FINAL

ENVIRONMENTAL IMPACT REPORT

VERONICA MEADOWS SPECIFIC PLAN

January 2005

City of Santa Barbara
Community Development Department
Planning Division

URS Corporation
130 Robin Hill Road, Suite 100
Santa Barbara, California 93117

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Appendix B Notice of Preparation and Letters of Comment
Appendix C Visual Simulations
Appendix D Comments on the Draft EIR
Appendix E Responses to Comments on the Draft EIR and at the Environmental Hearing
Appendix F Topical Responses and Additional Information Supporting Responses to Comments

Under Separate Cover (Volume II), available by request from the City:

Appendix H Geology Report by Geolith Consultants (Previously Appendix D)
Appendix I URS Corporation Geological Analysis (Previously Appendix E)
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EXECUTIVE SUMMARY

The City of Santa Barbara Community Development Department (City) has received an application for a residential development project and annexation in the Las Positas Valley, called the Veronica Meadows Specific Plan (Figure 1-1, Appendix A). The Environmental Impact Report (EIR) evaluates the environmental effects of the proposed project. The EIR identifies significant impacts of the project, as well as feasible mitigation measures and alternatives to avoid or reduce such impacts. Pursuant to the California Environmental Quality Act (CEQA), the City decision makers will use the information in the EIR during their consideration of the application, which will involve a public hearing. The EIR is also used to inform the public about the project and to facilitate public input.

1. PROJECT SUMMARY

The project site is located within the unincorporated area of the Las Positas Valley, between Arroyo Burro Creek (on the eastern boundary of site) and Campanil Hill (to the west). The current City/County jurisdictional boundary runs along the southern property line of the project area. The southern portion of the property is located in the Coastal Zone. The site is currently undeveloped, and access is taken from the end of Alan Road. Existing single-family development along Alan Road is located immediately south of the project site, and the Stone Creek Condominiums are to the north.

The project would involve annexation of approximately 50.5 acres from an unincorporated portion of Santa Barbara County. Approximately 35.7 acres would be dedicated open space and 14.8 acres would be developed for residential uses and public open space. Twenty four (24) residential lots would be created with two-story, single-family houses. The sizes of the houses would range from 1,800 to 4,500 square feet.

Site access to all but two lots would be provided via a concrete bridge over Arroyo Burro Creek that would intersect with Las Positas Road. This bridge would be constructed over a City-owned open space parcel along the creek. A two-way stop-controlled intersection would be constructed on Las Positas Road across from the entrance to Elings Park; a stop sign would not be placed on Las Positas Road. Access to the southern two lots on the property would occur from Alan Road.

The project includes a 100-foot buffer between the proposed residences and the top-of-bank of Arroyo Burro Creek, and a 50-foot buffer zone adjacent to the west side of the creek. A public pedestrian path is proposed within the 50-foot creek buffer area. It would provide access from Las Positas Road (and Elings Park) to Alan Road. Bicycle access would also be provided through the site using interior roads and a small length of a paved bike path.

The project also includes habitat restoration along both banks of Arroyo Burro Creek at, and adjacent to, the property. Much of the restoration would occur on a City-owned open space parcel, and would require City approval. Development of several lots would require stabilization of landslides on the hillsides above the lots.

The project also involves annexation of a 5.89-acre City-owned parcel, a portion of which would be used for the bridge to the project site, subject to City Council approval.

2. REQUIRED APPROVALS

The project requires a large number of discretionary approvals by both the Planning Commission and the City Council. Key approvals include a Coastal Development Permit, Lot Line Adjustment, Tentative Subdivision Map, annexation approval, specific plan approval, and amendments to the City General Plan and Local Coastal Plan. The Santa Barbara County Local Agency Formation Commission (LAFCO) must also approve annexation of the property to the City.

3. ENVIRONMENTAL REVIEW AND PUBLIC PARTICIPATION

The proposed project represents a discretionary action subject to the environmental review requirements of the California Environmental Quality Act (CEQA). The Community Development Department completed a CEQA Initial Study Environmental Checklist and determined that there was a potential for the project to cause significant environmental impacts. Therefore, an Environmental Impact Report (EIR) has been prepared to evaluate the potentially significant impacts of the project. A Notice of Preparation (NOP) was issued in September 2003 for a 30-day public review period. Public comments on the scope of the EIR were provided at the October 29, 2003 Planning Commission scoping hearing.

On September 22, 2004, a Notice of Availability was issued, announcing that the Draft EIR was available to the public and agencies for review and comment. A 45-day public review period was provided to receive comments, ending on November 5, 2004. A total of 33 letters of comments from public agencies, community organizations, and the general public were received. On October 21, 2004, the City Planning Commission conducted an environmental hearing on the Draft EIR to receive comments on the document.

The City has reviewed the comments on the Draft EIR and prepared responses to the comments. For some responses, the text of the EIR has been revised, as indicated by text <u>underlining</u>.

The Planning Commission will conduct a public hearing to consider certificating that the Final EIR meets the requirements of the California Environmental Quality Act (CEQA). The City will also conduct one or more subsequent public hearings to consider approval of the project.

4. SUMMARY OF IMPACTS

The proposed project would result in three significant unavoidable impacts (Class I) for which there are no feasible mitigation measures or alternatives to avoid these impacts while still meeting the project objectives:

- <u>Habitat Impacts of New Bridge</u>. The construction of the bridge over Arroyo Burro would permanently remove native and non-native riparian habitat at the location of the abutments, and would require removal of a large oak tree and sycamore tree. Tall dense riparian

woodland would not develop at this location with the bridge in place. The change in habitat could adversely affect wildlife movement due to the gap in vegetation cover at the bridge. In addition, wildlife movement would be hindered by the presence of the bridge abutments. In light of the narrow riparian corridor at this location and the close proximity of other human disturbances that affect wildlife, the overall impact of the bridge on riparian habitat and associated wildlife is considered significant and unmitigable. The EIR includes mitigation measures that would reduce the magnitude of this impact, but not avoid it.

- Contribution to Cumulative Traffic Impact on Local Intersections. The proposed project would add 5 to 21 trips to AM and/or PM peak hour trips at four local intersections. The additional trips, while small in magnitude, would contribute to a potentially significant cumulative impact from future projects on the operation of these intersections. A feasible mitigation measure requiring a fair share contribution of funds for capacity improvements at these intersections has been identified in the EIR, but may not fully mitigate the contribution of this project to the cumulative impact

- Construction Truck Noise on Alan Road. Construction traffic and haul trucks would use Alan Road to access the site during the initial phase of the project, while the bridge over Arroyo Burro is being constructed. Noise from haul trucks using Alan Road would increase the ambient sound levels in outdoor and indoor living areas of residences along the road, which would cause an inconvenience to residents during this temporary construction phase. The number of truck trips per day is estimated to be 30 to 40 round trips.

The proposed project would also result in various significant, but mitigable impacts (Class II), which are summarized below. Mitigation measures to avoid these impacts, or to reduce them to less than significant levels, are presented in the EIR. These impacts and the associated mitigation measures are described in more detail in Table ES-1.

Biological Resources

- Permanent loss of about 6.8 acres of mostly non-native habitats and seven oak trees due to the construction of residential lots and roads. [Note: The project also involves the restoration/enhancement of 6.8 acres or riparian habitat on and off the project site, and restoration of 3.8 acres of upland habitat]
- Loss of up to 7 coast live oak trees from the project site
- Disturbance and possible displacement of wildlife from the creek corridor due to construction activities
- Adverse effect of noise, lighting, human activity, pets, and pesticides associated with the residential development on aquatic and riparian habitats and species of Arroyo Burro Creek

Drainage, Flooding, and Water Quality

- Collecting on- and off-site runoff in a storm drain system and directing it only two storm drain outlets would reduce infiltration and bank seepage along Arroyo Burro Creek; construction and maintenance of large storm drain outlets could cause hydraulic impacts
- Proposed riparian corridor restoration plans and bank repair could cause unintended adverse impacts by increasing bank erosion and instability along Arroyo Burro Creek
- Temporary adverse effects on water quality in Arroyo Burro Creek due to construction activities
- Adverse effect of stormwater pollution from land development on Arroyo Burro Creek water quality

Geologic Hazards

- Potential liquefiable soils, expansive soils, and high groundwater conditions could adversely affect proposed development
- Landslide hazards are present at the project site

Cultural Resources

- Adverse effect of development on historic properties of the site

Traffic and Circulation

- Traffic associated with the residential development would add additional trips to local intersections, and when combined with other future projects, would be significant
- The proposed traffic light controlled intersection at the site entrance and Las Positas Road is not warranted by Caltrans standards. The use of a one-way stop controlled intersection is feasible, but would cause traffic safety hazards unless certain improvements were implemented
- Construction truck traffic along Las Positas Road, Cliff Drive, and Alan Road could degrade pavement conditions.

Public Health and Safety

- Potential public exposure to pesticides used for maintenance of open space landscaping
- Potential public exposure to radon gas that may be emitted from underlying geologic formations

Air Quality

- Generation of fugitive dust during major site grading and earthwork

Various adverse, but less than significant, impacts would also occur due to the proposed project. These impacts are summarized in Table ES-1. They include impacts to drainage, geological hazards, biological resources, visual resources, public health and safety, and cultural resources.

4. ALTERNATIVES

The following alternatives to the proposed project were evaluated in the EIR:

- No Project Alternative
- No Annexation Alternative
- Use of Draft Pre-Annexation Zoning
- Alan Road Access Alternative
- Secondary Emergency Access Alternative
- Concrete Sidewalks
- Avoid Landslide Alternative
- Alternative Landslide Stabilization
- Alternative Creek Setback Distance (three scenarios)
- Alternative Drainage and Stormwater Treatment
- Alternative Bridge Sites

The No Project Alternative would avoid the environmental impacts of the proposed project. The current environmental conditions at the project site would continue. This alternative is not expected to be feasible, as the project applicant purchased the property for the purposes of developing a project. Without development, it may not be economically feasible for the landowner to maintain ownership and manage the property. This alternative would not meet the overall project objective of developing the site for residential use, consistent with the City General Plan.

The No Annexation Alternative could potentially increase the environmental impacts of the proposed project because a higher maximum density of residential units would be potentially allowable under County zoning. Use of the City's Draft Pre-Annexation Zoning Designations for the project site could also increase the potential magnitude of the impacts identified for the proposed project due to higher density and number of allowable units at the project site. These alternatives are considered feasible, and would generally meet the overall project objective.

The Alan Road Access Alternative would avoid a significant biological impact to Arroyo Burro Creek due to the proposed bridge, but would cause an adverse impact on the quality of life in the Alan Road neighborhood because there would be an increase in traffic and traffic-related noise along Alan Road from residents traveling to and from the project site. Alan Road currently does not have through-traffic and ends in a cul-de-sac. This alternative is considered feasible and would meet the overall project objective.

The Secondary Emergency Access Alternative is considered feasible and would meet the overall project objective. Under this alternative, emergency vehicular access would be provided at Alan Road. This alternative would not cause any new significant impacts, nor intensify any impacts of the proposed project. However, it would enhance public safety conditions at the project site and Alan Road neighborhood.

The Concrete Sidewalk Alternative is considered feasible and would meet the overall project objective. It would not cause any new significant impacts, but it would reduce the effectiveness of the proposed stormwater management plan by increasing impermeable surfaces.

The Avoid Landslides Alternative would reduce various drainage, habitat, and construction-related impacts of the proposed project because of a reduction in amount of earthwork and the number of lots developed under this alternative. However, this alternative may be infeasible because the reduction in residential units would be substantial (up to 11 lots), and is expected to make the proposed site improvements economically infeasible for the applicant. Hence, this alternative would not meet the overall project objective.

The Alternative Landslide Stabilization would increase the magnitude of construction related impacts (i.e., habitat disturbance, erosion, equipment emissions, truck trips, noise) compared to the proposed project because more grading would be required, and retaining walls may be needed. The alternative stabilization methods would be designed to provide the same level of safety as under the proposed project. As such, this alternative would meet overall project objective. However, the alternative stabilization methods are not considered feasible due to the need to encroachment onto adjacent parcels.

The Alternative Creek Setbacks (which includes three setback scenarios) would reduce water quality and biological impacts to riparian resources along Arroyo Burro Creek, and provide additional protection to the creek resources compared to the proposed project (which includes a creek setback and riparian restoration program). The creek setback alternatives would meet the overall project objective of developing the site for residential use consistent with the City General Plan unless the economic impact of the loss of units renders the project infeasible, or if the reduction in revenue substantially reduces the applicant's financial ability to implement the creek corridor open space improvements (i.e., trail and restoration).

The Alternative Drainage and Stormwater Treatment would reduce potential adverse hydraulic and stormwater pollution impacts to Arroyo Burro Creek associated with the proposed project. It would provide additional protection of water quality compared to the proposed project (which includes a stormwater detention basin/bioswale). This alternative is considered feasible and would meet the overall project objective. It would not cause any new significant impacts, nor intensify any environmental impacts of the proposed project.

TABLE ES-1
SUMMARY OF IMPACTS AND MITIGATION

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS I IMPACTS: SIGNIFICANT AND UNAVOIDABLE		
Biological Resources		
Construction of the bridge across Arroyo Burro would permanently displace native and non-native riparian habitat, as well as a large oak tree and sycamore tree. Tall dense riparian woodland would not develop at this location with the bridge in place. The change in habitat could affect wildlife movement if there is a complete gap in vegetation cover at the bridge. In addition, wildlife movement would be hindered by the presence of the bridge abutments. In light of the narrow riparian corridor at this location and the close proximity of other human disturbances that affect wildlife (i.e., Las Positas Road), the overall impact of the bridge on riparian habitat and associated wildlife is considered significant and unmitigable.	**BIO-3.** The area of temporary disturbance associated with installation of the bridge over Arroyo Burro shall be minimized to the maximum extent feasible. The limit of temporary disturbance upstream and downstream of the bridge shall not exceed 25 feet. All disturbed areas shall be restored with native riparian trees and shrubs. The disturbed banks shall be stabilized, as necessary, with biotechnical methods to prevent post-construction erosion. Native perennial plants that are tolerant of shade shall be planted under the bridge span. To the extent feasible, tall riparian trees shall be planted that will grow adjacent to the edge of the bridge and provide cover. **BIO-4.** To partially offset the permanent habitat losses at the bridge site, the open space area north of the entrance road and south of Lot 12 shall be restored to a native oak-riparian area dedicated to wildlife habitat, particularly riparian breeding birds and raptors. The restoration of this site shall be included in the comprehensive native habitat restoration plan for the proposed project (see Mitigation Measure BIO-1). **BIO-8**. The width of the proposed bridge shall be reduced by only including a sidewalk on one site, if this modification does not create unsafe conditions for pedestrians and bicyclists, as determined by the City Transportation Department.	Significant
Noise		
Noise from construction haul trucks along Alan Road would temporarily increase the ambient sound levels in outdoor and indoor living areas of residences along the road during the initial construction period.	**N-2**. No haul, dump, or supply trucks shall use Alan Road for access during Phase 2, except as need to construct residences at Lots 1 and 2. During Phase 1, all haul trucks, dump trucks, and heavy equipment traffic on Alan Road shall be restricted to the time period 9 a.m. to 4 p.m. during weekdays.	Significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Traffic		
The proposed residential development would add traffic to the study area intersections, most of which are operating at LOS C or lower. The contribution of the project to the AM and PM peak hour traffic, when combined with traffic from other future projects, is significant. Mitigation Measure TR-6 would reduce the contribution of the proposed project to this significant cumulative impact. Under this measure, the applicant would be required to contribute a fair share contribution of funds for future capacity improvements of the affected intersections which are listed below: ▪ Calle Real/Hwy 101 NB Ramps ▪ Las Positas Road/Hwy 101 SB Ramps ▪ Las Positas Road/Modoc Road ▪ Las Positas Road/Cliff Drive A residual significant impact may occur because it may not be feasible to fully implement the mitigation measure because the proposed intersection projects may not be completed in a reasonable timeframe, most of the projects are not programmed or funded, and one of the projects would not fully reduce traffic impacts.	**TR-6**. The applicant shall provide the City with a fair share contribution to fund capacity or operational improvements by the City or Caltrans to the intersections listed below, where the project would have a significant contribution to cumulative impacts. ▪ Calle Real/Hwy 101 NB Ramps ; Las Positas Road/Hwy 101 SB Ramps; Las Positas Road/Modoc Road; Las Positas Road/Cliff Drive These intersections are currently Caltrans facilities. Capacity improvement projects have been identified at each intersection, but specific projects have not yet been programmed or funded at this time except at Las Positas and Cliff Drive. At this intersection, the City proposes to install a roundabout to improve traffic conditions, if and when Highway 225 is relinquished to the City. The City has prepared a Project Study Report (PSR) for the roundabout project and has initiated the relinquishment request process with Caltrans. The applicant shall contribute fair share funding for improvements at all four intersections based on the peak hour traffic volume contributed by the proposed project as a percentage of the existing and future volume that exceeds the City's significance impact threshold of 0.77 volume/capacity (V/C) ratio. The fair share contribution shall be determined by multiplying the above percentages times the estimated construction costs of the intersection improvements, and then summing the amount for each intersection. The estimated fair share contribution for this project is $88,850. The applicant shall execute a contract with the City prior to issuance of certificates of occupancy for the project that specifies the total fair share contribution, contract period, and the mechanism for transferring funds to the City and then making them available to Caltrans as needed. The fair share contribution shall be made prior to the issuance of the certificate of occupancy. The amount shall be $88,850, unless refined construction estimates are developed for one or more of the intersection projects prior to the execution of the contract. The contribution shall be revised based on new construction estimates and utilizing traffic information in the Final EIR, but would not exceed a total contribution of $88,850 or the amount established in the final project conditions of approval. The contract period shall be 10 years. The City shall allocate the funds to any of the four intersection projects if they are constructed during this 10-year timeframe only in the amounts as identified for each intersection mitigation, unless the City has the adopted a fee mitigation program that allows the allocation of the entire contribution to one or more projects. Any unallocated funds at the end of 10 years shall be returned to the homeowners in proportion to their lot size. This measure may be superceded if a formal traffic mitigation fee program is adopted by City Council prior to the approval of this project, and the City determines that the mitigation under the program is consistent with this measure. The total contribution shall not exceed the amount established by project condition of approval.	Significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE		
Biological Resources		
The proposed project would result in the permanent loss of about 6.8 acres of mostly non-native habitat due to the construction of residential lots. The primary habitat affected is non-native grassland/ruderal vegetation. This habitat, which dominates the central portion of the project site, has a very low wildlife function and value. About 0.19 acres of oak woodland, and 0.12 acre of riparian habitat would be removed. [The project also involves the restoration/enhancement of 6.8 acres or riparian habitat on and off the project site, and restoration of 3.8 acres of upland habitat]	**BIO-1**. The proposed native habitat restoration plans shall be modified as follows to ensure the successful long-term establishment of new and enhanced native habitats at the project site, including the creek corridor restoration, upland habitat restoration in Lots 25, 26, 27, and 28, and creek bank repair and restoration sites. A comprehensive habitat restoration plan for these project elements shall be submitted to the Community Development and the Parks & Recreation Department (Creeks Division) for review and approval prior to incorporation into the final grading and landscaping plans to be submitted to the Building Department for final review and approval. The comprehensive habitat restoration plan shall include the following elements (among others): ▪ Precise restoration objectives for each habitat type and location ▪ Detailed schedule of tasks and milestones for site preparation, planting, and maintenance ▪ Plans that show grading and soil preparation, and any areas that will require slope stabilization or temporary erosion control ▪ Description of specific habitat types to be restored, including species list and relative abundance in each habitat type, as well as planting densities and propagation methodologies ▪ Plans that show the boundaries of each habitat type to be restored, with precise acreages and plant densities ▪ Description of source of plant materials, with a commitment to utilize plant material from the South Coast region, and preferably from the Las Positas Valley ▪ Performance criteria that include survivorship, percent native plant cover, percent noxious weed cover, and percent naturalized species cover ▪ Plans and explanations that show how the non-native landscaping at the project site associated with the individual lots will interface with the native plant restoration in the upland and riparian open space areas *[continued]*	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Biological Resources (continued)		
[habitat impact, continued]	▪ A description of a watering approach to ensure successful plant establishment and long-term productivity, including methods to provide supplemental water ▪ A description of the weed management approach, emphasizing site preparation and watering methods that do not encourage weed growth and use of herbicides that is consistent with the City's adopted Integrated Pest Management (IPM) plan ▪ A long-term rodent management plan that avoids or greatly reduces the use of pesticides or poisons ▪ Plans and a description of the how the habitat restoration plans will incorporate fire hazard requirements for defensible space near structures and fire-safe vegetation, while still achieving habitat restoration goals ▪ Plans and a description of how to establish and maintain riparian habitats in the creek corridor open space with ongoing public uses along the pedestrian path ▪ Plans and calculations for any proposed bank stabilization shall include an evaluation of hydraulic and geomorphologic factors along the creek, such as flow velocities, sediment carrying capacity, bank failure modes, and shear stress factors as described in Mitigation Measure W-2. The plan may include non-native ornamental trees in selected portions of the hillside and central open space areas for aesthetic reasons, provided the number of these locations is low and the non-native trees would not displace native plants over time. The plan shall also include a maintenance program to be implemented by the homeowners association with a description of the authority and mechanism to secure sufficient funding to ensure long-term success. The plan would apply to portions of the City-owned parcel on the east side or Arroyo Burro Creek. Hence, the restoration approach and plan for this element of the project shall be approved by the City Parks and Recreation Department. The applicant shall maintain the restoration areas on City property until the performance criteria have been achieved, at which time the City will assume responsibility for maintenance.	

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Biological Resources (continued)		
The proposed project would remove up to seven coast live oak trees at the project site.	**BIO-2.** Oak trees to be removed shall be replaced at a 10:1 ratio at the project site. The replacement trees shall range in size from one gallon to 15-gallon trees. Planting locations shall be appropriate for oak trees, as determined by the arborist, and included in the habitat restoration plans. The number of oak trees to be removed shall be confirmed on the final plans. The plans shall include an oak and riparian tree protection drawings and specifications that require the following: ▪ Prior to grading, temporary protective fencing (4 feet high) shall be installed three feet outside the dripline of all oak and riparian trees to be preserved. Fencing shall be maintained during the entire construction period. ▪ Heavy equipment shall not be used or parked within three (3) feet of oak tree driplines, except where approved by a qualified arborist, and after protective fencing has been installed. ▪ Soil, rocks, or construction material shall not be stored or placed within the dripline of oak trees.	Less than significant
Construction activities at the project site would result in increase noise, traffic, dust, and human activity. These disturbances would displace wildlife from the areas under construction, and possibly displace or discourage wildlife from the Arroyo Burro corridor during periods of noisy construction activity near the creek.	**BIO-5**. Phase I grading and earthwork within 100 feet of the outer edge of the existing riparian corridor (as mapped in the EIR) shall not occur during the period 1 March through 15 July in order to avoid disturbance to breeding birds. Prior to removal of any oak, eucalyptus, or native riparian tree, a qualified biologist shall carefully examine the tree to determine that no active bird nests are present. If a nest is located, tree removal shall be delayed until all chicks have fledged. **BIO-6**. The limits of disturbance in areas with native or naturalized vegetation shall be minimized to the extent feasible. Limits of clearing and grubbing, grading, and vehicular access shall be marked at the site with orange exclusion fencing.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Biological Resources (continued)		
The proposed development would adversely affect wildlife in the Arroyo Burro riparian corridor due to noise, human activity, nighttime lighting, stormwater pollution, colonization by weedy species, herbicide/pesticide use in the creek corridor, and human and pet entry into the creek. The proposed creek setback and buffer zone would substantially reduce these impacts, but not to a less than significant level without additional measures.	**BIO-7.** The following measures shall be implemented to reduce impacts of residential development on riparian resources in the creek: ▪ The lowest output lighting permissible on all roadways and common areas of the development shall be used. All street and common lighting shall be shielded so that stray light effects are minimized, and to avoid direct illumination of the riparian corridor, except as needed for public safety. Decorative night lights shall not be directed into trees within the riparian restoration area. ▪ The pedestrian path in the creek open space corridor shall be sited to provide views and an aesthetic enjoyment of the creek environment. However, the alignment of the path shall not substantially interfere with the primary objective of providing wildlife habitat and native plant cover along the creek corridor. The path shall also include interpretative signs informing the public of the sensitive resources in the creek, and asking the public to refrain from entering the creek channel, or letting pets enter the channel. The final design for the creek open space shall also include a consideration of low-profile fencing at the top of the creek bank or in sensitive habitat areas. ▪ <u>The proposed gazebo to be located along the pedestrian path shall be situated as far as possible from the creek (a minimum of 50 feet), and the location shall be selected to minimize impacts to riparian resources.</u> ▪ The proposed homeowners association shall prepare and implement (<u>with long-term funding assurances</u>) a habitat maintenance and management plan for the four open space areas at the project site: Lot 27 (hillside open space), Lot 25 (central open space with tributary drainage channel), and Lots 26 and 28 (creek corridor with pedestrian path). The plan shall incorporate the principles, <u>methods, and approach</u> of the City's Integrated Pest Management (IPM) Plan <u>(as it is revised and updated in the future)</u> in order to minimize the use of pesticides and herbicides for landscape maintenance to the extent feasible. The plan shall include measures to monitor and remove the amount and extent of non-native invasive plants; maintain the riparian plantings in good health; and contingency plans for replacement planting. It shall also include measures to monitor and manage public access to prevent unanticipated impacts to riparian and aquatic habitats in the creek from public uses.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Redirecting the runoff from the site to the two discrete storm drain outlets would reduce infiltration and bank seepage along Arroyo Burro at the project site which supports riparian bank vegetation and aquatic habitats.	See Mitigation Measure W-1 below.	Less than significant
Drainage, Erosion and Water Quality		
Site development would increase the amount of impermeable surfaces and therefore, the amount of runoff. The proposed drainage system would discharge site runoff at only two outlets to Arroyo Burro. These modifications of the local drainage would adversely affect the hydrologic and hydraulic conditions of Arroyo Burro Creek which could result in both on-site and downstream impacts. The adverse hydraulic impacts are the loss of infiltration and associated bank storage and seepage, and the need to install and maintain large storm drain outlets on Arroyo Burro Creek.	**W-1.** The proposed drainage system shall be modified to provide at least four or more drain outlets to the creek to reduce the magnitude of the discharge at each location compared to the proposed drainage outlets. The new outlets shall be equally distributed along Arroyo Burro Creek to the extent feasible. In addition, the proposed drainage system shall be modified to provide infiltration areas that are distributed along the stream terraces of Arroyo Burro Creek in such a manner as to facilitate infiltration through the banks to support riparian vegetation and contribute to base flows. A preliminary design of the drainage system shall be reviewed and approved by the Community Development Department and Public the Works Department before completing final design for submittal to the Building Department. Examples of design elements to be considered under this mitigation are presented as the Alternative Drainage and Stormwater Treatment Plan (EIR Section 4.11).	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Removal of the giant reed on steep banks of Arroyo Burro Creek (as part of the creek corridor restoration plan) and repair of two eroded bank areas could cause an inadvertent increase in bank erosion along the creek at the project site. If the new plants are not successfully established, or if they do not have the same ability to stabilize slopes, there is a potential for an increase in bank erosion along the creek. In addition, the proposed bank repair does not include a consideration of stabilizing the toe of the slope where the original bank failures occurred. Hence, there is a potential for the bank repair, as currently proposed, to destabilize these slopes and increase bank erosion along the creek.	**W-2.** The applicant shall prepare detailed plans on the methods to remove giant reed and other exotics from the banks of Arroyo Burro Creek as part of the proposed creek corridor restoration effort, as well as for the stabilization and restoration of the two areas of bank erosion. The plans shall include analyses and calculations that demonstrate how the removal and replacement of the undesirable plants can be accomplished without destabilizing the creek banks and increasing bank erosion. The plans for both exotic removal and bank repair shall include considerations of hydraulic and geomorphologic factors along the creek, such as flow velocities, sediment carrying capacity, bank failure modes, and shear stress factors. They shall describe and show bank stabilization methods and materials, as well as any anticipated long-term weeding and bank maintenance. The plans for bank repair shall evaluate whether maintaining the existing vegetation on the eroded banks would be more stable than the proposed filling of the eroded areas. Only bio-technical bank stabilization shall be used in these efforts – that is, methods and materials that are based on using plants for long-term bank protection. The plans for bank repair shall also include an evaluation of the need to stabilize the base of the creek banks, where the original bank failure occurred, in order to achieve long-term stabilization. All creek bank stabilization associated with the project shall not reduce channel capacity or create new flood hazards. The creek restoration and bank repair plans shall be reviewed and approved by the Community Development Department, Parks & Recreation Department (Creeks Division), and the Public Works Department before completing final design for submittal to the Building Department.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Drainage, Erosion and Water Quality (continued)		
Construction of the proposed project could cause temporary adverse effects on Arroyo Burro water quality due to construction activities that increase on-site erosion potential and introduction of potential contaminants to the site.	**W-3**. The following measures shall be incorporated into the project Storm Water Pollution and Prevention Plan (SWPPP), which must meet state NPDES General Construction Permit requirements, and must be approved by the Building Department. The SWPPP shall incorporate all feasible Best Management Practices (BMPs) to reduce erosion from construction activities, to prevent sediment in stormwater discharges, and to minimize non-stormwater pollutants at the project site to the maximum extent possible. a) The following earthwork activities shall be restricted to the period April 1 to November 1 in order to avoid work during the rainy season: grading and earthwork for slope stabilization, mass grading, site grading for roads and building pads, trenching for utilities, and creek bank stabilization. Clearing and grubbing the site for earthwork shall also be restricted to the same time period. b) Construction of the bridge across Arroyo Burro Creek shall be restricted to the period July 1 to November 1 when runoff is low. c) A dewatering and flow by-pass plan for construction of the bridge over Arroyo Burro Creek shall be submitted to the Building Department for review and approval. d) The following construction activities involving minor earthwork and grading may occur in the winter months provided special measures are implemented to address stormwater runoff during the work: (1) construction of pedestrian paths in the creek corridor; (2) weeding, plant removal, and planting in the creek corridor as part of the habitat restoration effort; and placement of caissons. The applicant must prepare specific erosion control and stormwater management plans for these activities if they are planned for the period November 1 to April 1. The plans shall be submitted to the Building Department for review and approval. e) Temporary stockpiles at the project site shall be protected from erosion by the combined use of surface stabilization, upslope runoff diversions, temporary berms around the perimeter, perimeter interceptor ditches, and temporary downstream catchments, as necessary and appropriate. Stockpiles that are present during the winter season (November 1 to April 1) shall be protected from erosion due to direct precipitation or runoff during the winter by the use of surface stabilization (such as erosion control blankets or temporary seed cover).	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Drainage, Erosion and Water Quality (continued)		
[construction impacts, continued]	f) BMPs to prevent discharge of construction materials, contaminants, washings, concrete, fuels, and oils will include the following measures: 1. Ensure that all construction vehicles and equipment that enter the construction and grading areas are properly maintained (off-site) to prevent leaks of fuel, oil and other vehicle fluids 2. Implement measures and provide materials to contain any accidental spills or leakage during the fueling of construction equipment at the site 3. Prepare a spill prevention/spill response plan for the project site that includes training, equipment and procedures to address spills from construction equipment, refueling operations, and stored fluids (if any) 4. Place all stored fuel, lubricants, paints and other construction liquids in secured and covered containers within a bermed or otherwise contained area at least 200 feet from the creek 5. Refuel only in bermed areas with impermeable surfaces at least 200 feet from the creek 6. Prohibit equipment washing and major maintenance at the project site, except for washdown of vehicles to remove dirt 7. Remove all refuse and construction debris from the site as soon as possible g) In order to reduce tracking of sediment from the construction site onto public roads, a stabilized construction entrance/exit shall be constructed and maintained at entrances to the site. Tracking control shall be achieved by either gravel or metal plates. h) Two weeks prior to the beginning of the winter season (November 1), erosion control BMPs shall be installed at the site, and approved by the City Building Department in anticipation of rain events. Due to the extensive area and volume to be graded at the project site, erosion control shall include more than the placement of silt fences. Additional control shall be included such as temporary grass cover, interceptor ditches, and temporary downstream catchment basins.	

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Drainage, Erosion and Water Quality (continued)		
The proposed project would adversely affect water quality in Arroyo Burro due to stormwater pollution from the new residential development and associated roads.	**W-4.** The proposed stormwater treatment system shall be expanded and modified as described below. Examples of several design elements in this mitigation measure are presented in the Alternative Drainage and Stormwater Treatment Plan (EIR Section 4.11). a) Runoff from the western off-site watershed should be separated from the runoff from the project site. This runoff from this watershed shall be conveyed through the center of the site in an open earthen channel with small check dams to facilitate infiltration of low flows. The site grading plan for Lots 8-11 and 13-24 shall be modified to convey runoff from the lots towards the road into a separate stormwater treatment system. b) Stormwater detention basins or bioswales shall be constructed to treat runoff from Lots 1-7 and the private driveway to these lots, as well as from Lot 12 and the bridge. c) All stormwater from developed areas of the site shall be treated in accordance with the City's requirements in the current SWMP, and supplemented as necessary, with the design standards for detention basins and bioswales contained in Santa Barbara County's SWMP. d) The site plan and architectural design shall be modified during final design to include, to the extent practicable, stormwater management design elements, also known as low-impact design features. Examples include: roof drainage that is direct to infiltration trenches or bioswales; driveways constructed of permeable materials, pavers, or strip pavement for tires only; openings in curbs to provide opportunities for infiltration in adjacent grassy swales along the roads; use of permeable surfaces instead of concrete in roadway ribbon gutters; and small depressions in front years to collect roadside runoff for infiltration. e) The proposed homeowners association shall have the responsibility, authority, and ongoing funding to monitor and maintain the stormwater management facilities located in the public open space areas of the site and on private lots (if present) which would include detention basins, bioswales, and infiltration basins. The association shall have the authority to levy fees as necessary to maintain, repair, or replace stormwater management facilities. The City shall have responsibility for maintaining Lane "A" and any associated stormwater treatment feature such as permeable ribbon gutters or swales.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
[stormwater impacts, continued]	f) The proposed homeowners association shall periodically issue educational materials to homeowners, tenants, and occupants that address topics such as proper handling, use, and disposal of household chemicals, fertilizers, pesticides, and herbicides; legal impacts of illegal dumping or disposal; household waste collection programs; oil recycling programs; alternative household products; and pet waste management. g) The proposed homeowners association shall prepare a water quality management plan for the four open space areas at the project site: Lot 27 (hillside open space), Lot 25 (central open space with tributary drainage channel), and Lots 26 and 28 (creek corridor with pedestrian path). The plan shall incorporate the principles, methods, and approach of the City's Integrated Pest Management (IPM) Plan (as it is revised and updated in the future) in order to minimize the use of pesticides and herbicides for landscape maintenance to the extent feasible. The plan shall also include trash cans, informational signage, and mutt mitts along the creek corridor pedestrian path. h) The applicant shall submit a draft Stormwater Management Plan and an Open Space Water Quality Management Plan with the above elements to the Community Development Department and Public Works before completing final project design for submittal to Building Department.	
Geologic Hazards		
Available data indicate that there is a potential for liquefiable conditions throughout much of the site. Liquefaction could result in settling during seismic events due to lateral spreading. This condition could result in damage to roads, utilities, and structures.	**G-2.** The potential for liquefiable conditions underlying Lots 7 through 24 shall be evaluated by a geotechnical investigation during final design of the project. This investigation shall include additional borings at depth and locations approved by the City Building Department. Areas that are susceptible to liquefaction shall be identified. Appropriate design and construction techniques to address this condition (e.g., ground improvement, drainage) shall be included in the final design to be reviewed and approved by the Building Department. The applicant shall also provide evidence that the construction of deep shear keys using engineered fills as part of landslide stabilization for other lots will reduce the potential for seismic liquefaction at these locations to an acceptable level.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Geologic Hazards (continued)		
Expansive soils may be present at Lots 1 through 7, and Lots 12 through 21. Expansive soils can adversely affect structures due to the cycle of shrinking and swelling over time.	**G-3**. The potential for expansive soils underlying Lots 12 through 21 shall be evaluated by a geotechnical investigation during final design of the project. Appropriate design and construction techniques to address this condition shall be included in the final design to be reviewed and approved by the Building Department. The applicant shall also provide evidence that the construction of deep shear keys using engineered fills as part of landslide stabilization for other lots will mitigate the expansive soils at these locations to an acceptable level.	Less than significant
There is a potential for groundwater to rise to near the surface in fractures in the Rincon shale at the toe of the slopes at the project site. High groundwater conditions can adversely affect structure foundations and exacerbate liquefaction and expansive soil conditions.	**G-4.** The potential for high groundwater conditions in lots along the base of the hillside (Lots 1-7, and Lots 12 through 21) shall be evaluated by a geotechnical investigation during final design of the project. These investigations shall include additional borings. Appropriate drainage measures to address this condition shall be included in the final design to be reviewed and approved by the Building Department.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Geologic Hazards (continued)		
The proposed landslide stabilization approach is considered standard and reasonable. It involves traditional engineering solutions, e.g., earthwork, structural support, and drainage, and should be effective as well as feasible. The proposed stabilization measures would conform to applicable City of Santa Barbara codes, if the design is prepared in accordance with standard geotechnical and engineering standards, with the appropriate factors of safety and conservative assumptions. To ensure that that a significant impact due to landslide hazards is avoided throughout the life of the project, the City will require a series of geotechnical and engineering studies by the applicant to more fully characterize the individual landslides and the proposed engineering solutions to stabilize them.	**G-5**. To ensure that that a significant impact due to landslide hazards is avoided throughout the life of the project, the applicant shall complete a geotechnical investigation that provides the basis for final design and construction. The investigation program shall include sufficient subsurface exploration, laboratory testing, and engineering analysis to fully characterize each landslide and to develop an appropriate design of shear keys and cast-in-ground caissons to allow construction to proceed safely and to provide sufficiently stable building sites against future landsliding under both static and dynamic loading conditions. The results of the study shall be subject to review and approval by the City Building Department, and an independent geotechnical engineer and geologist to provide a greater level of confidence in the proposed solutions. The investigation shall include borings at landslides 1, 2, 3, 8, 9, and 12 to provide suitable information to design stabilization programs for Lots 1 through 6, Lot 12, NW of Lot 19, and SW of Lots 20 and 21. Some of the borings shall be drilled along the proposed caisson wall alignments to provide a basis for the actual wall design, e.g., caisson diameter, spacings and depth prior to the start of construction. This is necessary because in several instances the proposed caisson depths are less than the estimated depth of sliding. The investigations shall also determine the diameter and spacing of caissons, as the proposed diameter (2 feet) spacing (4 or 5 pier diameters) may not be sufficient to resist the driving forces, particularly during seismic loading, due to the quasi-stable landslide mass. All shear key excavations shall be observed and mapped by a qualified geotechnical engineer or engineering geologist to verify design assumptions in accordance with Section 3317 of Appendix Chapter 33 of the 1997 Uniform Building Code (UBC)/1998 California Building Code (CBC).	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Cultural Resources		
The development of the site would significantly modify the physical setting of the property, which was mostly undeveloped when the historic water company was active. Converting the site from open space that resembled its historic condition, to residential development would cause a substantial adverse change in one element of the historic resource – the physical setting. This change would reduce the historic significance of the property and reduce opportunities to learn about the history of Santa Barbara.	**CR-2.** The remnant oak trees at the project site shall be retained and incorporated into the project. Interpretive signage shall be placed near the trees along a path. The signage shall include a photograph of the buildings that were once located nearby, showing the activity on the site associated with the water company. All of the interpretive signage shall be metal within a wood frame (subject to review and approval by the Historic Landmarks Commission), and the text will be prepared by a qualified historic preservation professional. **CR-3**. A gazebo structure shall be constructed near the proposed pedestrian trail along the creek corridor. It shall be constructed to match the design, scale, and material of the original building that was associated with the water company. The gazebo structure shall contain a display of the history of Veronica Springs, including photographs and advertising brochures from the water bottling plant in town and the Veronica Springs site itself. If artifacts are found through archaeological monitoring, those artifacts should be suitably displayed in the building. The gazebo design shall be reviewed and approved by the Historic Landmarks Committee and Architectural Board of Review. <u>The proposed gazebo shall be situated as far as possible from the creek (a minimum of 50 feet) and the location shall be selected to minimize impacts to riparian resources.</u> **CR-4.** Interpretative signs shall be placed along the public path along the creek corridor that describe the entry road to Veronica Springs and other historical elements on the site. The signs shall be reviewed and approved by the Historic Landmarks Committee and Architectural Board of Review. **CR-5.** The name of the new development and streets within the development shall reflect the history of the Veronica Springs site (e.g., Veronica Springs, Veronica Meadows, Kimball Road, Hawley Heights, Clifton Way, Thomas Road). The street names shall be reviewed and approved by the Historic Landmarks Committee.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Traffic		
The proposed traffic signal intersection for the project entrance would not be allowed by Caltrans. The only feasible intersection would be a two-way stop intersection with stop signs on the Jerry Harwin Parkway and Veronica Meadows roadway connections ("Lane "A"). This intersection would operate at LOS C or better with Existing + Project and Cumulative + Project volumes with the two-way stop, which meets City standards for stop controlled intersections.	**TR-2**. The proposed intersection at Las Positas Drive and project site entrance (Lane "A") shall consist of a stop-controlled intersection that meets all applicable Caltrans standards, including turn lane lengths, roadway widths and curb-return radii. Caltrans has indicated that a public road intersection with a southbound right-turn lane and northbound left-turn lane on Las Positas Road will be required at the intersection. Minor widening of Las Positas Road may be required to provide adequate width for the turn lanes. The project applicant shall acquire Caltrans' conceptual approval of the intersection prior to final action by the City Council on the proposed Specific Plan. The project applicant shall also acquire all necessary Caltrans approval, including an encroachment permit, for the intersection prior to submittal of plans for City building and grading permits. The final design of the intersection improvements will be determine as part of the encroachment permit process.	Less than significant
Sight distances at the project entrance for outgoing traffic are not adequate for southbound traffic on Las Positas Road, which could result in unsafe traffic movements through the proposed stop controlled intersection.	**TR-3.** The proposed intersection at Las Positas Road and the project site entrance (Lane "A") shall include pruning or otherwise modifying trees and other vegetation on the west side of Las Positas Road between the access connection and the Stone Creek condominium complex access connection to create sight distances that meet Caltrans standards.	Less than significant
The proposed entrance road to the project site does not have adequate width to accommodate safe entry to the site under certain conditions.	**TR-4.** The entrance to the project site (Lane "A") from Las Positas Road shall be modified to permit adequate clearance for incoming trucks and vehicle queued on the outbound approach at the intersection waiting to exit the site vehicles. The modifications shall meet Caltrans standards.	Less than significant
Construction truck traffic along Las Positas Road, Cliff Drive, and Alan Road could degrade pavement conditions.	**TR-5.** The project applicant shall video document the pavement conditions on Alan Road, Cliff Drive, and Las Positas Drive before and after the construction project to determine the level of impact caused by the project. This documentation shall be provided to the City of Santa Barbara, Transportation Department. If the project traffic has caused damage to the roadway surface, the project applicant shall repair or resurface the affected reaches.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Public Health and Safety		
The use of pesticides for maintenance of open space landscaping at the project site in proximity to residences (in the central open space) and along a public path adjacent to a creek could result inadvertent or accidental exposure to people.	**H-1.** Prior to issuance of building and grading permits, the applicant shall submit a pesticide management plan that addresses the selection, application, storage, and transport of herbicides, insecticides, and rodenticides that would be used in managing the public open spaces at the project site by the homeowner's association. The plan shall be consistent with the City's Integrated Pest Management (IPM) program, and shall be designed to minimize the use of pesticides over time and to avoid public exposure.	Less than significant
The project area is underlain by Rincon Shale, a known geologic stratum that emits radon gas There is a potential to expose residents exposure to radon gas which can result in a health hazard.	**H-2.** Prior to the issuance of building and grading permits, the applicant shall conduct a study to determine the potential for radon gas to be emitted from the project soils after grading. If it appears that radon is present, the building plans shall incorporate EPA-approved construction methods and design features to prevent the exposure of residents to the gas.	Less than significant
Air Quality		
Construction during Phase I would generate substantial fugitive dust due to the large areas of exposed soil, high volume of material to be excavated and filled, and high level of construction vehicle activity.	**AQ-1.** The following measures would reduce fugitive dust emissions related to construction activities and haul trucks. They are based on the standard dust mitigation measures of the APCD. a) Areas subject to clearing, grading, earth moving or excavation shall be kept sufficiently moist, through use of either water trucks or sprinkler systems, to prevent dust from leaving the site. Water trucks or sprinkler systems shall also be used to keep on-site roads (paved and unpaved) damp enough to prevent dust raised from leaving the site. At a minimum, this shall include wetting down these areas in the late morning and after work is completed for the day. At the end of the day, areas with disturbed soil shall be sufficiently moistened to create a crust. Increased watering frequency shall be required whenever the wind speed exceeds 15 mph. These areas must also be kept moist during weekends and days when no construction activities are occurring.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
[air quality impacts, continued]	b) Reclaimed water shall be used for dust control if the Public Works Director determines that it is reasonably available c) Stockpiles and barren areas at the project site that shall be disturbed on a periodic basis (at least once every 5 days) shall be kept sufficiently moist by the use of water trucks or sprinklers to prevent dust from leaving the site. d) Stockpiles and barren areas at the project site that shall remain undisturbed for more than 5 days shall be stabilized by the use of tackifiers, soil binders, or other measures. These stabilization agents shall be replenished throughout the dry season on an as-needed basis to prevent dust emissions. e) On-site vehicle speeds shall be limited to 15 miles per hour or less. f) Gravel pads or similar devices shall be installed at all access points to prevent tracking of mud on to public roads. g) Alan Road, Cliff Drive (between Alan Road and Las Positas Road), and Las Positas Road (between Cliff Drive and Veronica Springs Road) shall be inspected daily (midday and at the end of the day) during periods of truck hauling to determine if there is an accumulation of silt on the road that could cause fugitive dust. These road segments shall be kept clean of such silt by the use of a street sweeper or watering truck. h) Trucks transporting fill material to and from the site shall be tarped from the point of origin. i) Upon the completion of construction, all disturbed areas shall be stabilized by the use of rock protection or perennial vegetation. j) The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to initiation of construction. All dust control requirements shall be shown on grading and building plans.	

