontaine will remain and will become a one-way vehicle exit while a new entrance gate and driveway will be located just west of the existing gate.

Additional changes relating to this component of the MDP include a new guardhouse, a drop-off and pick-up zone, administrative and guest parking, which will be located in the interior of the campus and will not be visible from the street. Students and staff who intend to park within the campus will access the parking lots using the existing Grand Avenue gate, where a new exit driveway will be constructed.

The project site does have structures that are eligible but have not been designated as historic resources. The 1986 Master Development Plan states that the following are "historic structures", i.e., eligible but not so

far designated as historic resources: Strub Hall, the pergola to the east of the Strub Hall, the Carriage House and gateways.

The centerpiece of the school campus is Strub Hall, located towards the south property line. It is a four-story building with a total floor area of 39,647 square feet, was built in 1919 and also known as "Eagle Mansion" and "Marshall Estate," names of former owners. This mansion is an excellent example of Italian Renaissance design and appears to be eligible for listing in the National Register under Criterion C in the context of Period Revival architecture. It now contains classrooms and will be preserved, and portions will be renovated according to the proposal. The proposed renovation of Strub Hall is interior only, and will not affect the exterior of the building. The proposed interior renovations are not considered significant because of earlier interior modification when the building's use was transformed from residential to educational use at the time it was donated to the Mayfield School in 1950.

The Carriage House was associated with the property at 891 South Orange Grove Boulevard, and was probably built prior to 1900 at the same time the principal building was built. Both buildings appear on the 1903 Sanborn Maps. It is approximately 3,000 square feet in size and is proposed to be demolished. Part of a new two-story educational center will be built on this site. The main house at this address was demolished after it was sold in 1972, and has been replaced by a condominium development. Although the house at 891 S. Orange Grove was as large as the Eagle Mansion, there is no record of the building permit for this address. The first known owner (1900 Directory) was Clara Burdette, who was a leader in the women's movement and founded several women's organizations in the state. From the mid-1920's until his death in 1941, the owner was Thomas Warner, a leading industrialist from Indiana, whose companies built automobiles, auto parts, and engines. Today his company is part of Borg-Warner, an engine builder. (See attached documents on Burdette and Warner.) This building was the carriage house and not the primary residence for Burdette and Warner. Therefore, staff believes that its association with these individuals is not strong enough to satisfy the criteria for local landmark designation or listing in the National Register.

The design of the Carriage House is Mission Revival. Auto entries are provided on the east side of the building. The northern half of the ground floor and the full second floor may have originally been employee residences. The Carriage House is in fair structural condition, according to the structural engineer's report and could be upgraded, but does not suit the school's needs. Based on our information, staff believes the building is not eligible as a local landmark or for listing in the National Register.

The historic gates on Bellefontaine Street and Grand Avenue appear to have historic value, and the current Mayfield entry gates were identified in the 1986 Mayfield Master Plan as historic structures. These gates contribute to the character of the neighborhood, and the school has stated that they will be retained.

The proposed relocation of the pergola will not be a significant an impact because the Design Commission recommended a condition of approval of the MDP that a restoration architect shall participate in all aspects of the relocation of the existing pergola from the eastern side of the campus to the south side.

The Historic Preservation Commission provided advisory comments on the proposed MDP, especially in regards to demolition of the Carriage House and impacts of other proposals on historic buildings on the campus. The Commission recommended a condition of approval that any exterior rehabilitation work on the Eagle Mansion (Strub Hall) be done in accordance with the Secretary of the Interior's Standards and Guidelines for Rehabilitation of Historic Structures. The project, however, indicates no exterior renovation on the Eagle Mansion. Assuming no major exterior alterations will be proposed, this review would be a staff function at the time of plan check. The review procedure will be specified in the Master Development Plan.

Moreover, in its October 9, 2006 meeting, the Design Commission provided advisory comments to the City Council on the Master Development Plan. Among the recommended conditions of approval is that new construction shall be subject to design review in accordance with the city-wide thresholds in the municipal

code (construction over 5,000 square feet reviewed by the Planning Director and construction over 25,0000 square feet reviewed by the Design Commission. The new 34,872-square-foot Educational Center would therefore be reviewed by the Commission, while the smaller new buildings (e.g., new 1,000-square-foot Maintenance Building and two new guard houses) will be subject to staff review.