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS III IMPACTS: LESS THAN SIGNIFICANT		
Air Quality		
Construction equipment will emit pollutants but the emissions would be short-term in nature and comprise a very small fraction of the total County-wide emissions from all point, mobile, and area sources.	**AQ-2.** The following measures would reduce NO_X emissions from construction equipment and haul trucks. They are based on the standard mitigation measures of the APCD. a) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) should be utilized wherever feasible. b) The engine size of construction equipment shall be the minimum practical size. c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time. d) Construction equipment shall be maintained in tune per the manufacturer's specifications. e) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines. f) Catalytic converters shall be installed on gasoline-powered equipment, if feasible. g) Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California shall be installed, if available and if determine to be reasonable and feasible by the City Public Works Department. h) Construction worker trips should be minimized by encouraging carpooling and by providing for lunch onsite.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Drainage , Erosion and Water Quality		
The proposed bridge over Arroyo Burro would be partially located in the Flood Zone and would create a permanent structure over the channel. However, the bridge span and height would be sufficient to avoid impinging on flows less than the 100-year event, and no in-channel structures are required. No impacts to the hydraulics of the creek are anticipated, nor would the bridge increase flood hazards.	No mitigation required	Less than significant
Visual Resources		
From public viewing locations at Elings Park, the proposed development would create a visual contrast with the surrounding landscape. However the project would be co-dominant with the surrounding elements of the visual environment, and the loss of open space would be offset by the preservation of the remainder of the site as open space. When viewed in the larger context of the Las Positas Valley area, the project blends with the surrounding suburban development seen on the ridges above the project site as well as with the residential neighborhoods to the south.	**VS-1.** The applicant shall submit final architectural plans and color/material boards to the Architectural Board of Review (ABR) for review and approval. The color and texture scheme shall be designed to minimize visual contrast with the surrounding landscape.	Less than significant
The project is not expected to substantially degrade views or significantly change existing visual character of the nearby suburban setting when viewed from Las Positas Road. Most views would be obscured by roadside or creekside vegetation, and would only be fleeting glimpses.	No mitigation required	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
The proposed new two-story homes may create a substantial contrast with the architectural design and scale of homes in the neighborhood, which would be of concern to nearby residents. To increase the compatibility of the new homes with the neighborhood, Mitigation Measure VS-2 is recommended.	**VS-2.** The final architectural plans for residences at Lots 1 and 2 shall be designed to minimize the contrast of height and mass between the proposed two-story homes and the adjacent one-story homes along Alan Road. These plans shall be submitted to the Architectural Board of Review (ABR) for review and approval.	Less than significant
Visual Resources (continued)		
Streetlights installed as part of the proposed project would not obscure a significant view nor would it affect a nighttime public viewing location. Residential and landscape lighting in the project area would be seen as a continuation of the standard residential lighting levels of the residential development to the south. However, the increased nighttime lighting would contribute to an overall visual impact to local residents.	**VS-3.** To prevent nighttime glare, any exterior lighting installed on the project site shall be of low intensity, low glare design, and be hooded to direct light downward and prevent spill over onto adjacent parcels. All light fixtures shall be shielded so that neither the lamp nor the related reflective interior surface is visible from any of the observation points. All light poles, fixtures, and hoods shall be dark colored (non-reflective). Security and street lighting shall be shielded so as not to create glare when viewed from the observation points. The light poles and fixtures shall not be obtrusive to travelers along Las Positas Road, the Alan Road neighborhood, or the public open space areas.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Cultural Resources		
There is the potential, although unlikely, for encountering previously undocumented cultural resource during site earthwork and grading.	**CR-1.** Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts associated with past human occupation of the parcel. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and an archaeologist from the most current City Qualified Archaeologists List shall be retained by the applicant. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, preparation and implementation of a Phase III Archaeological Resources Report in accordance with the City Master Environmental Assessment Guidelines for Assessment of Archaeological Resources and Historic Structures and Sites, etc. If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization. If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission to determine the disposition of the remains.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Public Health and Safety		
The proposed project is located in a High Fire Hazard Area. To reduce the risk, the project will comply with all applicable fire codes and requirements as follows. The proposed planting density and heights within 100 feet of each residence will be modified to meet the City's defensible space requirements. The proposed development would meet the Uniform Fire Code regulations and any other conditions imposed by the Fire Department which may pertain to structural materials resistant to ignition, hydrant flows, hydrant spacing, emergency equipment access and evacuation, on-site fire suppression, and landscaping design and maintenance. The proposed project would result in an incremental additional demand on the City of Santa Barbara Fire Department that would be accommodated by the Department. No changes in City Fire Department staffing or fire delivery systems would be required to serve the project.	No mitigation is required.	Less than significant
Geologic Hazards		
There is a slight potential for surface faulting to create a geological hazard near Lot 12. This impact is considered less than significant because the project applicant will be required to conduct field investigations to locate the fault near Lot 12, and ensure that the minimum 50-foot structural setback is achieved. Mitigation Measure G-1 provides additional guidance on the required fault investigations.	**G-1**. The stabilization of landslide above Lot 12 will involve the excavation of a deep shear key. This excavation shall be expanded to assess the presence or absence of the nearby Lavigia Fault in accordance with City requirements. The excavation shall be inspected by a Certified Engineering Geologist to identify possible features associated with the nearby Lavigia Fault. If evidence of faulting is detected, the likelihood of faulting affecting the structures at Lot 12 shall be evaluated and appropriate measures shall included into the design to accommodate possible future movements, if necessary, in accordance with City requirements.	Less than significant
The impact of ground shaking is considered adverse, but less than significant because the residences will be constructed to meet current state and local building codes designed to protect from ground shaking. Design and construction of all project elements, including landslide stabilization, in accordance with the Uniform Building Code will eliminate the need for an EIR mitigation measure.	No mitigation required	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Noise		
Construction noise would increase ambient noise levels at adjacent residences and portions of Elings Park which may cause a periodic distraction or nuisance when peak noise levels are generated during certain construction activities. However, construction related noise impacts are considered less than significant because the proposed construction schedule will be consistent with the Municipal Code (Section 9.16.015), and the construction noise will be temporary and intermittent.	**N-1.** Clearing and grubbing, earthwork, drilling, concrete placement, and other major construction activities involving heavy equipment shall be restricted to 8 a.m. to 5 p.m. at the following locations: bridge site, landslide stabilization site above Lot 12, and landslide stabilization site above Lot 1.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Construction noise would increase ambient noise levels at adjacent residences and portions of Elings Park which may cause a periodic distraction or nuisance when peak noise levels are generated during certain construction activities. However, construction related noise impacts are considered less than significant because the proposed construction schedule will be consistent with the Municipal Code (Section 9.16.015), and the construction noise will be temporary and intermittent.	**N-3.** The following measures should be incorporated into the project contract specifications to minimize general construction noise impacts: a) Construction operations shall be limited to the hours 7 a.m. to 7 p.m. Monday through Friday or at any time on Saturday, Sunday or on holidays, consistent with the City of Santa Barbara Municipal Code. Holidays are defined as those days that are observed by the City of Santa Barbara as official holidays, and include New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the following Friday, and Christmas Day. Further restrictions on construction operations are provided in Mitigation Measure N-1. b) All noise-producing project equipment and vehicles using internal combustion engines (including haul trucks) shall be professionally fitted with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features. These devices shall be professionally maintained in good operating condition so as to meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. c) Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from Alan Road and the Stone Creek Condominiums. d) The speed limit at the construction site during prior to completion of paved roads shall be 15 MPH. e) The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. f) No project-related music system shall be audible at any adjacent receptor. g) Within 20 days of commencement of construction, the project applicant shall provide a notice of construction schedule to property owners, residents, and neighborhood organizations within 500 feet of the site boundary and post information on the site in a location visible to the public, including the hours of operation and contact person with a telephone number who can address questions and problems that may arise during construction.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
	h) All project workers exposed to noise levels above 80 dBA shall be provided with personal protective equipment for hearing protection (i.e., earplugs and/or earmuffs); areas where noise levels are routinely expected to exceed 80 dBA shall be clearly posted with signs stating "Hearing Protection Required in this Area." i) Survey work, construction within residential units with completed walls, and landscaping (manual labor only) may occur at the project site on Saturday. No construction work can occur on Saturday if involves the use of haul trucks or construction equipment (e.g., loaders, backhoes, generators, etc). j) Construction staging areas where vehicles may idle or other noise-generating activities take place shall be located as far from adjacent residential areas as feasible.	
Traffic		
Construction truck traffic would occur along Alan Road during Phase 1. This is a narrow residential road with street parking on both sides. Hence, the passage of two trucks would be difficult. In addition, the residents along the road have not experienced truck traffic at this level. As with all other vehicles, trucks must follow the rules of the road, as defined in the California State Vehicle Code, which apply to the roadway and prevailing conditions. Hence, the impact on public safety due to truck traffic on Alan Road would be considered less than significant. However, to provide a higher level of public safety on this residential road, the precautions in Mitigation Measure TR-1 would be implemented during Phase 1.	TR-1. The following measures are recommended to minimize truck conflicts on Alan Road with passenger vehicles, bicycles, pedestrians, and parked vehicles during Phase 1 of the construction: ▪ The project applicant shall prepare and implement a Traffic Control Plan that shall specify measures to ensure traffic safety on Alan Road. The plan shall include instructions and guidelines on signage, notification of residents, ingress/egress procedures for large trucks, contact person with phone number, possible need for traffic control attendant, and measures to avoid passage of two trucks on the narrow road. ▪ No trucks shall park or queue on Alan Road at any time ▪ The truck speed limit along Alan Road shall be 15 MPH ▪ Truck drivers shall be disciplined for non-compliance with safety regulations. All trucks shall be clearly marked with a number visible to residents on both sides of the road and from the rear in the event non-compliance needs to be reported.	Less than significant
The proposed residential development would add traffic to the study area intersections, most of which are operating at LOS C or lower. The contribution of the project to the AM and PM peak hour traffic is less than significant.	No mitigation required	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
Public Services		
The proposed project would generate new solid waste.	PS-1. A solid waste management plan identifying measures for reuse, source reduction, and recycling shall be developed for construction and operation of the proposed project, and submitted to the City's Environmental Analyst and the County's Solid Waste Division for review and approval prior to building permit issuance.	Less than significant

TABLE ES-1

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
CLASS IV IMPACTS: BENEFICIAL IMPACTS		
Traffic		
The proposed pedestrian facilities would allow for pedestrian and bicycle connections between Elings Park and Alan Road (and beyond to Arroyo Burro County Beach Park).	No mitigation required	Not applicable
Land Use and Recreation		
Construction of the public path on the project site would create a route for pedestrians to walk from Elings Park to Arroyo Beach. In addition, bicycle access would be provided through the project site for riders along the Class II bike lane on Las Positas to access Arroyo Burro. These new access routes to the coast would represent beneficial impacts on local coastal recreation.	No mitigation required	Not applicable
Biological Resources		
The applicant has proposed an ambitious plan to restore and enhance riparian habitat along Arroyo Burro as part of the project. The major components of the plan are to remove the noxious weeds from the area, stabilize eroding banks, and establish a variety of native plants. If successful, the proposed project would result in the creation and enhancement of about 4.1 acres of riparian habitats on the project site, and 2.7 acres of riparian habitat on the adjacent City parcel.	No mitigation required	Not applicable

VERONICA MEADOWS SPECIFIC PLAN
MITIGATION MONITORING AND REPORTING PROGRAM
January 16, 2005
City of Santa Barbara, Community Development Department

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1. PURPOSE

The purpose of the Veronica Meadows Specific Plan Mitigation Monitoring and Reporting Program (MMRP) is to ensure compliance with all EIR mitigation measures and subsequent Conditions of Approval to mitigate or avoid potentially significant adverse environmental impacts resulting from the proposed project. The implementation of this MMRP shall be accomplished by City staff and the project developer's consultants and representatives. The program shall apply to the following phases of the project:

1. Applicant prepares engineering, landslide stabilization, bank repair, and creek restoration, and stormwater pollution prevention plans and specifications
2. City reviews and approves plans
3. City issues grading and building permits
4. Pre-construction conference with City
5. Construction (inspection and monitoring by City)
6. Post-construction inspection by City

2. RESPONSIBILITIES AND DUTIES

A qualified representative of the developer, approved by the City Planning Division and paid for by the developer, shall be designated as the Project Environmental Coordinator (PEC). The PEC shall be responsible for assuring full compliance with the provisions of this mitigation monitoring and reporting program to the City. The PEC shall have authority over all other monitors/specialists, the contractor, and all construction personnel for those actions that relate to the items listed in this program.

It is the responsibility of the contractor to comply with all mitigation measures listed in the attached MMRP matrix. Any problems or concerns between monitors and construction personnel shall be addressed by the PEC and the contractor. The contractor shall prepare a construction schedule subject to the review and approval of the PEC. The contractor shall inform the PEC of any major revisions to the construction schedule at least 48 hours in advance. The PEC and contractor shall meet on a weekly basis in order to assess compliance and review future construction activities.

3. IMPLEMENTATION

3.1 Plan Review and Approval

The City shall review and approve the following plans (among others) prior to issuance of grading and building permits:

- Landslide stabilization plan and supporting geotechnical studies.
- Site development plan (bridge, grading, drainage, landscaping, infrastructure, building, etc), including modified storm water treatment plan.
- Creek corridor restoration plan and supporting hydraulic, biological, and geomorphic analyses.
- Creek bank repair and restoration plan and supporting hydraulic, biological, and geomorphic analyses.
- Construction storm water pollution prevention plan.
- Construction traffic control plan.
- Construction fugitive dust and equipment emissions control plan.

3.2 Pre-Construction Conference

The PEC shall prepare a pre-construction project conference report. The report shall include a list of all mitigation measures and a plot plan delineating all sensitive areas to be avoided. This report shall be provided to all construction personnel.

The pre-construction conference shall be conducted by the PEC. The conference shall be attended by the PEC, construction manager, necessary consultants, Planning Division Case Planner, Public Works representative and all contractors and subcontractors associated with the project. Multiple pre-construction briefings shall be conducted as the work progresses and a change in contractor occurs.

The MMRP shall be presented to those in attendance. The presentation shall include project background, the purpose of the MMRP, duties and responsibilities of each participant, communication procedures, monitoring criteria, compliance criteria, filling out of reports, and duties and responsibilities of the PEC and project consultants. It shall be emphasized at this conference that the PEC and project consultants have the authority to stop construction and redirect construction equipment in order to comply with all mitigation measures.

Once construction commences, field meetings between the PEC and project consultants, and contractors shall be held on an as-needed basis in order to create feasible mitigation measures for unanticipated impacts, assess potential effects, and resolve conflicts.

3.3 Monitoring Activities

The PEC and required consultant(s) shall monitor construction activities and post-construction conditions per the EIR mitigation measures (see attached matrix) and Conditions of Approval. The frequency, location, and duration of monitoring is specified in the matrix.

3.4 Reporting Procedures

The PEC shall document compliance with the EIR mitigation measures and Conditions of Approval as specified in the attached matrix. Reporting shall include (at a minimum) the following:

- Master schedule of construction activities that is updated every two weeks.

- Weekly written progress reports to be submitted to the City. The reports would document field activities and compliance with EIR mitigation measures and Conditions of Approval
- Report at the completion of the bridge construction documenting compliance with EIR mitigation measures and Conditions of Approval
- Post-grading and landslide stabilization report to be submitted to the City upon completion of these major earthwork activities documenting compliance with EIR mitigation measures and Conditions of Approval
- Reports after every storm event of one inch over 24 hour period documenting compliance with SWPPP, EIR mitigation measures, and Conditions of Approval, and evaluating performance of stormwater BMPs
- Final report at the end of construction which includes the following: (a) A summary of all monitoring activities, dates, monitors, etc; (b) Complete set of progress reports; (c) An identification of non-compliance events and the manner in which they were corrected; and (d) Any technical reports required.

4. MMRP MATRIX

The following MMRP Matrix describes each EIR mitigation measure, monitoring activities and the responsibilities of the various parties, along with the timing and frequency of monitoring and reporting activities. The MMRP matrix is intended to be used by all parties involved in monitoring the EIR mitigation measures, as well as project contractors and others working in the field. The matrix should be used as a compliance checklist to aid in compliance verification and monitoring requirements. A copy of the MMRP matrix shall be kept in the project file as verification that compliance with all mitigation measures has occurred.

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
W-1. The proposed drainage system shall be modified to provide at least four or more drain outlets to the creek to reduce the magnitude of the discharge at each location compared to the proposed drainage outlets. The new outlets shall be equally distributed along Arroyo Burro Creek to the extent feasible. In addition, the proposed drainage system shall be modified to provide infiltration areas that are distributed along the stream terraces of Arroyo Burro Creek in such a manner as to facilitate infiltration through the banks to support riparian vegetation and contribute to base flows. A preliminary design of the drainage system shall be reviewed and approved by the Community Development Department and Public the Works Department before completing final design for submittal to the Building Department. Examples of design elements to be considered under this mitigation are presented as the Alternative Drainage and Stormwater Treatment Plan (EIR Section 4.11).	Applicant/ Contractor	City Staff PEC	Review and approve plans; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Daily, during installation of drainage system	Planning Division/ Building & Safety Division/ Public Works Dept. PEC Reports	
W-2. The applicant shall prepare detailed plans on the methods to remove giant reed and other exotics from the banks of Arroyo Burro Creek as part of the proposed creek corridor restoration effort, as well as for the stabilization and restoration of the two areas of bank erosion. The plans shall include analyses and calculations that demonstrate how the removal and replacement of the undesirable plants can be accomplished without destabilizing the creek banks and increasing bank erosion. The plans for both exotic removal and bank repair shall include considerations of hydraulic and geomorphologic factors along the creek, such as flow velocities, sediment carrying capacity, bank failure modes, and shear stress factors. They shall describe and show bank stabilization methods and materials, as well as any anticipated long-term weeding and bank maintenance. The plans for bank repair shall evaluate whether maintaining the existing vegetation on the eroded banks would be more stable than the proposed filling of the eroded areas. Only bio-technical bank stabilization shall be used in these efforts – that is, methods and materials that are based on using plants for long-term bank protection. The plans for bank repair shall also include an evaluation of the need to stabilize the base of the creek banks, where the original bank failure occurred, in order to achieve long-term stabilization. All creek bank stabilization associated with the project shall not reduce channel capacity or create new flood hazards. The creek restoration and bank repair plans shall be reviewed and approved by the Community Development Department, Parks & Recreation Department (Creeks Division), and the Public Works Department before completing final design for submittal to the Building Department.	Applicant/ Contractor.	City Staff PEC	Review and approve plans; inspect in field; direct field personnel as necessary Inspect in field	Prior to issuance of building permit(s); regular inspections Daily, during restoration activities; weekly, to ensure success of restoration efforts	Planning Division/ Building & Safety Division/ Parks & Recreation Dept./Public Works Dept. PEC Reports	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
W-3. The following measures shall be incorporated into the project Storm Water Pollution and Prevention Plan (SWPPP), which must meet state NPDES General Construction Permit requirements, and must be approved by the Building Department. The SWPPP shall incorporate all feasible Best Management Practices (BMPs) to reduce erosion from construction activities, to prevent sediment in stormwater discharges, and to minimize non-stormwater pollutants at the project site to the maximum extent possible.	Applicant/ Contractor	City Staff	Review and approve plan; inspect in field; direct field personnel as necessary	Prior to issuance of building permit(s); regular inspections	Building & Safety Division	
a) The following earthwork activities shall be restricted to the period April 1 to November 1 in order to avoid work during the rainy season: grading and earthwork for slope stabilization, mass grading, site grading for roads and building pads, trenching for utilities, and creek bank stabilization. Clearing and grubbing the site for earthwork shall also be restricted to the same time period. b) Construction of the bridge across Arroyo Burro Creek shall be restricted to the period July 1 to November 1 when runoff is low. c) A dewatering and flow by-pass plan for construction of the bridge over Arroyo Burro Creek shall be submitted to the Building Department for review and approval. d) The following construction activities involving minor earthwork and grading may occur in the winter months provided special measures are implemented to address stormwater runoff during the work: (1) construction of pedestrian paths in the creek corridor; (2) weeding, plant removal, and planting in the creek corridor as part of the habitat restoration effort; and placement of caissons. The applicant must prepare specific erosion control and stormwater management plans for these activities if they are planned for the period November 1 to April 1. The plans shall be submitted to the Building Department for review and approval. e) Temporary stockpiles at the project site shall be protected from erosion by the combined use of surface stabilization, upslope runoff diversions, temporary berms around the perimeter, perimeter interceptor ditches, and temporary downstream catchments, as necessary and appropriate. Stockpiles that are present during the winter season (November 1 to April 1) shall be protected from erosion due to direct precipitation or runoff during the winter by the use of surface stabilization (such as erosion control blankets or temporary seed cover). f) BMPs to prevent discharge of construction materials, contaminants, washings, concrete, fuels, and oils will include the following measures:		PEC	Inspect in field	Confirm SWPPP preparation prior to work; monitor implementation of BMPs prior to work; daily monitoring during rainy season	PEC Reports	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
1. Ensure that all construction vehicles and equipment that enter the construction and grading areas are properly maintained (off-site) to prevent leaks of fuel, oil and other vehicle fluids 2. Implement measures and provide materials to contain any accidental spills or leakage during the fueling of construction equipment at the site 3. Prepare a spill prevention/spill response plan for the project site that includes training, equipment and procedures to address spills from construction equipment, refueling operations, and stored fluids (if any) 4. Place all stored fuel, lubricants, paints and other construction liquids in secured and covered containers within a bermed or otherwise contained area at least 200 feet from the creek 5. Refuel only in bermed areas with impermeable surfaces at least 200 feet from the creek 6. Prohibit equipment washing and major maintenance at the project site, except for washdown of vehicles to remove dirt 7. Remove all refuse and construction debris from the site as soon as possible g) In order to reduce tracking of sediment from the construction site onto public roads, a stabilized construction entrance/exit shall be constructed and maintained at entrances to the site. Tracking control shall be achieved by either gravel or metal plates. h) Two weeks prior to the beginning of the winter season (November 1), erosion control BMPs shall be installed at the site, and approved by the City Building Department in anticipation of rain events. Due to the extensive area and volume to be graded at the project site, erosion control shall include more than the placement of silt fences. Additional control shall be included such as temporary grass cover, interceptor ditches, and temporary downstream catchment basins.						
W-4. The proposed stormwater treatment system shall be expanded and modified as described below. Examples of several design elements in this mitigation measure are presented in the Alternative Drainage and Stormwater Treatment Plan (EIR Section 4.11). a) Runoff from the western off-site watershed should be separated from the runoff from the project site. This runoff from this watershed shall be conveyed through the center of the site in an open earthen channel with small check dams to facilitate infiltration of low flows. The site grading plan for Lots 8-11 and 13-24	Applicant/ Contractor/ Homeowners	City Staff	Review and approve plans; review private CC&Rs; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division/ Public Works Dept.	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
shall be modified to convey runoff from the lots towards the road into a separate stormwater treatment system. b) Stormwater detention basins or bioswales shall be constructed to treat runoff from Lots 1-7 and the private driveway to these lots, as well as from Lot 12 and the bridge. c) All stormwater from developed areas of the site shall be treated in accordance with the City's requirements in the current SWMP, and supplemented as necessary, with the design standards for detention basins and bioswales contained in Santa Barbara County's SWMP. d) The site plan and architectural design shall be modified during final design to include, to the extent practicable, stormwater management design elements, also known as low-impact design features. Examples include: roof drainage that is direct to infiltration trenches or bioswales; driveways constructed of permeable materials, pavers, or strip pavement for tires only; openings in curbs to provide opportunities for infiltration in adjacent grassy swales along the roads; use of permeable surfaces instead of concrete in roadway ribbon gutters; and small depressions in front years to collect roadside runoff for infiltration. e) The proposed homeowners association shall have the responsibility, authority, and ongoing funding to monitor and maintain the stormwater management facilities located in the public open space areas of the site and on private lots (if present) which would include detention basins, bioswales, and infiltration basins. The association shall have the authority to levy fees as necessary to maintain, repair, or replace stormwater management facilities. The City shall have responsibility for maintaining Lane "A" and any associated stormwater treatment feature such as permeable ribbon gutters or swales. f) The proposed homeowners association shall periodically issue educational materials to homeowners, tenants, and occupants that address topics such as proper handling, use, and disposal of household chemicals, fertilizers, pesticides, and herbicides; legal impacts of illegal dumping or disposal; household waste collection programs; oil recycling programs; alternative household products; and pet waste management. g) The proposed homeowners association shall prepare a water quality management plan for the four open space areas at the project site: Lot 27 (hillside open space), Lot 25 (central open space with tributary drainage channel), and Lots 26 and 28 (creek corridor with pedestrian path). The plan shall incorporate the principles, methods, and approach of the City's Integrated Pest Management (IPM) Plan (as it is revised and updated in the future) in order to minimize the use of pesticides		PEC	Inspect in field	Daily, during installation activities	PEC Reports	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
and herbicides for landscape maintenance to the extent feasible. The plan shall also include trash cans, informational signage, and mutt mitts along the creek corridor pedestrian path. h) The applicant shall submit a draft Stormwater Management Plan and an Open Space Water Quality Management Plan with the above elements to the Community Development Department and Public Works before completing final project design for submittal to Building Department.						
Biological Resources						
BIO-1. The proposed native habitat restoration plans shall be modified as follows to ensure the successful long-term establishment of new and enhanced native habitats at the project site, including the creek corridor restoration, upland habitat restoration in Lots 25, 26, 27, and 28, and creek bank repair and restoration sites. A comprehensive habitat restoration plan for these project elements shall be submitted to the Community Development Department and the Parks & Recreation Department (Creeks Division) for review and approval prior to incorporation into the final grading and landscaping plans to be submitted to the Building Department for final review and approval. The comprehensive habitat restoration plan shall include the following elements (among others): ▪ Precise restoration objectives for each habitat type and location ▪ Detailed schedule of tasks and milestones for site preparation, planting, and maintenance	Applicant/ Contractor.	City Staff	Review and approve plans; inspect in field; direct field personnel as necessary	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division/ Parks & Recreation Dept.	
▪ Plans that show grading and soil preparation, and any areas that will require slope stabilization or temporary erosion control ▪ Description of specific habitat types to be restored, including species list and relative abundance in each habitat type, as well as planting densities and propagation methodologies ▪ Plans that show the boundaries of each habitat type to be restored, with precise acreages and plant densities ▪ Description of source of plant materials, with a commitment to utilize plant material from the South Coast region, and preferably from the Las Positas Valley ▪ Performance criteria that include survivorship, percent native plant cover, percent noxious weed cover, and percent naturalized species cover		PEC	Inspect in field	Daily, during restoration activities; weekly, to ensure success of restoration efforts	PEC Reports	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
▪ Plans and explanations that show how the non-native landscaping at the project site associated with the individual lots will interface with the native plant restoration in the upland and riparian open space areas ▪ A description of a watering approach to ensure successful plant establishment and long-term productivity, including methods to provide supplemental water ▪ A description of the weed management approach, emphasizing site preparation and watering methods that do not encourage weed growth and use of herbicides that is consistent with the City's adopted Integrated Pest Management (IPM) plan ▪ A long-term rodent management plan that avoids or greatly reduces the use of pesticides or poisons ▪ Plans and a description of the how the habitat restoration plans will incorporate fire hazard requirements for defensible space near structures and fire-safe vegetation, while still achieving habitat restoration goals ▪ Plans and a description of how to establish and maintain riparian habitats in the creek corridor open space with ongoing public uses along the pedestrian path ▪ Plans and calculations for any proposed bank stabilization shall include an evaluation of hydraulic and geomorphologic factors along the creek, such as flow velocities, sediment carrying capacity, bank failure modes, and shear stress factors as described in Mitigation Measure W-2. The plan may include non-native ornamental trees in selected portions of the hillside and central open space areas for aesthetic reasons, provided the number of these locations is low and the non-native trees would not displace native plants over time. The plan shall also include a maintenance program to be implemented by the homeowners association with a description of the authority and mechanism to secure sufficient funding to ensure long-term success. The plan would apply to portions of the City-owned parcel on the east side or Arroyo Burro Creek. Hence, the restoration approach and plan for this element of the project shall be approved by the City Parks and Recreation Department. The applicant shall maintain the restoration areas on City property until the performance criteria have been achieved, at which time the City will assume responsibility for maintenance.						

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
BIO-2. Oak trees to be removed shall be replaced at a 10:1 ratio at the project site. The replacement trees shall range in size from one gallon to 15-gallon trees. Planting locations shall be appropriate for oak trees, as determined by the arborist, and included in the habitat restoration plans. The number of oak trees to be removed shall be confirmed on the final plans. The plans shall include an oak and riparian tree protection drawings and specifications that require the following: ▪ Prior to grading, temporary protective fencing (4 feet high) shall be installed three feet outside the dripline of all oak and riparian trees to be preserved. Fencing shall be maintained during the entire construction period. ▪ Heavy equipment shall not be used or parked within three (3) feet of oak tree driplines, except where approved by a qualified arborist, and after protective fencing has been installed. ▪ Soil, rocks, or construction material shall not be stored or placed within the dripline of oak trees.	Applicant/ Contractor.	City Staff PEC	Review and approve plans; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Daily, throughout project duration	Planning Division/ Building & Safety Division PEC Reports	
BIO-3. The area of temporary disturbance associated with installation of the bridge over Arroyo Burro shall be minimized to the maximum extent feasible. The limit of temporary disturbance upstream and downstream of the bridge shall not exceed 25 feet. All disturbed areas shall be restored with native riparian trees and shrubs. The disturbed banks shall be stabilized, as necessary, with biotechnical methods to prevent post-construction erosion. Native perennial plants that are tolerant of shade shall be planted under the bridge span. To the extent feasible, tall riparian trees shall be planted that will grow adjacent to the edge of the bridge and provide cover.	Applicant/ Contractor	City Staff PEC	Review and approve plans; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Daily, throughout project duration	Planning Division/ Building & Safety Division PEC Reports	
BIO-4. To partially offset the permanent habitat losses at the bridge site, the open space area north of the entrance road and south of Lot 12 shall be restored to a native oak-riparian area dedicated to wildlife habitat, particularly riparian breeding birds and raptors. The restoration of this site shall be included in the comprehensive native habitat restoration plan for the proposed project (see Mitigation Measure BIO-1).	Applicant/ Contractor	City Staff PEC	Review and approve plans; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Daily, throughout project duration	Planning Division/ Building & Safety Division PEC Reports	
BIO-5. Phase I grading and earthwork within 100 feet of the outer edge of the existing riparian corridor (as mapped in the EIR) shall not occur during the period 1 March through 15 July in order to avoid disturbance to breeding birds. Prior to removal of any oak, eucalyptus, or native riparian tree, a qualified biologist shall carefully examine the tree to determine that no active bird nests are present. If a nest	Applicant/ Contractor	City Staff	Review and approve plan; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
is located, tree removal shall be delayed until all chicks have fledged.		PEC	Conducts pre-construction survey and enforces work restriction	Conducts survey for nest for work in restricted zone after July 15th	PEC Reports	
BIO-6. The limits of disturbance in areas with native or naturalized vegetation shall be minimized to the extent feasible. Limits of clearing and grubbing, grading, and vehicular access shall be marked at the site with orange exclusion fencing.	Applicant/ Contractor	City Staff	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	
		PEC	Inspect in field	Daily, throughout project duration	PEC Reports	
BIO-7 The following measures shall be implemented to reduce impacts of residential development on riparian resources in the creek: ▪ The lowest output lighting permissible on all roadways and common areas of the development shall be used. All street and common lighting shall be shielded so that stray light effects are minimized, and to avoid direct illumination of the riparian corridor, except as needed for public safety. Decorative night lights shall not be directed into trees within the riparian restoration area.	Applicant/ Contractor	City Staff & Archi-tectural Board of Review	Review and approve plans; review private CC&Rs; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	
▪ The pedestrian path in the creek open space corridor shall be sited to provide views and an aesthetic enjoyment of the creek environment. However, the alignment of the path shall not substantially interfere with the primary objective of providing wildlife habitat and native plant cover along the creek corridor. The path shall also include interpretative signs informing the public of the sensitive resources in the creek, and asking the public to refrain from entering the creek channel, or letting pets enter the channel. The final design for the creek open space shall also include a consideration of low-profile fencing at the top of the creek bank or in sensitive habitat areas.		PEC	Inspect in field	Weekly, until full compliance is confirmed	PEC Reports	
▪ <u>The proposed gazebo to be located along the pedestrian path shall be situated as far as possible from the creek (a minimum of 50 feet), and the location shall be selected to minimize impacts to riparian resources.</u> ▪ The proposed homeowners association shall prepare and implement (<u>with long-term funding assurances</u>) a habitat maintenance and management plan for the four						

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
open space areas at the project site: Lot 27 (hillside open space), Lot 25 (central open space with tributary drainage channel), and Lots 26 and 28 (creek corridor with pedestrian path). The plan shall incorporate the principles, methods, and approach of the City's Integrated Pest Management (IPM) Plan (as it is revised and updated in the future) in order to minimize the use of pesticides and herbicides for landscape maintenance to the extent feasible. The plan shall include measures to monitor and remove the amount and extent of non-native invasive plants; maintain the riparian plantings in good health; and contingency plans for replacement planting. It shall also include measures to monitor and manage public access to prevent unanticipated impacts to riparian and aquatic habitats in the creek from public uses.						
BIO-8. The width of the proposed bridge shall be reduced by only including a sidewalk on one site, if this modification does not create unsafe conditions for pedestrians and bicyclists, as determined by the City Transportation Department.	Applicant/ Contractor	City Staff	Review and approve plans; inspect in field	Prior to issuance of building permit(s)	Transporta-tion Division /Planning Division	
G-1. The stabilization of landslide above Lot 12 will involve the excavation of a deep shear key. This excavation shall be expanded to assess the presence or absence of the nearby Lavigia Fault in accordance with City requirements. The excavation shall be inspected by a Certified Engineering Geologist to identify possible features associated with the nearby Lavigia Fault. If evidence of faulting is detected, the likelihood of faulting affecting the structures at Lot 12 shall be evaluated and appropriate measures shall included into the design to accommodate possible future movements, if necessary, in accordance with City requirements.	Applicant/ Contractor	City Staff; Certified Engineer-ing Geologist	Review and approve plans	Prior to issuance of building permit(s); as necessary	Building & Safety Division; Geologist	
G-2. The potential for liquefiable conditions underlying Lots 7 through 24 shall be evaluated by a geotechnical investigation during final design of the project. This investigation shall include additional borings at depth and locations approved by the City Building Department. Areas that are susceptible to liquefaction shall be identified. Appropriate design and construction techniques to address this condition (e.g., ground improvement, drainage) shall be included in the final design to be reviewed and approved by the Building Department. The applicant shall also provide evidence that the construction of deep shear keys using engineered fills as part of landslide stabilization for other lots will reduce the potential for seismic liquefaction at these locations to an acceptable level.	Applicant/ Contractor	City Staff	Review and approve plans	Prior to issuance of building permit(s); as necessary	Building & Safety Division	
G-3. The potential for expansive soils underlying Lots 12 through 21 shall be evaluated by a geotechnical investigation during final design of the project. Appropriate design and construction techniques to address this condition shall be	Applicant/ Contractor	City Staff	Review and approve plans	Prior to issuance of building permit(s); as necessary	Building & Safety Division	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
included in the final design to be reviewed and approved by the Building Department. The applicant shall also provide evidence that the construction of deep shear keys using engineered fills as part of landslide stabilization for other lots will mitigate the expansive soils at these locations to an acceptable level.						
G-4. The potential for high groundwater conditions in lots along the base of the hillside (Lots 1-7, and Lots 12 through 21) shall be evaluated by a geotechnical investigation during final design of the project. These investigations shall include additional borings. Appropriate drainage measures to address this condition shall be included in the final design to be reviewed and approved by the Building Department.	Applicant/ Contractor	City Staff	Review and approve plans	Prior to issuance of building permit(s); as necessary	Building & Safety Division	
G-5. To ensure that that a significant impact due to landslide hazards is avoided throughout the life of the project, the applicant shall complete a geotechnical investigation that provides the basis for final design and construction. The investigation program shall include sufficient subsurface exploration, laboratory testing, and engineering analysis to fully characterize each landslide and to develop an appropriate design of shear keys and cast-in-ground caissons to allow construction to proceed safely and to provide sufficiently stable building sites against future landsliding under both static and dynamic loading conditions. The results of the study shall be subject to review and approval by the City Building Department, and an independent geotechnical engineer and geologist to provide a greater level of confidence in the proposed solutions. The investigation shall include borings at landslides 1, 2, 3, 8, 9, and 12 to provide suitable information to design stabilization programs for Lots 1 through 6, Lot 12, NW of Lot 19, and SW of Lots 20 and 21. Some of the borings shall be drilled along the proposed caisson wall alignments to provide a basis for the actual wall design, e.g., caisson diameter, spacings and depth prior to the start of construction. This is necessary because in several instances the proposed caisson depths are less than the estimated depth of sliding. The investigations shall also determine the diameter and spacing of caissons, as the proposed diameter (2 feet) spacing (4 or 5 pier diameters) may not be sufficient to resist the driving forces, particularly during seismic loading, due to the quasi-stable landslide mass. All shear key excavations shall be observed and mapped by a qualified geotechnical engineer or engineering geologist to verify design assumptions in accordance with Section 3317 of Appendix Chapter 33 of the 1997 Uniform Building Code (UBC)/1998 California Building Code (CBC).	Applicant/ Contractor	City Staff; geotech-nical engineer and geologist	Review and approve plans	Prior to issuance of building permit(s); as necessary	Building & Safety Division; geotechnical engineer and geologist	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
CR-1. Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts associated with past human occupation of the parcel. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and an archaeologist from the most current City Qualified Archaeologists List shall be retained by the applicant. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, preparation and implementation of a Phase III Archaeological Resources Report in accordance with the City Master Environmental Assessment Guidelines for Assessment of Archaeological Resources and Historic Structures and Sites, etc. If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization. If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission to determine the disposition of the remains.	Applicant/ Contractor	City Staff PEC	Review and approve plans Inspect in field; report discoveries to City Staff	Prior to issuance of building permit(s) Daily, during grading activities	Planning Division PEC Reports	
CR-2. The remnant oak trees at the project site shall be retained and incorporated into the project. Interpretive signage shall be placed near the trees along a path. The signage shall include a photograph of the buildings that were once located nearby, showing the activity on the site associated with the water company. All of the interpretive signage shall be metal within a wood frame (subject to review and approval by the Historic Landmarks Commission), and the text will be prepared by a qualified historic preservation professional.	Applicant/ Contractor	City Staff; Historic Land-marks Com-mission PEC	Review and approve plans; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Weekly, until full compliance is confirmed	Planning Division/ Building & Safety Division PEC Reports	
CR-3. A gazebo structure shall be constructed near the proposed pedestrian trail along the creek corridor. It shall be constructed to match the design, scale, and material of the original building that was associated with the water company. The gazebo structure shall contain a display of the history of Veronica Springs, including	Applicant/ Contractor	City Staff; Historic Land-marks	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
photographs and advertising brochures from the water bottling plant in town and the Veronica Springs site itself. If artifacts are found through archaeological monitoring, those artifacts should be suitably displayed in the building. The gazebo design shall be reviewed and approved by the Historic Landmarks Committee and Architectural Board of Review. The proposed gazebo shall be situated as far as possible from the creek (a minimum of 50 feet) and the location shall be selected to minimize impacts to riparian resources.		Com-mission PEC	 Inspect in field	 Weekly, until full compliance is confirmed	Division PEC Reports	
CR-4. Interpretative signs shall be placed along the public path along the creek corridor that describe the entry road to Veronica Springs and other historical elements on the site. The signs shall be reviewed and approved by the Historic Landmarks Committee and Architectural Board of Review.	Applicant/ Contractor	City Staff; ABR & HLC	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	
CR-5. The name of the new development and streets within the development shall reflect the history of the Veronica Springs site (e.g., Veronica Springs, Veronica Meadows, Kimball Road, Hawley Heights, Clifton Way, Thomas Road). The street names shall be reviewed and approved by the Historic Landmarks Committee.	Applicant/ Contractor	City Staff & HLC	Review and approve plans; inspect in field	Prior to issuance of Certificate of Occupancy; regular inspections	Planning Division/ Public Works Dept.	
AQ-1. The following measures would reduce fugitive dust emissions related to construction activities and haul trucks. They are based on the standard dust mitigation measures of the APCD. a) Areas subject to clearing, grading, earth moving or excavation shall be kept sufficiently moist, through use of either water trucks or sprinkler systems, to prevent dust from leaving the site. Water trucks or sprinkler systems shall also be used to keep on-site roads (paved and unpaved) damp enough to prevent dust raised from leaving the site. At a minimum, this shall include wetting down these areas in the late morning and after work is completed for the day. At the end of the day, areas with disturbed soil shall be sufficiently moistened to create a crust. Increased watering frequency shall be required whenever the wind speed exceeds 15 mph. These areas must also be kept moist during weekends and days when no construction activities are occurring. b) Reclaimed water shall be used for dust control if the Public Works Director determines that it is reasonably available c) Stockpiles and barren areas at the project site that shall be disturbed on a periodic basis (at least once every 5 days) shall be kept sufficiently moist by the use of	Applicant/ Contractor	City Staff PEC	Inspect in field Inspect in field	During regular inspections Daily, during grading activities	Building & Safety Division PEC Reports	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
water trucks or sprinklers to prevent dust from leaving the site. d) Stockpiles and barren areas at the project site that shall remain undisturbed for more than 5 days shall be stabilized by the use of tackifiers, soil binders, or other measures. These stabilization agents shall be replenished throughout the dry season on an as-needed basis to prevent dust emissions. e) On-site vehicle speeds shall be limited to 15 miles per hour or less. f) Gravel pads or similar devices shall be installed at all access points to prevent tracking of mud on to public roads. g) Alan Road, Cliff Drive (between Alan Road and Las Positas Road), and Las Positas Road (between Cliff Drive and Veronica Springs Road) shall be inspected daily (midday and at the end of the day) during periods of truck hauling to determine if there is an accumulation of silt on the road that could cause fugitive dust. These road segments shall be kept clean of such silt by the use of a street sweeper or watering truck. h) Trucks transporting fill material to and from the site shall be tarped from the point of origin. i) Upon the completion of construction, all disturbed areas shall be stabilized by the use of rock protection or perennial vegetation. j) The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to initiation of construction. All dust control requirements shall be shown on grading and building plans.						
AQ-2. The following measures would reduce NO_X emissions from construction equipment and haul trucks. They are based on the standard mitigation measures of the APCD. a) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) should be utilized wherever feasible. b) The engine size of construction equipment shall be the minimum practical size. c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest	Applicant/ Contractor	City Staff	Inspect in field	During regular inspections	Building & Safety Division	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
practical number is operating at any one time. d) Construction equipment shall be maintained in tune per the manufacturer's specifications. e) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines. f) Catalytic converters shall be installed on gasoline-powered equipment, if feasible. g) Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California shall be installed, if available and if determine to be reasonable and feasible by the City Public Works Department. h) Construction worker trips should be minimized by encouraging carpooling and by providing for lunch onsite.		PEC	Inspect in field	Weekly	PEC Reports	
N-1. Clearing and grubbing, earthwork, drilling, concrete placement, and other major construction activities involving heavy equipment shall be restricted to 8 a.m. to 5 p.m. at the following locations: bridge site, landslide stabilization site above Lot 12, and landslide stabilization site above Lot 1.	Applicant/ Contractor	City Staff; PEC	Inspect in field	During regular inspections; daily	Building & Safety Division; PEC Reports	
N-2. No haul, dump, or supply trucks shall use Alan Road for access during Phase 2, except as need to construct residences at Lots 1 and 2. During Phase 1, all haul trucks, dump trucks, and heavy equipment traffic on Alan Road shall be restricted to the time period 9 a.m. to 4 p.m. during weekdays.	Applicant/ Contractor	City Staff; PEC	Inspect in field	During regular inspections; daily	Building & Safety Division; PEC Reports	
N-3. The following measures should be incorporated into the project contract specifications to minimize general construction noise impacts: a) Construction operations shall be limited to the hours 7 a.m. to 7 p.m. Monday through Friday or at any time on Saturday, Sunday or on holidays, consistent with the City of Santa Barbara Municipal Code. Holidays are defined as those days that are observed by the City of Santa Barbara as official holidays, and include New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the following Friday, and Christmas Day. Further restrictions on construction operations are provided in Mitigation Measure N-1. b) All noise-producing project equipment and vehicles using internal combustion engines (including haul trucks) shall be professionally fitted with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features. These	Applicant/ Contractor	City Staff; PEC	Inspect in field	During regular inspections; daily	Building & Safety Division; PEC Reports	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
devices shall be professionally maintained in good operating condition so as to meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. c) Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from Alan Road and the Stone Creek Condominiums. d) The speed limit at the construction site during prior to completion of paved roads shall be 15 MPH. e) The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. f) No project-related music system shall be audible at any adjacent receptor. g) Within 20 days of commencement of construction, the project applicant shall provide a notice of construction schedule to property owners, residents, and neighborhood organizations within 500 feet of the site boundary and post information on the site in a location visible to the public, including the hours of operation and contact person with a telephone number who can address questions and problems that may arise during construction. h) All project workers exposed to noise levels above 80 dBA shall be provided with personal protective equipment for hearing protection (i.e., earplugs and/or earmuffs); areas where noise levels are routinely expected to exceed 80 dBA shall be clearly posted with signs stating "Hearing Protection Required in this Area." i) Survey work, construction within residential units with completed walls, and landscaping (manual labor only) may occur at the project site on Saturday. No construction work can occur on Saturday if involves the use of haul trucks or construction equipment (e.g., loaders, backhoes, generators, etc). j) Construction staging areas where vehicles may idle or other noise-generating activities take place shall be located as far from adjacent residential areas as feasible.						
VS-1. The applicant shall submit final architectural plans and color/material boards to the Architectural Board of Review (ABR) for review and approval. The color and texture scheme shall be designed to minimize visual contrast with the surrounding landscape.	Applicant/ Contractor	City Staff & ABR	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	
VS-2. The final architectural plans for residences at Lots 1 and 2 shall be designed to minimize the contrast of height and mass between the proposed two-story homes and the adjacent one-story homes along Alan Road. These plans shall be submitted to the Architectural Board of Review (ABR) for review and approval.	Applicant/ Contractor	City Staff & ABR	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
VS-3. To prevent nighttime glare, any exterior lighting installed on the project site shall be of low intensity, low glare design, and be hooded to direct light downward and prevent spill over onto adjacent parcels. All light fixtures shall be shielded so that neither the lamp nor the related reflective interior surface is visible from any of the observation points. All light poles, fixtures, and hoods shall be dark colored (non-reflective). Security and street lighting shall be shielded so as not to create glare when viewed from the observation points. The light poles and fixtures shall not be obtrusive to travelers along Las Positas Road, the Alan Road neighborhood, or the public open space areas.	Applicant/ Contractor	City Staff & ABR	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Planning Division/ Building & Safety Division	
PS-1. A solid waste management plan identifying measures for reuse, source reduction, and recycling shall be developed for construction and operation of the proposed project, and submitted to the City's Environmental Analyst and the County's Solid Waste Division for review and approval prior to building permit issuance.	Applicant/ Contractor	City Staff PEC	Review and approve plan; review private CC&Rs; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Weekly, during construction	Planning Division/ Building & Safety Division/ Public Works Dept. PEC Reports	
H-1. Prior to issuance of building and grading permits, the applicant shall submit a pesticide management plan that addresses the selection, application, storage, and transport of herbicides, insecticides, and rodenticides that would be used in managing the public open spaces at the project site by the homeowner's association. The plan shall be consistent with the City's Integrated Pest Management (IPM) program, and shall be designed to minimize the use of pesticides over time and to avoid public exposure.	Applicant/ Contractor	City Staff PEC	Review and approve plan; review private CC&Rs; inspect in field Inspect in field	Prior to issuance of building permit(s); regular inspections Weekly, during construction	Planning Division/ Building & Safety Division PEC Reports	
H-2. Prior to the issuance of building and grading permits, the applicant shall conduct a study to determine the potential for radon gas to be emitted from the project soils after grading. If it appears that radon is present, the building plans shall incorporate EPA-approved construction methods and design features to prevent the exposure of residents to the gas.	Applicant/ Contractor	City Staff	Review and approve study	Prior to issuance of building permit(s); as necessary	Building & Safety Division	
TR-1. The following measures are recommended to minimize truck conflicts on Alan Road with passenger vehicles, bicycles, pedestrians, and parked vehicles during Phase 1 of the construction:	Applicant/ Contractor	City Staff	Review and approve plan; inspect in field	Prior to issuance of building permit(s); regular inspections	Transporta-tion Division /Planning Division/ Building &	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
▪ The project applicant shall prepare and implement a Traffic Control Plan that shall specify measures to ensure traffic safety on Alan Road. The plan shall include instructions and guidelines on signage, notification of residents, ingress/egress procedures for large trucks, contact person with phone number, possible need for traffic control attendant, and measures to avoid passage of two trucks on the narrow road. ▪ No trucks shall park or queue on Alan Road at any time ▪ The truck speed limit along Alan Road shall be 15 MPH ▪ Truck drivers shall be disciplined for non-compliance with safety regulations. All trucks shall be clearly marked with a number visible to residents on both sides of the road and from the rear in the event non-compliance needs to be reported.		PEC	Inspect in field	Daily, during Phase 1 of construction	Safety Division PEC Reports	
TR-2. The proposed intersection at Las Positas Drive and project site entrance (Lane "A") shall consist of a stop-controlled intersection that meets all applicable Caltrans standards, including turn lane lengths, roadway widths and curb-return radii. Caltrans has indicated that a public road intersection with a southbound right-turn lane and northbound left-turn lane on Las Positas Road will be required at the intersection. Minor widening of Las Positas Road may be required to provide adequate width for the turn lanes. The project applicant shall acquire Caltrans' conceptual approval of the intersection prior to final action by the City Council on the proposed Specific Plan. The project applicant shall also acquire all necessary Caltrans approval, including an encroachment permit, for the intersection prior to submittal of plans for City building and grading permits. The final design of the intersection improvements will be determine as part of the encroachment permit process.	Applicant/ Contractor	City Staff	Review and approve plan; inspect in field	Prior to City Council action on the Specific Plan; prior to issuance of building permit(s); regular inspections	Transporta-tion Division /Planning Division/ Building & Safety Division	
TR-3. The proposed intersection at Las Positas Road and the project site entrance (Lane "A") shall include pruning or otherwise modifying trees and other vegetation on the west side of Las Positas Road between the access connection and the Stone Creek condominium complex access connection to create sight distances that meet Caltrans standards.	Applicant/ Contractor	City Staff	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Transporta-tion Division /Building & Safety Division	
TR-4. The entrance to the project site (Lane "A") from Las Positas Road shall be modified to permit adequate clearance for incoming trucks and vehicle queued on the outbound approach at the intersection waiting to exit the site vehicles. The modifications shall meet Caltrans standards.	Applicant/ Contractor	City Staff	Review and approve plans; inspect in field	Prior to issuance of building permit(s); regular inspections	Transporta-tion Division /Building & Safety Division	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
TR-5. The project applicant shall video document the pavement conditions on Alan Road, Cliff Drive, and Las Positas Drive before and after the construction project to determine the level of impact caused by the project. This documentation shall be provided to the City of Santa Barbara, Transportation Department. If the project traffic has caused damage to the roadway surface, the project applicant shall repair or resurface the affected reaches.	Applicant/ Contractor	City Staff	Review and approve video and condition of road	Before and after the project construction	Transporta-tion Division	
TR-6. The applicant shall provide the City with a fair share contribution to fund capacity or operational improvements by the City or Caltrans to the intersections listed below, where the project would have a significant contribution to cumulative impacts. ▪ Calle Real/Hwy 101 NB Ramps ; Las Positas Road/Hwy 101 SB Ramps; Las Positas Road/Modoc Road; Las Positas Road/Cliff Drive These intersections are currently Caltrans facilities. Capacity improvement projects have been identified at each intersection, but specific projects have not yet been programmed or funded at this time except at Las Positas and Cliff Drive. At this intersection, the City proposes to install a roundabout to improve traffic conditions, if and when Highway 225 is relinquished to the City. The City has prepared a Project Study Report (PSR) for the roundabout project and has initiated the relinquishment request process with Caltrans. The applicant shall contribute fair share funding for improvements at all four intersections based on the peak hour traffic volume contributed by the proposed project as a percentage of the existing and future volume that exceeds the City's significance impact threshold of 0.77 volume/capacity (V/C) ratio. The fair share contribution shall be determined by multiplying the above percentages times the estimated construction costs of the intersection improvements, and then summing the amount for each intersection. The estimated fair share contribution for this project is $88,850. The applicant shall execute a contract with the City prior to issuance of certificates of occupancy for the project that specifies the total fair share cont ribution, contract period, and the mechanism for transferring funds to the City and then making them available to Caltrans as needed. The fair share contribution shall be made prior to the issuance of the certificate of occupancy. The amount shall be $88,850, unless refined construction estimates are developed for one or more of the intersection projects prior to the execution of the contract. The contribution shall be revised based on new construction estimates and utilizing traffic information in the Final EIR, but would not exceed a total contribution of $88,850 or the amount established in the final project conditions of approval. The contract period shall be 10 years.	Applicant	City staff	Confirm receipt of fund	Prior to issuance of certificates of occupancy	Planning Division/ Transporta-tion Division	

Mitigation Measures	Responsible Entity	Monitor	Action by Monitor	Timing & Frequency	Compliance Check	Verif-ication
The City shall allocate the funds to any of the four intersection projects if they are constructed during this 10-year timeframe only in the amounts as identified for each intersection mitigation, unless the City has the adopted a fee mitigation program that allows the allocation of the entire contribution to one or more projects. Any unallocated funds at the end of 10 years shall be returned to the homeowners in proportion to their lot size. This measure may be superceded if a formal traffic mitigation fee program is adopted by City Council prior to the approval of this project, and the City determines that the mitigation under the program is consistent with this measure. The total contribution shall not exceed the amount established by project condition of approval.						

1.0 INTRODUCTION

The City of Santa Barbara Community Development Department (City) has received an application for a residential development project and annexation in the Las Positas Valley, called the Veronica Meadows Specific Plan (Figure 1-1, Appendix A). The Environmental Impact Report (EIR) evaluates the environmental effects of the proposed project. The EIR identifies significant impacts of the project, as well as feasible mitigation measures and alternatives to avoid or reduce such impacts. Pursuant to the California Environmental Quality Act (CEQA), the City decision makers will use the information in the EIR during their consideration of the application, which will involve a public hearing. The EIR is also used to inform the public about the project and to facilitate public input.

1.1 SUMMARY OF THE PROPOSED PROJECT

The Veronica Meadows Project involves the annexation to the City of approximately 50.5 acres from an unincorporated portion of Santa Barbara County (Figure 1-1). Approximately 35.7 acres would be dedicated open space and 14.8 acres would be developed for residential uses and public open space. Twenty four (24) residential lots would be created. The proposed residential lot sizes would range from approximately 5,520 to 14,140 square feet. The project would include seven house plans, all of which would be two-stories in height, and range in size from 1,800 to 4,500 square feet of living area. Each lot would also contain a 500 square-foot garage. The project also involves annexation of a 5.89-acre City-owned parcel, a portion of which would be used for the bridge to the project site, subject to City Council approval.

Site access to all but two lots would be provided via a concrete bridge over Arroyo Burro Creek (also known as simply "Arroyo Burro") that would intersect with Las Positas Road. This bridge would be constructed over City-owned land and the applicant would have to obtain appropriate easements for the bridge. A stop controlled intersection would be constructed on Las Positas Road across from the entrance to Elings Park. No improvements are proposed for the 35.7-acre open space parcel.

The project provides a 100-foot buffer between the proposed residences and the top-of-bank of Arroyo Burro Creek. Development rights would be restricted within the first 50 feet of the buffer zone. A public pedestrian path is proposed along the western edge of the creek, and within the 50-foot creek buffer area, to provide access from the end of Alan Road to the new bridge across Arroyo Burro Creek. The pedestrian path would be five feet wide and constructed of pervious materials. Access to the southern two lots on the property would occur from Alan Road. The project also includes habitat restoration along both banks of Arroyo Burro Creek at, and adjacent to, the property. Much of the restoration would occur on a City-owned open space parcel, and would require City approval. There are several active and dormant landslides on the property that would be stabilized through the use of concrete caissons and earthen embankments placed at the toe of the landslide.

The Specific Plan site is located within the unincorporated area of the Las Positas Valley, between Arroyo Burro Creek (on the eastern boundary of site) and Campanil Hill (to the west) (Figure 1-1). The current City/County jurisdictional boundary runs along the southern property line of the site. The Specific Plan area is currently undeveloped, and access is taken from the end of Alan Road. Existing single-family development along Alan Road is located immediately south of the project site, and the Stone Creek Condominiums are located to the east.

1.2 REQUIRED APPROVALS

The required discretionary approvals, permits, and actions by the City and other agencies are listed below.

Approvals and Actions by Planning Commission

- A Coastal Development Permit for the subdivision and development (residences, roads, creek bank repair, landscaping, grading, etc.) of the portion of the project within the appealable and non-appealable jurisdictions of the Coastal Zone (SBMC §28.45.009).
- A Lot Line Adjustment to attach a 4.49-acre portion of APN 047-010-053 to APN 047-010-016 (Gov. Code §66412).
- A waiver of the requirement that newly created lots must front upon a public street, to allow proposed Lots 3, 4, 5, 6, and 7 to be served by a private driveway (SBMC §22.60.300).
- Neighborhood Preservation Ordinance Compliance to allow grading in excess of 500 cubic yards outside of a building footprint, and to allow the total aggregate floor area of all structures to exceed 6,500 sq. ft., within the Hillside Design District (SBMC §22.68.070).
- A Tentative Subdivision Map to divide one parcel into 30 lots. Twenty-four lots would be developed with single-family homes, four would be open space lots, one lot would be for the public road ("A" Lane), and one lot is for the proposed cul-de-sac at the end of Alan Road (SBMC §27.07).

Approvals/Actions Requiring a Recommendation to City Council by Planning Commission

- Annexation of the subject parcels to the City of Santa Barbara.
- Adoption of the Specific Plan.
- General Plan Amendment, upon annexation, to add the subject parcels to the City's General Plan Map, with designations as described in Section 2.2.
- Zoning Map Amendment, upon annexation, to designate the parcels as described in Section 2.2.
- Zoning Map Amendment, upon annexation, to add the subject parcels to the Hillside Design District (SBMC §28.68.110).
- Coastal Plan Amendment to add the portions of APNs 047-010-009 and 047-010-016 that are located within the Coastal Zone boundary to the City's Local Coastal Program.

Actions by City Council

- Adoption of the Specific Plan.
- Approvals related to the bridge construction and creek restoration on City-owned lands adjacent to the project site.
- Request to Santa Barbara County Local Agency Formation Commission (LAFCO) for annexation of the properties to the City of Santa Barbara.
- General Plan Amendment upon annexation, as described above.
- Zoning Map Amendments upon annexation, as described above.

Actions of the Architectural Board of Review (ABR)

- Design Review by the Architectural Board of Review (SBMC §22.68.040).

Permits or Actions by Other Agencies

- LAFCO approval of the annexation to the City of Santa Barbara, and detachment from special districts.
- Approval of revised public easement locations for City water and sewer lines.
- Army Corps of Engineers Nationwide Permit for activities within waters of the U.S. (33 CFR 330).
- California Coastal Commission approval of amendments to the City's Local Coastal Program.
- Central Coast Regional Water Quality Control Board Section 401 Water Quality Certification.
- Santa Barbara County Flood Control District Letter of Map Revision (LOMR).
- California Department of Fish and Game Streambed Alteration Agreement (Section 1601 of the California Fish and Game Code).
- California Department of Transportation Encroachment Permit.
- City of Santa Barbara Building and Public Works Permits.

1.3 ENVIRONMENTAL REVIEW AND PUBLIC PARTICIPATION

Issuance of City permits and approval for the proposed project represents a discretionary action subject to the environmental review requirements of the California Environmental Quality Act (CEQA). The Community Development Department completed a CEQA Initial Study Environmental Checklist and determined that there was a potential for the project to cause significant environmental impacts. Therefore, an Environmental Impact Report (EIR) has been prepared to evaluate the impacts of the project.

A Notice of Preparation (NOP) was issued in September 2003 for a 30-day public review period. An opportunity for public comments on the scope of the EIR was also provided at the October 29, 2003 Planning Commission scoping hearing. The City received written comments on the NOP from the following parties: County of Santa Barbara, Planning & Development Department; California Department of Fish and Game; Caltrans; Santa Barbara Urban Creeks Council; and Citizens Planning Association (see Appendix B).

On September 22, 2004, a Notice of Availability was issued, announcing that the Draft EIR was available to the public and agencies for review and comment. A 45-day public review period was provided to receive comments, ending on November 5, 2004. A total of 33 letters of comments from public agencies, community organizations, and the general public were received. They are presented in Appendix D. On October 21, 2004, the City Planning Commission conducted an environmental hearing on the Draft EIR to receive comments on the document. Comments were received from 13 individuals and community groups; the comments are summarized in Appendix D.

The City has reviewed the comments on the Draft EIR and prepared responses to the comments. The responses are presented in Appendix E. For some responses, the text of the EIR has been revised, as indicated by underlining.

The Planning Commission will conduct a public hearing to consider certificating that the Final EIR meets the requirements of the California Environmental Quality Act (CEQA). The City will also conduct one or more subsequent public hearings to consider approval of the project.

As noted earlier, an EIR is an informational document to advise the public agency decision-makers and the public of the environmental effects of a project. CEQA Guidelines Section 15151 provides direction on the standard of adequacy for an EIR, stating the following:

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

2.0 PROPOSED SPECIFIC PLAN

2.1 PROJECT OBJECTIVES

The overall goal of the Veronica Meadows Specific Plan is to develop the vacant lands at the project site in accordance with the City of Santa Barbara General Plan, using the Specific Plan process to achieve the following multiple objectives:

- Annex unincorporated parcels to the City of Santa Barbara, thereby improving land use planning and public services in this portion of the Las Positas Valley
- Develop market-rate housing to meet ongoing housing demands in the City
- Develop the project site in a manner that respects and accommodates site constraints and is compatible with the natural setting and existing development of the surrounding area
- Ensure that development provides adequately for public safety, services, and facilities
- Implement a creek corridor restoration plan to improve habitat and water quality along Arroyo Burro Creek consistent with City creek policies and programs
- Provide adequate vehicle circulation and traffic control
- Improve public access in the Las Positas Valley and establish beneficial pedestrian and bike routes that enhance coastal and recreation access

Section 65450 of the Government Code provides that a planning agency may "prepare specific plans for the systematic implementation of the general plan for all or part of the area covered by the general plan." Section 65451 dictates what must be included in a specific plan. In essence, a Specific Plan acts as a bridge between the broader comprehensive policies of the General Plan and the more detailed Development Plan. In this instance, the Specific Plan was developed to be consistent with the City of Santa Barbara General Plan because the subject properties would be annexed to the City.

2.2 SPECIFIC PLAN AREA

The Specific Plan area is located within the unincorporated portion of the Las Positas Valley, between Arroyo Burro Creek and Campanil Hill (Figure 2-1, Appendix A). The southern 14.81-acre portion of the site (called the "project site" herein) is planned for residential development. It is currently undeveloped open space that is used informally by local residents for walking, outdoor play, and motorcycle recreation. Pedestrian access is available from the end of Alan Road where a locked gate blocks vehicular access. Existing single-family residences are located south of the project site in the Braemer Vista subdivision. The Stone Creek Condominiums are located north of the project site. Elings Park is located across Las Positas Road. (State Highway 225). Conditions at the project site are characterized in Photographs 1 through 8.

The 35.71-acre open space parcel, which is part of the Specific Plan, is located north of the project site to be developed (Figure 2-1). It consists of very steep, undeveloped open space with no current

public access or uses (historically, the public used an informal trail along the creek that was partially destroyed by flooding in 1995), The open space parcel encompasses most of the northeast slope of Campanil Hill.

2.2.1 Affected Parcels and Proposed Annexation

The Specific Plan site consists of all or part of four privately owned parcels which are listed below and shown on Figure 2-2. The Specific Plan would include a 14.81-acre parcel to be formed for residential uses, and a 35.71-acre parcel that would be dedicated to open space, for a total Specific Plan acreage of 50.52 acres.

Development Area of the Specific Plan ("Project Site")

- 10.28-acre parcel (047-010-016)
- 0.04-acre parcel (047-010-026)
- 4.49 acres of an adjacent 86.78-acre parcel (047-010-053)
  Total acreage = 14.81 acres

Open Space Area of the Specific Plan

- 35.71-acre parcel (047-010-011)

A Lot Line Adjustment is proposed to provide an additional 4.49 acres from parcel 047-010-053 to parcel 047-010-016 to form the Specific Plan area.

The proposed project includes annexation of the above parcels (totaling 50.52 acre) encompassing the Specific Plan from the County unincorporated area into the City of Santa Barbara's jurisdiction. The annexation of parcels 047-010-011 and 047-010-016 was initiated by the Planning Commission on November 18, 1993, pursuant to Planning Commission Resolution No. 078-93. The annexation of the 4.49-acre portion of parcel 047-010-053 was initiated by the Planning Commission on February 3, 2000, pursuant to Planning Commission Resolution No. 004-00.

In addition to the above parcels, development of the Specific Plan would require establishment of an intersection between the new road to the project site and Las Positas Road (State Route 225). The new intersection would involve improvements in a state highway right of way (no parcel number). There would be no change to the boundaries or status of the state right of way along Las Positas Road.

The proposed project also involves granting an easement over a City-owned parcel (047-010-009) between Las Positas Road and Arroyo Burro Creek (Figure 2-2) for the proposed new bridge and for habitat restoration activities, and the annexation of this parcel (APN 047-010-009) into the City.

A summary of the six parcels and rights-of-way affected by the proposed Specific Plan is presented in Table 2-1.

TABLE 2-1
SUMMARY OF AFFECTED PARCELS

Parcel Number	Size (ac.)	Owner	Existing Use	Proposed Use
047-010-016	10.28	Applicant	Vacant	24 residences and associated improvements; to be annexed
047-010-053	4.49	Applicant	Vacant	24 residences and associated improvements; to be annexed
(86.78 acres to be divided into two parcels)	82.29	Bollag	Residential	No change; not a part of the project
047-061-026	0.04	Applicant	Vacant	To be part of the overall residential development; too small for an individual lot
047-010-011	35.71	Applicant	Vacant	Vacant, open space; to be annexed
047-010-009	5.89	City of Santa Barbara	Vacant	Vacant, creek, access bridge; to be annexed
Las Positas Road right of way (No parcel number)	N/A	State of California	Highway 225	Stop-controlled intersection on state right of way

2.2.2 General Plan Designations

As noted above, the project site is located in an unincorporated portion of the County of Santa Barbara. It would be annexed to the City of Santa Barbara as part of the project. The existing County Comprehensive Plan designations for the affected parcels are shown in Table 2-2. The proposed City General Plan designations to be included in the Specific Plan and in an amended City General Plan are also shown in Table 2-2. Finally, the General Plan designations of the affected parcels in the City's Draft Las Positas Valley and Northside Pre-Annexation Study (presented to the Planning Commission in 1995) are shown in Table 2-2.

For the main parcel, 047-010-016, the proposed City General Plan land use designation would reduce the potential future density of housing from 4.6 units per acre under the County's jurisdiction to two units per acre under the City. The proposed City land use designation would establish a lower overall density for the property than identified in the Draft Las Positas Valley and Northside Pre-Annexation Study.

In contrast, the allowable housing density in the 4.49-acre part of parcel 047-010-053 that would be merged with the main parcel would increase through annexation and adoption of the proposed

Specific Plan. The County's Comprehensive Plan land use designation is residential ranchette (one unit per 20 acres, while the proposed City designation would be two units per acre.

The general plan designation for the 35.71-acre part of parcel 047-010-011 would change from the County's designation of Residential Ranchette to the City's designation as Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail.

The general plan designation for the City-owned parcel (047-010-009) would change from Residential under the County to Open Space/Buffer/Stream in the City.

TABLE 2-2
EXISTING AND PROPOSED GENERAL PLAN DESIGNATIONS OF THE AFFECTED PARCELS

Parcel Number	Size (ac.)	Existing County General Plan Designation	Proposed City General Plan Designation*	City General Plan Designations from Draft Pre-Annexation Study	Consistent with General Plan Designation from Pre-Annexation Study?
047-010-016	10.28	Residential, 4.6 units/acre and Public or Private Open Space (for Arroyo Burro Creek)	Residential – 2 Dwelling Units per Acre	Residential – 5 Dwelling Units per Acre	Yes
047-010-053 (86.78 acres to be divided into two parcels)	4.49	Residential Ranchette, 1 unit/20 acres	Residential – 2 Dwelling Units per Acre	Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail	No
	82.29	Residential Ranchette, 1 unit/20 acres	Not to be annexed	Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail	N/A
047-061-026	0.04	N/A	Residential – 2 Dwelling Units per Acre	None	N/A
047-010-011	35.71	Residential Ranchette, 1 unit/20 acres	Major Hillside, Open Space, Buffer/ Stream & Pedestrian/ Equestrian Trail	Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail	Yes
047-010-009 (City owned land)	5.89	Residential, 1 unit/acre	Open Space, Stream/Buffer, & Pedestrian/ Equestrian Trail	Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail	Yes

** See Appendix F for maps showing the proposed General Plan designations on the Specific Plan parcel map.*

2.2.3 Zoning

The existing County zoning for the affected parcels and the proposed City zoning for the Specific Plan are shown in Table 2-3. In addition, the zoning of the affected parcels identified in the City's Draft Las Positas Valley and Northside Pre-Annexation Study (1995) is shown in Table 2-3.

TABLE 2-3
EXISTING AND PROPOSED ZONING OF AFFECTED PARCELS

Parcel Number	Size (ac.)	Existing County Zoning	Proposed City Zoning after Annexation*	City Zoning from Pre-Annexation Study
047-010-016	10.28	8-R-1, Single Family Residential, (8,000 sq. ft. minimum lot size)	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	E-3, One Family Residence/ PUD Planned Unit Development, partially SD-3
047-010-053	4.49	RR-20 Rural Residential (20 acre minimum lot size)	SP-8/Specific Plan	20-A-1/One Family Residence (20 acre minimum lot size)
(86.78 acres to be divided into two parcels)	82.29	RR-20 Rural Residential (20 acre minimum lot size)	Not to be annexed	20-A-1/SD-3, One Family Residence (20 acre minimum lot size)/Ped/Eq. Trail Overlay
047-061-026	0.04	N/A	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	N/A
047-010-011	35.71	RR-20 Rural Residential (20 acre minimum lot size)	SP-8, Specific Plan	20-A-1/SD-3, One Family Residence (20 acre minimum lot size
047-010-009 (City owned parcel)	5.89	8-R-1, Single Family Residential (8,000 sq. ft. minimum lot size)	P-R/SD-3, Park and Recreation/ Coastal Overlay Zone	P-R/SD-3, Park and Recreation/ Coastal Overlay Zone

** See Appendix F for maps showing the proposed zoning designations on the Specific Plan parcel map.*

The parcels comprising the Specific Plan would be zoned SP-8, Specific Plan. The proposed City zoning of these parcels in the Draft Las Positas Valley and Northside Pre-Annexation Study is E-3/PUD, 20-A-1, and P-R. The portion of the Specific Plan project site in the Coastal Zone would have a SD-3 Coastal Zone Overlay.

The zoning designation for the City-owned parcel (047-010-009) would change from the County zoning of 8-R-1 to P-R with a partial Coastal Zone Overlay.

2.3 PROPOSED DEVELOPMENT PLAN

The project applicant is requesting approval of a 50.52-acre Specific Plan with the General Plan designations and zoning described above, and annexation of the parcels into the City. Land development in the 14.81-acre project site would occur under a Specific Plan. Approximately 6.75 acres of this project site would be developed with residences and roads; the remaining 8.66 acres would be dedicated open space. Current County zoning of the 14.81-acre project site would allow up to 56 dwelling units. The proposed project involves 24 dwelling units under the proposed General Plan designations and zoning for the Specific Plan. The project includes a Tentative Subdivision Map (TSM) to create 30 lots (of which only 24 would have dwelling units).

The 35.71-acre parcel would remain as undeveloped open space. While a Pedestrian/Equestrian Trail Overlay is proposed along the creek portion, no physical improvements for public trails or access are proposed due to erosion, steep slopes, and landslide hazards on this parcel. The applicant is also not proposing any new land management activities on the parcel. The parcel would remain in private ownership, although the applicant has indicated an willingness to transfer ownership to the City or other public entities to be managed for open space.

The proposed project would require an easement across the City-owned parcel 047-010-009 to allow for the construction of the proposed bridge and access road to the project site from Las Positas Road. However, no other development would occur on this parcel other than habitat restoration activities along the creek banks. This parcel would not be included in the Specific Plan.

2.3.1 Project Site Characteristics

The topography of the main project site to be developed varies from almost flat to very steep (Figure 2-3). Very steep slopes over 30 percent occur along the base of the hills on the west side of the project site. Most of the steeper slopes would be left in open space. The slope of the area proposed for development ranges from about 1 percent to 16 percent.

Arroyo Burro Creek (also simply known as "Arroyo Burro") traverses the east side of the project site (Figure 2-3). It is a perennial stream with year-round flow from winter runoff and summer flows from spring, bank seepage, and urban runoff. The creek channel is deeply incised with very steep, eroding banks that are up to 15 feet high. The creek flow line drops about 10 feet as it passes through the project site, a linear distance of about 1,400 feet. The creek corridor supports a dense array of native riparian trees and shrubs, and various non-native weeds and ornamental plants (Figure 2-4).

The steep slopes at the site contain dense native coastal sage scrub. The center of the project site contains a diverse array of primarily non-native weedy species and ornamentals that reflect the historic uses of the site. There is a large eucalyptus grove in the center of the site, scattered palm trees, and numerous ornamental trees such as myoporum, pine, pepper, and acacia trees.

The center of the project site represents a large earthflow debris fan formed at the end of a southeast-draining canyon bounded by two prominent northwest-striking ridges, one of which is

Campanil Hill. There are several landslides on the steep hills above the project site. The ridges west of the proposed development area rise to elevations between 350 to 619 feet above mean sea level. The development area lies between 25 and 100 feet above sea level (1927 NGVD). The overall relief within the portion of the property proposed for development is approximately 75 feet. The center of the site contains informal trails and a motorcycle dirt track. The center of the site is highly disturbed by informal recreational uses.

2.3.2 Land Use and Housing

The proposed project layout is shown on Figures 2-5 and 2-6. Twenty-four of the 30 proposed lots would contain single-family residences. The following four lots would be dedicated open space: 25, 26, 27, and 28. Lot 29 would represent the cul de sac at the end of Alan Road, while Lot 30 would represent the internal public roadway. A summary of the land uses in the Specific Plan is presented below in Table 2-4.

TABLE 2-4
SPECIFIC PLAN LAND USE ACREAGE

Area	Acres
Project Site to be Developed	
Residential lots	4.49
Roads (Lots 29 and 30)*	1.95
Paths	0.44
Hillside Open Space (Lot 27)	2.59
Central Open Space (Lot 25)	1.23
Creek Corridor Open Space (Lots 26 and 28)	4.12
Subtotal=	14.81
Open Space Area on Parcel 047-010-011	
Subtotal=	35.71
Total=	50.52

*Roads may be placed in easements rather than separated as lots.

The proposed residential lot sizes would range from approximately 5,520 to 14,140 square feet. The project would include seven house plans, all of which would be two-stories in height (29 feet, six inches), and range in size from 1,800 to 4,500 square feet of living area. Each lot would also contain a 500 square-foot garage with a 350 square-foot accessory space above. The number of bathrooms varies between 2.5 to 3.5. Characteristics of the lots and houses are listed in Table 2-5.

TABLE 2-5
SUMMARY OF LOT AND DWELLING CHARACTERISTICS

Lot #	Lot Size	Dwelling Square Feet	Number of Bedrooms	Front Yard Setback	Interior Yard Setback	Floor to Lot Area Ratio
1	10,239	2,400	2+study	20	6	0.25
2	10,276	2,000	2	20	6	0.25
3	9,983	1,800	2	25	0	0.20
4	8,692	2,500	3	25	0	0.25
5	14,140	4,500	4+study	25	0	0.25
6	9,962	3,200	3	25	0	0.25
7	12,907	3,500	3	25	6	0.25
8	10,848	3,500	3	20	0	0.25
9	7,410	3,500	3	20	0	0.35
10	7,420	3,200	3	20	0	0.35
11	8,341	4,000	3+study	20	0	0.30
12	11,373	4,000	3+study	30	6	0.25
13	7,036	1,800	2	20	0	0.25
14	6,656	2,500	3	20	0	0.30
15	8,024	4,000	3+study	30	0	0.35
16	6,965	3,200	3	20	0	0.35
17	7,092	3,500	3	20	0	0.40
18	6,946	4,000	3+study	20	0	0.40
19	5,520	3,200	3	20	0	0.45
20	6,306	3,200	3	10	0	0.40
21	9,391	4,000	3+study	25	0	0.30
22	7,612	3,500	3	30	0	0.35
23	7,422	3,200	3	20	0	0.35
24	9,569	4,000	3+study	20	0	0.30

The proposed lot sizes and setbacks for the Specific Plan shown in Table 2-4 were designed for the characteristics of the project site. Hence, there are some variances from the Municipal Code requirements based on the pre-annexation zoning considered in the Draft Las Positas Valley and Northside Pre-Annexation Study, as described below.

The primary parcel to be developed (047-010-016) was considered for a pre-annexation zoning of E-3 - One Family Residence and Planned Unit Development (PUD). The PUD zone does not establish a minimum parcel size nor lot frontage requirement. The E-3 zone requires that all newly created parcels have at least 7,500 square feet and 60 feet of frontage on a public street. All residential lots would comply with the minimum lot size requirement except Lots 9, 10, 13, 14, 16, 17, 18, 19, 20, and 23. The average lot size would be approximately 8,775 square feet or 0.20 acres. All lots would comply with the minimum lot frontage requirement for the E-3 zone. Lots would be fenced.

The minimum setbacks and open yard requirements in the PUD and E-3 zones and the extent to which the proposed lots would comply are listed below.

- Front yard: Not less than twice the required front yard in the basic zone (Sec. 28.36.075.2). The basic zone district is E-3, which requires a front yard setback of 20 feet. Therefore, the front yard setback should be a minimum of 40 feet. None of the lots would comply, as the front yard setbacks range from 10 to 30 feet.

- Interior yard: Not less than 40 feet (Sec. 28.36.075.1). None of the lots would comply with this requirement.

- Open yard: The PUD zone does not establish minimum requirements for Open Yard area. However, the E-3 zone requires a minimum of 1,250 square feet of open yard area that does not contain any of the following: cut or fill sloped greater than one foot rise or fall in five feet of horizontal distance; portion of a front yard; paving or other surface designed for use by motor vehicles or trailers; and, is not less than 20 feet in length, width or other horizontal dimension measured perpendicular to the boundary of the yard. Many of the lots would not meet this requirement. This Specific Plan proposes a floor to lot area ratio instead of a minimum yard area.

The PUD zone requires that not less than 50 percent of the net area of the property be devoted to open space and landscaping. The project site is approximately 50 acres, of which 43 acres is proposed for open space and landscaping., consistent with this requirement.

The project layout has been developed in consideration of Arroyo Burro Creek channel. The applicant has delineated the top of bank on the west side of the creek, as shown on Figure 2-3. Based on this line, all structures have been located outside a 100-foot setback line. Roads, sidewalks, and lot fences have been located outside a 50-foot wide setback line, but within the 100 foot set back line. A public path along the creek and creek restoration activities would occur within the 50 foot set back line.

2.3.3 Architecture

As noted above, there are seven house plans. All houses would have a craftsman architectural style. Homes would be located close to the street with front porches to create a neighborhood feeling. Colors would be traditional California bungalow and craftsman style. The final color palette would be determined by the City's Architectural Board of Review (ABR) based on color boards submitted by the project architect. Examples of the architecture are presented on Figure 2-7.

2.3.4 Roads, Sidewalks, Parking, and Emergency Access

The only access to the project site would be from a two lane road off of Las Positas Road, which would require a new bridge over Arroyo Burro Creek (Figure 2-5). The to-be-named public road would loop around Lots 8-25. For the purposes of the EIR, it has been designated Lane "A." Five lots (Lots 3-7) would be accessed off a private driveway south of the main road, referred to in the EIR as Driveway "A." Lots 1 and 2 would take access from a proposed cul de sac on Alan Road.

The main public road would have a 38-foot wide right of way with two 14-foot wide travel lanes, as shown on Figures 2-8a and b. The travel lanes would include a 3-foot wide shoulder with a ribbon drain. A 5-foot wide pervious path would be located adjacent to the road and function as a sidewalk. No curb would separate the path from the roadway. A 3-foot wide parkway would be located on the outside of the path for street trees. A one-foot high curb would be installed adjacent to the retaining walls along the upper portions of the road loop.

The private driveway serving Lots 3-7 would have a 25-foot wide right of way, with a 20 foot travel lane and a 5 foot wide pervious path (Figure 2-8a). A six-inch curb and gutter would be present on the east side of the driveway.

The project would provide two covered parking spaces in a garage per residential lot (2 spaces x 24 lots = 48 spaces). Parking for approximately 75 cars (assuming an average car length of 20 feet) would also be provided on one side of the public road, allowing for a maximum of 125 parking within the development. No street parking would be available on the 20-foot wide private driveaay to Lots 3 -7.

In areas where on-street parking is not allowed, "No Parking" signs and red curbs, as required by the Fire Department, would be provided. The existing end of Alan Road would be improved with a cul-de-sac and two new homes would front on the new cul-de-sac. No vehicular or emergency access from Alan Road is proposed by the applicant.

A "hammerhead" space would be provided near the end of the private driveway to allow space for emergency vehicles to turn around (Figure 2-5). "No Parking" signs and red curbs would be provided at this space.

Street lights would be provided along the public road, but not along the private driveway.

2.3.5 Public Pedestrian Trails and Bike Access

A public pedestrian path would be established that extends from the sidewalk on the new bridge over Arroyo Burro Creek to Alan Road (Figure 2-5). The path would be located between the project site roads and Arroyo Burro Creek, in the 50-foot wide buffer zone from the creek top of bank. The pedestrian path would be five feet wide and constructed of pervious materials such as decomposed granite (DG) rock. It would be designed solely for pedestrian use. Equestrian use of the path would be prohibited. No nighttime lighting is proposed along the path.

Bicyclists who enter the project site from Las Positas Road would use the travel lanes of the public road and private driveway to traverse the site. At the end of the driveway, at Lot 3, a 10-foot wide paved bike path would connect to Alan Road (Figure 2-5). The southern end of the pedestrian path would merge with the 180-foot long paved bike path.

2.3.6 Bridge and New Intersection

A new bridge would be installed to cross Arroyo Burro Creek and provide access to the project site. The bridge would be approximately 140 feet long and 31.67 feet wide, with two ten-foot travel lanes and two four-foot sidewalks (Figure 2-9). The bridge would be constructed of poured-in-place concrete with a decorative railing and would span the creek channel. Concrete abutments with wing-walls would be installed on each bank to support the bridge. Street lights would be placed at each end of the bridge. This bridge would be constructed over City owned land (parcel 047-010-009), managed by the City Parks and Recreation Department. The applicant would have to obtain appropriate easements from the City to construct the bridge.

The proposed entrance would be located directly across from the entrance to Elings Park where there is a divided two lane private road to the park. The applicant has proposed a new traffic signal at this intersection, which would require Caltrans approval because Las Positas Road is a state highway (Route 225). As described in Section 4.8, the current and future traffic volumes associated with the proposed project and Elings Park (including increased traffic associated with the proposed park improvements) would not warrant a traffic signal. Hence, Caltrans would not allow a traffic signal at this time. If and when Caltrans relinquishes Route 225 to the City, the use of a traffic signal would be a City decision.

In light of this information, a stop-controlled intersection would be required as shown on Figure 2-10. A stop sign would be placed at the bridge for outgoing traffic. No stop sign would be placed on Las Positas Road; existing traffic would continue unimpeded.

Access to the site from southbound traffic would occur using a new right-turn lane constructed in the existing Caltrans right of way. Access to the site from northbound traffic would require construction of a left-turn lane pocket (stripes only, no median) along Las Positas Road. This lane would likely require re-striping the entire segment of Las Positas Road near the intersection.