The applicable design guidelines are the City-wide Design Principles in the General Plan and the Secretary of the Interior's Standards and Guidelines for Rehabilitation. Although not design guidelines, the Purposes of Design Review in the Zoning Code also provide measures for reviewing the project. Furthermore, the 1986 Master Plan stated that all new buildings would have references to Italian Renaissance architectural style of Strub Hall/Eagle Mansion. The continuation or discontinuation of this thematic consistency of design should be determined by the applicant and specified in the Master Development Plan. The Design Commission will review any proposed changes to building style and this will be part of recommendations to the Planning Commission and City Council.

Therefore, implementation of the proposed MDP will not result in a significant impact to aesthetic resources or the visual character or quality of the site and surroundings. In addition, the project will b subject to review and conditions of approval, if any, by the Historic Preservation Commission, the Design Commission, and by the Design and Historic Preservation staff.

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

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WHY? See response to 3.b above.

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

☐	☐	X	☐

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. Height and direction of any outdoor lighting and the screening of mechanical equipment must conform to Zoning Code requirements.

The Department of Public Works is requiring the applicant to install a maximum of five new street lights to upgrade the existing street lights on or near the frontage of the project site on Grand Avenue in order to improve pedestrian and traffic safety. The project site is located in an older, developed residential urban area with streetlights in place. These lights are not sources of glare and are an aide to public safety.

Exterior and interior lights and reflective building materials may be potential sources of light and glare. Use of reflective materials shall conform to Zoning Code requirements and to evaluations of exterior cladding and materials through the City's Design Review process. However, most activity occurs during daylight hours; thus interior lights do not shine onto surrounding properties. The residential uses to the west, north, south and east may be affected by glare from the reflective building materials. The design of this project, including its finish, colors, and materials, will be reviewed for approval through the Design Review process, and any potential impacts will be reduced to a less than significant level.

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? ( )*

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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? ( )*

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WHY? The City of Pasadena has no land zoned for agricultural use other than commercial growing areas. Commercial Growing Area/Grounds is permitted by right in the CG (General Commercial), CL (Limited Commercial) and IG (General Industrial) zones and conditionally permitted in the RS (Residential, Single-Family), and RM (Residential Multi-Family) districts. The use is also permitted in certain specific plan areas.

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? ( )*

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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? ( )*

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WHY? The City of Pasadena is within the South Coast Air Basin (SCAB), which is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the Pacific Ocean to the south and west. The air quality in the SCAB is managed by the South Coast Air Quality Management District (SCAQMD).

The SCAB has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. Because of the violations of the California Ambient Air Quality Standards (CAAQS), the California Clean Air Act requires triennial preparation of an Air Quality Management Plan (AQMP). The AQMP analyzes air quality on a regional level and identifies region-wide attenuation methods to achieve the air quality standards. These region-wide attenuation methods include regulations for stationary-source polluters; facilitation of new transportation technologies, such as low-

emission vehicles; and capital improvements, such as park-and-ride facilities and public transit improvements.

The most recently adopted plan is the 2003 AQMP, adopted on August 1, 2003. This plan is the South Coast Air Basin's portion of the State Implementation Plan (SIP). This plan is designed to achieve the 5 percent annual reduction goal of the California Clean Air Act.

The SCAQMD understands that southern California is growing. As such, the AQMP accommodates population growth and transportation projections based on the predictions made by the Southern California Association of Governments (SCAG). Thus, projects that are consistent with employment and population forecasts are consistent with the AQMD.

In addition to the region-wide AQMP, the City of Pasadena participates in a sub-regional air quality plan – the West San Gabriel Valley Air Quality Plan. This plan, prepared in 1992, is intended to be a guide for the 16 participating cities, and identifies methods of improving air quality while accommodating expected growth.