Traffic leaving the site in a northbound direction on Las Positas Road would need to cross the southbound travel lane and merge with traffic in the northbound travel lane.

2.3.7 Utilities

Utilities serving the residences at the project site would be provided by the following sources:

- Water - City of Santa Barbara
- Sewer - City of Santa Barbara
- Gas - Southern California Gas Company
- Electricity - Southern California Edison Company
- Television - Cox Cable of Santa Barbara
- Telephone - Verizon

Development of the site would require relocation and abandonment of several existing utility lines that traverse the site, as shown on Figure 2-11. A 12-inch City water line currently crosses the site to serve water to the Braemer Vista subdivision. The pipe originates from Las Positas Road and crosses Arroyo Burro Creek on a suspension bridge. The pipe would be relocated and placed on the proposed bridge and in the entrance road to the project site where it would be connected to the existing line at Alan Road.

A 15-inch sewer line serving areas north of the project site traverses the site as shown on Figure 2-11. A portion of this sewer line was exposed and damaged along Arroyo Burro Creek during the 1995 El Nino storms. In 2003, the City abandoned the line at the southern end of the Stone Creek Condominiums because of its continued vulnerability to damage along the creek corridor. The City relocated the line from behind the Stone Creek Condominiums to Las Positas Road. Hence, the sewer line now by-passes the project site. The line across the project site has been abandoned in place between the Stone Creek Condominiums and Alan Road.

An 8-inch sewer line would be installed at the project site to serve the new residences. It would be located in the roads at the site, and connect to the manhole at Alan Road. An existing 8-inch sewer line serving Campanil Hill west of the project site would tie into the new line, as shown on Figure 2-11.

All other utilities would be connected to the site via Alan Road.

2.3.8 Drainage

Site drainage would be managed by a combination of underground storm drains and surface flows. The ephemeral drainage that currently traverses the center of the site would be directed into a culvert under the public access road (Lane "A") at the west end of the project site (Figure 2-12). Flows would traverse the center of the site in a broad open swale behind the lots, in a common open space area. This area would be designed to detain flows for hydraulic purposes, as well as to treat stormwater by infiltration and biofiltration. The applicant has identified this area as a bioswale. The dimension or design criteria for this detention area and bioswale have not been developed yet. Water would exit the area through a storm drain that discharges to Arroyo Burro Creek at the new bridge location (Figure 2-12).

Runoff from Lots 8 to 11 and 13 to 24 would be directed to the detention and bioswale area behind these lots. Runoff from the hills and road surrounding these lots would be captured in storm drain inlets along the road and discharged to Arroyo Burro Creek. Runoff from the south side of the road loop would pass through the bioswale before being discharged to the creek. Most of the runoff from Lot 12 would flow to the creek as sheet flow; a small portion would be captured by storm drain inlets in the road and discharged below the bridge.

Runoff from Lots 1 and 2 would be directed to Alan Road and its existing storm drain system. Some of the runoff from Lots 3 through 7 would be captured in a storm drain inlet at the south end of the private driveway (see Figure 2-12) and discharged to the creek. The remainder would be directed to the creek corridor as sheet flow.

Runoff from the open space area east of the project site roads, including the pedestrian path, would occur as sheet flow to the creek.

2.3.9 Grading and Landslide Stabilization

The project has been designed for a balanced cut and fill grading operation. The applicant has estimated that grading of the project site would require 13,459 cubic yards of cut and 10,390 cubic yards of fill. However, as noted in the proposed plans, these estimates do not take into account shrinkage or compaction. The applicant has estimated that there may be a need for up to 16,000 cubic yards of imported fill to develop the site. The site would be graded to establish road and building pads. It would be necessary to construct various retaining walls at the toe of slopes and between lots as shown on Figures 2-13 and 2-14. The maximum heights of the retaining walls would be five feet.

The above cut and fill quantities reflect grading from roads, building pads, and contouring of open space areas. Several landslides on the hills would require geologic stabilization that would result in approximately 61,500 cubic yards of cut and 61,500 cubic yards of fill. The geologic stabilization would occur prior to the mass grading of the site, and is described below.

The project site is surrounded and, in places, underlain, by a number of dormant (i.e., geologically inactive) landslides. Most of the slides originate from the adjacent unimproved land outside the project site. A geologic study of the site evaluated the landslides and provided recommendations on stabilization methods (Geolith Consultants, 2004). The approach involves three main elements that would be applied to landslides impinging on the project site, as follows:

1. Prior to landslide stabilization work, the toe of the landslide would be partially stabilized by installing buried cast-in-ground straight shaft reinforced concrete cylindrical caissons about 2 feet in diameter. The caissons would act as an underground wall to prevent subsurface earth movement when the toe of the landslide is subsequently strengthened. Although the immediate use of the cassions is to allow earthwork down gradient of the landslides, they would remain in place and contribute to the permanent stabilization. The depth of the caissons would vary from 30 to 50 feet.

2. The toe of the landslide would be excavated to bedrock, then filled and compacted with engineered fill material to stabilize the landslide, as shown on Figure 2-15. The new earth mass is called a "toe of slope buttress or keyway." The building pad would be established on top of the buttress.

3. Subdrains would be installed beneath the buttress to convey groundwater under the buttress. Surface runoff would be managed on the buttress fill to prevent excessive seepage or erosion.

A description of the proposed stabilization for each landslide feature at the project site is provided below.

- Lots 1-4. A line of cast-in-ground caissons approximately 50 feet deep would be installed along the upslope property line of the lots (Figure 2-13). The cast-in-ground caissons in this area would be spaced four pier diameters apart, center-to-center, based on current geologic information. The final depth and spacing may differ based on the results of the structural design. The buttress would be up to 33 feet deep and up to 175 feet wide. The buttress should be backfilled with engineered fill and sub drains. The downhill edge of the buttress would be 55 to 90 feet from the top of the creek bank.

- Lots 5 and 6. A line of cast-in-ground caissons approximately 30 to 40 feet deep would be installed along the upslope property line of the lots (Figure 2-13). The cast-in-ground caissons in this area would be spaced four to five pier diameters apart, center-to-center, based on current geologic information. The final depth and spacing may differ based on the results of the structural design. The buttress would be up to 20-32 feet deep and up to 110 feet wide. The buttress should be backfilled with engineered fill and sub drains. The downhill edge of the buttress would be 55 to 85 feet from the top of the creek bank. A 5-foot high retaining wall would also be constructed along the western property line of these lots.

- Area between Lots 6 and 7. A line of cast-in-ground caissons approximately four feet deep would be installed along the base of the slopes (Figure 2-13). A buttress is not required because no homes are proposed for this area.

- Slope Across from Lot 21. The area beneath the proposed roadway and upslope retaining wall would be over-excavated and recompacted with engineered fill (Figure 2-13). The small buttress should also be fitted with a buried subdrain, sloped to outfall via gravity flow. This buttress would start about 20 feet downslope of the project boundary and utilize a slope of 1.5:1 (horizontal to vertical) for the temporary backcut. The excavation would be up to eight feet deep.

- Slope Across from Lot 20. This area is believed to be underlain by a medium-size prehistoric earthflow, about 100 feet wide and extending about 240 feet upslope, beyond the property line. It may be up to 12 feet deep. The proposed 5-foot high retaining wall traversing the toe of this old earthflow would be supported on cast-in-ground caissons (Figure 2-13). The cast-in-ground caissons in this area would be spaced four pier diameters apart, center-to-center. The depth

would likely be between 8 and 12 feet, depending on the diameter chosen and the outcome of the structural design.

- Slope Across from Lot 19. This area is underlain by a medium-size prehistoric earthflow, about 100 feet wide and extending about 250 feet upslope and beyond the property line. It may be up to 16 feet deep. The proposed 5-foot high retaining wall traversing the toe of this old earthflow would be supported on cast-in-ground caissons (Figure 2-13). The cast-in-ground caissons in this area would be spaced four pier diameters apart, center-to-center. The depth would likely be between 8 and 12 feet, depending on the diameter chosen and the outcome of the structural design.

- Slope Behind Lot 12. There is a large dormant slump-block bedrock landslide west of Lot 12. The slide is about 250 feet long, up to 110 feet wide and up to 30 feet deep. Most of the landslide lies offsite. A line of cast-in-ground caissons approximately 30 feet deep, would be installed along the rear (western) property line (Figure 2-13). The caissons would be spaced four pier diameters apart, center-to-center. The actual depth may be slightly less or more, depending on the diameter chosen and the outcome of the structural design. The buttress would be up to 14 feet deep, about 115 feet wide and up to 260 feet long, extending along the new road. It would have a buried subdrain to capture and convey subsurface moisture that is likely perched along the basal landslide slip surface.

In addition to the landslide stabilization, the applicant has proposed to repair two eroded portions of the west bank of Arroyo Burro Creek, as shown on Figure 2-13. These areas eroded during the 1998 El Niño storms, creating depressions in the bank. The eroded areas would be backfilled with native material and compacted to restore the creek bank to its pre-1998 position. The bank repair would conform with the existing banks up and downstream of these locations to maintain near-constant bank roughness so that eddies would not develop in this reach during high flow.

In order to avoid rill erosion on the finished bank faces, layers of high density polypropylene membrane would be embedded on the slopes at the time of earth placement to stabilize and strengthen the soil. These "geomembranes" would be buried in layers on the slope face at vertical spacings of 12 inches, extending five feet into the slope face. They should not be visible within a year of completion as the banks would be restored with native riparian trees and shrubs.

2.3.10 Landscaping

The proposed landscaping plan involves multiple objectives and treatments for the project site. Lot frontage would be landscaped with lawn and groundcover. Backyard landscaping has not been specified at this time.

The open space areas surrounding the lots and outside of the 50-foot wide creek setback line (Lots 27 and 25, and portions of Lots 26 and 28) would be landscaped with a broad mixture of native and non-native plants. The plans identify 15 species of native plants for hydroseeding, 84 non-native shrubs and groundcover species, and 38 native and non-native trees to be used in these areas. The plans indicate that container plant sizes would range from 1-gallon to 24-inch boxed trees.

Street trees would be installed in the front yards of Lots 8 through 24 along Lane "A" in accordance with City standards.

Development of the site would result in the removal of 97 trees, as listed below:

Eucalyptus – 48
Coast live oak – 7
Various ornamentals – 16
Acacia – 11
Palm (to be salvaged and removed off site) – 7
Pepper – 5
Yucca – 1
Cherry – 1
Myoporum – 1

Within the 50-foot creek setback zone and along the creek banks, native plants would be restored as part of a creek restoration plan. The boundaries of the restoration area are shown on Figure 2-16. Habitat restoration would include the removal of invasive exotic plants from this area, including giant reed; planting with native trees, vines, shrubs and ground cover; drip irrigating the new plantings; and monitoring for 3-5 years or until all performance criteria of the restoration plan are met. A grove comprised of native oak trees would also be planted in one of the creek bank repair areas (Figure 2-16) to create habitat for monarch butterflies. The weeded banks would be hydroseeded with native shrubs and herbs. However, container plants would only be installed on the west bank of the creek. A substantial portion of creek restoration work would occur on the adjacent City parcel, if approved by the City Parks and Recreation Department, which manages this parcel.

The project site is located in a High Fire Hazard Zone. The standard defensible space requirement for this site is 100 feet. The applicant has prepared a fire protection zone plan as an overlay to the proposed landscaping plan. The applicant proposes to modify the proposed planting density and heights within 100 feet of each residence in the following manner to meet the defensible space requirements. The extent of these Fire Hazards Zones are shown in Appendix F.

- Zone 1 (0-30 feet from structure): Lawn and ground cover only.
- Zone 2 (30-50 feet from structure): Open planting design. Low to medium shrubs or clusters of shrubs that are no more than 10 feet in diameter, planted with at least 18 feet between plants or clusters of plants. No shrubs beneath trees. Trees spaced at 30 feet to prevent crowns from overlapping.
- Zone 3: (50-70 feet from structure): Shrubs or clusters of shrubs that are 5-7 feet in height and no more than 10 feet in diameter, planted with at least 18 feet between plants or clusters of plants. No shrubs beneath trees. Trees spaced at 30 feet to prevent crowns from overlapping.
- Zone 4 (70-100 feet from structure): No limit on shrub height. Shrubs or clusters of shrubs no more than 10 feet in diameter, planted with at least 18 feet between plants or clusters of plants. Trees spaced at 30 feet to prevent crowns from overlapping.

2.3.11 Open Space

Approximately four acres (Lots 26 and 28, see Figure 2-5) would be dedicated as open space for public use to be maintained by the homeowner's association in perpetuity. Interpretive signage would be installed along the pedestrian path to provide the public information about the historic use of the property. This land would be available for passive uses only compatible with the creek, such as walking, bird watching, jogging, and dog walking. No fencing is proposed for the open space areas.

The open space in Lots 25 and 27 would also be maintained by the homeowner's association. These areas would be landscaped as part of the proposed project, and Lot 25 would contain a drainage and stormwater detention facility.

The adjusted parcel 047-010-011, comprising 35.71 acres, would remain as dedicated open space (Figure 2-2). However, no formal improvements for public access or trails would be provided to this parcel due to steep terrain and landslide hazards. Informal access to the property by local residents would not be prohibited unless unsafe or undesirable activities occur on the property (e.g., motorcycle riding), people visit portions of the property where there are hazardous site conditions (e.g., steep slopes, unstable hillsides), and/or complaints are made by adjacent residents about recreational activities on the property.

2.4 CONSTRUCTION

2.4.1 Schedule and Phasing

Construction of the proposed site improvements is expected to require 18 months. Construction would occur in two major phases, as summarized below. At this time, no specific dates have been identified by the applicant. Construction trailers, parking, staging areas and stockpiles would only occur on the project site.

Phase 1 – Site Preparation

This phase would require about 6 months and involve the following concurrent construction activities: (1) construction of the bridge; (2) landslide stabilization; and (3) site grading, road construction, and infrastructure improvements (e.g., utilities, drains). Access to the site during this phase would occur from Alan Road (Figure 2-17).

Construction would commence by bringing heavy equipment to the site. Bridge construction would begin immediately and require 2 – 3 months. Most of the work would occur from the west side of the creek because there is insufficient room for construction access on the east side of the creek. Bridge construction would require extensive excavation on the banks to build the concrete abutments and wing walls. The bridge deck would be constructed using wood forms and concrete poured on site. This would require clearing the creek bed to construct temporary wood forms and

footings. Creek flows would need to be temporarily redirected through the construction area for several months.

During the bridge construction period, the cast-in-place caissons would be installed at the various landslide locations. A drill rig would bore a hole, and then a steel frame would be lowered into the hole and filled with concrete. Because the work involves sequential work crews and equipment, construction would occur simultaneously at more than one landslide location. Once the caissons have cured to design strengths, earthwork would commence for the buttresses. Pits would be excavated below the landslides, and then backfilled with engineered fill using on-site materials that have been processed. If necessary, fill material would be imported to make up any shortfall, or if high quality material is required for the buttresses. Subdrains would be installed at the same time beneath the buttresses. Retaining walls would be constructed at the toe of slopes.

Following the completion of the landslide stabilization, utility lines would be installed at the site, and then the entire site would be graded to final elevations, including building pads and road beds. Road paving would occur under Phase 2. As noted earlier, up to 16,000 cubic yards of fill may be imported to complete the grading. The haul trucks would use Alan Road. Up to 800 truck trips (round trips) would be required to import this material.

Phase 2 – Home Construction

Upon completion of the bridge and site grading, all access to the site would occur from Las Positas Road. Home construction and site landscaping is expected to take one year. It is assumed that the creek habitat restoration plan would occur during this phase.

2.4.2 Work Hours and Traffic

The applicant has proposed that construction would occur between 7:00 AM and 5:00 PM Monday through Friday. When using Alan Road for construction traffic during Phase 1, the applicant proposes to prohibit haul trucks during the peak traffic hours of 7:00 AM to 9:00 AM and 4:00 PM to 5:00 PM. The estimated number of workers and construction related truck trips for each phase is summarized below:

TABLE 2-6
SUMMARY OF CONSTRUCTION WORKERS AND TRUCK TRIPS

Phase	Number of Workers		Haul and Supply Truck Trips (round trips)	
	Average Days	Peak Days	Average Days	Peak Days
1	15	25	30 (Alan Rd)	40 (Alan Rd)
2	35	65	40 (Las Positas Road)	60 (Las Positas Poad)

2.4.3 Equipment

An estimate of the type and number of construction equipment during the two construction phases is presented in Table 2-7.

2.5 DEVELOPMENT STANDARDS

The applicant's proposed Specific Plan includes the following development standards. The applicability of these standards to the Specific Plan would be evaluated at the end of the environmental review process. Some of these standards would be incorporated as conditions of approval, while others would be replaced with specific mitigation measures from the Final EIR. Certain standards would not be included in the final approved project because they are redundant with other City requirements in the Municipal Code for this type of project, or are considered unnecessary or inapplicable.

Geology

5.1.1 Geologic stabilization shall be performed in accordance with all Geolith Consultants reports and any Penfield & Smith grading and drainage plans approved by the City.

5.1.2 The applicant shall obtain any required state and federal permits prior to issuance of grading permits for geologic stabilization (e.g., Regional Water Quality Control Board, California Department of Fish and Game (DFG), Army Corps of Engineers (COE)).

5.1.3 The applicant shall implement a Storm Water Pollution Prevention Plan (SWPPP), as required by the State Water Quality Control Board. The City shall be able to review the SWPPP at any time during construction and/or grading activity. The SWPPP shall include procedures for controlling erosion and sediment runoff.

5.1.4 Cut and fill slopes shall be no steeper than 2:1 (horizontal to vertical) without the use of engineered retaining walls. Because of the potential for erosion adjacent to the larger drainage canyons, no fill material shall be placed in areas where concentrated surface runoff flows can occur.

5.1.5 The grades of individual lots and roads shall blend with the natural topography of the site, minimize site grading, preserve the maximum number of trees and balance on-site earthwork to the maximum extent feasible.

5.1.6. Storm water either shall be carried in improved facilities (storm drainpipes or drainage swales) or allowed to run off naturally to the creeks.

5.1.7 The Home Owner's Association shall ensure that at such time as any future changes are proposed by individual homeowners, such changes comply with the Veronica Meadows SWPPP.

5.1.8 Revegetation of disturbed soil shall occur as soon as feasible. Vegetation for slope stabilization shall be in conformance with the landscape architect's and geologist's recommendations.

Roads and Utilities

7.1.1 Primary ingress and egress to the site shall be via the to-be-named lane. Only Lots 1 and 2 shall use Alan Road.

7.1.2 The proposed bridge shall be designed to accommodate a 60,000 pound fire apparatus.

7.1.3 Drainage from roads (except across the bridge and adjacent to lots 13 and 14) shall be collected into storm drains and discharged into a bioswale and then into adjacent water bodies. Filters shall be installed on all drop inlets.

TABLE 2-7
LIST OF LIKELY CONSTRUCTION EQUIPMENT

Equipment	HP	Phase 1A: Bridge Construction at Las Positas Road		Phase 1B: Slope Stabilization (Caisson installation)		Phase 1C: Keyway Construction, Infrastructure Installation, Site Grading		Phase 2: Housing Construction	
Duration =		6 months						12 months	
		Equipment Used During Phase	Maximum Daily Concurrent Equipment	Equipment Used During Phase	Maximum Daily Concurrent Equipment	Equipment Used During Phase	Maximum Daily Concurrent Equipment	Equipment Used During Phase	Maximum Daily Concurrent Equipment
Wheeled loader	175	x		x		x	1	x	
Grader	175					x	1		
Bulldozer	250					x			
Scraper	300					x	1	x	1
Wheeled excavator	175	x				x			
Off-highway trucks	250					x	2		
Backhoe	75	x				x		x	1
Roller	75					x		x	
Water truck	125			x		x	1		
Crane	175	x		x	1				
Wheeled rotary drill rig	350			x	2				
Paver	100							x	
Cement truck	250	x	1	x	2			x	1

Housing

8.3.1 Parcels may vary in size from 5,500 to 15,000 square feet.
8.3.2 Parcels shall be sized and configured to allow for adequate development of a residence while minimizing landscape water use, encroachment into steeper slopes or removal of existing oak trees.
8.3.3 Development shall be allowed to be setback from the front and interior property lines as allowed by the chart above and as shown on the development plan.
8.3.4 Building height as defined in Title 28 of the Municipal Code shall not exceed two (2) stories, thirty (30) feet, nor exceed limitations of the Solar Access Ordinance Section 28.11.
8.3.5 Construction of fences shall be installed in accordance with the City of Santa Barbara Title 28, Section 28.87.170.
8.3.6 Residences shall be designed in the craftsman style using colors associated with that style, with final discretion left to the City Historic Landmarks Commission.
8.3.7 All roofing will be of concrete or non-combustible materials. Reflective roofing materials are prohibited.
8.3.8 Exterior lighting, where provided, shall be of low-intensity in order to provide aesthetically pleasing lighting which promotes safety, but does not impose on adjacent properties and uses. No floodlights shall be allowed, and all lighting shall be directed toward the ground.
8.3.9 All lighting, other than lighting within residential units, shall be energy-efficient lighting of a type other than incandescent, except as determined to be impractical by the Community Development Director.

Landscaping

8.5.1 Landscaping shall be designed to meet City of Santa Barbara Drought-Tolerant Landscape Standards.
8.5.2 Landscaping around the homes as well as in the common open space shall be planted with fire resistant shrubs and trees using the "Four Zone" concept defined by the City of Santa Barbara Fire Department.
8.5.3 Plans shall be reviewed by the Fire Department prior to installation of the landscaping.
8.5.4 Landscape design shall blend with existing trees and vegetation, with the addition of Coast Live Oak and native deciduous trees.
8.5.5 Landscaping within oak tree driplines shall be drought tolerant and irrigated such that ponding does not occur within the tree dripline.
8.5.6 The project will be consistent with the Landscape Plan approved by the Historic Landmarks Commission (HLC). Such plan shall not be modified unless prior written approval is obtained from the HLC. The landscaping on the Real Property shall be provided and maintained in accordance with said landscape plan.
8.5.7 Landscaping shall enhance the riparian corridor associated with Arroyo Burro Creek.
8.5.8 Non native and invasive plants shall not be permitted within 100 feet of the creek.

Open Space

9.1.1 The Homeowners Association shall maintain the open space (lots 26 and 28), including the public access path, for five years from the date of conveyance to the City. At such time, the City shall assume maintenance cost and responsibilities.
9.1.2 Maintenance of the open space shall include removal of invasive exotic plants, removal of trash, etc.
9.1.3 Interpretive signage shall be installed in accordance with Development Standards 11.1.5 and 11.1.6.

Habitat Restoration

10.1.1 The applicant shall implement the Riparian Restoration and Management Plan as proposed by Tierney and Hunt, dated December 15, 2000 (revised) and incorporated herein by reference.

10.1.2 The applicant shall create a monarch butterfly habitat incorporating the plant material recommended by Meade (January 11, 2000) and incorporated herein by reference.

10.1.3 Lighting for roadways and common areas shall be kept to the minimum allowable level. All street and common lighting shall be shielded. Decorative night lights shall not be directed into the riparian restoration area.

10.1.4 Retain as many mature trees onsite as feasible.

10.1.5 In the event an oak tree is removed, standard mitigation shall include the replacement planting of oak trees on a ratio of 10:1 for each oak removed other than dead trees verified by the arborist. The replacement trees shall range in size from 1 gallon to 15-gallon trees. Planting locations shall be appropriate for oak trees on the site as determined by the arborist, and included in the project landscape plan.

10.1.6 Prior to grading, temporary protective fencing (4 feet high) shall be installed 3 feet outside the driplines of all trees to be preserved. Trees in close proximity may be fenced as a group. All fencing shall be maintained during the entire construction period.

10.1.7 Heavy equipment shall not be used or parked within three (3) feet of oak tree driplines, except where approved by a qualified arborist and after protective fencing has been installed.

10.1.8 Soil, rocks or construction material shall not be stored or placed within the dripline of oak trees.

10.1.9 Soil sterilants shall not be used including under streets, walkways and other improvements.

Cultural Resources

11.1.1 A city-approved archaeologist shall conduct a pre-construction meeting to inform construction staff of the procedures to follow in the event archaeological resources are discovered.

11.1.2 In the event archaeological resources are discovered during project construction, all work shall be stopped and redirected until a qualified archaeologist and Native American representative has evaluated the nature and significance of the find. After the find has been evaluated and mitigated if necessary, work in the area may resume.

11.1.3 The property shall be made a City Landmark.

11.1.4 The project shall retain the small row of trees that were located adjacent to the cluster of buildings and road.

11.1.5 Interpretive signage shall be placed near the trees along a pedestrian path. The signage shall include a photograph of the buildings with reference to the activity occurring onsite (e.g., wagons being loaded.). All interpretive signage shall be metal within a wood frame (as approved by the City Historic Landmarks Commission) with text written by a City-approved historical preservation professional.

11.1.6 Interpretive signage shall be placed along the proposed Arroyo Burro Creek pedestrian trail (west side) that reflects the location of the historic road and other elements of the water company.

11.1.7 A gazebo similar in design, material and scale (as determined by a City-approved historical preservation professional) shall be constructed at either the north or south end of the proposed Arroyo Burro Creek pedestrian trail.

11.1.8 The gazebo should contain an interpretive exhibit of the Veronica Medicinal Springs Water Company, which should include photograph, brochures and any artifacts obtained onsite. If artifacts are not available, photographs may be used.

11.1.9 Oak and sycamore trees shall be retained onsite to the maximum extent feasible. Any oaks to be removed shall be replaced at a 10:1 ratio. Palm trees may be removed and/or relocated as needed.

11.1.10 The planting plan for the Veronica Meadows project should incorporate a palate similar to that of the Veronica Medicinal Springs Water Company.

11.1.11 Roads within the project shall be named to reflect the history of the project site or important individuals related to the project site (e.g., Veronica Meadows Road). Arroyo Burro Creek may also be used for a road name.

11.1.12 During riparian restoration along Arroyo Burro Creek, the stream bank shall be inspected for evidence of trash dumps associated with the water company.

Construction

13.1.1 During site grading and transportation of fill materials, regular water sprinkling shall occur using reclaimed water if Public Works deems it feasible. During earth clearing, grading, earth moving or excavation, sufficient quantities of water shall be applied to prevent dirt from leaving the site.

13.1.2 Trucks transporting fill material to and from the site shall be covered from the point of origin.

13.1.3 All roadways, driveways, sidewalks, etc shall be paved as soon as possible.

13.1.4 After clearing, grading or earth moving is completed, the entire area of disturbed soil shall be treated to prevent wind pick up of soil. This may be accomplished by:
Seeding and watering until grass cover grows; Spreading soil binders;Sufficiently wetting down the area to form a crust to prevent wind pick up; Other methods approved by the Air Pollution Control District

Construction of the Specific Plan improvements will be implemented in accordance with the following standards:

Pre-Construction Meeting. Prior to the issuance of construction permits, the Developer and Contractor will hold a Pre-Construction Meeting to review and coordinate the upcoming construction activities amongst the project team members and government agency liaisons. This meeting will include representatives from the Public Works Department, Building Division, Planning Division, County Resource Management and the Mitigation Monitoring Team, and will include a review of the following Construction Management procedures:

- Project organization chart including review of functions and authority of personnel.
- Project directory of all government agency liaison members as well as all consultants, architects, engineers, contractors, subcontractors and owner representatives.
- Correspondence and notification procedures.
- Insurance requirements.
- Project schedule review.
- Hours of operation.
- Site access and circulation.
- Delivery and storage.
- Construction parking.
- Traffic control procedures.
- Safety and emergency procedures.
- Progress and final clean-up requirements and procedures.
- Job site security policies.
- Mitigation procedures: Noise mitigation procedures. Dust control procedures. Soil erosion control procedures. APCD mitigation procedures. Tree protection procedures. Sensitive habitat protection procedures.

- Construction process control procedures: Regularly scheduled progress meetings. Daily Report requirements. Submittal and Shop Drawing procedures, journals and correlation with Project Schedule. Project Scheduling requirements, including master CPM schedule and weekly two-week look-ahead schedule requirements. Requests For Information procedures. Architect Supplemental Instruction procedures. Proposal Request procedures. Field Order procedures. Change Order procedures. Testing and inspections requirements and management. Payment Application requirements. Quality control requirements and procedures. Record document procedures. Punch list, warrantee and project closeout procedures.

All of the following implementation measures, along with those established in the final Conditions of Approval will be reviewed.

Construction Site Access and Logistics. All construction work will adhere to the following procedures for site access and utilization:

- Construction will be allowed only between 7:00 Am and 5:00 PM Monday through Friday, or as otherwise permitted by overseeing agencies.
- All construction materials will be maintained either on-site or at a remote off-site location. No materials will be stored within the public right-of-way.
- Construction parking will be provided on site or, if provided off-site, will be in a location subject to the approval of the Community Development Director.
- Routes of construction traffic will be specifically designated to minimize the quantity of trips through surrounding residential neighborhoods and to avoid impacted roads and/or intersections during peak periods.
- The Contractor and/or Developer will prepare guidelines to be approved by the Fire Department to maintain clear access on the construction site to allow the ingress and egress of emergency vehicles. The Contractor will provide sufficient permanent or temporary water service for fire-fighting purposes prior to the storage of significant quantities of lumber or the start of framing operations on wood structures.
- Provide project identification and other signs in accordance with governing agency standards as necessary to provide directional and access/logistical information to construction personnel and visitors for the requirements above.

Temporary Utilities and Services. Temporary utilities and services, including water, power, communication, waste, fencing, etc., will be provided in accordance with all Mitigation Management requirements below and in accordance with the requirements and specifications of all serving utilities and governing agencies.

Survey and Layout. Before proceeding with any work on the site, Contractor and/or Developer will verify existing conditions, benchmarks and layout information through the engagement of a certified land surveyor to:

- Verify the location, connection points and vital statistics of all serving and crossing utilities.
- Establish benchmarks and control points.
- Provide for and check the location, level and plumb of every major element of construction.
- Maintain a log of layout and control work.

- Record benchmark locations, with horizontal and vertical data, on project Record Drawings.
- Upon completion, prepare a certified survey showing dimensions, locations, angles and elevations of constructed site work.
- Close all site surveys with an error of closure equal to or less than the standard established by governing authorities having jurisdiction.

Mitigation Management:

- Noise-Control Program. The Contractor will implement a Noise Control Program in accordance with the standards of the City of Santa Barbara.
- Dust-Control Program. The Contractor will implement a Dust Control Program in accordance with APCD standard mitigations and in accordance with Section 12.1 above. The dust control program will include, but not necessarily be limited to, the following components: (1) The Contractor will designate a person or persons to monitor this dust control program and to order increased watering, if necessary, to control and minimize the transmission of dust off-site, 24 hours a day, 7 days a week. (2) All trucks transporting earth material to and from the site will be tarped. (3) All roadways, driveways and sidewalks will be paved as soon as possible. (4) After grading, the entire disturbed area will be treated in a number of ways to prevent the wind pick-up of soil, including watering down each day to create a "crust" cover on the soil.(5) Grading operations will be suspended when winds gust above 20 mph and there is evidence of excessive visible dust production. (6) Gravel will be placed on all temporary driveways, to the extent and the quantity necessary, to eliminate excessive dust and to substantially remove soil and mud from the wheels of vehicles before they enter the public right-of-way. (7) The contractor will utilize a program including vehicle wash stations, watering trucks and street sweepers, as necessary, to maintain clean public rights-of-way that have the potential to become soiled as the result of truck transport during construction.
- Soil Erosion-Control Program. The Contractor will adhere to an Erosion Control Program, to be developed by the Civil Engineer and to be approved by both the Public Works Department and the Building Division.
- Air Pollution Control Program. The Contractor will implement an Air Pollution Control Program in accordance with guidelines of the Santa Barbara County APCD.
- Tree Protection Program. The Owner / Developer will have prepared a Tree Protection Program in accordance with governing agency requirements and the Contractor will provide for a qualified arborist to supervise all work specified in the said Plan.
- Sensitive Habitat Protection Program. The Owner / Developer will have prepared a Sensitive Habitat Protection Program in accordance with governing agency requirements and the Contractor will provide for a qualified biologist to supervise all work specified in said Plan.
- Archaeological Resources Protection Program. At the inception of grading operations, and if and when archaeological resources are encountered or suspected, work shall be halted immediately and a professional archaeologist consulted. The archaeologist shall be employed to assess the nature and any discoveries and to develop appropriate management recommendations for archaeological resource treatment.

Earthwork Guidelines. All trucking of soil to and from the site will avoid the peak traffic hours of 7:00 AM to 9:00 AM and 4:00 PM to 5:00 PM along Alan Road. Earthwork activities shall adhere to the following general guidelines:

- All grading soil stabilization and foundation preparation earthwork work will be performed in accordance with the standards and requirements of the approved geotechnical engineering report.
- All earthwork activities will be performed in accordance with an approved Tree Protection and Sensitive Habitat Protection Programs, outlined above
- All grading will be performed in accordance with the Archaeological Resources Protection Program, outlined above.
- Grading activities will be limited to minimum heavy equipment when operating within 250 feet of any existing residence.
- Earthwork equipment will be equipped with catalytic converters and will be maintained in accordance with the manufacturers' specifications and with APCD guidelines.
- Grading will be performed in accordance with the Dust Control guidelines outlined above.
- Grading operations will be reduced or suspended during periods of high ozone or PM_{10} concentrations.
- The overall quantity of grading equipment being utilized at any give time will be optimized (minimum quantity necessary to accomplish the task in a reasonably allotted time frame).

Quality Control Procedures. Each and every contractor, subcontractor and supplier will be individually and jointly responsible for quality control related to their trade and how their trade integrates with others. Each such trade shall:

- Require the installer of each major component to inspect both the substrate and conditions under which the work is to be performed and will not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- Comply with manufacturer's installation instructions and recommendations to the extent that those instructions and recommendations are more explicit or stringent than the requirements contained in the contract documents.
- Where compliance with two or more standards is specified, or where conflicting dimensions, instructions or procedures are observed, work is not to commence or proceed until after the conflicting circumstance is referred to the architect or supervising engineer and a written clarification has been provided.
- Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- Verify whether the installation of materials and systems requires architect, engineer, governmental-inspector and/or special-inspector monitoring or testing and coordinate the inspection or testing process prior and/or during installation, as applicable. Coordinate temporary enclosures and covering of work to facilitate tests and inspections as required.
- Provide all required attachment and connection devices and methodology for installation.
- Be attentive to "visual effects," such as installing all items in alignment, plumb and level as applicable and providing uniform joints, arrangement of joints, etc., to obtain the best visual effect and finish. If uncertain, request clarification by the supervising architect or engineer.
- Recheck all measurements and dimensions prior to starting each installation and then again after the installation is complete.
- Install work during weather and environmental conditions that will ensure the best possible results.
- Isolate each part of completed construction from incompatible adjacent materials and processes as necessary to prevent damage or deterioration.

3.0 ENVIRONMENTAL IMPACTS AND MITIGATION

Environmental impacts of the proposed Veronica Meadows Specific Plan are classified in the categories shown below.

Class I – Significant and Unmitigable Impact. An impact that cannot be avoided or reduced below the level of significance given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.

Class II – Significant but Mitigable Impact. An impact that is potentially significant, but that can be reduced to below the significance level given reasonably available and feasible mitigation measures. Such an impact requires CEQA Findings to be made if the project is approved.

Class III – Less than Significant Impact. An impact that may be adverse, but does not exceed the significance level and does not require mitigation measures under CEQA. However, mitigation measures that could further lessen the minor adverse impacts may be recommended, if available and feasible.

Class IV – Beneficial Impact. An effect that would reduce an existing environmental problem or hazard.

Note: CEQA Guidelines 15126(c) requires that an EIR identify "*significant irreversible environmental changes which would be involved in the proposed project should it be implemented*." Section 15127 states that the information required by Section 15126.2(c) concerning irreversible changes, need be included only in EIRs prepared in connection with any of the following activities: (a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency; (b) The adoption by a Local Agency Formation Commission of a resolution making determinations; or (c) A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969. These conditions do not apply to the proposed project, and as such, the EIR does not include a specific section for irreversible changes. However, permanent and long-term impacts of the project are fully described in the following subsections.

3.1 DRAINAGE, EROSION, AND WATER QUALITY

3.1.1 Existing Conditions

3.1.1.1 Drainage Units

The dominant drainage feature at the project site is Arroyo Burro Creek, a major stream that traverses portions of the east side of the project site (Figure 3-1). The creek meanders in and out of the property boundary, as shown on Figure 2-3. The creek conveys flows from the upstream watershed through the project site, as well as collects local runoff from the project site.

Local drainage units at the project site are shown on Figure 3-1 and summarized in Table 3-1. All units drain to Arroyo Burro Creek and discharge to the creek by overland flow and small dispersed drainage swales. No well defined tributary channels are present at the project site. The largest unit is the Campanil Hill drainage, an 80-acre local watershed with very steep slopes. Discharge from the canyon travels in dispersed shallow swales and by overland flow across the alluvial fan in the center of the project site (Figure 3-2). This area is highly disturbed by motorcycle riding, and as such, the drainage patterns across the site are continually altered.

TABLE 3-1
DRAINAGE UNITS AT THE PROJECT SITE

Drainage Unit	Acreage
A	11.9
B	9.8
C	79.9
D	5.9
Total=	107.5

Arroyo Burro Creek begins in the Santa Ynez Mountains and flows south until it empties into Arroyo Burro Beach (Hendry's Beach). The watershed encompasses about 6,217 acres. It extends about seven miles from the ocean to the ridge of the Santa Ynez Mountains which reaches 3,800 foot elevation. Major tributaries to Arroyo Burro Creek consist of Las Positas Creek, Barger Canyon, and San Roque Creek. There are two minor tributaries on each side of Northridge Road that empty into Arroyo Burro Creek through storm drains. A small tidal lagoon is present at the end of the creek at Arroyo Burro Beach. The upper portions of the creek traverse rural estates and orchards, while the middle portions of the creek traverse dense residential and commercial development between Foothill Road and Highway 101. Downstream of Highway 101, the creek traverses a mixture of residential areas and open space.

3.1.1.2 Channel Conditions

The length of the flow line of Arroyo Burro Creek along the project site is about 1,575 linear feet (Figure 3-2). The linear distance of this reach of Arroyo Burro Creek across the project site is only 1,360 feet. The creek channel meanders through the project site, which increases the flow line

distance. The meander ratio or sinuosity index of the creek at the project site is 1.16, which is considered a low level of channel sinuosity.

The channel bed elevation changes from 35 feet at the north end of the project site near the Stone Creek Condominiums to 25 feet the south end of the project site near Alan Road. The average channel slope over this distance is 1.57 percent, which is moderately steep for a stream reach, particularly at the bottom of the watershed. The steep gradient is evident by the deeply incised channel along Arroyo Burro Creek between Highway 101 and the ocean.

The channel conditions at the project site were examined in the field and on topographic maps. The slope of the creek banks at the project site varies considerably as shown on Figures 3-2 and 3-3. The average slope is 2.8:1 (H:V). The steepest banks are at 1:1, and the most gradual slope is 7:1 (Table 3-2). The average channel depth is 15 feet, with a range of 10 to 23 feet at the project site. The average channel width from top of bank to top of bank is 116 feet. The range of widths is 80 to 160 feet.

TABLE 3-2
SUMMARY OF KEY CREEK CHANNEL DIMENSIONS

	Slope (H:V ratio)	Bank Height (feet)	Channel Width (feet)
Average	2.8:1	15.2	116
Minimum	7:1	10	80
Maximum	1:1	23	160

The channel along the project site is deeply incised, with very steep banks that are actively eroding due to undercutting from a deepening channel bed (Figure 3-3). As the channel is lowered, the banks become over steepened and fail, causing bank regression. The failed banks create flow obstructions, which redirect the creek into the opposite side of the channel, causing new bank erosion from direct impingement.

Geolith Consultants (2000) has described the predominant modes of bank regression along Arroyo Burro Creek at the project site. They postulate that there are two predominant stream terrace surfaces above the low flow channel, as shown on Figure 3-4. These terraces appear to have been developed during Holocene time (past 11,000 years), when dramatic changes in weather patterns, rising sea level and ongoing tectonic uplift of the Santa Barbara coastline (along a series of faults that parallel the coastline) combined to create a channel that appears to have repeatedly incised its channel on at least three or more occasions. At the present time, most of the channel bed is floored in bedrock, which appears to coincide with the deepest penetration to date of the channel through Las Positas Canyon. Some minor terraces are present along the creek but are not shown on Figure 3-4; they appear to have been associated with landslide dams that periodically block the main channel.

Several large dormant bedrock landslides occur at the project site as described in detail in Section 3.2. These ancient slides were developed within the Rincon shale. The original channel of Arroyo Burro Creek migrated towards the west side of the valley and undercut the bedrock slopes. Several

large slump-earthflow style slides appear to have been triggered, which traveled downslope, into the opposing bank of the old channel. These slides temporarily blocked the channel, which was soon reestablished, by overtopping the obstruction. In a few places the channel excavated through part of the old slides, in other areas it appears to have flowed around the toe of the largest slides.

This sequence was likely initiated sometime during late Pleistocene time, within the past 30,000 years. Excavation, filling and re-excavation of the Arroyo Burro Creek channel appears to have occurred at least three times (and possibly more) during the Holocene Epoch, covering the past 11,000 years. The Arroyo Burro Creek channel was observed to be asymmetrical at most locations surveyed through the proposed project area. This means the banks tend to be higher on one side than another at any given location. The banks are also perturbed by a series of benches, termed "inset terraces". The inset terraces record the erosional and depositional levels of older channels floored at higher elevations than present. Although the precise rate of downcutting is unknown, this channel exhibits evidence of active downcutting.

Active lowering of the channel bed can be expected to facilitate the ongoing regression of the channel banks wherever they are locally over steepened. Local over steepening is present along the outside bank of turns. However, future bank regression could be triggered by localized concentrations of surface runoff spilling into the creek.

Upstream of the proposed land development, on the proposed 35-acre open space parcel, a recent slump-flow landslide slid into the channel during the winter of 1997-98, opposite the Stone Creek Condominiums (Figure 3-1). This slide appears to have been a reactivation of an active bedrock slide complex developed within the underlying Rincon shale, the only location where the active channel abuts the Rincon slope. Because of the narrow, fault-controlled canyon, there was insufficient area here for natural buttressing of the slide by debris fan or stream terrace materials, as exist elsewhere downstream. A considerable volume of slide debris appears to have been eroded by the creek since the 1998 reactivation, likely between 6,000 and 10,000 cubic yards of material. This material has been conveyed downstream to the ocean. Creek flows since 1998 have created a bank 20 to 26 feet high across the toe of this slide. The slide has not shown any movement in the past several winters. No development is planned on this parcel.

3.1.1.3 Creek Discharge

Arroyo Burro Creek at the project site contains year-round flow. Peak streamflows occur in the winter due to runoff from rainfall events. Flows in the summer are attributed to a combination of urban runoff in the watershed and bank seepage from high groundwater and springs, particularly from the Bel Air neighborhood and along Las Positas Creek.

Flooding in the South Coast area typically occurs as a result of high intensity rainfall that produces heavy runoff in creeks and tributaries over a short period of time. Such events typically occur during the rainy season, which occurs between November and April of each year. Flooding is a direct response to the amount, distribution, and intensity of precipitation. Floods are usually referred to in terms of their frequency of occurrence. A 100-year flood event refers to an event of an intensity that has a 1% statistical likelihood of happening in any given year (i.e., statistically once every 100 years).

The estimated discharge in Arroyo Burro Creek at, above, and below the project site is presented in Table 3-3 based on hydrologic modeling by Penfield & Smith (2003). Estimates of flows were generated using the HEC-HMS rainfall-runoff model. Rainfall data from the Santa Barbara County gauging network were analyzed to determine appropriate design storm magnitudes as a function of elevation. The estimated discharge at the project site during a 10-year event would be about 1,500 cubic feet per second (cfs).

TABLE 3-3
ESTIMATED DISCHARGE IN ARROYO BURRO CREEK
(CUBIC FEET PER SECOND)

Location	Return Interval (years)		
	10	50	100
Arroyo Burro Creek above confluence with Las Positas Creek	1,382	4,227	5,707
Las Positas Creek	890	1,384	1,579
Arroyo Burro Creek below confluence with Las Positas Creek	1,410	4,291	5,787
Arroyo Burro Creek at Cliff Drive	1,590	4,386	5,945

Source: Hydrologic Analysis for the Arroyo Burro Creek Re-Study. Penfield & Smith. February 2003

The estimated velocities of flows at the project site for different runoff events are presented in Table 3-4. The velocities vary considerably between different reaches of the creek along the project site due to the change in channel configuration (see above). Flow velocities are higher in portions of the creek where the channel is narrow because the water is forced through a smaller cross section. Velocities of seven or more feet per second (fps) are erosive and can contribute to bank erosion and channel bed scouring.

TABLE 3-4
ESTIMATED FLOW VELOCITIES IN ARROYO BURRO CREEK
(FEET PER SECOND)

Station	Return Interval (years)		
	10	50	100
5478 – Near the bridge	7.07	8.53	9.15
4800 – center of the project site	5.49	9.42	11.23
4475 – center of the project site	5.78	8.24	8.69
4037 – downstream end of the site	10.57	10.71	10.59

Source: Hydrologic Analysis for the Arroyo Burro Creek Re-Study. Penfield & Smith. February 2003

3.1.1.4 Floodplain Boundary

The relatively flat or lowland area adjoining a stream that is subject to periodic inundation by floodwater is known as a floodplain. A 100-year floodplain is comprised of a floodway and a floodway fringe that would be inundated during a 100-year size storm event. The floodway is made up of the stream channel and associated floodplain that must be free of obstructions in order for the 100-year flood to be carried without a substantial increase in flood height. The floodway fringe is the area between the floodway and the 100-year flood zone boundary. Where the floodplain and the floodway coincide, the area is called the Flood Zone.

The Federal Insurance Rate Maps (FIRM) indicate that the floodplain and floodway coincide in the Las Positas Valley. These combined zones, called the Flood Zone, at the project reach are shown on Figure 3-2. The Flood Zone boundaries on the FIRM maps are outdated and based on older hydrologic information, topographic mapping, and modeling methodologies. In 2003, the City completed an update to the floodplain mapping of Arroyo Burro Creek, including along the project reach. The updated Flood Zone boundaries are shown on Figure 3-2. The City has submitted the revised floodplain boundaries to the Federal Emergency Management Agency (FEMA) for review and approval.

3.1.1.5 Water Quality

Water quality in Arroyo Burro Creek at the project site is a function of the upstream watershed. Over the past five years, the City and County of Santa Barbara have conducted various watershed and water quality studies in the watershed to characterize the water quality (particularly related to bacteria) and identify sources of pollutants. The Arroyo Burro Creek watershed contains a mixture of different land uses that can contribute to water pollution. Residential land uses account for about 44 percent of the watershed, while open space and parks account for about 39 percent. Commercial land uses account for less than five percent of the watershed. Typical pollutants from urban areas include: heavy metals, oil and grease, nitrates, phosphates, BOD, and bacteria. Pollutant types from open space and parks would depend on the background levels present in natural soils and rocks underlying the area. Generally, concentrations of trace metals, TSS, TOC, BOD, and bacteria would be very low.

The general water quality of Arroyo Burro Creek is good – that is, it exhibits very low to non-detectable levels of metals, total petroleum hydrocarbons, total nitrogen, and nitrite. However, Arroyo Burro Creek exhibits some of the highest bacteria concentrations on the South Coast. Since 1998, one or more of the beach bacteriological standards have been exceeded at Arroyo Burro Beach 10 to 50 percent of the time. However, the number of exceedances of bacteriological standards has decreased since 1998 when there were prolonged flows to the ocean due to the El Nino weather conditions. The highest concentrations of bacteria within the watershed occur upstream of the project site at the head of the Las Positas Creek drainage channel, immediately downstream of Union Pacific Railroad; Las Positas Creek at its confluence with Arroyo Burro Creek at Veronica Springs Road; and Hope Avenue Drain.

3.1.2 Potential Impacts

3.1.2.1 Impact Thresholds

Based on the City's Master Environmental Assessment and CEQA Guidelines Appendix G, any of the following could trigger a finding of potentially significant impact related to hydrology/flooding:

- Projects which would place structures within a 100-year flood hazard area designated on the Federal Flood Insurance Rate Maps or other flood hazard delineation map;
- Projects that create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems;
- Projects that would substantially alter the absorption rate or existing drainage pattern of a site or substantially increase the rate or amount of surface runoff in a manner that could result in flooding either on- or off-site;
- Projects that would expose people or structures to a significant risk of loss, injury or death involving water-related hazard such as flooding;
- Projects that would be located in areas that would be at risk for innundation by seiche, tsunami, or mudflow, or
- Projects that would require major structural engineering within the creek to make a building site safe.

Additionally, a project would have a significant impact on hydrology/water quality if it could:

- Conflict with applicable legal requirements relating to hydrology and water quality;
- Substantially alter the existing drainage pattern of the site or area in a manner that results in substantial erosion, siltation, either onsite or offsite;
- Would result in substantial grading during the rainy season in areas subject to severe erosion;
- Result in a substantial increase in storm water drainage or the rate and amount of surface water run-off in a manner that would provide substantial additional sources of polluted runoff;
- Cause direct or indirect wastewater discharges which would result in acute or eventual exposures to hazardous materials in quantities which would adversely affect human health, wildlife, or plant species;
- Substantially degrade groundwater quality, interfere substantially with groundwater recharge, or deplete groundwater resources in a manner that would cause water-related hazards such as subsidence;
- Result in the deterioration of a drinking water source;
- Discharge noxious substances into surface waters by way of storm drains carrying contaminants to an end source containing wildlife or wetland habitat; or

- Otherwise substantially degrade water quality

3.1.2.2 Potential Impacts

Effect of Bridge on Creek Hydraulics and Flood Hazard

A new bridge would be installed to cross Arroyo Burro Creek and provide access to the project site. The bridge would be approximately 140 feet long and 31.67 feet wide, with two ten-foot travel lanes and two four-foot sidewalks (Figure 2-9). The bridge would be constructed of poured-in-place concrete and would span the creek channel. Concrete abutments with wing-walls would be installed on each bank to support the bridge. The bottom of the bridge would be at elevation 48 feet at the west end, and at elevation 53 feet at the east end (Figures 2-9 and 3-3). The elevation of the 100-year flood event is estimated to be 46 feet. Hence, there would be a freeboard of at least two feet above the flood elevation (see Figures 2-9 and 3-3). The toe of the abutments would be at 46 feet elevation. The bridge opening would be slightly wider than the estimated width of the 100-year flood event.

The proposed bridge would not create a flow obstruction because it would span the creek. Hence, flood flows with woody debris and sediments would pass unimpeded under the bridge. Only flows above the 100-year event would impinge on the bridge abutments or deck. The width of the active channel at the bridge location is about 80 feet. Hence, there is additional space for the channel to migrate if hydraulic conditions change in the creek and cause bank erosion or lateral migration. The bridge abutments would be designed to accommodate future channel downcutting at this location, if that condition were to occur. The bridge would be designed without the need for an in-channel grade control structure in the future. Hence, no hydraulic barrier would be created in the future. Based on these considerations, the bridge would have **a less than significant impact on the hydraulic conditions in the creek and would not increase flooding hazards (Class III)**.

Effect of Land Development on the Floodplain

The proposed residences would occur outside the existing FIRM 100-year Flood Zone and the most recently calculated 100-year Flood Zone, as shown on Figure 3-2. Hence, these structures would not directly affect floodplain boundaries or processes.

A very small portion of the abutments for the proposed bridge would impinge on the FIRM Flood Zone boundary and on the newly mapped Flood Zone boundary (west end), as shown on Figure 3-2. Structures may encroach into the flood zone; however, there can be no resulting increase in the elevation of floodwater caused by additional displacement of floodwater. To ensure that there would be no increase in floodwater elevations in the floodway, the applicant is proposing to remove an equal amount of material from the floodway as is proposed to be installed in association with the construction of the bridge. The amount and location of the material to be removed from the floodway would be determined during final design. It is estimated that less than 200 cubic yards would need to be removed from the floodway. The most likely locations are near the west abutment, as part of the installation and bank stabilization associated with the abutments. Compliance with this City requirement would ensure that the proposed land development in its entirety would not adversely affect the floodplain and floodway.

Effect of Site Drainage on Creek Hydraulics

Site drainage would be managed by a combination of underground storm drains and surface flows, as described in Section 2.3.8 and shown on Figure 2-12. Runoff from the site would be discharged to Arroyo Burro Creek at two locations. Runoff from Lots 1 and 2 would be directed to Alan Road and its existing storm drain system. Runoff from Lots 3 through 7 would be captured in a storm drain inlet at the south end of the private driveway and discharged to the creek at the south end of the project site. Runoff from Lots 8 to 11 and 13 to 24 would be directed to the detention and bioswale area behind these lots. Runoff from the hills and roads surrounding these lots would be captured in storm drains. The runoff from these areas would be discharged to Arroyo Burro Creek at the bridge site. Runoff from Lot 12 and the open space area east of the project site roads, including the pedestrian path, would occur as sheet flow to the creek.

The proposed drainage units are shown on Figure 3-5. The key inlets (or areas of flow concentration) and the two creek outlets are also shown. The proposed project would increase the amount of impervious surfaces at the project site, which in turn would increase the amount of surface runoff to Arroyo Burro Creek. A summary of the amount of different surfaces associated with the proposed development is presented in Table 3-5. Impermeable surfaces would include residences, driveway, and roads - about 3.78 acres or 26 percent of the site.

TABLE 3-5
PERMEABLE AND IMPERMEABLE SURFACES ASSOCIATED WITH THE PROPOSED PROJECT

Types of Surfaces	Acres	Percent of Total
Permeable	11.04	74 %
Impermeable (residences, roads, driveways)	3.78	26 %
Total=	14.82	100 %
Roads	1.95	13 %
Residential Lots (houses, driveways, yards)*	4.49	30 %
Paths	0.28	2 %
Open Space Areas (Lots 25, 26, 27, 28)	8.10	55 %
Total=	14.82	100 %

* Residential yards account for 2.65 acres, and are considered permeable.

The proposed drainage plan for the project which is shown on Figures 2-12 and 3-5 has been designed to ensure that the volume of runoff during all storm events from the developed site would be the same as from the current, undeveloped site (Penfield & Smith, 2003). The applicant proposes to meet this objective by creating a detention area in the center of the site, as shown on Figure 3-5. The detention area would hold and slowly release runoff from the primary tributary west of the site, and from the center of the developed site. By temporarily storing runoff, the discharge from the site

to Arroyo Burro Creek (with the additional runoff from impervious areas), would be the same as before the project.

The estimated runoff from the project site with and without the development is shown in Table 3-6. This analysis indicates that the overall runoff amount from the project site would not significantly increase with the new impervious surfaces due to the temporary storage and controlled releases from the detention area to the creek.

TABLE 3-6
PRE- AND POST-DEVELOPMENT RUNOFF

	Estimated Runoff from the Entire Project Site (cfs) that is Discharged to Arroyo Burro Creek	
	25-year runoff event	100-year runoff event
Pre-development drainage conditions	140.6	187.4
Post-development drainage conditions, with the detention area	141.3	188.0
Increased flow due to additional impervious areas	+ 0.7	+ 0.6

Source: Penfield & Smith (2003)

The above analysis does not take into account that the runoff from the project site under current conditions is discharged to the creek through overland flow, not at well-defined discrete discharge locations. In addition, much of the runoff at the site percolates prior to reaching the creek, and then discharges to the creek at a later time as bank seepage. Under the proposed drainage system, runoff from the site would be discharged to Arroyo Burro Creek at two locations (Figure 3-5). The concentration of flows at these locations could cause several adverse impacts, as discussed below.

The concentration of flows at two outlets to the creek could cause localized erosion at the base of the outlets, which would require channel bank and bed protection (e.g., rock rip rap). This outlet protection would need to be designed to withstand high velocity flows and debris in Arroyo Burro Creek. The continual maintenance of the outlet protection could require additional armoring in the future, which could cause adverse localized hydraulic effects to the creek.

The collection of site drainage and discharge at two locations would substantially modify the current drainage and discharge conditions. Under current conditions, runoff from four watersheds discharges to the creek at various locations along the creek, as shown on Figures 3-1, 3-2 and 3-5. Redirecting the flows to the two discrete storm drain outlets would reduce infiltration and bank seepage along Arroyo Burro Creek at the project site. The current runoff conditions ameliorate peak downstream flows and generate lower, more prolonged base flows.

The magnitude of the drainage modification is summarized in Table 3-7. These data indicate that the four major watersheds at the project site will be combined into two watersheds, and that diffused discharge to the creek over a 1,575 foot long reach would be replaced with two discharge points on the creek.

TABLE 3-7
CHANGE IN SITE DRAINAGE AND DISCHARGE

	Drainage Units at the Project Site (see Figure 3-1)				
	A	B	C	D	Total
Approximate watershed (acres)	11.9	9.8	79.9	5.9	107.5
Length of creek where runoff discharges by overland flow (feet) under existing conditions	500	120	555	400	1,575
Combined basins under proposed drainage system, and that would discharge at single point	Downstream discharge point for 11.9 acre watershed and 0.79 acre of developed lands (lots 1-7 and Driveway A)	Downstream discharge point for 96.5 acre watershed and 3.0 acres of developed lands (lots 8-24 and Lane "A")			

In summary, the hydrologic and hydraulic conditions of Arroyo Burro Creek would be adversely affected by two major modifications of site runoff conditions: increased impermeable surfaces due to site development which necessitate temporary runoff storage, and concentration of runoff into two discrete discharge points. The adverse hydraulic impacts are the loss of infiltration and associated bank storage and seepage, and the need to install and maintain large storm drain outlets on Arroyo Burro Creek. These impacts are considered **significant, but mitigable (Class II).** They can be effectively mitigated to a less than significant level by modifying the site drainage system to provide more infiltration and by providing additional storm drain outlets to the creek with lower discharge volumes than proposed (see Mitigation Measure W-1).

Effect of Riparian Corridor Restoration and Bank Repair on Bank Conditions

As described in Section 2.3.10, the applicant would implement a riparian restoration plan within the 50-foot creek setback zone and along the creek banks at and near the project site. The boundaries of the restoration area are shown on Figure 2-16. Habitat restoration would include the removal of invasive exotic plants from this area, including giant reed; planting with native trees, vines, shrubs and ground cover; and drip irrigating the new plantings. There are extensive stands of giant reed in the creek corridor, including on steep creek banks and in the channel bed. Removal of giant reed requires heavy equipment to cut and remove the large biomass. In addition, depending upon the method selected, the removal could cause disturbance to the ground surface, and possible removal of the roots. Giant reed is a hardy plant that provides slope stabilization due to its size and resistance to flows.

Removal of the giant reed on steep banks could cause an inadvertent increase in bank erosion along Arroyo Burro Creek at the project site. If the new plants are not successfully established, or if they do not have the same ability to stabilize slopes, there is a potential for an increase in bank erosion along the creek. This impact is considered **significant, but mitigable (Class II).** It can be effectively mitigated by adopting a cautious and strategic approach to giant reed removal and replacement, and by establishing appropriate design criteria and using appropriate analytic methods to develop final restoration plans that incorporate local hydraulic and geomorphologic factors (see Mitigation Measure W-2).

The applicant has proposed to restore two eroded portions of the west bank of Arroyo Burro Creek, shown on Figure 3-6. The southern most eroded area was created when the toe of the bank failed during the 1998 El Nino floods, causing extensive bank failure to the top of the bank, and exposing a sewer line. The northern erosion feature was also caused by the undercutting of the lower creek bank during the high storm flows. The applicant has prepared conceptual bank repair plans that are presented on Figure 3-6. The plans are not sufficiently detailed to determine the precise physical extent of the proposed bank repair, and the engineering methods. It is possible that the proposed bank repair could require significant removal of willow trees that have become established in the eroded areas. The existing native trees may provide sufficient bank protection such that the proposed bank repair can be reduced in scale. In addition, the proposed bank repair does not include a consideration of stabilizing the toe of the slope where the original bank failures occurred. Hence, there is a potential for the bank repair, as currently proposed, to destabilize these slopes and increase bank erosion along the creek. This impact is considered **significant, but mitigable (Class II).** Implementation of Mitigation Measure W-2 would ensure that excessive bank work is not performed which may destabilize slopes that are becoming more stable through natural revegetation.

Mitigation Measures W-2 and BIO-1 (Section 3.3.4) require that the applicant submit detailed creek bank stabilization and habitat restoration plans for City approval. The development of the detailed plans, which must incorporate more in-depth hydrological, geomorphological, and biological analyses, is intended, in part, to identify additional approaches and methods to achieve the desired conditions and to ensure successful bank stabilization, reduced erosion, improved water quality, enhanced riparian habitat, and channel grade stabilization.

Effect of Construction on Creek Water Quality

Regulatory Requirements for Construction Runoff Control

Because more than five acres of land area would be disturbed during construction of the project, the applicant must comply with the State General Permit to Discharge Storm Water Associated with Construction Activity (General Permit) issued by the State Water Resources Control Board. The General Permit includes requirements to implement appropriate pollution prevention control measures and/or Best Management Practices (BMPs) to achieve water quality standards, monitor stormwater discharges, maintain monitoring records, and prepare a Storm Water Pollution Prevention Plan (SWPPP) for the construction activities.

The SWPPP must include a description of sediment and pollutant sources (such as equipment and graded areas) and measures to reduce sediment and other pollutants in storm water discharges from

the construction area. The SWPPP must specifically include a description of erosion and sediment control measures which can include, as applicable, soil stabilization, seeding, vegetative buffer strips, detention basins, straw bale dikes, silt fences, storm drain inlet protection, velocity dissipators, etc. At a minimum, sandbag dikes, silt fences, and straw bale dikes are required for areas with expected high sediment yield and for fill or cut slopes in proximity to area drainages. In addition, the SWPPP would contain provisions to prevent and contain spills of oils, fuels, paints, and concrete. The SWPPP must also include the following elements:

- Non-storm water management - measures to eliminate or reduce discharge of pollutants from point sources.
- Post-construction storm water management - measures to reduce sedimentation from the site after completion of construction activities.
- Waste disposal - procedures to remove all construction wastes from the site.
- Inspection, maintenance, and repair - procedures to inspect, maintain, and repair (as necessary) erosion and sediment control devices after construction.

The City of Santa Barbara filed a Notice of Intent (NOI) to comply with the State Water Resources Control Board Water Quality Order 2003-0005-DWQ for National Pollutant Discharge Elimination System (NPDES) Phase II General Permit No. CAS000004, also known as the NPDES municipal stormwater permit. The permit requires the City to implement a storm water management program composed of six elements that, when implemented together, are expected to reduce stormwater pollutants discharged into creeks and the ocean. The City has prepared a draft Storm Water Management Program (SWMP) that describes scope and implementation of the six program elements. The City is currently revising the Draft SWMP in response to comments by the Regional Water Quality Control Board. Two of the program elements apply to the proposed project: (1) construction site stormwater runoff control; and (2) new development post construction stormwater management. A summary of the current requirements for construction site stormwater runoff control is provided below. These requirements are equal to, or greater than, the General Permit for construction stormwater management noted above.

As a matter of practice, the City requires erosion controls on all projects where there is removal of vegetation, grading or other soil disturbance. Detailed erosion control plans are required on larger projects or projects on steep slopes or near creeks, such as the proposed project. The City enforces erosion control under the Uniform Plumbing Code (Chapter 11, Storm Drainage) and Uniform Building Code (appendix Chapter 33) and under City Title 22, Vegetation Removal, which contains erosion control, slope stabilization and grading requirements, and applies to the Hillside Design District. Currently, the City is evaluating its requirements and regulatory authority in the application of erosion control standards on land development projects. The City policies and regulations that establish erosion control standards will be reviewed and revised or replaced, as necessary, with new standards. Staff review, public input, and review and approval by the Planning Commission and City Council are needed prior to the completion of new standards and requirements.

All land development projects in the City must include construction site erosion and sediment control Best Management Practices (BMPs). The City developed the Procedures for the Control of Runoff into Storm Drains and Watercourses as a specification section containing BMP requirements for general construction work. The Procedures outline a selection of required sediment control

BMPs, such as drain inlet protection and a stabilized construction entrance/exit. Use of the Procedures is also required on all discretionary review projects.

The scope and content of construction site erosion control plans are subject to either administrative or discretionary review by the Community Development and Public Works Departments. The Building Division of the Community Development Department utilizes the plan check process to assess the erosion controls for a given project. This approach assures that all permitted projects in the City are reviewed for erosion controls, since all projects are routed through plan check. City Building Inspection staff inspects erosion controls on private property. Erosion controls are normally inspected in the course of other scheduled inspections, in particular grading, foundation and rebar inspections, and in response to complaints.

Impacts of Construction Site Runoff

Construction of the project would occur over an 18-month period, which would include one, and possibly, two winters. Construction activities could adversely affect water quality in Arroyo Burro Creek due to exposure of soils to erosion from winter rainfall and runoff, discharge of paints, solvents, fuels, trash, and other materials during construction that can be washed into the creek or leached. Major sources of possible stormwater pollution during construction are listed below:

- Phase 1 – Bridge Construction. Construction of the bridge would require work in the creek bed to construct the wood forms for the concrete abutments and span. This would require by-passing flows through the work site through the use of temporary cofferdams and piping. Work in the creek channel could expose soils to erosion from winter rainfall and runoff, which could cause sedimentation of the creek. In addition, construction of the concrete bridge could result in accidental discharge of concrete to the creek.

- Phase 1 – Slope Stabilization. This work would require significant excavation and backfilling at several locations at the base of the hills. Substantial areas of bare soil and large stockpiles would be present for several months at each location. Depending upon the construction schedule, there is a potential for these soils to be exposed to winter rainfall and runoff, which could result in on-site erosion and off-site sedimentation of Arroyo Burro Creek

- Phase 1 – Mass Grading. This activity would involve grading of all but the creek corridor. Hence, there would be a substantial amount of bare ground that could be subject to erosion from winter rainfall and runoff. The site has a natural slope towards the creek; hence, a heavy rainfall event could mobilize significant quantities of soil unless adequate erosion control measures were implemented.

- Phase 1 – Road Paving. The paving of the site roads and driveways would involve the application of asphalt and concrete. These materials could adversely affect water quality in the creek if they were exposed to rainfall and then mobilized in stormwater.

- Phase 2 – Construction. During this phase of the project, the storm drain systems would be operative. However, landscaping would not be completed until the end of the phase. As such, there may be large areas of barren soil or sparsely vegetated areas that could be subject to winter

erosion. In addition, construction would involve a substantial number of worker vehicles and the generation of trash that may contain contaminants.

Construction of the proposed project could cause temporary adverse effects on Arroyo Burro Creek water quality due to construction activities that increase on-site erosion potential and introduce potential contaminants to the site. This impact can be effectively mitigated to a less than significant level by: (1) scheduling grading and major earthwork activities outside the winter seasons; and (2) implementing an erosion control, stormwater, and non-stormwater discharge management plan during construction with effective BMPs that comply with both state and local requirements, as described above (see Mitigation Measure W-3). Hence, the impact of construction activities on water quality in Arroyo Burro Creek and the downstream estuary is considered **significant, but mitigable (Class II impact).**

Effect of Land Development on Water Quality

City Requirements to Manage Stormwater from the Development

The City's draft SWMP contains requirements for managing post-construction stormwater from new development, such as the proposed project. Under current practices, the City reviews and approves post-construction stormwater control and treatment BMPs on a case by case basis through the discretionary permit review and final building plan review processes. The typical conditions that trigger post-construction BMP requirements are: project size; 10 or more parking spaces; adjacency to creek, ocean or other drainage channel; and commercial or industrial uses. The BMPs must take into account the anticipated pollutant load, site features and constraints, and must be sized appropriately. The proposed project will require post-construction stormwater management due to its size and proximity to Arroyo Burro Creek.

The types of BMPs approved by the City to reduce stormwater pollution include vegetated buffers, permeable surfaces, bioswales, infiltration trenches, and catch basin inserts. Projects that contribute to local drainage problems often require stormwater detention, which often can be used to treat stormwater.

Pursuant to the Draft SWMP, the City is currently developing post-construction BMP design standards and guidelines for new development, and design guidelines for stormwater treatment facilities and retention facility requirements. Until these standards and guidelines are developed, the City is using the design standards and guidelines in Attachment 4 of the State's NPDES municipal stormwater permit. The design standards and guidelines that would apply to residential development such as the proposed project are described below. The City will apply these standards when reviewing the final plans for the project for the purposes of issuing grading and building permits.

1. Post development peak stormwater runoff must not exceed pre-development runoff. The City has not identified what storm event will be used to assess the pre- and post-development discharge. Under current practices, the City staff determines the appropriate return interval for each project on a case by case basis.

2. Conserve natural areas in the project layout. This requirement can be met by clustering development, limiting vegetation clearing to the minimum necessary, including as much native plant landscaping as feasible, and preserving riparian areas and wetlands.

3. Minimize stormwater pollutants through use of source control and stormwater treatment. Development should be designed to minimize, to the maximum extent practicable, the introduction of pollutants of concern generated from site runoff from impervious areas and discharged to storm drains. Pollutants of concern are those which are currently or historically affecting beneficial uses of the receiving water, are elevated in the receiving water, or are detected in harmful concentrations. Post-construction treatment control BMPs should incorporate either volumetric or flow based treatment control to mitigate (e.g., infiltrate, filter, or treat) stormwater runoff. The City has developed specific design standards for treatment BMPs, which are: (1) one inch storm for volumetric treatment control (e.g., detention systems); and (2) 0.25 inch storm per hour for four hours for flow-based treatment systems.

4. Protect drainage channels and slope from erosion. This can be accomplished by conveying runoff from slopes without erosion, using natural drainage patterns, stabilizing drainage crossings, vegetating drainage banks, and using energy dissipaters at storm drain outlets.

5. Stencil storm drain inlets. Use wording such as "NO DUMPING. DRAINS TO OCEAN."

6. Ensure ongoing BMP maintenance. The responsible party should provide a maintenance plan, and evidence that there are adequate funds and agreements to ensure long-term BMP maintenance. The City's SWMP contains the following requirement. "*All discretionary projects with post-construction stormwater BMPs are required to have a BMP maintenance plan. The owner(s) are required to have a maintenance schedule and appropriate BMP maintenance manuals, and to retain all BMP maintenance records for two years. Inspection of the BMPs and maintenance records will be required annually. The City tracks BMPs in the Permit Plan database, and uses the database to generate mailings requesting BMP maintenance records. Provision for long-term maintenance of BMPs is required of all discretionary review projects. On applicable projects, a maintenance provision is required in the covenants, conditions and restrictions (CC&Rs) that are the governing documents that dictate how the homeowners association operates and what rules they must obey.*"

Potential Impacts of Stormwater from the Development

The proposed project could adversely affect water quality in Arroyo Burro Creek due to stormwater pollution from the new residential development and associated roads. The primary pollutants generated from low to moderate residential development in a suburban setting are nutrients from fertilizers applied to yards and in common space landscaping, pesticides/herbicides applied by residents, and heavy metals from automobile and tire discharges to roads and driveways. Stormwater pollution concentrations from several years of monitoring stormwater from different land uses are presented in Table 3-8. These data indicate that total suspended solids (e.g., sediments) are typically lower in residential areas compared to open space, such as the current project site:, because of the extensive landscaping in residential areas which reduce erosion and sedimentation. Hence, the proposed project would likely reduce the total suspended solids (TSS) currently discharged to Arroyo Burro Creek from the undeveloped and disturbed project site.

The project site would contain road with asphalt pavement. Asphalt is a mixture of sand, gravel, and petroleum oils. When properly mixed and applied, it has a very low leachability. The oil in standard asphalt mix contains low levels of metals (such as barium, cadmium, and chrome), but little to no volatile or semi-volatile organic compounds, or poly-aromatic hydrocarbons. Due to its low leachability, asphalt is often used for lining of water reservoirs. The primary stormwater quality issue with asphalt is the oil and grease deposited from vehicles which easily runs off the paved surface.

Bacteria concentrations from residential areas vary greatly. The factors that affect the concentrations include presence of septic systems, population density, age and condition of sanitary sewer system, presence of illicit connections, presence of homeless, presence of pets and domestic animals, and extent of dumping trash and grass cuttings into the storm drains or natural drainages.

TABLE 3-8
MEASURED STORMWATER POLLUTANT LEVELS
FOR DIFFERENT LAND USES*

Pollutant		Mixed Residential	Open Space	Roads	Industrial	Commercial	Agricultural
TSS	mg/l	73	224	39	178	68	1397
Total P	mg/l	0.28	0.12	0.30	0.31	0.40	2.74
Nitrate	mg/l	0.59	1.16	0.33	0.20	0.55	12.32
Cd	ug/l	0.06	0.05	1.94	0.36	0.66	1.9
Cu	ug/l	8.6	2.5	24.3	17.1	14.5	29
Pb	ug/l	1.6	1.25	0.52	8.38	4.9	18.41
Zn	ug/l	98	37	129	267	157	38

* Mean measured stormwater concentrations from Los Angeles County 1994-2000 Integrated Receiving Water Impact Report.

The stated objective of the proposed drainage plan for the project (Penfield & Smith, 2003) is to "… *capture the runoff from both on-site and off-site areas and successfully clean the urban runoff and transport the runoff through a proposed storm drain systems.*" The proposed stormwater treatment is a detention basin in the center of the site (see Figure 2-12). The description of the proposed stormwater treatment in Penfield & Smith (2003) does not include information on the size of the detention basin, water residence time, and presence of vegetation. It is assumed that the proposed detention basin would be designed to meet City design standards.

The proposed stormwater treatment using a detention basin represents an appropriate treatment BMP that could reduce stormwater pollutants from the site. However, the effectiveness of this BMP cannot be fully evaluated based on the available design information. The effectiveness of this BMP, or any stormwater treatment BMP, is dependent upon the design criteria and many site-specific factors such as soil type, depth of inundation, presence or absence of plants selection, amount of exposed water vs. vegetative cover, potential to attract birds that introduce bacteria, and maintenance practices. URS completed calculations to determine if there was sufficient space at the

project site to construct a detention basin. The basin was sized using the City's one-inch storm event design standard, and the basin sizing standards from Santa Barbara County's SWMP (36 hour detention time). Based on these design criteria, the proposed basin would need to store about 0.6 acre-feet. Assuming a 3-foot depth, the basin would be about 400 by 40 feet, which would fit in the open space shown on Figure 2-12.

The proposed stormwater treatment approach has several deficiencies that would substantially reduce its effectiveness, as listed below:

- The proposed system does not treat all stormwater from the developed site. Runoff from Areas 2 and 6 with seven lots (Lots 1-6 and 12) would not be treated (Figure 3-5). In addition, the runoff from the private driveway to Lots 3-6 and from the bridge would not be treated.

- The proposed system would capture and treat runoff from the 80-acre watershed west of the project site (i.e., north of Campanil Hill), as shown on Figure 3-1. The applicant is not required to treat pollutants from this mostly undeveloped watershed. Very little stormwater pollution, such as nutrients and heavy metals are expected from this watershed. Including this watershed in the proposed stormwater treatment system could reduce the effectiveness of the detention system. It is anticipated that there would be a relatively high sediment load from this watershed during high rainfall events because of the soil and landslide conditions in the watershed. Hence, the proposed detention basin would need to be sized for ongoing sediment deposition, which will require continual maintenance of the basin.

- There are two discharge points to the proposed detention basin, as shown on Figure 2-12. The primary discharge is from the off-site watershed, and enters the basin from the west. The second discharge point is located east of the basin and is a storm drain outlet conveying water from the road. This discharge is located near the outlet of the basin, which violates one of the primary design standards for basins. Discharge points to a basin must be located at the upper end to avoid short circuiting the basin.

- The proposed stormwater treatment approach does not include any provisions to reduce pollution from the creek open space area east of Lane "A" and the private driveway to Lots 3-7. This area will be restored to native habitat and will contain a public pedestrian path. There are two sources of stormwater pollution in this area: pesticides or herbicides used in the maintenance of the restored native landscape, and coliform bacteria from pets that residents may walk along the corridor.

Based on the above information, it is concluded that the proposed project would adversely affect water quality in Arroyo Burro Creek due to stormwater pollution from the new residential development and associated creek corridor open space. The level of stormwater pollution is not expected to be severe due to the low density of housing, the type of land use involved, the relatively high amount of permeable surfaces, and the presence of a creek buffer zone with native vegetation. However, to ensure that the stormwater pollution would be less than significant, the proposed stormwater treatment system should be expanded and modified as described Mitigation Measures W-1 and W-4. Hence, the impact of stormwater pollution would be considered **significant, but**

mitigable (Class II impact). This conclusion also applies to the impact of stormwater pollution on aquatic organisms that reside in the receiving waters - Arroyo Burro Creek (Section 3.3.2.7).

3.1.3 Applicable Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. In addition, the policies in the State Coastal Act are also applicable. The consistency of the proposed project with goals and policies related to water quality, drainage, and flooding is evaluated below. The final determination of consistency will be made by the Planning Commission and City Council.

Conservation Element – Drainage and Flood Control

> ***Goal.*** *Ensure that human habitation of the City's floodplains does not adversely affect public health, safety, and welfare.*

The proposed project is potentially consistent with this goal. The only development in the floodplain would be the pedestrian path, creek habitat restoration, and the bridge. These developments would not cause any adverse hydraulic impacts that would result in on-site or off site flooding hazards.

> ***Goal.*** *Encourage recreation, conservation, and open space uses in floodplains*

The proposed project is potentially consistent with this goal because it includes dedication of about four acres along Arroyo Burro Creek for public open space and a pedestrian path. No other use would occur in the floodplain.

> ***Implementation Strategies:*** *2.1 Prohibit the construction of new structures in stream channels (except stream measurement or flood control related facilities).*

The proposed project is potentially onsistent with this strategy because the only structures to be placed in Arroyo Burro channel are storm drain outlets, which are considered flood control facilities.

> ***Implementation Strategies:*** *2.2 Encourage light intensity use in the floodway or floodway fringe with the requirement that such uses shall not impair the flood carrying capacity of the streams.*

The proposed project is potentially consistent with this strategy because the only development in the floodway would be the pedestrian path in the creek corridor, and a portion of the western bridge abutment. These project elements would be designed to avoid a reduction in channel capacity, and as such, would not increase flood hazard.

Implementation Strategies: *2.3 Require adequate setback from flood channels or any new development as defined under the Federal Flood Insurance Program, for those properties within the identified flood hazard area.*

The proposed project is potentially consistent with this strategy because roads and residences would be located outside the floodplain and floodway boundaries.

Implementation Strategies: *2.4 Encourage the use of permeable or pervious surfaces in all new development to minimize additional surface runoff.*

The proposed project is potentially consistent with this strategy because the proposed sidewalks would be constructed of permeable materials, if approved by Public Works Department.

Conservation Element – Water Resources

Implementation Strategies. *1.3 Encourage the use of permeable or pervious surfaces such as turfblocks or other materials in all new development in order to maximize groundwater recharge.*

The proposed project is potentially consistent with this strategy because the proposed sidewalks would be constructed of permeable materials, if approved by Public Works Department.

Coastal Act Policies

Policy 30231. *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The proposed project is potentially consistent with this policy for several reasons. One, the proposed project, with mitigation, would reduce stormwater pollution to the maximum extent feasible, and as such, protect the beneficial uses of Arroyo Burro Creek and the downstream estuary and ocean. Two, the proposed project, with mitigation, would not result in any significant water quality impact on Arroyo Burro Creek due to construction or land development. Three, the proposed project, with mitigation, would avoid significant hydraulic impacts due to land development and a storm drain system. However, the project may be potentially inconsistent with the final element of this policy (…*minimizing alteration of natural streams.*) because the eastern abutment of the proposed bridge would occur in the creek channel, below the top of bank.

Policy 30236*. Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.*

The proposed project is potentially consistent with this policy because: (1) the bridge has been designed to provide a clear span over the 100-year flood event; (2) mitigation measures to reduce some (but not all) of the biological impacts of the bridge are included in the EIR, and (3) the proposed creek restoration and bank repair, as modified by the EIR mitigation measures, could improve fish and wildlife habitat.

City Local Coastal Plan – Water and Marine Environment: Creek Environments

> ***Policy 6.8.*** *The riparian resources, biological productivity, and water quality of the City's coastal zone creeks shall be maintained, preserved, enhanced, and, where feasible, restored.*

The proposed project is potentially consistent with the water quality elements of this policy for several reasons. One, the proposed project, with mitigation, would reduce stormwater pollution to the maximum extent feasible, and as such, protect the beneficial uses of Arroyo Burro Creek and the downstream estuary and ocean. Two, the proposed project, with mitigation, would not result in any significant water quality impact on Arroyo Burro Creek due to construction or land development. Three, the proposed project, with mitigation, would avoid significant hydraulic impacts due to land development and a storm drain system.

> ***Policy 6.10.*** *The City shall require a setback buffer for native vegetation between the top of the bank and any proposed project. This setback will vary depending upon the conditions of the site and the environmental impact of the proposed project.*

The proposed project is potentially consistent with this policy because it includes a buffer zone with native vegetation along Arroyo Burro Creek. With the EIR mitigation measures, the buffer zone can be enhanced to provide more stormwater infiltration to further protect water quality of the creek.

> ***Policy 6.11.*** *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) Necessary water supply projects; (2) Flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or; (3) Developments where the primary function is the improvement of fish and wildlife habitat.*

The proposed project is potentially consistent with this policy because: (1) the bridge has been designed to provide a clear span over the 100-year flood event; (2) mitigation measures to reduce some (but not all) of the biological impacts of the bridge are included in the EIR, and (3) the proposed creek restoration and bank repair, as modified by the EIR mitigation measures, could improve fish and wildlife habitat.

> ***Policy 6.11-A.*** *New highway bridges or other highway improvements should be designed to provide clear spans of the stream or creek and to avoid the use of pilings within the stream or creek corridor. Culverting of the creek channel shall not be permitted.*

The proposed project is potentially inconsistent with this policy because the proposed bridge would not fully span the Arroyo Burro Creek channel, as the eastern abutment would be located below the top of bank. However, the proposed bridge would span the 100-year flood event.

3.1.5 Mitigation Measures

W-1 The proposed drainage system shall be modified to provide at least four or more drain outlets to the creek to reduce the magnitude of the discharge at each location compared to the proposed drainage outlets. The new outlets shall be equally distributed along Arroyo Burro Creek to the extent feasible. In addition, the proposed drainage system shall be modified to provide infiltration areas that are distributed along the stream terraces of Arroyo Burro Creek in such a manner as to facilitate infiltration through the banks to support riparian vegetation and contribute to base flows. A preliminary design of the drainage system shall be reviewed and approved by the Community Development Department and Public the Works Department before completing final design for submittal to the Building Department. Examples of design elements to be considered under this mitigation are presented as the Alternative Drainage and Stormwater Treatment Plan (EIR Section 4.11).

W-2 The applicant shall prepare detailed plans on the methods to remove giant reed and other exotics from the banks of Arroyo Burro Creek as part of the proposed creek corridor restoration effort, as well as for the stabilization and restoration of the two areas of bank erosion. The plans shall include analyses and calculations that demonstrate how the removal and replacement of the undesirable plants can be accomplished without destabilizing the creek banks and increasing bank erosion. The plans for both exotic removal and bank repair shall include considerations of hydraulic and geomorphologic factors along the creek, such as flow velocities, sediment carrying capacity, bank failure modes, and shear stress factors. They shall describe and show bank stabilization methods and materials, as well as any anticipated long-term weeding and bank maintenance. The plans for bank repair shall evaluate whether maintaining the existing vegetation on the eroded banks would be more stable than the proposed filling of the eroded areas. Only bio-technical bank stabilization shall be used in these efforts – that is, methods and materials that are based on using plants for long-term bank protection. The plans for bank repair shall also include an evaluation of the need to stabilize the base of the creek banks, where the original bank failure occurred, in order to achieve long-term stabilization. All creek bank stabilization associated with the project shall not reduce channel capacity or create new flood hazards. The creek restoration and bank repair plans shall be reviewed and approved by the Community Development Department, Parks & Recreation Department (Creeks Division), and the Public Works Department before completing final design for submittal to the Building Department.

W-3 The following measures shall be incorporated into the project Storm Water Pollution and Prevention Plan (SWPPP), which must meet state NPDES General Construction Permit requirements, and must be approved by the Building Department. The SWPPP shall incorporate all feasible Best Management Practices (BMPs) to reduce erosion from construction activities, to prevent sediment in stormwater discharges, and to minimize non-stormwater pollutants at the project site to the maximum extent possible.

a) The following earthwork activities shall be restricted to the period April 1 to November 1 in order to avoid work during the rainy season: grading and earthwork for slope stabilization, mass grading, site grading for roads and building pads, trenching for utilities, and creek bank stabilization. Clearing and grubbing the site for earthwork shall also be restricted to the same time period.

b) Construction of the bridge across Arroyo Burro Creek shall be restricted to the period July 1 to November 1 when runoff is low.

c) A dewatering and flow by-pass plan for construction of the bridge over Arroyo Burro Creek shall be submitted to the Building Department for review and approval.

d) The following construction activities involving minor earthwork and grading may occur in the winter months provided special measures are implemented to address stormwater runoff during the work: (1) construction of pedestrian paths in the creek corridor; (2) weeding, plant removal, and planting in the creek corridor as part of the habitat restoration effort; and placement of caissons. The applicant must prepare specific erosion control and stormwater management plans for these activities if they are planned for the period November 1 to April 1. The plans shall be submitted to the Building Department for review and approval.

e) Temporary stockpiles at the project site shall be protected from erosion by the combined use of surface stabilization, upslope runoff diversions, temporary berms around the perimeter, perimeter interceptor ditches, and temporary downstream catchments, as necessary and appropriate. Stockpiles that are present during the winter season (November 1 to April 1) shall be protected from erosion due to direct precipitation or runoff during the winter by the use of surface stabilization (such as erosion control blankets or temporary seed cover).

f) BMPs to prevent discharge of construction materials, contaminants, washings, concrete, fuels, and oils will include the following measures:

    1. Ensure that all construction vehicles and equipment that enter the construction and grading areas are properly maintained (off-site) to prevent leaks of fuel, oil and other vehicle fluids
    2. Implement measures and provide materials to contain any accidental spills or leakage during the fueling of construction equipment at the site
    3. Prepare a spill prevention/spill response plan for the project site that includes training, equipment and procedures to address spills from construction equipment, refueling operations, and stored fluids (if any)
    4. Place all stored fuel, lubricants, paints and other construction liquids in secured and covered containers within a bermed or otherwise contained area at least 200 feet from the creek
    5. Refuel only in bermed areas with impermeable surfaces at least 200 feet from the creek

6. Prohibit equipment washing and major maintenance at the project site, except for washdown of vehicles to remove dirt
7. Remove all refuse and construction debris from the site as soon as possible

g) In order to reduce tracking of sediment from the construction site onto public roads, a stabilized construction entrance/exit shall be constructed and maintained at entrances to the site. Tracking control shall be achieved by either gravel or metal plates.

h) Two weeks prior to the beginning of the winter season (November 1), erosion control BMPs shall be installed at the site, and approved by the City Building Department in anticipation of rain events. Due to the extensive area and volume to be graded at the project site, erosion control shall include more than the placement of silt fences. Additional control shall be included such as temporary grass cover, interceptor ditches, and temporary downstream catchment basins.