The proposed project is consistent with the Zoning and General Plan Land Use designations for the site. As a result, the project is consistent with the growth expectations for the region. The proposed project is therefore consistent with the AQMP and the West San Gabriel Valley Air Quality Plan, and would have no associated impacts.

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

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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 is well below the South Coast Air Quality Management District's (SCAQMD) land use, construction, and mobile emission thresholds for significant air quality impacts, according to the 1993 updated SCAQMD's CEQA Air Quality Handbook. Therefore, the proposed project would not violate and air quality standard or substantially contribute to an existing or projected air quality violation, and would have no related significant impacts.

The traffic study prepared for this project states that the project currently generates 1,338 vehicle trips per day based on the current enrollment of 300 students. The MDP proposes to increase enrollment by 10% (30 students) over the life of the MDP. The trips to be generated is estimated to increase by the same 10%, projected to be 1,472 trips per day. This will result in less than significant impacts.

CONSTRUCTION EMISSIONS: According to the 1993 updated SCAQMD's CEQA Air Quality Handbook Table 9-1 project emissions during construction will not exceed the district threshold for construction emissions.

MOBILE EMISSIONS: Using the 1993 updated SCAQMD's CEQA Air Quality Handbook Table 9-7 for Estimating Mobile, Energy and PM10 Emissions, the project's mobile emissions will not exceed the district's threshold for air emissions.

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)? ( )*

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WHY? The City of Pasadena is within the South Coast Air Basin (SCAB). This basin is a non-attainment area for Ozone (O_3), Fine Particulate Matter ($PM_{2.5}$), Respirable Particulate Matter (PM_{10}), and Carbon Monoxide (CO), and is in a maintenance area for Nitrogen Dioxide (NO_2). Projects that contribute to a significant cumulative increase in O_3, $PM_{2.5}$, PM_{10}, CO, or NO_2 will be considered to be significant and require the consideration of mitigation measures.

As shown is Section 5.b, the proposed project will not exceed the SCAQMD's Thresholds for Significance. The SCQAMD established these thresholds in consideration of cumulative air pollution in the SCAB. Thus, projects that do not exceed the SCAQMD's thresholds do not significantly contribute to cumulative air quality impacts. Since the proposed project would not exceed the SCAQMD's thresholds, the project would not result in a cumulatively considerable net increase of any criteria pollutant, and the project would have no related significant impacts.

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

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WHY? According to Figure 5-1 and Table 5-1 of the 1993 updated SCAQMD's CEQA Air Quality Handbook the project (school) is located near sensitive receptors (residences), but is not likely to generate any significant toxic air emissions.

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

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WHY? This type of use (school) is not shown on the 1993 updated SCAQMD's CEQA Air Quality Handbook Figure 5-5 "Land Uses Associated with Odor Complaints."

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 project is in a developed urban area, and is within a Public, Semi-Public (PS) zoning district, and is outside any natural habitat area in the City of Pasadena. There are no known unique, rare or endangered plant or animal species or habitats on or near the site. At the same time, the project site is adjacent to a Hillside Development Overlay Zoning District partially to the north, east and southeast (RS4-HD). However, the development projects within the scope of the proposed Master Development Plan will not remove or disturb any sensitive vegetation on the site as to impact any habitat that may exist in the surrounding Hillside Development Overlay District.

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? ( )*

☐ ☐ ☐ ☒

WHY? There are no designated natural communities on or near the project site; however, the Final Environmental Impact Report for the adopted 1994 Land Use and Mobility Elements maps the natural communities with in the City's boundaries. The project is not located near any of these communities. While the project site's western boundary is about a hundred feet from the eastern edge of the Lower Arroyo Seco area, it is located in a developed urban area. There are no known existing riparian habitat or other sensitive natural plant communities on or near the site.