W-4 The proposed stormwater treatment system shall be expanded and modified as described below. Examples of several design elements in this mitigation measure are presented as the Alternative Drainage and Stormwater Treatment Plan (EIR Section 4.11).

a) Runoff from the western off-site watershed should be separated from the runoff from the project site. This runoff from this watershed shall be conveyed through the center of the site in an open earthen channel with small check dams to facilitate infiltration of low flows. The site grading plan for Lots 8-11 and 13-24 shall be modified to convey runoff from the lots towards the road into a separate stormwater treatment system.

b) Stormwater detention basins or bioswales shall be constructed to treat runoff from Lots 1-7 and the private driveway to these lots, as well as from Lot 12 and the bridge.

c) All stormwater from developed areas of the site shall be treated in accordance with the City's requirements in the current SWMP, and supplemented as necessary, with the design standards for detention basins and bioswales contained in Santa Barbara County's SWMP.

d) The site plan and architectural design shall be modified during final design to include, to the extent practicable, stormwater management design elements, also known as low-impact design features. Examples include: roof drainage that is direct to infiltration trenches or bioswales; driveways constructed of permeable materials, pavers, or strip pavement for tires only; openings in curbs to provide opportunities for infiltration in adjacent grassy swales along the roads; use of permeable surfaces instead of concrete in roadway ribbon gutters; and small depressions in front years to collect roadside runoff for infiltration.

e) The proposed homeowners association shall have the responsibility, authority, and ongoing funding to monitor and maintain the stormwater management facilities located in the public open space areas of the site and on private lots (if present) which would include detention basins, bioswales, and infiltration basins. The association shall have the

authority to levy fees as necessary to maintain, repair, or replace stormwater management facilities. The City shall have responsibility for maintaining Lane "A" and any associated stormwater treatment feature such as permeable ribbon gutters or swales.

f) The proposed homeowners association shall periodically issue educational materials to homeowners, tenants, and occupants that address topics such as proper handling, use, and disposal of household chemicals, fertilizers, pesticides, and herbicides; legal impacts of illegal dumping or disposal; household waste collection programs; oil recycling programs; alternative household products; and pet waste management.

g) The proposed homeowners association shall prepare a water quality management plan for the four open space areas at the project site: Lot 27 (hillside open space), Lot 25 (central open space with tributary drainage channel), and Lots 26 and 28 (creek corridor with pedestrian path). The plan shall incorporate the principles, methods, and approach of the City's Integrated Pest Management (IPM) Plan (as it is revised and updated in the future) in order to minimize the use of pesticides and herbicides for landscape maintenance to the extent feasible. The plan shall also include trash cans, informational signage, and mutt mitts along the creek corridor pedestrian path.

h) The applicant shall submit a draft Stormwater Management Plan and an Open Space Water Quality Management Plan with the above elements to the Community Development Department and Public Works before completing final project design for submittal to Building Department.

3.2 GEOLOGIC HAZARDS

The geologic hazards at the project site are evaluated in this section based on an independent review by URS Corporation of several previous site specific geology studies of the property, which included the following:

1. *Site Feasibility Study, 10 acre Site, Las Positas Road, Santa Barbara, CA,* by RJR Engineering Group, Inc. of Ventura, dated March 24, 1999.

2. *Preliminary Geologic Hazards and Soil Engineering Evaluation, Las Positas Valley Project, Santa Barbara, CA*, by Hoover & Associates, Inc., dated July 19, 1999.

3. *Geotechnical Input, Shear Keys for Recompacted Buttress Fill Embankments for Proposed Subdivision, 900-1100 block of Las Positas Road, Santa Barbara, CA*, Geolith Consultants, dated November 28, 2000.

4. *Geotechnical Input, Shear Keys for Recommended Buttress Fill Embankments for Proposed Subdivision, 900-1100 block of Las Positas Road, Santa Barbara, CA,* Geolith Consultants, dated January 21, 2000

5. *Response to Geotechnical Concerns, Tentative Map, Las Positas Valley Development, Santa Barbara, California*, Geolith Consultants, dated November 23, 2001.

6. *Geotechnical Plan Review, Tentative Map, Veronica Meadows Development, Santa Barbara, California*, Geolith Consultants, dated May 17, 2003.

7. *Consolidated Report, Geological and Geotechnical Conditions and Geotechnical Recommendations for Proposed Veronica Meadows Development*, Geolith Consultants, dated January 30, 2004. (see Appendix D)

The studies by RJR Engineering and Hoover & Associates included field surveys to map geologic formations, small diameter borings, an exploratory trench across the project site, and testing of the soil and subgrade materials for geotechnical properties. The investigations by Geolith Consultants included additional mapping of geologic formations and landslides, development of a conceptual model of the landslide formations at and near the property, calculations of slope stability, and development of slope stabilization measures. The interpretation of the landslide conditions on the project site by Geolith Consultants was supplemented by field investigations (borings and trenches) by the same engineering firm (for a different property owner) on the adjacent 85-acre parcel where the landslides are primarily located.

3.2.1 Existing Conditions

3.2.1.1 Site Topography

The project site consists of a relatively flat topographic terrace on the west bank of Arroyo Burro Creek and an alluvial fan at the mouth of an unnamed tributary valley that trends generally southeasterly between two ridges as shown on Figure 2-3. The land surface elevation ranges from approximately 45 to 50 feet at the south end of the project site, to about elevation 60 to 100 feet in

the center of the site on the alluvial fan between two ridges. The alluvial fan rises from east to west at a grade of approximately 7 percent.

Campanil Hill and the associated ridges west of the project site rise to elevations between 350 to 619 feet above mean sea level. The development area lies between 25 and 100 feet above sea level. The overall relief within the portion of the property proposed for development is approximately 75 feet. Arroyo Burro Creek enters the project site from the north at about elevation 35 feet and exits at about elevation 25 feet at the southern property line.

3.2.1.2 Regional and Site Geology

The project site lies within California's Transverse Ranges Geologic Province on a part of a folded sequence of Tertiary sediments uplifted to form the Mesa area of Santa Barbara. The rocks typically trend in an east-west direction and dip toward the Santa Barbara Channel to the south. The sedimentary sequence is bounded on the north by the Mesa Fault and on the south by the Pacific Ocean; the Lavigia Fault, a thrust feature, lies to the north of the project site within the uplifted block (Hoover, 2000; Geolith, 2004).

Figure 3-8 is a geologic map of the Veronica Meadows project site showing geologic limits as well as landslides and earthflows. The topographic ridges to the north and west of the project site are underlain by bedrock of the Tertiary Monterey and Rincon Formations. The remainder of the property is underlain by Quaternary stream terrace deposits and a series of dormant to active landslides and earthflows. Geologic units are described in the following paragraphs, generally from oldest to youngest, and referenced to Figure 3-8.

- **Rincon Formation (Tr) –** The Rincon Formation is a lower Miocene marine shale averaging about 1,600 feet in thickness in the coastal region south of the Santa Ynez Range. It is a poorly to massively bedded, light gray to gray brown, clay shale or claystone. Some of the Rincon's characteristics are its susceptibility to landsliding and its weathering products, which exhibit extreme plasticity and low strength. Limited geologic mapping in the vicinity of the Veronica Meadows property shows that the Rincon Formation trends west-northwest to east-southeast and dips to the south-southwest at inclinations ranging between 35° and 49°.

- **Monterey Formation (Tml) –** The middle Miocene Monterey Formation conformably overlies the Rincon Formation in the hills in the southwestern portion of the project site. This marine shale is on the order of 800 to 1,100 feet thick along this portion of the coast. At the property, it is considered the "lower shale unit" and consists of predominately white-weathering, soft, fissile clay shale with occasional interbeds of hard siliceous shale and thin limestone. Limited geologic mapping in the vicinity of the project site indicates that the Monterey strikes almost east-west in the hills above the property's southwest corner and typically dips 33° to 37° to the south (Minor et al., 2003). A bed of tuff (volcanic ash) up to 30 feet thick is present locally at the base of the Monterey Formation; but it does not crop out at the surface due to its softness. The tuff is commonly altered to bentonite, or white smectitic clay, which is highly plastic and prone to sliding (Borchardt, 1977; 1984). The approximate location of the tuff and the contact between the Monterey and Rincon Formations is shown on Figure 3-8.

- **Old Earth and Debris Flow Fan (Qoef) –** The triangular shaped landform that occupies the confluence between Arroyo Burro Creek and its tributary valley to the northwest has been described as an old earth and debris flow fan that was developed over thousands of years by a series of repeated shallow earth flows. The material is a mixture of weathered bedrock and slide debris that has accumulated as a semi-viscous fluid probably during periods of intensive rainfall. The depths of these events were likely modest, probably in the range between 2 and 36 inches each time material was deposited. The distal toe of the fan has constricted Arroyo Burro Creek, causing the channel grade to increase markedly where it passes around the toe of the fan. The creek has partially excavated the toe of the fan, as evidenced by two prominent inset terraces cut into the right (western) bank. One small map unit, designated "Qef" on Figure 3-8 and located at the base of the northernmost ridge on the project site, has been described as intercalated earthflows and younger earthflow fans, the result of a more geologically recent event, probably the most recent depositional episode, of uncertain age.

- **Old Landslide Deposits (Qols) –** Site reconnaissance mapping and air photo interpretation have resulted in the identification of a series of pre-Holocene (11,000 years old) dormant bedrock landslides. For convenience, these features are labeled 1 through 7, from south to north, on Figure 3-8. These landslides are considered to be deep-seated translational features that may have moved up to several hundred feet. As noted on Figure 3-8, most of these features occur in the Rincon shale along the base of the westernmost ridge on the Veronica Meadows property. Landslide 1, the largest of this type of movement, above Lots 1 through 6, may be related to the presence of the relatively weak tuff unit at the base of the Monterey Formation at its contact with the underlying Rincon shale.

- **Holocene Age Landslides (Qls) –** Five landslides, considered to be earth slumps probably between 100 and 11,000 years old, have been identified on or adjacent to the project site; they are labeled 8 through 12 on Figure 3-8. All but one of these features is located along the northern ridge in Rincon shale. These landslides are interpreted to be developed on a semi-circular failure surface exhibiting backward rotation at the headscarp.

- **Quaternary Age Stream Terrace Deposits (Qt) –** The lower-lying relatively flat portions of the project site are underlain by stream-deposited sediments that currently form a terrace adjacent to Arroyo Burro Creek. These deposits are labeled Qt on Figure 3-8 but were considered to be Quaternary alluvium (Qal) on previous site mapping (Hoover, 1999). Eight geotechnical borings, three by RJR (1999) and five by Hoover (1999), were drilled and sampled within about 300 feet of Arroyo Burro Creek on the topographically flat portions of the property. Most of these borings were located near the edge of the terrace near the toe of the adjacent slopes, thus typically encountered very clay-rich units rather than the granular materials, sands and gravels, typical of alluvial deposition. In fact, most of the materials encountered in these borings probably represent old slide debris, as interpreted by Geolith (2004), rather than classical alluvial deposits. The debris fan flushed from the side canyon west of the subject parcel appears to have shoved the active creek channel about 200 feet easterly, towards Las Positas Road.

- **Active Landslides (Als) –** Figure 3-8 shows eleven landslides, defined as active (within about the last 100 to 200 years), labeled 13 through 23. Nine of these slides are adjacent to Arroyo Burro Creek while two are located on the Rincon shale ridge in the northern portion of the property. The majority of the active slides on the Veronica Meadows property are quite recent, triggered along Arroyo Burro Creek by undercutting caused by the heavy rains of January through March 1995 or February 1998. One active slide in the proposed development area, No. 14, was related to the accidental rupture of the City of Santa Barbara sanitary sewer pipeline and resulting overland flow in February 1998. The largest active slide on the property is No. 20, which also occurred in 1998 and temporarily blocked the flow of Arroyo Burro Creek, eventually triggering slide No. 21, immediately upslope.

- **Historic Artificial Fill –** Several apparently randomly distributed areas of artificial fill were identified and mapped by Hoover (1999) as follows, from south to north: a small pile at the end of Alan Road; a band of material up to about 40 feet wide along the top of the western bank of Arroyo Burro Creek extending about 400 feet from the south property line; two lobes of fill materials in the vicinity of Lot 8; a relatively large area, about 200 by 250 feet in plan dimension, approximately between Lots 11 and 13; and, a small pile of rocky debris in the vicinity of Lot 12. Hoover (1999) described the artificial fill materials as poorly compacted cobbles, sand, and clay. These areas were not mapped on Geolith's 2004 map (Figure 3-8). In addition, a loosely-backfilled exploratory trench approximately 320 feet long and extending from the vicinity of Lot 24 to the southwest, excavated by Hoover (1999), was identified as artificial fill by Geolith (2004).

3.2.1.3 Site Soils

Figure 3-9 is a soil map of the Veronica Meadows property based on information from Shipman (1981). As indicated, the flatter portions of the site are underlain by Agueda silty clay loam, 2 to 9 percent slopes, while the upland areas are underlain by Ayar clay, 50 to 75 percent slopes. The Agueda soil features moderate permeability, medium runoff potential, and a moderate erosion hazard. The Ayar soil, on the other hand, has developed from the weathering of soft calcareous shale and mudstone bedrock. It exhibits very rapid runoff, slow permeability, high erosion hazard, high shrink-swell potential, and is subject to landsliding.

Land in the immediate vicinity of Arroyo Burro Creek is designated "Gullied Land," which features very rapid runoff characteristics, variable permeability, and a very high erosion hazard.

3.2.1.4 Geologic Hazards

Potential for Fault Rupture

The only mapped fault structure at the project site is the Lavigia Fault, a thrust fault of Late Quaternary age, judged by the California Geological Survey (CGS), formerly the California Division of Mines and Geology (CDMG), to have moved between 10,000 and 700,000 years ago. The Lavigia Fault is shown on Figure 3-8 trending along Arroyo Burro Creek in the extreme northern corner of the property; it is upthrown on the west, downthrown on the east. This fault is not considered active by the CGS and has not been zoned in accordance with the provisions of the

Alquist-Priolo Earthquake Fault Zoning Act, codified in the State of California Public Resources Code, Division 2, Chapter 7.5, effective March 1973. Nevertheless, the City of Santa Barbara has a special study zone and could require a setback of at least 50 feet from the mapped trace of this fault for a residential structure.

A linear features observed on air photos, suspected of being fault related, was evaluated by a trenching program (Hoover, 1999); the feature was concluded to be unrelated to faulting. Accordingly, the likelihood of surface faulting on the Veronica Meadows property is considered to be very low.

Ground Shaking Potential

The Veronica Meadows property lies in a seismically active portion of the California coast. Moderate or major earthquakes have been reported and recorded in Santa Barbara in 1812, 1857, 1925, 1941, and 1978; the largest was probably the 1925 event. Numerous onshore and offshore fault systems have the potential to generate earthquakes that would be felt at the site. The fault system most likely to control future site ground motions is the Mission Ridge-Arroyo Parida-Santa Ana Fault which trends in an east–west direction for a distance of about 35 miles, passing as close as about 1.4 miles to the north of the property. This system is considered a Type B fault in accordance with the definition in ICBO (1998) meaning that special design provisions are required for structures located within 6 miles of it. The fault is a reverse structure with a left lateral component, exhibiting an assigned slip rate of 0.40 mm/yr (± 0.20 mm/yr), capable of a local maximum magnitude of 6.7 on the Richter scale. The City of Santa Barbara recommends peak horizontal ground acceleration of 0.57 g and 0.33 g from an earthquake with a 10 percent chance of occurrence in 50 years and a 50 percent chance of occurrence in 50 years, respectively (Hoover, 1998).

Geolith Consultants (2004) has estimated the following seismic design parameters:

- Seismic Zone Factor, Z, 0.40;
- UBC Soil type Sd (stiff soil);
- Seismic Coefficient Ca = 0.44 Na;
- Seismic Coefficient Cv = 0.64 Nv;
- Near-Source Factor Na = 1.2; and
- Near-Source Factor Nv = 1.5.

The soil type (Sd), seismic coefficients (Ca, Cv), and near-source factors (Na, Nv) represent estimated parameters for the entire site based on existing data. Further investigation may reveal different soil types for individual lots. In addition, the seismic coefficients and near-source factors for specific lots would be slightly higher or lower depending on the lot's distance from the controlling fault.

Potential for Liquefaction

Liquefaction is the loss of strength of saturated, relatively low density, granular soils under seismic loading (earthquake) conditions, whereby a soil will behave like a liquid.

By definition, due to the site depositional environments, the portions of the project site potentially susceptible to liquefaction are the flatter terrace and/or alluvial fan zones. These areas are zoned as "Areas of Potentially High Ground Water and High Liquefaction Potential" on Map D of the City of Santa Barbara Draft Pre-Annexation Study Area, reproduced as Figure 5D in Hoover (1999).

Nine geotechnical borings have been drilled and sampled on the site as shown on Figure 3-10; three by RJR (1999) and six by Hoover (1999). Only three or four of these are considered representative of the potentially liquefiable portions of the property; these are HB-2, HB-3, RJR-3 and possibly RJR-1. The remainder are very close to the toe of the adjacent hills and are not considered representative of locations farther out on the valley floor where thicker alluvial deposits would be expected. Of the few borings considered appropriate for an evaluation of liquefaction potential, the following is noted:

- RJR-1, on Lot 1, showed a zone of clean poorly graded sand between depths of about 7 and 27 feet and an inferred water table at 20 feet, but relatively high blow counts (N = 23, 23, 33), indicating a low likelihood of liquefaction.
- RJR-3, near Lot 11, showed a possible lens of clean poorly graded sand at around 24 to 27 feet with a water table at 17 feet and a relatively low blow count (N = 7), suggesting potential liquefaction susceptibility.
- HB-2, between the proposed access road and the creek, showed predominantly clayey sands and silty sands to a total depth of 26.5 feet, water table at 16 feet and relatively low blow counts, thus a potentially liquefiable condition.
- HB-3, in open space near the north end of the property, shows predominantly interbedded silts, silty and clayey sands to total depth of 31.5 feet, groundwater at 18 feet and relatively low blow counts, suggesting a liquefaction potential.

Both previous investigators (RJR, 1999; Hoover, 1999) indicated that additional borings and analyses would be required to further evaluate liquefaction potential prior to final design. However, available data indicates that there is a potential for liquefiable conditions throughout much of the site due to the depositional nature of most of the project site.

Presence of Expansive Soils

Ayar clay soils, developed by the weathering of Rincon shale bedrock and located as shown on Figure 3-9, have a high shrink–swell potential, thus are considered highly expansive. A soil's plasticity, and thus its expansive potential, is evaluated by means of Atterberg limits testing (ASTM Test D-4318). The Liquid Limit (LL) is defined as the moisture content above which the soil behaves as a liquid whereas the Plastic Limit (PL) is the moisture content above which the soil behaves plastically. The Plasticity Index (PI) is the difference between the LL and PL, and indicates the magnitude of water content range over which the soil remains plastic. Published test data (Shipman, 1981) indicate that the PI for Ayar clay ranges between 25 and 45, considered highly expansive. This is supported by limited on-site expansion index testing performed by Hoover (1999) which shows the uppermost soil in boring HB-1 and HB-5, near Lot 7 and Lots 19/20, respectively,

to demonstrate high and very high expansion potential. Hence, expansive soils are present on the slopes above the project site, and possibly at the base of the slopes.

Landslides

The investigation of landsliding to date, summarized extensively by Geolith (2004), has relied primarily upon air photo interpretation, review of topographic maps, and field geologic reconnaissance. Subsurface investigations of the identified slide masses have not been conducted because: (1) these investigations would be potentially invasive and require work outside the project site; and (2) the available information is sufficient to characterize the type and approximate spatial extent and depth of the slides for the purposes of determining the feasibility of stabilizing the slides.

Based on the investigations by Hoover (1999) and Geolith (2004), 23 landslides have been identified at or adjacent to the proposed developable portion of the project site (Figure 3-8). The landslides are classified as follows:

- 7 old, Quaternary-age landslides, likely older than 11,000 years;
- 5 probably Holocene-age landslides, less than 11,000 years old;
- 11 active landslides, most formed in the last 10 years during periods of intense rainfall.

A reactivation of the active landslides could be anticipated if rainfall and resulting stream flow conditions cause additional undercutting. This would result in continued deterioration of the creek banks and adjacent areas.

Although the older, currently dormant landslides seem to be stable under current conditions, reactivation of movements can be theorized in the future, depending upon rainfall conditions and/or seismic activity.

The stability of a natural or manmade slope is evaluated by means of a calculated Factor of Safety (FS) which is defined as the ratio of forces resisting movement (e.g., strength of earth materials) to the forces causing movement (e.g., weight of earth materials, groundwater conditions, earthquake loading). By definition, a FS of 1.0 represents marginal stability and anything less than this value implies failure. The commonly accepted FS to demonstrate adequate stability is 1.5 under static conditions and this is incorporated into many government codes.

The static stability of the large dormant landslide above Lots 1 through 6, designated "1" on Figure 3-8, was evaluated by two investigators, Hoover (1999) and Geolith (2004). Both investigators found that the calculated FS under high groundwater conditions was on the order of 1.1 to 1.2, thus representing an unsatisfactory condition. It is likely that the stability of other mapped slides at the project site would be similar.

These landslides would logically be considered less stable under seismic loading. Hoover (1999) evaluated the deformation of the landslide located above Lots 1 through 4 under seismic loads. For a design earthquake of Magnitude 6.7 on the Mission Ridge-Arroyo Parida-Santa Ana fault, the calculated deformation ranged from 28 to 82 inches

3.2.2 Potential Impacts

3.2.2.1 Impact Thresholds

Potentially significant geological impacts may result from:

- Exposure to or creation of unstable earth conditions due to seismic conditions, such as earthquake faulting, ground shaking, liquefaction, or seismic waves.
- Exposure to or creation of unstable earth conditions due to geologic or soil conditions, such as landslides, settlement, collapsible/compressible, or expansive soils, or from creation of substantial manufactured slopes.
- Extensive grading on slopes exceeding 20 percent, substantial topographic change, destruction of unique physical features.
- Creation of substantial erosion of soils, overburden, or sedimentation of a water course.

3.2.2.2 Potential Impacts

Geologic hazards associated with existing regional and site conditions are described in Section 3.2.1. No mitigation of these hazards would be required in the absence of a development project. However, development of the project site would expose people to these hazards, and possibly exacerbate the hazards due to site grading and drainage improvements. The proposed site development includes landslide stabilization through site earthwork, and the mitigation of other geologic hazards through design features. The following section of the EIR discusses possible impacts associated with geologic hazards, both in terms of the creation of new hazards and the exacerbation of existing hazards due to the construction of the proposed project.

Fault Rupture

A portion of the Lavigia Fault is mapped along Arroyo Burro Creek in the extreme northern portion of the property. The City of Santa Barbara has established a special study zone extending 300 feet from the surface trace of the fault and requires that exploration be conducted to locate possible fault traces if development is contemplated within this area. The 300-foot wide special study zone encompasses Lot 12 of the proposed project.

The likelihood of surface fault rupture affecting the proposed site improvements is considered extremely unlikely based on current information on the location and depth of the fault at the project site. However, development of Lot 12 would require field investigations to locate the fault trace, and ensure that any structures are at least 50 feet from the fault.

In summary, there is a slight potential for surface faulting to create a geological hazard for at least a small portion of the project site. This impact is considered less than significant because the project applicant would be required to conduct field investigations to locate the fault near Lot 12, and ensure that the minimum 50-foot structural setback is achieved. The field investigations and set-back would be subject to approval by the City Building Department. In light of these considerations, the

impact of faulting on the proposed project and the future residents is considered **less than significant (Class III)**. Mitigation Measure G-1 provides additional guidance on the required fault investigations.

Ground Shaking

Ground shaking during earthquakes is a hazard endemic to California. Single-family wood frame structures that are built to UBC standards generally respond well to moderate to severe shaking. Ground motions associated with future earthquakes are not anticipated to be more severe at the project site than at other comparable locations in the City of Santa Barbara. Assuming that all project elements are designed and constructed in accordance with appropriate codes, ground shaking caused by future earthquakes should not represent a significant geologic hazard to residents of the future development. The impact of ground shaking is considered **adverse, but less than significant (Class III)** because the residences would be required to be constructed to meet current state and local building codes designed to protect from ground shaking. Design and construction of all project elements, including landslide stabilization, in accordance with the Uniform Building Code would eliminate the need for an additional mitigation measure.

Liquefaction

The existing geologic data from site borings are insufficient to characterize liquefaction potential in all portions of the site. Available data indicate that there is a potential for liquefiable conditions throughout much of the site due to the depositional nature of most of the project site, high groundwater conditions, and evidence of sand layers. The potentially liquefiable zones are overlain by significant thickness of non-liquefiable soils. Hence, the manifestation of liquefaction would most likely be settling during seismic events due to lateral spreading, estimated to be up to 6 inches (Hoover, 1999). This condition could result in damage to roads, utilities, and structures. The impact of this geological hazard is considered potentially **significant, but mitigable (Class II)**. It can be avoided or greatly reduced by engineering design features that would prevent or offset the differential settlement, as specified in Mitigation Measure G-2.

Lots 1 through 6 and 12 would be improved by the construction of deep shear keys, consisting of engineered fill, as part of the landslide stabilization program. The construction of the shear keys would also mitigate the liquefiable conditions at these lots. Per Mitigation Measure G-1, the potential for liquefiable conditions underlying Lots 7 through 24 would be evaluated by a geotechnical investigation program during final design of the project. If potentially liquefiable deposits are identified, the affected lots can be improved by conventional engineering solutions so that the liquefaction hazard is ameliorated.

Expansive Soils

As noted on Figure 3-9, zones of highly expansive soils are confined to areas underlain by Rincon shale bedrock, principally the topographic ridges in the northern and western portion of the property and the toes of these slopes near the edge of the terrace and alluvial fan deposits. Hence, expansive soils may be present at Lots 1 through 7, and Lots 12 through 21. Expansive soils can adversely affect structures due to the cycle of shrinking and swelling over time. The impact of this

geological hazard on the proposed project and its residents is considered significant, but mitigable (Class II). Expansive soils can be mitigated through soil removal, geotechnical engineering, and/or foundation design. Significant portions of the expansive soils at the project site would be removed during construction of the landslide stabilization shear keys on Lots 1 through 6 and at Lot 12. Hence, no significant geologic hazard due to expansive would occur at these lots. Expansive soils at other lots along the base of the slopes (Lots 12 to 21) would be addressed through additional geotechnical investigations and engineering design, as specified in Mitigation Measure G-3.

High Groundwater

Groundwater at the project site was encountered typically between depths of 15 to 20 feet in previous on-site borings. The groundwater appears to be in semi-confined or confined conditions. Springs have been found at the project site in the past, but their locations are no longer known. No shallow groundwater (less than 10 feet) has been encountered at the project site in previous geological borings. However, there is a potential for groundwater to rise to near the surface in fractures in the Rincon shale at the toe of the slopes at the project site. High groundwater conditions can adversely affect structure foundations and exacerbate liquefaction and expansive soil conditions. The impact of this geological hazard on the proposed project and its residents is considered **significant, but mitigable (Class II)**. The potential for high groundwater conditions at lots along the base of the slopes would be addressed through additional geotechnical investigations and engineering design, as specified in Mitigation Measure G-4.

It should be noted that the proposed landslide stabilization by construction of shear keys also includes incorporation of drainage elements in the deep excavations. The new subsurface drainage would lower groundwater levels and improve the stability of such landslide areas.

Landslides

The landslide hazard at the project site is considered severe. Development of the site, without provisions to mitigate landslides, could result in severe geologic hazards that could: (1) damage the property and any structures on the site due to earth movement; (2) cause environmental impacts (remove vegetation, expose soils to erosion, etc); and (3) create a public safety hazard due to unstable land masses and rocks. The impact of the landslide hazard at the project site is **considered significant, but mitigable (Class II)**. The proposed project includes the stabilization of selected existing landslides in order to develop usable and safe housing sites and infrastructure. The slide stabilization plan is described in Section 2.3.9 and shown on Figure 2-13. The approach involves three main elements that would be applied to landslides impinging on the project site, as follows:

1. Prior to landslide stabilization work, the toe of the landslide would be partially stabilized by installing buried cast-in-ground straight shaft reinforced concrete cylindrical caissons. The caissons would act as an underground wall to prevent subsurface earth movement when the toe of the landslide is subsequently strengthened. Although the immediate use of the caissons is to allow earthwork down gradient of the landslides, they would remain in place and contribute to the permanent stabilization. The depth of the caissons would vary from 30 to 50 feet.

2. The toe of the landslide would be excavated to bedrock, then filled and compacted with engineered fill material to stabilize the landslide, as shown on Figure 2-15. The new earth mass is called a "toe of the slope buttress or keyway." The building pad would be established on top of the buttress.

3. Subdrains would be installed beneath the buttress to convey groundwater under the buttress.

A summary of the stabilization treatment for each lot is presented below in Table 3-9.

TABLE 3-9
PROPOSED LANDSLIDE STABILIZATION ELEMENTS

Stabilization Measure	Affected Landslide (Figures 1-3 and 3-8)	Lot Nos. (Figures 2-13 and 3-8)
Deep shear key with engineered fill buttress to support existing slide; includes subdrainage	1; 8; 10/11/12	1 through 6; 21; 12
Drilled, cast-in-place straight shaft caissons installed either along property line or upslope limit of shear key excavation, prior to excavation	1; 10/11/12	1 through 6; 12
Drilled, cast-in-place straight shaft caissons installed along property line	2	Between Lots 6 and 7
Drilled, cast-in-place straight shaft caissons installed along property line	3	Across from Lot 20
Drilled, cast-in-place straight shaft caissons installed along property line	9	Across from Lot 19

The proposed landslide stabilization approach is considered standard and reasonable. It involves traditional engineering solutions, e.g., earthwork, structural support, and drainage, and should be effective as well as feasible. The proposed stabilization measures would conform to applicable City of Santa Barbara codes, if the design is prepared in accordance with standard geotechnical and engineering standards, with the appropriate factors of safety and conservative assumptions.

To ensure that that a significant impact due to landslide hazards is avoided throughout the life of the project, the City would require a series of geotechnical and engineering studies by the applicant to more fully characterize the individual landslides and the proposed engineering solutions to stabilize them (see Mitigation Measure G-5). These studies and plans would be subject to review and approval by the City Building Department, and an independent geotechnical engineering and geologist to provide a greater level of confidence in the proposed solutions.

Potential impacts associated with the construction of the deep shear key buttresses include the possible reactivation of the landslide due to the removal of the support by excavation. In order to enhance the likelihood of a safe excavation, the applicant proposes to install a wall consisting of drilled, cast-in-place caissons at the uphill limit of the proposed keyway excavation or the upslope property line across two major slide areas. This would provide short-term slope support to enable the excavation and backfilling to proceed as well as long-term support for the upslope remaining slide mass. Additionally, this would allow a minimum of disturbance to offsite uphill property.

The caisson wall solution is considered conceptual at this time. The actual design of each caisson wall should be performed based on the results of the final geotechnical investigation and take into account the anticipated earth pressures from each of the slide masses to be stabilized. Additional information on the adequacy of the caisson design is provided in the following subsection.

As described in the following subsection, URS Corporation (2004) conducted independent analyses and concluded that the landslide hazards can be mitigated and that the proposed stabilization measures should not create new geological problems or exacerbate existing problems. The impact of the landslide hazard at the project site is considered **significant, but mitigable to a less than significant level (Class II)** with the application of Mitigation Measure G-5.

Independent Slope Stability Analyses by URS Corporation

Note: URS geologists and landslide experts conducted an independent analysis of the stability of the landslides at the project site under existing conditions, and with the proposed slope stabilization measures. This analysis (URS, 2004) is presented in Appendix E. URS (2004) concluded that the proposed landslide stabilization is an appropriate method to improve the stability of the landslides under static and seismic conditions to acceptable levels. However, additional geological investigations and refinements of the stabilization concept will be necessary during final design. A concise, but complete summary of the URS analyses and recommendations for improving the landslide stabilization method is provided in this subsection.

Geolith (2004; included in Appendix D) analyzed the static slope stability of the unmitigated and mitigated landslide involving Lots 1-4, and the slope stability for the Lots 1-4 landslide (without mitigation) under seismic conditions. Geolith (2004) did not evaluate the static or seismic slope stability of the other major landslide at the project site – at Lot 12. Unmitigated slope conditions represent current conditions, while mitigated conditions represent the proposed cast-in-place caissons and earth embankment at the toe of the slope.

URS (2004) conducted the following analyses to confirm and expand the Geolith (2004) analyses: (1) estimate the static slope stability of the unmitigated and mitigated landslide involving Lots 1-4 to confirm the Geolith (2004) calculations: (2) estimate the seismic slope stability of the unmitigated and mitigated landslide at Lots 1-4; and (3) estimate the static and seismic slope stability of the unmitigated and mitigated landslides at Lot 12. URS (2004) utilized the same analytic models (static and pseudostatic), soil parameters, landslide geometry, groundwater conditions, design earthquake, caisson design, and embankment design as Geolith (2004). In addition to evaluating the stability of the Geolith recommended mitigated slope design, URS analyzed a slope mitigation design with wider diameter and more closely spaced caissons.

Geolith (2004) evaluated both the unmitigated and mitigated landslide at Lots 1-4 with a low groundwater table and a high groundwater table. The results indicate that the unmitigated slide with high groundwater had a marginal Factor of Safety (FS) of about 1.2. The FS was 2 for the proposed mitigated slide with both an earth buttress toe and a caisson wall. Using the same analysis techniques, URS repeated the Geolith (2004) static analyses and produced the same Factors of Safety.

URS extended the Geolith (2004) analyses and used a pseudostatic technique to evaluate the seismic slope stability of the unmitigated and mitigated Lots 1-4 slide. The Geolith (2004) mitigation design includes 2-foot diameter caissons at a spacing of tree pile diameters (6 feet spacing center-to-center). The Geolith (2004) mitigated design has a FS of about 1 for a yield acceleration of 0.23 g. URS (2004) modified the mitigation design by increasing the caisson diameter to 3 feet and decreasing the center to center spacing to one pile diameter (3 feet). For the modified design, the yield acceleration increased to 0.40 g for a FS of 1, indicating a more stable slope under seismic conditions. The seismic deformation of the mitigated landslide above Lots 1-4 using the proposed slope mitigation would be 7 to 39 inches. By modifying the proposed mitigation to include a continuous tangent wall of 3-foot diameter caissons (one pile diameter spacing), the permanent deformation of the landslide above the lots decreased to 2 to 11 inches.

Using the same techniques as for Lots 1-4, URS (2004) evaluated the static and seismic stability of the Lot 12 landslide. For the unmitigated slide with a high groundwater table, the static FS was estimated to be about 1.2. The proposed mitigation would increase the FS to 1.9. The yield acceleration for the Lot 12 landslide with the proposed mitigation was estimated to be 0.28 g for a FS of about 1. By modifying the mitigation design to create a continuous tangent wall of 3-foot diameter caissons at one pile diameter spacing, the yield acceleration increased to 0.75 g for a FS of 1. For Lot 12, URS (2004) estimates seismic deformations of 28 to 55 inches for the unmitigated slope, 7 to 24 inches for the Geolith (2004) mitigation design, and 0 to 1 inch for the mitigated design modified to include a continuous tangent wall of 3-foot diameter caissons.

Based on the results of the static and seismic slope stability analysis results and the seismic deformation analysis results, URS (2004) concluded the following:

- Based on the geometry and soil parameter assumptions and the analysis techniques, the Geolith (2004) results for static slope stability FS and the seismic deformation magnitudes are repeatable.

- Under high groundwater conditions, the static slope stability FS is 1.2 for both Lots 1-4 and Lot 12. This is a marginally stable static FS, and therefore, these slopes require stabilization to reach an acceptable static FS of at least 1.5. The static slope stability FS is 1.9 to 2 for the Geolith (2004) mitigated slope designs for Lots 1-4 and Lot 12. This indicates that the Geolith (2004) mitigated slope design is stable under static loading.

- The seismic slope stability FS is less than 1 for the unmitigated landslides involving Lots 1-4 and Lot 12. Therefore, these areas must be mitigated to avoid failure under seismic loading.

- The seismic slope stability FS is 1.2 to 1.3 for the Geolith (2004) mitigated slope design for Lots 1-4 and Lot 12. This indicates only marginal stability under seismic loading. The estimated seismic movement of the Geolith (2004) mitigated slope design is 7 to 39 inches for the Lots 1-4 slide and 7 to 24 inches for the Lot 12 slide. Both slide areas require additional mitigation measures to further reduce or eliminate seismic movements.

- The calculated seismic movements of the Geolith (2004) mitigated slope design modified to include a three-foot diameter continuous tangent caisson wall is 2 to 11 inches for the Lots

1-4 slide and 0 to 1 inch for the Lot 12 slide. The results show that strengthening the original caisson design can greatly reduce the estimated seismic deformation.

- The landslide mitigation/stabilization concept portrayed in the Geolith (2004) report appears to be suitable to improve the static stability of the slopes to acceptable levels. The mitigation concept will require modifications to reduce the seismic deformation to acceptable magnitudes, as described in Mitigation Measure G-5. A more detailed and sophisticated geotechnical investigation, in terms of site-specific field exploration, laboratory testing, and stability and deformation analyses, is required to produce a more accurate assessment of the slope stability and deformation. This will provide a solid basis for determining the most appropriate mitigation scheme to reduce or eliminate the deformations under seismic loading.

Inconsistencies in Applicant's Studies and Plans

The Geolith (2004) study provides an in-depth analysis of the landslide hazards at the project site and the proposed stabilization approach. Many of the recommended landslide stabilization measures are incorporated in the Preliminary Grading and Drainage Plan, Sheet 4 of 9 (Penfield & Smith, 2003), which was used as the basis of the EIR analyses. However, there are inconsistencies between these two documents that need to be reconciled before final project approval. These inconsistencies are listed below:

- 5-foot-high caisson-supported retaining wall at rear property line of Lots 5 and 6 are not shown on geologic cross section 1C (Figure 19) or on Sheet 4;
- The cast-in-ground caisson wall proposed at the base of the slope in the common area between Lots 6 and 7 is not shown on Sheet 4;
- The proposed upslope retaining wall across Lane "A" from Lot 21 is not shown on geologic cross-section 3 (Figure 21) or on Sheet 4; and
- The proposed caisson-supported 5-foot-high retaining wall opposite Lot 20 is not shown on Sheet 4.

For the purposes of the EIR, the City has assumed that the measures to stabilize landslides proposed by Geolith (2004) would be incorporated at the locations shown on Sheet 4 or at locations identified by Geolith (2004) in instances where they are not yet shown on Sheet 4.

3.2.3 Applicable Local Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. In addition, the policies in the State Coastal Act are also applicable. The potential consistency of the proposed

project with goals and policies related to geologic hazards is evaluated below. The final determination of consistency will be made by the Planning Commission and City Council.

Seismic Safety and Safety Element

> ***Goals.*** *To protect life, property, and public well-being from seismic and other geologic hazards.*
>
> ***Goals.*** *To reduce or avoid adverse economic, social, and environmental impacts caused by geologic conditions.*
>
> ***Policy:*** *To evaluate the compatibility of existing zoning as well as future land use allocation with known geologic risk zones, or those which may be identified in the future.*

The proposed project is located in an area with several known, and potentially severe, geologic constraints and hazards. Sufficient information and analyses are available to determine that the proposed land development can be completed without exposing the public to new or exacerbated geological hazards. There are feasible engineering solutions and project design options to fully mitigate these hazards. Hence, the proposed project, with mitigation, would be potentially consistent with these goals and policies.

Conservation Element

> ***Goal:*** *Prevent the scarring of hillsides by inappropriate development.*
>
> ***Policy 2.0:*** *Development on hillsides shall not significantly modify the natural topography and vegetation.*
>
> ***Implementation Strategy 2.1****: Development which necessitates grading on hillsides with slopes greater than 30 percent should not be permitted.*

The potential consistency of the proposed grading with each item is presented below.

- ***Goal.*** The proposed roads and building pads associated with the proposed project would be located below the steep hillsides. Landslides would be stabilized by earthwork at the base of the slopes. The number of locations, areas, and length of grading on slopes of 30 percent or more is very limited (see Figure 2). Finally, the graded slopes would be returned to their original contours and revegetated with native shrubs. Hence, no long term, extensive, or highly visible scarring would occur on the hillsides. Hence, the proposed project is potentially consistent with this goal.

- ***Policy 2.0.*** As noted above, the finished graded slopes would be returned to their original contours and revegetated with native shrubs. Hence, the proposed project is potentially consistent with this policy.

- **Implementation Strategy 2.1.** The development of Lots 5, 6, 7, 12, and 21 would require grading on slopes of 30 percent or more in order to create the buttress fill for the building pads. The proposed project would involve grading on steep slopes, and as such, may be considered potentially inconsistent with this strategy. However, this strategy does not strictly prohibit this type of grading (the language is "should not," rather than "shall not"). The proposed project may be found to be consistent with this policy because the project largely avoids 30 percent slopes, and because the project would not result in any significant geologic, biological, and visual

impacts due to grading. The City decision makers will make the final determination of policy consistency when applying this policy to the project.

Uniform Building Code and California Building Code

Building safety and construction in the City of Santa Barbara are currently regulated by the requirement set forth in 1997 editions of the Uniform Building Code (UBC). The 1997 UBC and 1999 California Building Code requirements have been adopted and appended to the City's Municipal Code (Chapter 22.04). The 1997 UBC and 1999 California Building Code set forth current seismic and grading design requirements. The City's Municipal Code requires site-specific design-level geological and geotechnical studies be conducted and approved by the City's Building Official prior to development and that project components be designed to satisfy minimum building code requirements provided in these codes.

3.2.4 Mitigation Measures

G-1 The stabilization of landslide above Lot 12 would involve the excavation of a deep shear key. This excavation shall be expanded to assess the presence or absence of the nearby Lavigia Fault in accordance with City requirements. The excavation shall be inspected by a Certified Engineering Geologist to identify possible features associated with the nearby Lavigia Fault. If evidence of faulting is detected, the likelihood of faulting affecting the structures at Lot 12 shall be evaluated and appropriate measures shall included into the design to accommodate possible future movements, if necessary, in accordance with City requirements.

G-2 The potential for liquefiable conditions underlying Lots 7 through 24 shall be evaluated by a geotechnical investigation during final design of the project. This investigation shall include additional borings at depth and locations approved by the City Building Department. Areas that are susceptible to liquefaction shall be identified. Appropriate design and construction techniques to address this condition (e.g., ground improvement, drainage) shall be included in the final design to be reviewed and approved by the Building Department. The applicant shall also provide evidence that the construction of deep shear keys using engineered fills as part of landslide stabilization for other lots would reduce the potential for seismic liquefaction at these locations to an acceptable level.

G-3 The potential for expansive soils underlying Lots 12 through 21 shall be evaluated by a geotechnical investigation during final design of the project. Appropriate design and construction techniques to address this condition shall be included in the final design to be reviewed and approved by the Building Department. The applicant shall also provide evidence that the construction of deep shear keys using engineered fills as part of landslide stabilization for other lots would mitigate the expansive soils at these locations to an acceptable level.

G-4 The potential for high groundwater conditions in lots along the base of the hillside (Lots 1-7, and Lots 12 through 21) shall be evaluated by a geotechnical investigation during final design of the project. These investigations shall include additional borings. Appropriate drainage

measures to address this condition shall be included in the final design to be reviewed and approved by the Building Department.