The Zoning Code Chapter 17.44 requires that all projects shall provide and maintain landscaping according to the purposes of said chapter, ensuring the protection of landmark, native and specimen trees to the extent specified by the City Tree Protection Ordinance. Figure 4.8-1 taken from the FEIR of the 1994 General Plan Land Use and Mobility Elements shows the remaining non-urbanized native plant communities in the city: Eaton Canyon, Arroyo Seco and the undeveloped hillsides along the western boundary of Pasadena adjacent to Glendale. These areas may contain representative sub areas of Coastal Sage Scrub, Chaparral, Riparian, Coastal Oak Woodland and/or Annual Grassland plant communities. The project site is located east of, but outside of the lower Arroyo Seco area. Thus, it is not likely that any Riparian plant communities occur in project site. The project site is a developed site and no impacts will result.

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? NON-HILLSIDE AREAS: While the project site's western boundary is only approximately a hundred feet from the eastern edge of the Lower Arroyo, it is located in a developed urban area. There is no known naturally occurring wetland habitat within or near the project site.

See also the response to 3.b

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? NON-HILLSIDE AREAS: While the project site's western boundary is only about a hundred feet from the eastern edge of the Lower Arroyo, the project site is located in a developed urban area and does not involve the dispersal of wildlife nor will it result in a barrier to migration or movement.

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

☐ ☐ ☐ ☑

WHY? The Master Development Plan site (including 465 Orange Circle property) contains a total of 252 trees. Of this total, 81 trees (14 public, 47 Native and 20 Specimen) are protected by Ordinance No. 6896 "City Trees and Tree Protection Ordinance" as detailed in the enclosed table titled "Mayfield Senior School Tree Inventory". There are 171 other private trees that are not protected by the Tree Protection Ordinance.

The proposed Master Development Plan includes removal of one public (street) tree, a 7-inch diameter Camphor is proposed to be removed, and will need approval from the Urban Forestry Commission prior to its removal.

The proposed MDP also includes the removal of two private protected Specimen trees: one 46-foot tall California fan Palm tree (Washingtonia filifera, tree #125, located east of Strub Hall's north wing) and one 15-foot tall Senegal Date Palm (Phoenix reclinata, tree #262, located in the 465 Orange Grove Circle property). The applicant will be required to relocate these trees elsewhere on the campus.

The application includes removal of 33 other trees, which are not protected by the Tree Protection Ordinance, but nonetheless, will be replaced by new trees and landscaping that will exceed the tree canopy being removed. A comprehensive campus-wide landscape plan is part of the project application in concert with the reconfiguration of the driveways. The Phase II site plan indicates that there will be approximately 140 new trees in the campus. The Tree Protection Ordinance allows removal of a protected tree if the proposed project includes a landscape design that will result in a tree canopy coverage of greater significance than that being removed within all 47 Native and 18 protected Specimen trees that will remain will be required for the proposed Master Development Plan.

Based on the protection of existing trees and a new landscape plan resulting in a greater tree canopy, there will be no conflict with the city's tree preservation policy.

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 Lower Arroyo Seco Master Plan is an adopted plan by the City Council. The 150-acre Lower Arroyo Seco is designated as open space. The Lower Arroyo Seco Master Plan consists of about 20 major projects, which involve improvement, enhancement and restoration of certain facilities or natural features of the area. None of these projects, however, are connected to or in any way affected by the project.

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? The 1986 Master Development Plan identified the following as "historic structures": Strub Hall (also known as Eagle Mansion and Marshall Estate); the pergola to the east of Strub Hall; the Carriage House; and gateways. The proposed Master Development Plan proposes to demolish the Carriage House. These buildings and structures have been reviewed by Design and Historic Preservation staff resulting in the following analysis and determinations:

The Strub Hall is the centerpiece of the school campus. Built in 1919, it is an excellent example of Italian Renaissance design and appears to be eligible for listing in the National Register and/or as a local landmark. It is currently used for classrooms and is proposed for extensive interior renovation according to the proposed MDP.

According to the proposed MDP, the structures to be demolished are: a garage, a guard shack and the Carriage House. The garage is a simple utilitarian three-car garage that appears to have been built in the 1920's and expanded since 1960. The guard shack is a modern pre-fabricated building. These two structures have no significance.

The Carriage House was probably built prior to 1900, the same time as the principal structure that it was associated with (address at 891 South Orange Grove Boulevard). It is approximately 3,000 square feet in size and is proposed to be demolished for a new Educational Center building. The City has not designated the Carriage House or any other structure on the site as a local landmark.

The Carriage House was not originally associated with the Eagle Mansion. The 1903 Sanborn Map shows that it was located at the rear of the 891 South Orange Grove property. The main house at this address was demolished at some point, and was developed as a 48-unit condominium project in 1973. Although the house at 891 South Orange Grove was as large as the Eagle Mansion, there is no record of the building permit for this address. The first known owner (1900 City Directory) was Clara Burdette, who was a leader in the women's movement and founded several women's organizations in the state. From the mid-1920's until his death in 1941, the owner was Thomas Warner, a leading industrialist from Indiana, whose companies built automobiles, auto parts, and engines. Today his company is part of Borg-Warner, an engine builder. This building was the carriage house and not the primary residence for Burdette and Warner. Therefore, its association with these individuals does not meet the criteria for local landmark designation or listing in the National Register.

The design of the Carriage House is Mission Revival. Auto entries are provided on the east side of the building. The northern half of the ground floor and the full second floor may have originally been employee residences. The Carriage House is in fair condition, according to the structural engineer's report, and could be upgraded to suit the school's needs. Based on information compiled by the Design and Historic Preservation staff, the building is not eligible as a local landmark or for listing in the National Register.

The historic gates along Bellefontaine Street (north frontage of school campus) and Grand Avenue (south frontage) appear to have historic value. The current Mayfield entry gates were identified in the 1986 Mayfield Master Plan as historic structures. The school wishes to preserve these gates, as they contribute to the character of the neighborhood.

The MDP proposes to relocate the existing pergola from the east side of the campus (adjacent to the Carriage House) to the south side of the campus (adjacent to Strub Hall). In its October 9, 2006 advisory review of the proposed MDP, the Design Commission forwarded to the Planning Commission and to the City Council its recommended conditions of approval, including one that states: A restoration architect shall participate in all aspsects of the relocation of the existing pergola from the east side of the campus to the south side.

It should be noted that properties with frontages on Bellefontaine Street between Grand Avenue and Orange Grove Boulevard have been designated as the Bellefontaine Landmark Overlay District in May 2006 (Ordinance #7039). This block contains excellent examples of early and mid-Twentieth Century residential architecture. The northerly portion of Mayfield Senior School campus, which consists of the entrance gate and lawn area is part of this landmark district.

The landmark designation requires that all future construction, exterior alterations, relocations or demolitions initiated by application for a building permit, land use entitlement or building plan check are subject to approval of a Certificate of Appropriateness prior to issuance of any building permits according to

the guidelines set forth in the "Design Guidelines for Historic Districts". This process is open to public review and involves environmental impact review (e.g., Aesthetics, Cultural Resources, etc.).

In summary, the only proposed changes to a historic resource are the interior renovations at Strub Hall. The historic gates along Bellefontaine Street and Grand Avenue will remain and the pergola adjacent to Strub all will also remain on-site. Therefore, the project will result in less than significant impacts to historic resources.

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 proposed for demolition on the project site, which are of significant archaeological value to the City.

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 proposed Master Development Plan (MDP) includes construction of a new 34,672-square-foot Educational Center and other minor facilities, and the removal of two buildings, which will result in a net increase of building floor area of 28,943 square feet. 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. The proposed MDP involves construction of new buildings in the school campus resulting in a net new floor area of 28,943 square feet over a period of ten years from date of approval. Construction of the project will result in a short-term insignificant consumption of oil-based energy products. However, the additional amount of resources used will not cause a significant reduction in available supplies.

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 (2,761 cubic feet per day). 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 by 389 net kilowatt-hours of electrical energy per day. This increased consumption will be reduced to an insignificant level by meeting the above referenced energy standards. 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. The energy conservation measures will be prepared by the developer and shown on building plans. 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 a net increase of approximately 2,894 gallons per day in water consumption. The current use consumes approximately 8,262 gallons of water per day. However, this impact will be mitigated during drought periods by the applicant adhering to 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 Code Inspector prior to issuance of a Certificate of Occupancy. The Water Division has reviewed the proposed MDP during the Predevelopment Plan Review (PPR) process and indicated that water service can be served to this project. Therefore, impacts will be less than significant.