G-5 To ensure that that a significant impact due to landslide hazards is avoided throughout the life of the project, the applicant shall complete a geotechnical investigation that provides the basis for final design and construction. The investigation program shall include sufficient subsurface exploration, laboratory testing, and engineering analysis to fully characterize each landslide and to develop an appropriate design of shear keys and cast-in-ground caissons to allow construction to proceed safely and to provide sufficiently stable building sites against future landsliding under both static and dynamic loading conditions. The results of the study shall be subject to review and approval by the City Building Department, and an independent geotechnical engineering and geologist to provide a greater level of confidence in the proposed solutions. The investigation shall include borings at landslides 1, 2, 3, 8, 9, and 12 to provide suitable information to design stabilization programs for Lots 1 through 6, Lot 12, NW of Lot 19, and SW of Lots 20 and 21. Some of the borings shall be drilled along the proposed caisson wall alignments to provide a basis for the actual wall design, e.g., caisson diameter, spacings and depth prior to the start of construction. This is necessary because in several instances the proposed caisson depths are less than the estimated depth of sliding. The investigations shall also determine the diameter and spacing of caissons, as the proposed diameter (2 feet) and spacing (4 or 5 pier diameters) may not be sufficient, particularly under seismic loading, to resist the driving forces due to the quasi-stable landslide mass. All shear key excavations shall be observed and mapped by a qualified geotechnical engineer or engineering geologist to verify design assumptions in accordance with Section 3317 of Appendix Chapter 33 of the 1997 Uniform Building Code (UBC)/1998 California Building Code (CBC).

3.3 BIOLOGICAL RESOURCES

3.3.1 Existing Conditions

3.3.1.1 Data Sources

The following characterization of the biological resources at the project site was based on information from previous biological investigations conducted by consultants for the applicant, which are listed below, and independent field investigations by URS biologists during the preparation of the EIR (March through June 2004).

- General habitat, vegetation, and rare plant surveys by Rachel Tierney in 1994, 1996, 1999, and 2000. (Rachel Tierney Consulting, 2000).
- Literature review and field surveys for aquatic species in Arroyo Burro Creek, particularly for red-legged frog and tidewater goby by Larry Hunt (1999) and Paul Collins (1999)
- Assessment of potential butterfly habitat at the project site by Althouse and Meade (2000)

The URS field investigations included detailed vegetation mapping of the project site, development of a plant species list, surveys for raptor nests, early morning bird surveys, aquatic habitat surveys, and field investigations to confirm previous conclusions about the absence of monarch butterflies, red-legged frog, and tidewater goby.

3.3.1.2 Setting and Summary of Key Biological Resources

The project site consists of undeveloped open space that is contiguous with other extensive open space along Arroyo Burro Creek and on the steep hillsides west of the project site (Figure 2-4). The site includes <u>four</u> primary landforms which are listed below:

- Steep hillsides on the western boundary of the site where no development would occur
- A highly disturbed alluvial fan in the center of the site where most of the development would occur
- Several stream terraces along the west side of Arroyo Burro Creek with varying widths and elevations above the creek
- Highly incised creek channel, often with very steep eroding banks

A well-defined floodplain is not present at the project site due to the incised nature of the creek channel and the moderately sloped alluvial fan on the west side of the creek.

The steep hillsides on the west side of the project site contain a low and dense cover of coastal sage scrub with very few trees or large shrubs. Only a few scattered pepper, oak, and willow trees are present on the slopes. However, a very large eucalyptus grove occurs at the base of the slopes where a major drainage from Campanil Hill is located. The alluvial fan in the center of the site is highly disturbed from past and present ground disturbing activities. In recent years, this area has been

modified for motorcycle tracks and ramps; as such, it is dominated by bare dirt and weeds. The creek channel and adjacent stream terraces contain a very dense mixture of native riparian trees and shrubs, ornamental trees, and noxious weeds (e.g., German ivy, castor bean, and giant reed).

The most valuable biological resources at the project site are fourfold:

- Riparian Habitat along the Creek Corridor. The creek corridor contains dense riparian cover that supports a high diversity and abundance of wildlife species compared to upland habitats at the project site. In addition, the creek channel and adjacent terraces with the dense plant cover provide a corridor for aquatic species and wildlife to move between the lower and upper reaches of the creek and Arroyo Burro watershed.

- Aquatic Habitat in Arroyo Burro Creek. The perennial flows in Arroyo Burro Creek provide important habitat for aquatic insects, invertebrates, amphibians, and fish in a semi-arid environment. The year-round flows also contribute to the high productivity of the riparian trees and shrubs at the project site.

- Tree Resources. The high number and variety of native and ornamental trees at the project site (mostly within and along the margins of the creek corridor) provide roosting, perching, and foraging habitat for various birds (native and introduced species) that are adapted to undeveloped areas, as well as urban settings.

- Avian Habitat. The diversity of birds at the site appears to be moderate to high because of the mosaic of diverse habitats at the site - mature riparian woodland, coastal sage scrub, weedy grassy areas, barren dirt areas, and scattered oak, eucalyptus, and ornamental shrubs and trees.

The project site does not contain pristine examples of native habitats. The site has been highly disturbed over the years from prior development and operation of the water company (1880s – 1940s), and unregulated uses of the open space for recreation over the past 30 to 40 years.

The project site does not support any state or federal endangered species, nor provide significant habitat for any species of special interest, as described below.

The large eucalyptus grove at the head of the alluvial fan is a dominant habitat feature at the project site similar to the creek corridor. However, the grove does not provide any special or highly productive biological functions.

In general, the steep scrub-covered slopes and the highly disturbed center of the site support a low diversity and abundance of wildlife. However, during the spring and early summer, there is a high diversity of breeding birds, some of which are migrants, in the adjacent riparian habitats at the project site. Resident wildlife in scrub include deer mouse, cottontail rabbit, and feral cat.

The site is subject to ongoing disturbances which include jogging, dog walking, outdoor games, and motorcycle racing and off-road traversing. In addition, the center of the site and the main trail are periodically cleared or mowed for fire abatement. These ongoing disturbances reduce the quality of the upland portions of the site for wildlife.

The project site is one of several large open spaces in the Arroyo Burro watershed. The site is bounded on the north, west, and east by similar open space. Riparian habitat along Arroyo Burro Creek is well developed above and below the project site. Very large expanses of scrub-covered hills, similar to those at the project site, are present on the other side of Las Positas Road at Elings Park. The site does not represent a unique refuge or habitat area in the watershed.

3.3.1.3 Habitat Types

Habitat types at the project site include ruderal vegetation with scattered ornamental trees, a eucalyptus grove, willow woodland along Arroyo Burro Creek, coastal sage scrub and chaparral along the western project boundary slopes, and coyote brush scrub along the east side of Arroyo Burro Creek. A description of the individual habitat types is provided below. The distribution of the habitat types is shown on Figure 3-11.

Ruderal Vegetation and Ornamentals

The center of the site is dominated by ruderal vegetation consisting of cheese weed, black mustard, Italian thistle, fennel, bristly ox-tongue, poison hemlock, wild radish, castor bean, and non-native grasses such as smilo grass and ripgut brome. There are many ornamental trees scattered throughout the site, including eucalyptus, California pepper, black acacia, silk oak, Canary Island palm, olive, and Monterey cypress.

Eucalyptus

A eucalyptus grove is located at the western tip of the project area. It contains very large trees with a sparse understory. Understory species include geranium, sour grass, fennel, nasturtium, poison hemlock, cheese weed, black mustard, horehound, ripgut brome, milk thistle, and Italian thistle ,with a few native species such as California everlasting, morning glory, poison oak, coast live oak, elderberry, mugwort, and Douglas nightshade. There are several very large eucalyptus trees located along Arroyo Burro Creek, both within and outside the boundaries of the project site.

Riparian Willow Woodland

The banks and stream terraces along Arroyo Burro Creek support willow woodland with large patches of invasive species, predominately giant reed and German ivy, with a few scattered eucalyptus, elderberry, western sycamore, and coast live oak trees along the banks. Other invasive species along the banks of the creek include nasturtium, periwinkle, and ice plant. Native riparian understory species along the banks and adjacent uplands include California rose, poison oak, Douglas nightshade, giant wild rye, blackberry, California barley, wild cucumber, California everlasting, coyote brush, and morning glory. In general, the native understory vegetation on the banks has been almost entirely displaced by invasive and non-native vines (nasturtium and German ivy). The stream terraces and adjacent uplands near the creek contain many of these native understory species, as well as ruderal species such as castor bean, black mustard, cheese weed, poison hemlock, milk thistle, Italian thistle, nasturtium, periwinkle, smilo grass, and German ivy.

Coastal Sage Scrub and Chaparral

The hills on the western side of the project site contain coastal sage scrub dominated by giant wild rye, California sagebrush, coyote brush, and morning glory with scattered black mustard, poison hemlock, fennel and ripgut brome. The slopes also include patches of chaparral dominated by lemonade berry, toyon, redberry, and elderberry.

Coyote Brush Scrub

The stream terraces on the east side of Arroyo Burro Creek, between the creek and Las Positas Road, are dominated by coyote brush scrub with patches of ruderal vegetation and scattered palm trees. Ruderal vegetation in this area includes similar species to the ruderal vegetation west of Arroyo Burro Creek.

3.3.1.4 Aquatic Habitats

Arroyo Burro Creek contains year-round flow due to natural bank seepage from the lower watershed. Hence, aquatic habitat is present during the summer and fall when most creeks on the South Coast are dry. Most of the spring and summer aquatic habitat in Arroyo Burro Creek at the project site consists of long pools that are on average about 20 feet wide and 0.5 to 2 feet deep. There are occasional riffles and runs generally 10 to 15 feet wide and range from 2 to 6 inches deep. Creek flow varies, but is typically 2 to 5 cfs in the summer. The distribution of aquatic habitats in the creek at the project site is shown on Figure 3-12a.

The pools that are present in the creek at the project site have sandy substrates with a small amount of gravel. Riffles and runs generally have gravel and cobble substrate. There are a few small sandbars along the edges of the creek. Only one or two pieces of large woody debris were observed in the creek and there are no large boulders. In the middle section of the reach, there are old rusted pipes and pieces of concrete in the channel bottom. There are no barriers to fish passage along this stretch of the creek, although there are several impassable fish barriers located downstream of the project site.

The following is a description of the major pools from the upstream end to the downstream end of the project site (Figure 3-12a). There is a long shallow pool at the north end of the site with dense overhanging giant reed and willows on both sides. The second pool downstream of the north end is long and deep with dense overhanging vegetation on the west bank and a steep eroded east bank with several burrows. There is one very large deep pool that is about 4 feet deep with dense overhanging willows on the west bank and a steep eroding east bank containing several burrows. There is a long series of pools ranging in width from 10 to 20 feet and depth from 0.5 to 2.5 feet with dense overhanging vegetation on both banks. The pool on the southern end of the reach has overhanging vegetation on the west bank and a steep non-vegetated east bank and has one of the only major sandbars within the project reach. This pool and the 4-foot deep pool provide suitable habitat with exposed sandbars and mud banks that the southwestern pond turtle can use for basking and burrows.

The dominant vegetation on the creek banks at the project site is giant reed, mixed with arroyo willow and a few scattered coast live oak and sycamore trees. Giant reed is rapidly expanding along the creek, displacing native willows and riparian understory. There is very little emergent vegetation in the creek bed because of the effects of winter stream flows, and the scarcity of oxbows and shallow marshy bank areas. There is one large riffle about 20 feet wide and 6 inches deep that is completely vegetated with watercress (*Rorippa nasturtium-aquaticum*) and a small patch of cattails (*Typha* sp.).

There are five areas along the eastern bank were there is significant erosion due to steep non-vegetated slopes. These eroded, 90-degree slopes reach about 15 feet above the bottom of the creek. The west bank has more gradual 45-degree slopes with some slightly steeper areas and, due to dense vegetation on this side of the creek, there are no erosion problems. There is a section along the west bank where a mesh fence about 5 feet wide and a few hundred feet long is holding back a dense section of giant reed.

3.3.1.5 Wildlife

The steep scrub covered slopes on the west side of the project site support a relatively low diversity of wildlife. As noted earlier, avian diversity, at least seasonally, is moderate to high at the site due to the mosaic of different landforms and habitat types, numerous perching trees, and the presence of a riparian corridor with year-round water.

The large eucalyptus stand at the western tip of the project site may be used as a roost site by a number of raptors, including red-tailed hawk, red-shouldered hawk, Cooper's hawk, great horned owl, barn owl, western screech owl, and others. No active or inactive raptor nests were observed at the project site during the May and June 2004 surveys for the EIR, nor by the applicant's biological consultants.

Common amphibians and reptiles expected to inhabit the project site include: Pacific treefrog, western toad, western fence lizard, southern alligator lizard, gopher snake, and common kingsnake. Crayfish and Pacific tree frog tadpoles were observed to be very abundant in the creek in May 2004. Hunt (1999) observed mosquito fish in the creek in 1999.

Common resident and migratory birds expected at the site include: red-tailed hawk, red-shouldered hawk, turkey vulture, American kestrel, northern flicker, downy woodpecker, acorn woodpecker, American crow, Anna's hummingbird, bushtit, Lawrence's goldfinch, scrub jay, Cassin's kingbird, northern mockingbird, northern oriole, black phoebe, greater roadrunner, American robin, violet-green swallow, California thrasher, plain titmouse, California towhee, spotted towhee, common yellowthroat, yellow-rumped warbler, yellow warbler, cedar waxwing, Bewick's wren, wrentit, golden-crowned sparrow, white-crowned sparrow, house finch, song sparrow, and cliff swallow.

Common birds observed during May 2004 surveys at the site for the EIR include orange-crowned warblers, pigeons, house sparrows, mourning doves, song sparrows, American crow, orioles, and bushtits. <u>No raptor nests or raptors were observed during this 4-hour survey of the entire project site.</u> <u>The evaluation of raptor habitat and species occurrence for the EIR was based on the previous studies of the project site, as described below.</u>

The project site, consisting of the 14.81-acre site with the eucalyptus grove, open grassland, barren disturbed areas, and riparian woodland along the creek, provides low to moderate quality habitat for raptors based on the following studies of the site:

- Final Biological Assessment, Las Positas Valley/Northside Pre-Annexation Study (1999), City of Santa Barbara (Biologists: Kathy Rindlaub and Larry Hunt)
- Biological Resource Analysis, Las Positas Valley (2000), for Peak-Las Positas Partners. (Biologists: Rachel Tierney and Larry Hunt)

Based on the above investigators, the following raptors are known to occur at the project site, utilizing most of the different habitats for perching, resting, and foraging:

- Cooper's hawk – possible resident breeder, primarily in the riparian woodland along the creek. Recently observed.
- Sharp-shinned hawk – winter visitor or transient, which is expected to be uncommon to rare at the site, primarily associated with the riparian corridor. No recent observations.
- Northern harrier – winter visitor or transient, which is expected to be uncommon to rare at the site, primarily associated with the open areas of the site. Observed perched in eucalyptus trees in 1997.
- White-tailed kite – resident and summer breeder on the South Coast. Periodically observed foraging at the project site, but the prey base is limited and they are not expected to nest at the site (Larry Hunt).

Common mammals to be expected in the project area include: opossum, broad-handed mole, pocket gopher, deer mouse, dusky-footed woodrat, raccoon, striped skunk, bobcat, feral cat, and coyote.

3.3.1.6 Sensitive Habitats

Two habitats of special interest occur at the project site, as described below.

- Arroyo Burro. The creek contains year-round aquatic habitat, which is a scarce but highly productive habitat type in southern California. The creek provides cover and food for a variety of wildlife species, as well as a movement corridor along the watershed. Finally, the creek is tributary to the Arroyo Burro estuary where the endangered tidewater goby occurs.

- Oak Trees. Individual large oak trees and oak woodland habitat are considered valuable resources due to their inherent wildlife value (shelter and food for wildlife), aesthetics, and vulnerability to human disturbance (due in part to the long time period to reach maturity). Coast live oak trees occur at the project site in the following locations: (1) a grove of large trees occurs in the center of the site, a remnant of the old water bottling company; (2) small to large oak trees occur as scattered individual trees or groups of trees on the stream terraces and banks of Arroyo Burro Creek.

3.3.1.7 Wetlands

Occurrence of "Waters of the U.S." as defined by the Corps of Engineers

Under Section 404 of the Clean Water Act, the Corps of Engineers (Corps) regulates the discharge of fill and dredged material into "waters of the United States," which are broadly defined in 33 CFR 328.3(a) to include navigable waters and others, such as intermittent streams and wetlands adjacent to such streams.

The lateral limits of Corps 404 jurisdiction in non-tidal "waters" are defined as *the ordinary high water mark*, unless adjacent wetlands are present. If wetlands occur within, or adjacent to, "waters," the lateral limits of jurisdiction will extend beyond the ordinary high water mark to the outer edge of the wetlands. The term "ordinary high water mark" means the line on the shore or edge of a channel established by the fluctuation of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, destruction of vegetation, debris, etc.

The Corps defines wetlands as: *"Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions"* (33 CFR 328.3). Under the Clean Water Act, wetlands must exhibit the following three characteristics:

- Hydrophytic vegetation - a predominance of plants that are adapted to anaerobic soil conditions
- Hydric soils - soils classified as hydric or that exhibit characteristics of reducing soil environment
- Wetland hydrology - inundation or soil saturation during a certain portion of the growing season

Arroyo Burro Creek is considered "waters of the United States" due to its connection to the Pacific Ocean. The lateral limits of "waters" along the creek at the project site are defined by both a visible ordinary high water mark and vegetated wetlands. The former occurs along the base of the creek banks and is evident by eroded banks, exposed cobbles, water-borne deposits of vegetation and woody debris, and water marks. Jurisdictional wetlands are present on portions of the creek bed with sandbars and on the margins of the creek bed where wetland plants (e.g., watercress, willows, sedge) persist despite the scouring effects of winter stream flows. As noted above, very little emergent vegetation is present in the creek bed because of the effects of winter stream flows, and the scarcity of oxbows and shallow marshy bank areas. Wetlands at the project site consist of small patches of watercress, willows, and sedge along the margins of the live stream. The general limits of "waters" at the project site are shown on Figure 3-12b.

California Department of Fish and Game

Fish and Game Code 1600 requires that the California Department of Fish and Game (CDFG) be notified of any activity that could affect the bank and bed of any stream that has value to fish and wildlife. Upon notification, the CDFG has the opportunity to execute a Streambed Alteration

Agreement. CDFG does not have a formal definition of watercourses under their jurisdiction. Their practice has been to include any natural drainage with a definable bank and bed. Man-made drainages are typically included if the drainages have taken on the character of a natural stream; the drainage supports habitat; and/or the drainage will function as a natural watercourse in the future without human intervention, and is not supported solely by irrigation runoff. Wetlands need not be present for CDFG jurisdiction. The lateral extent of CDFG jurisdiction is typically the outer limit of any riparian vegetation contiguous with the bank of the watercourse.

The limits of CDFG jurisdiction at the project site are shown on Figure 3-12b. The outer limit of riparian-related vegetation includes oak trees, and extents above the top of bank.

Occurrence of Coastal Act Wetlands

The southern half of the project site occurs in the Coastal Zone (see Figure 3-12b). As such, the proposed project is under the jurisdiction of the City through its land use permitting authority under the Local Coastal Plan. The project will require an Coastal Plan amendment, which must be approved by the City and California Coastal Commission (CCC). Consideration of the amendment will require information about the presence of wetlands at the project site based on the definition in the Coastal Act and associated regulatory guidance from the CCC. Wetlands are defined in Section 30121 of the Coastal Act as follows:

> *"Wetlands means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens."*

The operative criterion in the above definition is the presence of shallow water on land. The definition does not reference hydric soils or vegetation types, nor does it state or imply the required duration of inundation. Based on the above language, it appears that the wetland definition from the CCC regulations requires two parameters for vegetated wetlands (i.e., hydrology and wetland plants). However, the CCC typically identifies wetlands based on the presence of a single characteristic – typically, the presence of hydrophytic plants. These plants include species that are typically found in moist conditions (both prolonged moisture and seasonal moisture) such as willows, bulrush, mulefat, and watercress. This wetland definition is very broad because it does not require evidence of wetland hydrology; as such, Coastal Act wetlands can occur above drainage banks and in isolated depressions unconnected to watercourses. The general limits of Coastal Act wetlands at the project site are shown on Figure 3-12b.

Occurrence of Environmentally Sensitive Habitat Areas

Section 30107.5 of the Coastal Act defines "Environmentally sensitive area" as *"… any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."* In the Coastal Act, "environmentally sensitive area" is synonymous with "environmentally sensitive habitat area" (ESHA) and "environmentally sensitive habitat."

The Coastal Act does not specifically state that wetlands are "environmentally sensitive areas" or "environmentally sensitive habitat areas." Instead, a statement in the 1981 Interpretive Guidelines

for Wetlands and Other Wet Environmentally Sensitive Areas provides guidance: *"The Commission generally considers wetlands, estuaries, streams, riparian habitats … to be environmentally sensitive habitat areas because of the especially valuable role of these habitats in maintaining the natural ecological functioning of many coastal habitat areas…"* Based on this statement, it is generally the practice of the CCC and the City's Planning Division to consider all wetlands, regardless of size and condition, as ESHAs.

Arroyo Burro Creek and the associated riparian habitat at the project site are considered ESHAs because: (1) they support a wide variety and abundance of aquatic species and wildlife; (2) the creek provides a movement corridor for fish, aquatic species and wildlife; (3) the riparian corridor is used for avian breeding and raptor breeding/perching; and (4) the riparian corridor at the project site is relatively long, densely vegetated, and continuous in contrast to most creek corridors in the City of Santa Barbara. The eucalyptus grove at the project site is not considered an ESHA due to its limited size, and the lack of autumnal monarch roosting. The overall quality of the project site for raptor foraging and nesting is insufficient to characterize the site as a raptor ESHA, particularly when compared to other identified raptor ESHAs on the South Coast where the raptor abundance and variety is markedly higher (e.g., More Mesa, Ellwood).

3.3.1.8 Sensitive Plant Species

Sensitive plant species include the following categories of species that are considered rare, endangered, or with limited distribution: (1) species officially designated as rare, threatened, or endangered by the California Fish and Game Department (CDFG) or US Fish and Wildlife (USFWS); (2) species included in the California Native Plant Society (CNPS) Inventory of Rare and Endangered Species of California; or (3) species of local botanical interest, and included on the list of locally rare plants maintained by the local CNPS chapter.

There are four locally-rare plant species, not listed under the state or federal programs, which have been collected in the region, but not at the project site. These plants are of interest because: (1) they are endemic to the Santa Barbara area, although they may be very abundant locally; or (2) they are uncommon in the County, although they are widespread elsewhere. Known populations are discussed below. None of these species were located at the project site during site reconnaissance and field surveys in 1994, 1996, 1999 or 2000 by Rachel Tierney Consultating (2004), and in 2004 by URS Corporation biologists. These species are not expected to occur at the project site.

- *Baccharis plummeme* (Plummer's Baccharis). This small shrub has been found in moist areas at the Douglas Family Preserve. It is on the California Native Plant Society's List 4 (a watch list) and has not been located on-site.

- *Echinodorus berteroi* (Burhead). This water plantain was collected along Las Positas Road near Veronica Springs in 1962 and 1963. The plant is also known from Lake Cachuma at Tequepis Point. It has not been observed along Arroyo Burro Creek.

- *Eriogonum citharaeforme* (Cithara Buckwheat). This annual endemic buckwheat was collected in Elings Park. It is often found along roadsides and other mildly-disturbed places within woodlands and chaparral communities in the fall. Due to the highly disturbed nature of the

project site and the lack of chaparral or extensive native woodlands, this species has a low potential for occurrence. It has not been observed at the project site.

- *Samoliis parviflonis* (Water Pimpernel). This marsh species has been previously recorded from the Las Positas Valley. It has not been observed at the project site. This species has been located at El Capitan Beach, near the La Purisima Mission, and within hillside seeps outside of Oceano and Los Alamos.

3.3.1.9 Sensitive Fish and Wildlife Species

Sensitive wildlife species include the following categories of species that are considered rare, endangered, or with limited distribution: (1) species officially designated as rare, threatened, endangered by the California Fish and Game Department (CDFG) or US Fish and Wildlife (USFWS); and (2) Species of Special Concern designated by CDFG.

Threatened or Endangered Species

No threatened or endangered fish or wildlife species are known or expected to occur at the project site, as described below:

- The California red-legged frog *(Rana aurora draytonii)* is a federal threatened species that occurs in only a few South Coast streams such as Tecolote Creek in western Goleta, and Arroyo Paradon in Summerland. It has not been recorded on Arroyo Burro Creek, nor in other Santa Barbara creeks. Frogs are typically found in slow-moving or pooled water (i.e., runs or pools at least 12 inches deep) that have overhanging banks, aquatic emergent vegetation, and/or overhanging bankside vegetation that contacts the surface of the water creating cover and retreat sites. Adults and subadults frequently overwinter along the margins of the riparian corridor, in burrows or in dense leaf litter.. Habitat for this species is poor along Arroyo Burro Creek at the project site. Surveys for this species at the project site in 2001 were negative, as were surveys conducted in 2004 for the EIR. The red-legged frog has not been observed in the annual creek surveys by the Santa Barbara County Flood Control District.

- The tidewater goby *(Eucyclogobius newberryi),* a state- and federally-endangered fish that resides year-round in the Arroyo Burro Creek estuary, about 0.75 miles downstream from the project site. This species occurs in coastal estuaries, often concentrated near the upper end of lagoons where the salinity is low. Tidewater gobies may travel upstream in freshwater reaches on occasion. This species constructs nests in fine sandy substrates. Tidewater gobies do not occur along Arroyo Burro Creek upstream of the estuary due to the presence of a 6 to 9 foot high concrete grade control structure at Cliff Drive, which prevents their upstream migration. Another 3 to 4 foot high concrete barrier is located about 500 feet upstream of Cliff Drive that would also prevent upstream movement by this fish.

- The southern steelhead (*Onorhynchus mykiss)* occurs in coastal streams and creeks of Central and Northern California, and southern Oregon. The populations that occur between Los Angeles County and northern Santa Barbara County constitute the Southern California Evolutionarily

Significant Unit (ESU), which has been designated an endangered species by the National Marine Fisheries Service (NMFS). Southern steelhead are known to historically use coastal streams as a migration corridor both during upstream movement to spawning areas in the Santa Ynez Mountains, and downstream movement to the ocean. There are recent incidental observations of steelhead in many South Coast streams such as Carpinteria, Montecito, and Mission creeks. There is documented evidence on Mission Creek of spawning. There have been anecdotal sightings of steelhead on upper San Jose Creek, and confirmed sightings on Atascadero and Marie Ygnacio creeks in the past several years. There are no modern records of southern steelhead on Arroyo Burro. The concrete apron at the downstream end of the Cliff Drive bridge represents a significant, if not impassable, barrier. A larger barrier is present about one-half mile upstream of Cliff Drive, downstream of the project site.

Species of Special Interest

The following species of special interest are known to occur at the project site as transients or seasonal visitors.

- The monarch butterfly *(Danaus plexippus)* is a California Species of Special Concern. It forms large, highly disjunct overwintering aggregations in eucalyptus groves. This species is particularly abundant in western Goleta, forming very large wintering populations at Ellwood Devereux groves. The nearest aggregations to the project site are some eucalyptus stands in Hidden Valley and at the Douglas Family Preserve. The eucalyptus stand in the project area is too narrow and open to provide suitable microclimatic conditions for overwintering monarchs. This site is not considered a butterfly roosting area by local authorities (Adrian Wenner; personal communication; Althouse and Meade, 2000). However, individual monarchs are known to occur at the project site, and may visit the eucalyptus stand.

- The Cooper's hawk *(Accipiter cooperi)* is a California Species of Special Concern. This wide-ranging raptor is typically associated with oak woodland and riparian woodlands. It is an uncommon to common transient and winter visitor. Formerly more abundant as a breeding species, it is now a very uncommon to rare breeder in the Santa Barbara area. There are periodic observations of Cooper's hawks in the Arroyo Burro Creek riparian corridor and adjacent oaks and ornamental trees at the project site. This species may occasionally breed at the site.

- The northern harrier *(Circus cyaneus)* is a California Species of Special Concern that is an uncommon fall transient and winter visitor to the south coast of Santa Barbara County. It typically forages and nests in grasslands and open scrub habitats and freshwater and salt marshes. Harriers have been observed in the Las Positas Valley on occasion, but are relatively uncommon. They may temporarily roost in the eucalyptus stand at the project site, but would not reside, breed, or spend an extended amount of time at the site.

- Sharp-shinned hawk (*Accipter striatus)* is a California Species of Special Concern This species is a winter visitor or transient on the South Coast. It is expected to be uncommon to rare at the site, primarily associated with the riparian corridor. It has not been observed at the project site in recent years.

- The loggerhead shrike *(Lanius ludovicianus)* is a California Species of Special Concern that is widely distributed across arid and semi-arid lands of the western United States. It is an uncommon resident and rare breeder along coastal southern Santa Barbara County. Shrikes were observed foraging in disturbed coastal sage scrub and floodplain habitats on the project site in June 1999, but were not observed during the May 2004 survey. As such, it is considered an infrequent resident of the site.

The following species of special interest may potentially occur at the project site, but there have been no records and the habitat conditions for these species appear poor (Hunt, 1999; Collins, 1999).

- Southwestern pond turtle (*Clemmys marmorata pallida*) – possible, but unlikely resident of pools in the creek
- Two-striped garter snake (*Thamnophis hammondii*) - possible, but unlikely resident of Arroyo Burro riparian corridor
- Silvery legless lizard (*Anniella pulchra pulchra*) – possible resident of riparian corridor
- Sharp-skinned hawk (*Accipiter striatus*) – possible infrequent visitor to the site for foraging
- White-tailed kite (*Elanus leucurus*) – occasional visitor to the site for foraging, not breeding
- Yellow warbler (*Dendroica petechia*) – possible spring breeder in the riparian corridor
- Yellow-breasted chat *(Icteria virens)* – possible seasonal transient in the riparian corridor
- Pale big-eared bat (*Corynorhinus townsendii pallescens*) – possible infrequent visitor to the site for foraging
- Pallid bat (*Antrozus pallidus*) – possible infrequent visitor to the site for foraging
- Warbling vireo (*Vireo gilvus*) – possible seasonal transient in the riparian corridor

3.3.2 Potential Impacts

3.3.2.1 Impact Thresholds

Applicable biological impact thresholds from the *CEQA Guidelines* Appendix G (Biological Resources section) are listed below: A project will normally have a significant impact if it will:

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

b) Have a substantial adverse effect on any riparian habitat or other special status natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

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

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

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

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

The CEQA Environmental Checklist also contains the following Mandatory Finding of Significance:

a) Does the project have the potential to … substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant …?

3.3.2.2 Habitat Impacts Due to Land Development

Development of the project site would result in the following adverse and beneficial impacts to habitats:

- Development of residences and roads – permanent habitat loss
- Creation of the central and hillside open spaces – conversion of existing disturbed habitats to native upland habitats with greater native plant species diversity and cover (beneficial impact)
- Enhancement of the creek corridor including native plant restoration and bank repair – enhancement of a disturbed riparian habitat (beneficial impact)

The estimated habitat impact acres are shown in Table 3-10. These data indicate that of the 14.8 acres at the project site, only 6.8 acres would be permanently removed. The remainder would be converted to higher value native habitats (central and hillside open spaces) or be enhanced with additional native plants and the removal of noxious species (creek corridor restoration). Approximately eight acres of existing native and non-native habitats at the project site would be enhanced as a result of the proposed project.

The predominant habitat that would be permanently removed due to the construction of residential lots is non-native grassland/ruderal vegetation. This habitat, which dominates the central portion of the project site, has a very low wildlife function and value. About 0.19 acres of oak woodland, and 0.12 acre of riparian habitat would be removed. The permanent loss of native and non-native habitats at the project site is considered a **significant but mitigable impact (Class II)** for the following reasons:

TABLE 3-10
HABITAT IMPACTS

	Upland	Oaks	Riparian	NNG/RD*	Arundo	Eucs	RD*	Orn*	Total
Residences	0.105	0.004	0.008	3.174	0.007	0.280	0.507	0.405	4.491
Road and paths	0.022	0.184	0.115	0.867	0.039	0.435	0.502	0.224	2.388
Hillside Open Space (Lot 27)	0.856	0.116	0.000	0.557	0.022	0.314	0.204	0.522	2.591
Central Open Space (Lot 25)	0.000	0.057	0.017	0.796	0.000	0.082	0.186	0.097	1.234
Creek Open Space (Lots 27 and 28)	0.140	0.483	0.916	0.506	0.791	0.218	0.815	0.253	4.123
Total Affected by the Project =	1.123	0.844	1.056	5.900	0.859	1.329	2.215	1.501	14.827
Total Permanent Loss =	0.127	0.188	0.123	4.041	0.046	0.715	1.010	0.629	6.879
Native plant landscaping on the project site (Lots 25, 26, 27, 28)	0.996	0.655	0.933	1.860	0.813	0.614	1.205	0.872	7.948
Offsite native landscaping on City property	0.37	0.48	0.08	0.00	0.31	0.09	0.02	1.30	2.659
Total Native Restoration (Upland and Riparian Habitats) =	1.370	1.134	1.014	1.861	1.122	0.709	1.221	2.177	10.607
% of habitats on the project site that is permanently lost	11%	22%	12%	68%	5%	54%	46%	42%	46%
% of habitats on the project site to be restored	89%	78%	88%	32%	95%	46%	54%	58%	54%

* RD = ruderal (weedy) vegetation. NNG = non=native grassland. Orn = ornamental species.

- The amount of native habitat to be removed is very low (about 0.31 acre) compared to the entire site (14.8 acres). Most of the habitat impacts would occur to low value, non-native habitats.

- The applicant has proposed to restore the open space areas with native vegetation, which would result in the creation and enhancement of about eight acres of native upland and riparian habitats on the project site. This action would improve habitat conditions at the project site, even with the presence of residences. The increased acreage and biological value of these restored habitats would more than offset the loss of the 0.31 acres of native habitats.

The permanent habitat impact has been classified as significant, but mitigable (instead of less than significant) because the proposed restoration plans for the upland open space areas, the detention basin and bioswale in the central open space, and the creek corridor are very conceptual and difficult to interpret. There are many ambiguities about the proposed restoration approach, limits, and species to be used, and there are many inconsistencies between the conceptual restoration plans by Rachael Tierney Consulting (2004) and the landscaping plans. Hence, the proposed restoration plans for upland and riparian habitat areas at the project site must be refined and improved to ensure that the intended native habitat restoration is successful. The proposed habitat restoration is very comprehensive and ambitious. Successful implementation of the restoration program would greatly enhance habitat conditions in the lower Arroyo Burro watershed. Recommendations for improving the restoration program are provided in Mitigation Measure BIO-1.

3.3.2.3 Effect of Proposed Creek Corridor Restoration and Bank Repair

As noted above, the creek corridor is highly disturbed due to the increasing presence of giant reed and other noxious weeds which are displacing native riparian species. It appears that the degradation of the riparian habitat would continue unabated unless a restoration effort is implemented. The applicant has proposed an ambitious plan to restore and enhance riparian habitat along Arroyo Burro Creek as part of the project. The extent of the proposed restoration is shown on Figure 3-14.

The major components of the plan are to remove the noxious weeds from the area, stabilize eroding banks, and establish a variety of native plants. <u>If appropriately designed and successfully implemented (with the inclusion of Mitigation Measures W-2 and BIO-1)</u>, the proposed <u>creek corridor restoration</u> would result in the creation and enhancement of about 4.1 acres of riparian habitats on the project site, and 2.7 acres of riparian habitat on the adjacent City parcel (Table 3-9). The <u>overall impact of a successful creek corridor restoration</u> is considered **beneficial (Class IV)** to biological resources along the creek at the project site, as well as for the entire Las Positas Valley.

<u>The applicant has proposed to restore two eroded portions of the west bank of Arroyo Burro Creek, shown on Figure 3-6. The southern most eroded area was created when the toe of the bank failed during the 1998 El Nino floods, causing extensive bank failure to the top of the bank, and exposing a sewer line. The northern erosion feature was also caused by the undercutting of the lower creek bank during the high storm flows. The applicant has prepared conceptual bank repair plans that are presented on Figure 3-6. The plans are not sufficiently detailed to determine the physical extent of the proposed bank repair. It is possible that the proposed bank repair could require significant removal of willow trees that have become established in the eroded areas. The existing native trees</u>

may provide sufficient bank protection such that the proposed bank repair can be reduced in scale. In addition, the proposed bank repair does not include a consideration of stabilizing the toe of the slope where the original bank failures occurred. Hence, there is a potential for the bank repair, as currently proposed, to destabilize these slopes and increase bank erosion along the creek. Hence, there is a potential for the bank repair, as currently proposed, to destabilize these slopes and increase bank erosion along the creek. This impact is considered **significant, but mitigable (Class II).** Implementation of Mitigation Measure W-2 would ensure that excessive bank work is not performed which may destabilize slopes that are becoming more stable through natural revegetation, and that the long-term bank repair would be successful. The proposed bank repair would improve riparian habitat conditions at the site of the eroded banks if the existing non-native plants are replaced with native riparian shrubs and trees that would persist.

Mitigation Measures W-2 (Section 3.1.5) and BIO-1 (Section 3.3.4) require that the applicant submit detailed creek bank stabilization and creek corridor habitat restoration plans for City approval. The development of the detailed plans, which must incorporate more in-depth hydrological, geomorphological, and biological analyses, is intended, in part, to identify additional approaches and methods to achieve the desired conditions and to ensure successful bank stabilization, reduced erosion, improved water quality, enhanced riparian habitat, and channel grade stabilization. The plans would also ensure that no adverse biological impacts would occur as a result of the restoration efforts.

3.3.2.4 Effect of Fuel Management on Creek Restoration and Native Plants in Open Space Areas

As described in Section 3.8.4, the current defensible space requirement for the project area established by the Fire Department is 50 – 70 feet. It is anticipated that the minimum distance (50 feet) would be acceptable along the east side of lots along the creek due to the presence of a road. The defensible space requirements restrict the density and height of plants. Based on the new distance requirements for this area, these requirements would not substantially adversely affect the creek corridor restoration which would extend well beyond the 50 foot set back boundary. Most of the creek corridor open space (Lots 26 and 28) with the pedestrian path would not be located in the 50 foot defensible space.

The open space areas surrounding the lots and outside of the 50-foot wide creek setback line (Lots 27 and 25, and portions of Lots 26 and 28) would be landscaped with a broad mixture of native and non-native plants. The defensible space requirements noted above would apply to portions of these open space areas. The extent of the defensible space is shown in Appendix F. The restriction on the density and height of native plants to be installed in these open space areas is not expected to substantially adversely affect the native plant restoration because the types of habitats that would be suitable for restoration in these areas include low-growing shrubs with a mosaic of grass and shrubs, with periodic open spaces.

3.3.2.5 Loss of Oak Trees

The proposed project would remove up to seven coast live oak trees at the project site. The loss of these trees is considered a **significant, but mitigable impact (Class II)** because the number of

trees to be removed would be small relative to the total number of oak trees on the property, the trees to be removed are not specimen sized trees (with the exception of the oak tree at the project site entrance), and the trees can be feasibly replaced (at a 10:1 ratio) as part of the habitat restoration plan for the project. Mitigation Measure BIO-2 addresses mitigation for oak tree loss, and protection of oak trees to remain at the site.

3.3.2.6 Effect of Bridge on Riparian Habitats and Wildlife

Construction of the bridge across Arroyo Burro Creek would permanently displace native and non-native habitat. The eastern abutment near Las Positas Road would remove a large oak tree (30 inches diameter) and about 600 to 800 square feet of willow-giant reed habitat on the creek bank. The western abutment is located directly adjacent to a large willow grove. It would displace non-native grassland and ruderal species. The bridge span would displace a large sycamore tree, and a mixture of willow and giant reed that are present on the creek banks. The impacts to habitat under the bridge would be temporary, as these areas would only be temporarily cleared to construct the forms for the bridge. The area of temporary impact associated with the bridge construction is estimated to be about 0.25 acre, comprised of the bridge space and 25 feet upstream and downstream of the span.

The loss of the large oak and sycamore trees at the bridge site is unavoidable. The bridge must be aligned with the Elings Park entrance to ensure safe operation of the intersection. The permanent loss of the 600 to 800 square feet of willow and giant reed at the eastern abutment is not considered significant because of the offsetting effects of the proposed creek corridor restoration plan associated with the proposed project.

The temporary impacts to riparian habitat under the bridge would result in a permanent conversion of habitat because the habitat that would become established under the bridge in the future would be limited by the presence of the bridge structure. Hence, a dense, tall riparian woodland could not develop at this location with the bridge in place. Only low-growing shrubs and small willows are likely to develop on the creek banks under the bridge. The change in habitat could affect wildlife movement if there is a complete gap in vegetation cover at the bridge. In addition, wildlife movement would be hindered by the presence of the concrete abutments and roads at each end of the bridge.

Natural gaps occur in riparian corridors due to natural process such as trees falling due to bank failure or changes in substrate that change the vegetation structure. Gaps provide openings for different plants and insects than in the dense and shaded portions of the corridor. Hence, a gap in and of itself is not necessarily significant to wildlife movement. However, in light of the narrow riparian corridor at this location and the close proximity of other human disturbances that affect wildlife (i.e., Las Positas Road, Stone Creek Condominiums), the overall impact of the bridge on riparian habitat and associated wildlife is considered **significant and unmitigable (Class I)**. This impact can be partially offset by restoring temporarily disturbed areas under the bridge (Mitigation Measure BIO-3) and by increasing the proposed habitat restoration areas between Lot 12 and the creek, as specified in Mitigation Measure BIO-4. <u>In addition, removing one of the two sidewalks on the bridge would provide a slight reduction in the bridge shadow effect on underlying habitat (see Mitigation Measure BIO-8).</u>

There were many public comments on the above impact conclusion as presented in the Draft EIR. A detailed analysis of the basis for concluding that the impact of the bridge on riparian habitat and wildlife is a significant impact is presented in Topical Response No. 2 – Environmental Impacts of the Proposed Bridge (Appendix F). Based on a consideration of the comments and additional analyses of this issue, the City has determined that the impact classification in the EIR is appropriate and supported by substantial evidence (as defined under the CEQA Guidelines, Sections 15382 and 15064) due to the following factors:

- The permanent displacement of native and non-native riparian habitat at the crossing to be replaced with barren ground under the bridge, or low growing native and naturalized plants
- Loss of a large oak tree and sycamore tree
- Possible effect on the movement of wildlife using the project site, particularly the riparian corridor, due to the gap in the vegetation, presence of concrete abutments that impinge into the creek channel, and road connections at each end of the bridge

These impacts are substantial, as defined in the CEQA Guidelines (Section 15382), which is a criterion for identifying significant impacts.

It should be noted that t conclusion that the bridge would have a significant impact does not, in and of itself, require that the City reject the bridge option.

3.3.2.7 Effect of Proposed Drainage on Riparian and Aquatic Habitats

As described in Section 3.1.2.2., the proposed drainage plan with two discharge points to the creek would substantially modify the current drainage and discharge conditions along the creek. Redirecting the flows to the two discrete storm drain outlets would reduce infiltration and bank seepage along Arroyo Burro Creek at the project site. The reduction in on-site infiltration and groundwater storage that supports riparian bank vegetation or that discharges to the creek is considered a **potentially significant, but mitigable impact (Class II**). It can be avoided by modifying the site drainage system to provide more infiltration and a greater number of outlets to the creek as specified in Mitigation Measure W-1.