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

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

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 south west of the City, the Eagle Rock Fault is considered potentially active. The proposed project is within a half mile south of the Eagle Rock Fault and its Fault Hazard Management Zone. The project site is also within one mile north of the Raymond (Hill) Fault, approximately five miles south of the Sierra Madre Fault, and more than three miles south of a potentially active strand of the Sierra Madre Fault.

The 2002 Safety Element in program S1-1 requires geological studies, such as fault trenching, of the defined traces of the Sierra Madres and the Raymond fault traces shown in Plate P-1 for projects of 5,000 square feet or more if located within 50 feet in any direction of these traces. The project site is more than 50 feet distance from any direction of these traces. Thus, geological studies for the proposed new 34,872-square-foot Educational Center will not be required.

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 proposed new structures 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.

The proposed MDP includes renovation of Strub Hall (Eagle Mansion), built in 1919. Strub Hall is a large three-story structure with a partial fourth level that was used as a residence and is now proposed to be used as classrooms and offices. The structural evaluation report submitted with the MDP application indicates that the structure appears to be very well maintained with no evidence of settlement problems or damage from previous seismic events. The report states that a complete Los Angeles City Building Code Division 88 seismic strengthening analysis and drawings were prepared and executed for the structure. Division 88 prescribes requirements that mitigate seismic hazards of unreinforced masonry bearing wall buildings. The bearing walls are not unreinforced masonry but unreinforced hollow clay tile bearing walls, which tend to be more brittle than unreinforced masonry. It appears that the Division 88 seismic retrofit that was executed in 1987 is in general conformance with the intent of the seismic strengthening requirements of that code. The study concluded that the building is expected to perform adequately during moderate seismic events and provide for the life safety risk levels associated with the code. The study recommends that the following structural issues related to the proposed renovation be considered to enhance the building's structural longevity:

a. Infilling of some existing stair floor openings.

b. Creation of new floor and roof openings for stair and elevators; possibly locate elevator outside the building.
c. Relocation and removal of partitions.
d. Removal of second floor bridge from terrace to Convent Building.

The south wing was added to the mansion in 1954 to provide housing for the resident nuns. It is a three-story, flat-roofed structure with a stuccoed exterior. The height of the roof matches that of the cornice line of the mansion. The horizontal stringcourses between the first and second stories match those on the mansion. The wood framed casement windows on the first and second stories and the arched openings along the basement also match those of the mansion. The exterior walls are reinforced concrete, and the floors and roof are wood-framed construction. The building is reasonably well maintained. No evidence of settlement problems are apparent, nor any damage from previous seismic activity. This structure was not part of the Strub Hall seismic strengthening that was executed in 1987.

The auditorium was built in that same year (1954) and extends to the north. It is a one-story structure with a flat roof, stuccoed exterior and wood-framed casement windows and doors with divided lights. The auditorium functions as a free standing structure that is connected to the mansion by an arcaded corridor. Both additions are compatible with the mansion, but are distinguishable as new construction.

Based on the fact that the proposed project will comply with all applicable building and safety requirements, and the existing structure (Strub Hall) can meet current safety requirements, there will be no impacts related to seismic safety.

ii. Strong seismic ground shaking? ( )

☐ ☐ ☐ ☒

WHY? See 9.a.i.
Since 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? The 2002 adopted Safety Element of the General Plan Plate P-2 shows that the Lower Arroyo Seco area is within a Liquefaction Hazard Zone. The project site is located east of and just outside a portion of the Lower Arroyo Seco streambed area. The nearly 8.5-acre project site consists of gently rolling hills and is surrounded to the north, east and southeast by single-family residences. 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? ( )

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

WHY? According to the Summary of Hazards Map (I) (Plate P-1) of the adopted 2002 Safety Element of the General Plan, the project site is located outside and far from any Landslide Hazard Zone in the city, which consists mostly of the upper reaches of the Hahamongna Watershed at the foot of the Angeles National Forest. According to these same sources there is no 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)* The project includes the construction of a new two-story, 34,872-square-foot Educational Center building. At this point of the project review, exact cut and fill quantities relating to excavation and grading are not yet known. The proposed new Educational Center will occupy the site where the existing Carriage House and 465 Orange Grove Circle property are located, and both sites have been graded in the past. There are no subterranean components to the buildings and it is not likely that any significant additional grading and excavation will be necessary to construct the new building. The displacement of soil through cut and fill will be controlled by Appendix Chapter 33 of the 2001 California Building Code relating to grading and excavation therefore there will be no impact.

At its built-out state (Phase III), the total building footprint and paved areas (parking lots) will cover approximately 31.8% of the site as compared to the present use, which occupies 37.5% of the site. 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 HD Hillside Development Overlay District regulations, other applicable building regulations and standard construction techniques; therefore there will be no impact.

Standard practice states that should a detailed geotechnical and foundation investigation be required for planned structural facilities it should be performed by California licensed geologists and engineers and at a minimum contain the following information:

1. The characteristics of the soil materials below the construction site.
2. The most appropriate type of foundation for the proposed structure.
3. The static and dynamic design criteria for the recommended foundation type.
4. The estimated foundation settlement rate.
5. The necessary subgrade preparation for the foundation.
6. The lateral pressures for retaining walls.
7. The design slopes for cut and fill sections.
8. The suitability of on-site soils for use as backfill.

(Erosion) According to the Final Environmental Impact Report certified for the adoption of the 1994 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.

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

Although the project site is outside the Hillside Development Overlay district, it is surrounded on the north, east and southeast by residential districts located within the Hillside Development Overlay district (RS4-HD). Construction may temporarily expose the soil to wind and/or water erosion. This erosion will 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.

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. Some of the geologic units in the Pasadena area have fine-grained components that are moderately to highly expansive. These units are generally present in the southern San Rafael Hills (south of Colorado Boulevard) and in the southern part of the City, where fine-grained sequences within the alluvial fans are more likely to be present. These fine-grained units may not be present at the surface but may be exposed during grading.

The project site is several miles south of an identified Landslide Hazard Zone that cover most the Hahamongna Watershed area (at the far northwest reaches of the City's boundaries), and within a mile of a much smaller Landslide Hazard Zone along the south portion of the Arroyo Seco streambed. At the same time, the project site is located in close proximity to the east of the Lower Arroyo park area, which is identified in the 2002 Safety Element as one of several Liquefaction Hazard Zones in the City.

Depending upon the nature of the soil on the project site, a geological study may be necessary to determine if the soil is stable enough to support the proposed new buildings in the school campus without being graded and the soil compacted to specified standards per applicable codes. Requiring a soils or engineering survey for the proposed two-story 34,872-square-foot Educational Center will be determined at the time of plan review for Building Permits. Based on code-required review, there will be no impact.

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? ( )

☐ ☐ ☐ ☒

WHY? According to the 2002 adopted Safety Element of the City's General Plan, some of the geologic units in Pasadena area have fine-grained components that are moderately to highly expansive, and that these units are generally in the southern San Rafael Hills (south of Colorado Boulevard) and in the southern part of the City, where fine-grained sequences within the alluvial fans are more likely to be present. These fine-grained units may not be present at the surface but may be exposed during grading. Therefore, depending on the amount of grading that may be necessary for the proposed new Educational Center building (a two-story, 34,872-square-foot building), a 1,000-square-foot Maintenance building and two new guard houses (200 square feet) a soils or engineering survey may be required prior to issuance of building permits, in order to address any potential risk to life or property due to soil instability. Based on code-required review, there will be no impact.

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 City's Sewer Map indicates that the project site and surrounding residential properties are connected to the public sewer system, thus, there is no need to use any septic tanks or alternative wastewater disposal system. The proposed 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 school buildings 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 proposed MDP 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? ( )*

☐ ☐ ☐ ☑