3.3.2.8 Water Quality Impacts on Aquatic Organisms

As described in Section 3.1.2.2, the proposed project would adversely affect water quality in Arroyo Burro Creek due to stormwater pollution from the new residential development and associated creek corridor open space. The pollutants would include nutrients (i.e., from fertilizers), pesticides, herbicides, metals, sediment, and bacteria. Several of these pollutants could adversely affect aquatic invertebrates and fish in the creek. For example, excessive levels of nutrients can increase algal growth in the summer, which in turn can deplete oxygen in the water which would harm aquatic organisms. Pesticides and herbicides can affect aquatic organisms if the concentrations are very high. The analyses in Section 3.1.2.2 indicate that level of stormwater pollution from the proposed project is not expected to be severe due to the low density of housing, the type of land use involved, the relatively high amount of permeable surfaces, and the presence of a creek buffer zone with native vegetation. To ensure that the stormwater pollution would be less than significant, the proposed stormwater treatment system should be expanded and modified as described Mitigation Measure W-

4. Based on the addition of this mitigation, the impact of stormwater pollution on water quality in Arroyo Burro Creek is considered less than significant (Class III). This conclusion would also apply to the effect of stormwater pollution on aquatic organisms in the creek.

3.3.2.9 Impacts to Wildlife During Construction

Construction activities at the project site would result in increase noise, traffic, dust, and human activity. These disturbances would displace wildlife from the areas under construction, and possibly displace or discourage wildlife from the Arroyo Burro Creek corridor during periods of noisy construction activity near the creek. Construction activity in or near the riparian areas during the breeding season could disturb breeding birds pairs and cause them to abandon the area. Birds in the scrub covered hills adjacent to the construction area may be temporarily flushed out of the project site during construction depending on the amount and frequency of noise. Other wildlife such as lizards and rodents would be similarly displaced. Mortality of some common rodents and reptiles may occur during grading.

The impact of construction on wildlife at the project site is considered **significant, but mitigable (Class II)** because the most substantial impact (disturbance of breeding riparian birds and raptors) can be avoided by scheduling major construction activities outside the breeding bird season (Mitigation Measure BIO-5) and minimizing habitat disturbance during construction (Mitigation Measure BIO-6).

3.3.2.10 Effect of Development and Human Uses on Creek Resources

As noted earlier, the most important biological resource at the project site is Arroyo Burro Creek. The creek corridor contains dense riparian cover that supports a high diversity and abundance of wildlife species compared to upland habitats. In addition, the creek channel and terraces with the dense plant cover provide a corridor for aquatic species and wildlife to move between the lower and upper reaches of the creek and Arroyo Burro watershed. Finally, the creek contains federally and state defined wetlands, and is considered an ESHA in the Coastal Zone.

The proposed project has been designed to avoid direct impacts to the creek corridor, except at the bridge crossing. Other than the bridge, the primary impact to the creek resources would be indirect disturbance from the adjacent development. These impacts include the following:

1. Noise from vehicles and residents that may disturb wildlife in the riparian habitats of the creek, and possibly discourage or reduce foraging, breeding, and travel.
2. Nighttime lighting from street lights and residences that could adversely affect nocturnal species which rely on darkness to hunt or evade predators would be especially affected, including owls, nighthawks, and small mammals. On the other hand, certain species of aerial-foraging bats may be aided by night-lighting as these light sources are foci of activity for many flying insects.
3. Physical disturbances to the riparian habitat from people and pets that wander into the creek corridor from the pedestrian path. These disturbances can displace wildlife, degrade habitat, destroy nests, and in the case of pets, result in direct mortality of wildlife.

4. Degradation of water quality in the creek from stormwater pollution which can adversely affect aquatic insects and fish in the creek.
5. Degradation of water quality in the creek from pesticide/herbicide use in the creek corridor open space which can adversely affect aquatic insects and fish in the creek.
6. Colonization of the creek corridor by ornamentals and exotic plant species associated with the adjacent development, displacing native plants.

The ***magnitude*** of these impacts can be ***lessened*** by establishing a suitable buffer zone between the development (i.e., the source of the disturbance) and the resources in the creek. The determination of whether these impacts are considered significant involves a consideration of many factors, including the width of the buffer zone, management actions in the buffer zone, and the nature of the adjacent aquatic and riparian resources.

The applicant has proposed two creek setbacks from the top of the west bank of Arroyo Burro Creek, as shown on Figure 3-13: (1) a 50-foot wide buffer zone in which no roads or structures would be located, but a 5-foot pedestrian path would be present to provide public access to the open space and to traverse the project site from Las Positas Road to Alan Road; and (2) a 100-foot wide setback line which demarcates the limit of structures; roads, driveways, and sidewalks would be present in the 50 to 100 foot zone.

The applicant has mapped the top of bank as shown on Figures 2-3 and 3-13 based on a combination of field observations of the grade break, and a determination of the theoretical top of bank using a hypothetical 2:1 slope that would extend from the toe of the bank. URS has extended the top of bank at three locations to reflect the major grade break present along the creek at these locations. It is recognized that the top of bank near the sewer line erosion location is, in part, an artifact of the sewer line discharge that eroded much of the bank. However, the bank failed prior to the sewer line being severed, indicating that the bank at this location was already vulnerable. The other bank erosion location where the top of bank was extended outward appears to be a natural bank failure associated with a larger landslide.

There is no formal definition of the top of bank in such complex conditions in which the creek banks are intermixed with landslide features and various alluvial terraces that have been uplifted and eroded. However, one of the primary purposes of a creek setback is to ensure that the hydraulic and biological processes in the creek are protected. The land between URS' top of bank and the applicant's top of bank at these three locations are functional parts of the creek rather than the uplands. As such, the URS top of bank at these locations provide a more conservative limit based on the intent of the creek setback requirements. Alternative creek setbacks using the URS' top of bank are addressed in Section 4 of the EIR.

The extent to which the proposed 50 and 100 foot setbacks would reduce the magnitude of indirect impacts of the adjacent development is summarized below in Table 3-11, along with potential deficiencies in the proposed buffer zone in providing protection to the adjacent aquatic and riparian resources of the creek. These deficiencies can be corrected by enlarging the creek setback, implementing certain habitat and public access management actions, or a combination of both approaches. The use of management actions to protect creek resources does not necessarily imply

that they are more effective in protecting or enhancing riparian and aquatic habitat, water quality, or wildlife than a larger creek setback – only that management actions can reduce impacts.

The analysis summarized in Table 3-11 indicates that the proposed setback distances of 50 and 100 feet are generally adequate to provide protection to creek resources; however, additional measures are needed to enhance the proposed setbacks. The proposed setback distances and the proposed creek corridor buffer zone are considered adequate to avoid the potentially significant impacts listed in Section 3.3.2.1, provided Mitigation Measures W-1 and BIO-7 are implemented. Hence, indirect impacts to creek resources due to the proposed residential development are **considered significant, but mitigable (Class II).**

The proposed project includes restoration of about four acres of riparian habitat along the creek corridor (which will be dedicated public open space) and about 2.7 acres of riparian habitat on City-owned property. The restoration of riparian habitats along the creek would offset the indirect impacts of residential development at the project site when combined with the proposed creek setbacks of 50 and 100 feet and Mitigation Measures W-1 and BIO-7 (designed to protect creek resources). Indirect impacts to the aquatic and riparian resources of Arroyo Burro Creek, with the proposed creek setback, are considered significant, but mitigable (Class II) only if the EIR mitigation measures related to water quality and biological resources are implemented, and the proposed creek restoration is fully implemented and successful.

It should be noted that the City does not have a standard setback requirement for development along creeks except along Mission Creek. Protective setbacks are determined on a case-by-case basis, depending upon specific conditions of each site and proposed development. In 2003, the City issued draft Creek Development Standards for projects located next to all creeks in the City. Public hearings were conducted on the proposed standards, which resulted in a high level of interest and controversy. The City staff has indicated that the development of standards will require more time and further public participation and hearings beyond the hearing timeframe for this project.

3.3.3 Applicable Local Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. In addition, the policies in the State Coastal Act are also applicable. The consistency of the proposed project with goals and policies related to biological resources is evaluated below. The final determination of potential consistency will be made by the Planning Commission and City Council.

TABLE 3-11
ADEQUACY OF PROPOSED CREEK SETBACKS IN REDUCING IMPACTS TO CREEK RESOURCES

Impact to Creek Resources	Effectiveness of the Proposed Creek Setback and Buffer Zone in Reducing Impacts to Creek Resources	Other Possible Management Actions to Further Reduce Impacts to Creek Resources (other than a larger setback)
Noise and human activity from adjacent roads and residences that could disturb wildlife in the riparian habitat of the creek	Adequate because the noise generation from residential uses and a no-through traffic road would be very low. The setback is also adequate because the habitat values of the creek buffer zone will be enhanced compared to current conditions, and because the buffer zone will be part of a much larger and wider riparian corridor along the creek.	Other management actions are available to substantially reduce impacts from adjacent roads and residences.
Nighttime lighting impinging on riparian habitat in the creek	The adequacy of the proposed creek setback in reducing this impact would vary depending upon the location of the lighting and proximity to the creek. Widening the creek setback and providing more dense planting would reduce this impact.	A potentially effective management action is available. The intensity and coverage of lights could be adjusted at the fixtures which could reduce this impact. See Mitigation Measure BIO-7.
Disturbance from people and pets using the pedestrian path in the creek corridor	The creek buffer zone with path is relatively narrow and may not be sufficient to effectively reduce this impact because its small size could make it be more vulnerable to human disturbance from unleashed pets, children playing in the creek, and pedestrians creating new trails. A wider creek setback would provide more space to prevent unwanted impacts from people and pets.	A potentially effective management action is available. Strategic placement of the path and management of access and use in the buffer zone could reduce this impact with the proposed setback. The effectiveness of this action is unknown, and would depend upon monitoring and enforcement of access rules. See Mitigation Measure BIO-7.
Stormwater pollution from adjacent developed areas and roads that may be discharged to the creek	Not applicable because the applicant has not proposed to use the creek buffer zone for stormwater treatment. However, a wider creek setback would provide more space for bio-filtration and percolation of stormwater, if discharged to the buffer zone.	Use of portions of the creek buffer zone for stormwater treatment would be beneficial for water quality, and could also enhance restoration efforts. See Mitigation Measure W-1.
Use of herbicides and pesticides in the creek corridor open space which could be discharged to the creek	The adequacy of the proposed creek setback in reducing this impact would vary depending upon the amount and location of herbicide and pesticide application.	This impact can be addressed more effectively by managing herbicide and pesticide use in the buffer zone than by simply widening the buffer zone.
Colonization of the riparian habitat in the creek corridor by invasive weeds or ornamentals from adjacent residences	The proposed creek buffer zone is relatively narrow and may not be sufficient to prevent this impact over time because its small size and anticipated human use could make it be more vulnerable to weed and ornamental plant colonization over time. However, the restored creek corridor would have less weeds and ornamental plants compared to current conditions. A wider creek buffer zone may be more resistant to invasive weeds.	This impact can also be addressed, possibly more effectively, by active habitat management in the buffer zone. However, the success of reducing the impact would depend directly on the diligence in monitoring and maintenance of the buffer zone. See Mitigation Measure BIO-7.

Coastal Act Policies

> ***Policy 30231.*** *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The proposed project (excluding the proposed bridge) is potentially consistent with this policy because it would protect the sensitive resources at the project site (i.e., Arroyo Burro Creek and the associated aquatic and riparian habitats) by the proposed creek setbacks and the proposed riparian habitat restoration. In addition, recommended mitigation measures would further protect water quality in the creek and riparian habitats along the creek. The proposed project, with mitigation, would avoid all but one significant impact to the creek biological resources (the impact of the bridge), and would ensure their continued productivity if the EIR mitigation measures and the proposed creek restoration are fully and successfully implemented.

However, the proposed bridge may be inconsistent with the final element of this policy (*…minimizing alteration of natural streams.*) because the eastern abutment of the proposed bridge would occur in the creek channel, below the top of bank. In addition, the proposed bridge would cause a significant impact on riparian habitat and trees at the bridge location, and on riparian habitat and wildlife at the project site as described in Appendix F, which would be inconsistent with the first element of the policy (*The biological productivity… shall be maintained.).*

> ***Policy 30236****. Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.*

The proposed project is potentially consistent with this policy because: (1) the bridge has been designed to provide a clear span over the 100-year flood event; (2) mitigation measures to reduce some (but not all) of the biological impacts of the bridge are included in the EIR, and (3) the proposed creek restoration and bank repair, as modified by the EIR mitigation measures, could improve fish and wildlife habitat.

> ***Policy 30240.*** *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

The proposed project includes two project elements in an environmentally sensitive habitat area (ESHA) – the bridge over Arroyo Burro Creek and the pedestrian path and habitat restoration in the

creek corridor. The bridge would result in a significant impact to riparian habitats at the bridge site. Hence, the proposed bridge may be potentially inconsistent with this policy due to the substantial impact to the creek channel and riparian corridor at the bridge site.

The construction of the pedestrian path and the restoration of the creek corridor (involving about 4.8 acres) would not significantly disrupt the habitat values of Arroyo Burro Creek. The proposed creek restoration could result in higher habitat values along the creek if it is implemented with the EIR mitigation measures and is successful. Based on these considerations, the proposed project (excluding the proposed bridge) would be potentially consistent with this policy.

City Local Coastal Plan – Water and Marine Environment: Creek Environments

> ***Policy 6.8.*** *The riparian resources, biological productivity, and water quality of the City's coastal zone creeks shall be maintained, preserved, enhanced, and, where feasible, restored.*

The proposed project (excluding the proposed bridge) is potentially consistent with this policy because it would protect the sensitive resources at the project site (i.e., Arroyo Burro Creek and the associated aquatic and riparian habitats) by the proposed creek setbacks and the proposed riparian habitat restoration. In addition, recommended mitigation measures would further protect water quality in the creek and riparian habitats along the creek. The proposed project, with mitigation, would avoid all but one significant impact to the creek biological resources (the impact of the bridge), and would ensure their continued productivity if the EIR mitigation measures and the proposed creek restoration are fully and successfully implemented.

However, the proposed bridge may be inconsistent with the final element of this policy (*…minimizing alteration of natural streams.*) because the eastern abutment of the proposed bridge would occur in the creek channel, below the top of bank. In addition, the proposed bridge would cause a significant impact on riparian habitat and trees at the bridge location, and on riparian habitat and wildlife at the project site as described in Appendix F, which would be inconsistent with the first element of the policy (*The biological productivity… shall be maintained.).*

> ***Policy 6.10.*** *The City shall require a setback buffer for native vegetation between the top of the bank and any proposed project. This setback will vary depending upon the conditions of the site and the environmental impact of the proposed project.*

The analysis in the EIR concluded that the proposed creek setbacks, coupled with the EIR mitigation measures, dedicated creek corridor open space, and proposed riparian habitat restoration, would be adequate to protect creek resources and avoid significant impacts. Hence, the project is potentially consistent with this policy.

> ***Policy 6.11.*** *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) Necessary water supply projects; (2) Flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or; (3) Developments where the primary function is the improvement of fish and wildlife habitat.*

The proposed project is potentially consistent with this policy because: (1) the bridge has been designed to provide a clear span over the 100-year flood event; (2) mitigation measures to reduce some (but not all) of the biological impacts of the bridge are included in the EIR, and (3) the proposed creek restoration and bank repair, as modified by the EIR mitigation measures, could improve fish and wildlife habitat.

> ***Policy 6.11-A.*** *New highway bridges or other highway improvements should be designed to provide clear spans of the stream or creek and to avoid the use of pilings within the stream or creek corridor. Culverting of the creek channel shall not be permitted.*

The proposed bridge may be potentially inconsistent with this policy due to the use of concrete abutments, one of which would occur in the creek channel, below the top of bank. The proposed bridge would not fully span the creek channel.

Conservation Element – Biological Resources

> ***Goal:*** *Enhance and preserve the City's critical ecological resources in order to provide a high-quality environment necessary to sustain the City's ecosystem.*

The proposed project is potentially consistent with this goal because, with mitigation, it would protect and enhance the most sensitive biological resource at the project site - Arroyo Burro Creek.

> ***Policy 4.*** *Remaining coastal perennial grassland and southern oak woodland shall be preserved, where feasible.*

The proposed project is potentially consistent with this policy because impacts to oak woodland and oak trees have been minimized, and the unavoidable loss of other oak trees would be fully offset by oak tree replacement planting.

> ***Policy 5.*** *The habitats of rare and endangered species shall be preserved.*

The proposed project is potentially consistent with this policy because it would not cause any direct or indirect impacts to threatened or endangered species.

3.3.4 Mitigation Measures

BIO-1 The proposed native habitat restoration plans shall be modified as follows to ensure the successful long-term establishment of new and enhanced native habitats at the project site, including the creek corridor restoration, upland habitat restoration in Lots 25, 26, 27, and 28, and creek bank repair and restoration sites. A comprehensive habitat restoration plan for these project elements shall be submitted to the Community Development Department and the Parks & Recreation Department (Creeks Division) for review and approval prior to incorporation into the final grading and landscaping plans to be submitted to the Building Department for final review and approval. The comprehensive habitat restoration plan shall include the following elements (among others):

- Precise restoration objectives for each habitat type and location
- Detailed schedule of tasks and milestones for site preparation, planting, and maintenance
- Plans that show grading and soil preparation, and any areas that will require slope stabilization or temporary erosion control
- Description of specific habitat types to be restored, including species list and relative abundance in each habitat type, as well as planting densities and propagation methodologies
- Plans that show the boundaries of each habitat type to be restored, with precise acreages and plant densities
- Description of source of plant materials, with a commitment to utilize plant material from the South Coast region, and preferably from the Las Positas Valley
- Performance criteria that include survivorship, percent native plant cover, percent noxious weed cover, and percent naturalized species cover
- Plans and explanations that show how the non-native landscaping at the project site associated with the individual lots will interface with the native plant restoration in the upland and riparian open space areas
- A description of a watering approach to ensure successful plant establishment and long-term productivity, including methods to provide supplemental water
- A description of the weed management approach, emphasizing site preparation and watering methods that do not encourage weed growth and use of herbicides that is consistent with the City's adopted Integrated Pest Management (IPM) plan
- A long-term rodent management plan that avoids or greatly reduces the use of pesticides or poisons
- Plans and a description of the how the habitat restoration plans will incorporate fire hazard requirements for defensible space near structures and fire-safe vegetation, while still achieving habitat restoration goals
- Plans and a description of how to establish and maintain riparian habitats in the creek corridor open space with ongoing public uses along the pedestrian path
- <u>Plans and calculations for any proposed bank stabilization shall include an evaluation of hydraulic and geomorphologic factors along the creek, such as flow velocities, sediment carrying capacity, bank failure modes, and shear stress factors as described in Mitigation Measure W-2.</u>

The plan may include non-native ornamental trees in selected portions of the hillside and central open space areas for aesthetic reasons, provided the number of these locations is low and the non-native trees would not displace native plants over time.

The plan shall also include a maintenance program to be implemented by the homeowner's association with a description of the authority and mechanism to secure sufficient funding to ensure long-term success.

The plan would apply to portions of the City-owned parcel on the east side or Arroyo Burro Creek. Hence, the restoration approach and plan for this element of the project shall be approved by the City Parks and Recreation Department. The applicant shall maintain the restoration areas on City property until the performance criteria have been achieved, at which time the City will assume responsibility for maintenance.

BIO-2 Oak trees to be removed shall be replaced at a 10:1 ratio at the project site. The replacement trees shall range in size from one gallon to 15-gallon trees. Planting locations shall be appropriate for oak trees, as determined by the arborist, and included in the comprehensive habitat restoration plan. The number of oak trees to be removed shall be confirmed on the final plans. The plans shall include oak and riparian tree protection drawings and specifications with the following requirements:

- Prior to grading, temporary protective fencing (4 feet high) shall be installed three feet outside the dripline of all oak and riparian trees to be preserved. Fencing shall be maintained during the entire construction period.
- Heavy equipment shall not be used or parked within three (3) feet of oak tree driplines, except where approved by a qualified arborist, and after protective fencing has been installed.
- Soil, rocks, or construction material shall not be stored or placed within the dripline of oak trees.

BIO-3 The area of temporary disturbance associated with installation of the bridge over Arroyo Burro Creek shall be minimized to the maximum extent feasible. The limit of temporary disturbance upstream and downstream of the bridge shall not exceed 25 feet. All disturbed areas shall be restored with native riparian trees and shrubs. The disturbed banks shall be stabilized, as necessary, with bio-technical methods to prevent post-construction erosion. Native perennial plants that are tolerant of shade shall be planted under the bridge span. To the extent feasible, tall riparian trees shall be planted that will grow adjacent to the edge of the bridge and provide cover for wildlife.

BIO-4 To partially offset the permanent habitat losses at the bridge site, the open space area north of the entrance road and south of Lot 12 shall be restored to a native oak-riparian area dedicated to wildlife habitat, particularly riparian breeding birds and raptors. The restoration of this site shall be included in the comprehensive native habitat restoration plan for the proposed project (see Mitigation Measure BIO-1).

BIO-5 Phase 1 grading and earthwork within 100 feet of the outer edge of the existing riparian corridor (as mapped in the EIR) shall not occur during the period 1 March through 15 July in order to avoid disturbance to breeding birds. Prior to removal of any oak, eucalyptus, or native riparian tree, a qualified biologist shall carefully examine the tree to determine that no

active bird nests are present. If a nest is located, tree removal shall be delayed until all chicks have fledged.

BIO-6 The limits of disturbance in areas with native or naturalized vegetation shall be minimized to the extent feasible. Limits of clearing and grubbing, grading, and vehicular access shall be marked at the site with orange exclusion fencing.

BIO-7 The following measures shall be implemented to reduce impacts of residential development on riparian resources in the creek:

- The lowest output lighting permissible on all roadways and common areas of the development shall be used. All street and common lighting shall be shielded so that stray light effects are minimized, and to avoid direct illumination of the riparian corridor, except as needed for public safety. Decorative night lights shall not be directed into trees within the riparian restoration area.

- The pedestrian path in the creek open space corridor shall be sited to provide views and an aesthetic enjoyment of the creek environment. However, the alignment of the path shall not substantially interfere with the primary objective of providing wildlife habitat and native plant cover along the creek corridor. The path shall also include interpretative signs informing the public of the sensitive resources in the creek, and asking the public to refrain from entering the creek channel, or letting pets enter the channel. The final design for the creek open space shall also include a consideration of low-profile fencing <u>to prevent access to</u> the top of the creek bank or in sensitive habitat areas.

- <u>The proposed gazebo to be located along the pedestrian path shall be situated as far as possible from the creek (a minimum of 50 feet), and the location shall be selected to minimize impacts to riparian resources.</u>

- The proposed homeowners association shall prepare and implement (<u>with long-term funding assurances</u>) a habitat maintenance and management plan for the four open space areas at the project site: Lot 27 (hillside open space), Lot 25 (central open space with tributary drainage channel), and Lots 26 and 28 (creek corridor with pedestrian path). The plan shall incorporate the principles, <u>methods, and approach</u> of the City's Integrated Pest Management (IPM) Plan <u>(as it is revised and updated in the future)</u> in order to minimize the use of pesticides and herbicides for landscape maintenance to the extent feasible. The plan shall include measures to monitor and remove the amount and extent of non-native invasive plants; maintain the riparian plantings in good health; and contingency plans for replacement planting. It shall also include measures to monitor and manage public access to prevent unanticipated impacts to riparian and aquatic habitats in the creek from public uses.

BIO-8 <u>The width of the proposed bridge shall be reduced by only including a sidewalk on one site, if this modification does not create unsafe conditions for pedestrians and bicyclists, as determined by the City Transportation Department.</u>

3.4 CULTURAL RESOURCES

3.4.1 Existing Conditions

Cultural resources include prehistoric and historic archaeological deposits, as well as structures of historic or architectural importance in Santa Barbara's history. Prehistoric deposits are those that predate written history in the areas, and are the result of the early settlement and continued residence of Native Americans in the Santa Barbara Channel area for many thousands of years. Historic deposits and structures, from the periods when written evidence of Santa Barbara's history is available, were left by Native Americans and by a succession of new arrivals to the area, beginning with the Spaniards who visited the area and later founded the presidio and mission. Archaeological deposits and historic structures often contain or embody connections to Santa Barbara's past that merit protection and preservation.

3.4.1.1 Prehistoric Archeological Resources

The archaeological resources found on the South Coast are the result of Native American habitation in the Santa Barbara Channel area for over 9,000 years. The resources found in the inhabited coastal areas of Santa Barbara consist principally of artifacts such as ornaments, tools, and middens. Petroglyphs and pictographs have been found in inland locations.

Archaeological research indicates that the historic Indian populations in Santa Barbara were one of the most advanced in California. Archaeological sites are significant from a scientific perspective, because analysis of them increases the understanding of the evolution of Native American culture. Many sites have been subject to disturbance, but may still provide information useful in the regional analysis of prehistoric population distribution, settlement location, and resource use. In addition, archaeological sites are significant from the historic, social and religious perspective of those in the current Native American community.

The creeks, river valleys and floodplains of the Santa Barbara area have supported a continuous cultural occupation for at least the last 8,000 years. An early Holocene occupation has been identified in the archaeological record that reflects the early emergence of non-agricultural village-based groups in the region. Current archaeological evidence suggests that a relatively small population existed in these areas, but by 2,000 years before present (B.P.), populations appear to have expanded considerably into resource-rich coastal and near-shore estuarine environments.

Prehistoric archeological sites are found throughout the coastal plains and foothills of the Santa Ynez Mountains, including near the project site. A wide variety of sites are present, although most sites in the project area appear to be small middens or resource exploitation sites containing remnants of localized hunting/gathering activities. Late prehistoric and ethnohistoric evidence in the project area is associated with the Chumash. Chumash were organized into several groups, with the Barbareño being attributed to the coastal areas.

According to the City's Master Environmental Assessment (MEA) Cultural Resources Map, the project site is located in an area of potential subsurface archaeological resources related to Prehistoric Sites and Watercourses. A Phase 1 archaeological survey (Conejo Consultants, 1999)

was conducted for the project site, which involved a record search and field survey. The former consisted of a review of previous archeological surveys and site records at the Central Coastal Information Center (CCIC) of the California Historical Resources Information System. The record search indicates that there are no recorded archeological resources at the project site. Six archeological sites have been recorded within a one mile radius of the project site. Two archeological surveys had been previously conducted at the project site. Cagle and McDowell (1994) conducted an archeological field survey of the project site in 1994. They found no evidence of archeological resources, but recommended additional field surveys due to dense vegetation which obscured ground visibility. A previous survey was conducted of the sewer line corridor on the slopes of Campanil Hill in 1992, which yield negative results.

In 1999, Conejo Archeological Consultants conducted a Phase I field survey of the project site. Linear transects at 15 to 20 foot spacing across the project site were walked, and the ground surface examined for archeological artifacts. No archeological resources were discovered, nor any midden or shell fragments. The integrity of the project site has been degraded as a result of prior disturbance, including informal construction of a BMX track by local teens, the placement of spoils for the construction of the Stone Creek Condominiums, and the previous location of the Veronica Springs Medicinal Water Company. The project site has no known ethnic or religious use or significance.

The Historic Landmarks Commission (HLC) and its archaeological advisor reviewed the Phase 1 survey and recommendations, and accepted it on January 5, 2000.

3.4.1.2 Historic Resources

Historically, the property was the site of several artesian springs exploited by the Veronica Springs Medicinal Water Company and successor companies. At present, there are no standing structures on the property. The only evidence to indicate that buildings once existed are scattered remains of construction debris, including fragments of wood siding, asphalt shingle tiles, nails and fragments of window glass. Much of this construction debris, however, appears to have been brought to the site and dumped on the property, the bulk of it since the 1950s.

Site History

After Mission Santa Barbara was founded in 1786, the springs at the project site formed a part of the lands of Mission Santa Barbara. Although several later sources state that the Franciscan missionaries named the springs after Saint Veronica and used the water for medicinal purposes, there is no documentary evidence to indicate that the springs were exploited during the Mission Period. In 1834, the Mexican Government took control of the missions and their lands. The secularized lands were then sold to private individuals and groups, including Veronica Springs, called *La Calera y Positas*. After a series of owners, it was purchased by Thomas Hope in 1861. Thomas W. Hope was a sheepherder and cattle rancher in Texas before coming to Santa Barbara in 1849. After arriving in California, Hope continued his interest in sheepherding and increased his wealth and landholdings. The Veronica Springs property was sold by his children in 1880.

Sometime after 1880, a medicinal water company was established at the property when a partnership was formed by local businessmen to promote the springs. One of the first verifiable indications that

Veronica Springs was being exploited was a newspaper article extolling the virtues of the spring's bottled mineral water at the 1892 Santa Barbara Fair. A year later, in 1893, Henry Clifton formed a partnership with Theodore and Walter A. Hawley, creating the Veronica Medicinal Springs Water Company. At the time the Hawleys and Clifton formed their partnership, mineral spring water was a popular palliative used in the treatment of a number of illnesses.

In the late Nineteenth and early Twentieth centuries, natural mineral water was often touted as cure-alls for almost every ill, including digestive complaints, gout, rheumatism, tumors and even alcoholism (Anderson 1889). Its popularity during this period can be attested to by the fact that by 1889, in California alone, over a hundred and forty mineral springs were being utilized for their curative powers (Anderson 1889). The marketing of mineral water was often accompanied by the development of elegant resorts that transformed "taking the waters" into a fashionable experience. The Hawley's and Clifton formed their company in order to take advantage of this interest in the health benefits of mineral water by bottling and marketing the Veronica Springs water as a medicinal cure.

Most likely as a result of lagging sales, the company undertook few improvements at Veronica Springs. By 1903, only one structure, most likely the well house, is depicted on the property. During the Hawley/Clifton tenure, water was extracted directly from the artesian springs and then placed in large wooden barrels, then hauled from the springs by four-horse teams to railroad sidings at Hope Ranch or Stearns Wharf. From there the barrels of water were shipped north to the main office in San Francisco for bottling and distribution to its major market, the Eastern Seaboard.

In 1913, the company was sold to a new partnership, headed by F. H. Kimball and Joseph H. Thomas. After purchasing the company, Kimball and Thomas conducted an intensive advertising and marketing campaign to popularize the mineral water as a health cure. In conjunction with their marketing campaign, the company's owners carried out an expansive building campaign that included the acquisition of a lot in Santa Barbara to build a bottling plant and office. The parcel was located at the corner of East Montecito and Salsipuedes Street. The bottling plant, built in 1913, could turn out six hundred dozen bottles of water per day.

Over the years a number of capital improvements were made at Veronica Springs, including the construction or renovation of at least nine outbuildings. These included an octagonal gazebo housing a fountain, a circular well house covering the main well, a large three- gable board and batten well house, a wooden bridge, and several other outbuildings whose precise function could not be determined. The company also carried out extensive landscaping at Veronica Springs. Plants included exotic flowers, pepper trees, palms, agaves, lemon trees and poinsettias. Largely as a result of these enhancements, the Veronica Spring's property soon became a popular picnic spot for Santa Barbara's residents. The springs also became a favorite destination for Santa Barbara's tourists, especially for guests from the Potter and Arlington Hotels.

On April 5, 1919, Kimball and Thomas sold the Veronica Springs Medicinal Water Company to William F. Layer. After 1927, and for the next eighteen years, there are no listings in the City Directories for the Veronica Medicinal Springs Water Company or any other successor company associated with Veronica Springs. It is likely then that the company ceased operations sometime shortly after 1927. It is not clear as to when the buildings at Veronica Springs were demolished.

In 1945, Veronica Springs is once again listed in the City Directory. The new company's plan to reintroduce Veronica Water to the public failed within a year. Two years later an attempt was made to market the spring water once again. In 1948, the Veronica Mineral Springs Water Corporation, with Frank. W. Cole as the President and M. F. Kimmet as the Vice-President established offices at 735 State Street. This company too lasted a brief time. By 1955, a new company, under the name of Veronica Sales Company, Limited, opened offices. It is likely, by the name of the business, that this was a real estate development company, interested in acquiring the land for a residential tract, rather than exploiting the mineral waters of its artesian springs.

Over the next forty years the property changed hands a number of times. As far as can be ascertained, none of the subsequent owners developed the property or exploited the springs. In the early 1960s, the property was subdivided into two parcels (APN 047-010-11 and APN 047-010-16). Earl and Raffaela Brann (and other partners) bought the property in 1978 . They were the first owners since 1955 to attempt to develop the land. Their proposal entailed the construction of a housing development of sixty-four multiple housing units. This project was never realized and twenty-one years later, in 1999, the property was sold to the current owners, Peak-Las Positas Partners.

Assessment of Historic Resources

As described above, the project site was the location of the Veronica Medicinal Springs Water Company from at least 1893 until approximately 1930. For over 40 years, mineral water from Veronica Springs was bottled and sold in the United States as a medicinal supplement. Through its marketing image, the Veronica Water brand helped establish in the imagination of the late nineteenth and twentieth century American consumer the idea of Santa Barbara as a paradise, which played an important role in establishing Santa Barbara as a major tourist destination. As a consequence, the site could prove to be an important historical and cultural resource in enhancing our knowledge of the economic development on California, particularly as it relates to the history of the City of Santa Barbara.

Despite the demolition of the buildings associated with the Veronica Springs Medicinal Water Company, the site itself represents an important resource. The site has retained almost all of the natural setting that it possessed during its heyday in the early twentieth century, and the property could yield information regarding the development and operation of the company.

In1999, a Phase 1 Historic Resources Report was prepared by Post/Hazeltine Associates (1999) which evaluated the project site and previous buildings and features for historical significance. The report concludes that the property is potentially eligible as a City Landmark under significance criteria (a) and (j), finding that the site represents a significant part of the heritage of the City, the State or Nation, and has the potential to yield significant information of historical interest. In addition, the report concludes that the site meets eligibility under the guidelines for National Register of Historic Places for criteria (a) and (d), as it is associated with events that have made a significant contribution to the broad patterns of our history, and it may yield information important in prehistory or history. The report was accepted by the Historic Landmarks Commission (HLC) on January 5, 2000,

In 2001, a Phase 2 Historic Resources Report was prepared by San Buenaventura Research Associates (2001) to further evaluate the historic significance of the site and to provide recommendations for mitigation measures. The report was accepted by the HLC on August 15, 2001. The HLC requested that the Phase 2 report evaluate the previously existing landscape elements and circulation paths that may have existed with the Veronica Springs and provide photo documentation to allow designers to look at some of the vernacular elements. The HLC also asked that the site be designated a landmark, and that the development and design reflect the historical use of the site.

The results of the Phase 2 report indicated that little remains today of the original road circulation system. Remnants of asphalt can be seen along what once was the road into the property from the north. Today, this road is overgrown with weeds and trees. The eastern portion of proposed public Lane "A" would be located in the vicinity of the original road used to access the site. Only one small remnant of what may have been the row of oak and acacia trees along the road that led to the Veronica Springs cluster of buildings remains. Photos of three of the nine buildings that once existed on the site were found, and a gazebo structure is perhaps the most distinctive building, with an octagonal shape and bellcast hip roof covered with what appears to be composition shingles. These, along with diamond-paned windows, are its characteristic features.

3.4.2 Potential Impacts

3.4.2.1 Impact Thresholds

Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines states that a project will have a significant effect on a historic resource (including archaeological resources that meet the criteria for historic resources) if the project may cause a substantial adverse change in the significance of a historic resource. According to Section 15064.5 of the CEQA Guidelines, a historic resource is one that:

- Is listed in or determined to be eligible for listing in the California Register of Historic Places;
- Is included in a local register of historic resources or is identified as significant in a historical resource survey;
- Any object, building, structure, site, area, place, record or manuscript which a lead agency determines to be historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California based on substantial evidence in the record;
- If the resource is not listed in or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources, or has not previously been evaluated in a local survey, the lead agency is still obligated to determine its historical significance in the environmental review process;
- A substantial adverse change means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance would be materially impaired.

Further, Section 21083.2 of CEQA defines a "unique archaeological resource" as an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as oldest of its type or best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Pursuant to CEQA Section 21083.2, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that archaeological resources are not preserved in place or left in an undisturbed state, mitigation measures shall be required. In addition to the above criteria, a project would have a significant impact on cultural resources if it would:

- Conflict with applicable legal requirements relating to cultural and historic protection;
- Conflict with existing City policies related to cultural resource protection, including the General Plan Conservation Element, Local Coastal Program or Master Environmental Assessment;
- Conflict with cultural and historic preservation measures established by federal, state, or City regulatory programs;
- Result in the loss of any designated Landmark tree, or tree with historic value;
- Cause the physical disturbance of, or prevent future access to, a prehistoric, historic or cultural site which is listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or as a City Landmark or Structure of Merit (Municipal Code Sections 22.22.040 and 22.22.090);
- Cause physical disturbance of, or prevent future access to, a structure, parcel, or other feature of historic or cultural significance to a community, ethnic or social group;
- Cause physical disturbance of, or prevent access to, a unique paleontological site; or
- Cause disturbance to any human remains

3.4.2.2 Impacts to Archeological Resources

No archeological resources are known or expected to occur at the project site based on three previous surveys of the property. Any cultural material encountered is not expected to be an intact or significant resource. Hence, the impact of the project on archeological resources is considered **less than significant (Class III)**. There is the potential, although unlikely, for encountering

previously undocumented cultural resource during site earthwork and grading. Thus, standard procedures for evaluation and mitigation in the event of discovery of unanticipated cultural materials during construction are recommended below in Mitigation Measure CR-1.

3.4.2.3 Impacts to Historic Resources

The project site has been identified as a significant historic resources based on the Phase 1 and 2 historic resources studies. The property meets the criteria for listing as a City Landmark and for eligibility on the National List of Historic Places. No historic structures remain on the site. Hence, the proposed development of the project site would not remove any historic structure. A grove of oak and acacia trees that originated within the Veronica Springs Medicinal Water Company is present at the site. These trees would be retained adjacent to Lot 7 as part of the proposed project.

The development of the site would significantly modify the physical setting of the property, which was mostly undeveloped when the water company was active. Converting the site from open space that resembled its historic condition, to residential development would cause a substantial adverse change in one element of the historic resource – the physical setting. This change would reduce the historic significance of the property and reduce opportunities to learn about the history of Santa Barbara. The impact is considered **significant, but mitigable (Class II).** Mitigation measures identified in the Phase 2 historic resource study would offset the physical impacts to the site, and provide information on the historic significance of the site to the public. These mitigation measures (CR-2 to CR-5) include retaining the remnant of the original stand of oak trees at the site, and commemorating the demolished structures with a display of text and photographs within a newly constructed gazebo that reflects the original structure that once existed on the site.

3.4.3 Applicable Local Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. In addition, the policies in the State Coastal Act are also applicable. The consistency of the proposed project with goals and policies related to cultural resources is evaluated below. The final determination of consistency will be made by the Planning Commission and City Council.

> ***Goal 1.*** *Sites of significant archeological, historic, or architectural resources will be preserved and protected wherever feasible in order that historic and prehistoric resources shall be preserved.*
>
> ***Policy 1.*** *Activities and development, which could damage or destroy archeological, historic, or architectural resources are to be avoided.*
>
> ***Implementation Strategy 1.*** *Activities and development which could damage or destroy archeological, historic, or architectural resources are to be avoided.*

The proposed project would be consistent with the above goals and policies because no significant archeological impacts are anticipated, and because the potentially significant impacts to historic resources can be feasibly mitigated.

3.4.4 Mitigation Measures

CR-1 Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts associated with past human occupation of the parcel. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified, and an archaeologist from the most current City Qualified Archaeologists List shall be retained by the applicant. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, preparation and implementation of a Phase III Archaeological Resources Report in accordance with the City Master Environmental Assessment Guidelines for Assessment of Archaeological Resources and Historic Structures and Sites, etc. If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization. If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission to determine the disposition of the remains.

CR-2 The remnant oak trees in the center of the project site near Lot 7 shall be retained and incorporated into the project. Interpretive signage shall be placed near the trees along a path. The signage shall include a photograph of the buildings that were once located nearby, showing the activity on the site associated with the water company. All of the interpretive signage shall be metal within a wood frame (subject to review and approval by the Historic Landmarks Commission), and the text will be prepared by a qualified historic preservation professional.

CR-3 A gazebo structure shall be constructed near the proposed pedestrian trail along the creek corridor. It shall be constructed to match the design, scale, and material of the original building that was associated with the water company. The gazebo structure shall contain a display of the history of Veronica Springs, including photographs and advertising brochures from the water bottling plant in town and the Veronica Springs site itself. If artifacts are found through archaeological monitoring, those artifacts should be suitably displayed in the building. The gazebo design shall be reviewed and approved by the Historic Landmarks Commission and Architectural Board of Review. <u>The proposed gazebo shall be situated as</u>

far as possible from the creek (a minimum of 50 feet) and the location shall be selected to minimize impacts to riparian resources.

CR-4 Interpretative signs shall be placed along the public path along the creek corridor that describe the entry road to Veronica Springs and other historical elements on the site. The signs shall be reviewed and approved by the Historic Landmarks Commission and Architectural Board of Review.

CR-5 The name of the new development and streets within the development shall reflect the history of the Veronica Springs site (e.g., Veronica Springs, Veronica Meadows, Kimball Road, Hawley Heights, Clifton Way, Thomas Road). The street names shall be reviewed and approved by the Historic Landmarks Commission.

3.5 VISUAL RESOURCES

This section addresses the potential for the proposed Veronica Meadows development project to create visual impacts, including: potential impairment or obstruction of public scenic view corridors, including views from Elings Park; potential changes to the visual character of the area; and effects of glare or night lighting on adjoining areas. The photographic simulations used in the following analysis (see Appendix C) were prepared by Cannon Associates of San Luis Obispo.

3.5.1 Existing Conditions

3.5.1.1 Visual Environment

Regional Character

The Santa Barbara coastal region consists of rolling hillsides and sharp creek valleys rising towards the rocky slopes of the Santa Ynez Mountains, stretches of undeveloped beaches, park lands, open space, and agricultural land on marine terraces. Quality views of resources are available from various city and county streets, Highway 101, public trails and parks, and beaches.

A large portion of Las Positas Valley is developed with low and moderate density residential neighborhoods. Development through this region of Santa Barbara County and adjacent City of Santa Barbara is less dense toward the coast, transitioning to more intensive development closer to Highway 101. The ridgeline above the valley is developed with very large houses and estates, the most notable being a large estate on Campanil Hill.

Landforms and Vegetative Cover

Steep slopes rise sharply from Las Positas Road and Arroyo Burro Creek forming the Las Positas Valley. Las Positas Valley is a narrow, winding canyon oriented north-south which connects Highway 101 to the north with Cliff Drive to the south. The steep slopes east and west of Las Positas Road contain undeveloped coastal scrub and annual grassland. Developed areas in the valley contain a mix of non-native landscape trees and shrubs and some native trees and shrubs used in residential landscaping. Dense riparian vegetation with large willow, eucalyptus, and sycamore trees occur along Arroyo Burro Creek, which meanders through the bottom of the valley.

The project site, approximately 0.75 miles north of the coastline, is located adjacent to Arroyo Burro Creek. Most of the site consists of alluvial deposits at the base of the steep slopes of Campanil Hill. While the project site is not level, it appears relatively horizontal in the context of the surrounding vertically oriented slopes. A wide mix of mostly exotic trees and shrubs occur on the site including a large stand of eucalyptus at the west end of the project site, several palms of significant size, an oak grove and scattered exotic trees such as acacias. As noted above, Arroyo Burro Creek contains very dense and tall oak, willow, eucalyptus, and sycamore trees. The mature trees at the project site are considered aesthetic resources.

Surrounding and Onsite Uses

The project site is surrounded primarily by a mix of open space and low density residential development. Surrounding hilltops are punctuated by larger individual residences, while flanking the project site west of Las Positas Road are a single family neighborhood to the south (Alan Road) and a condominium complex to the north. Across Las Positas Road from the project site is Elings Park, a large multi-use park with vistas of the Pacific Ocean and the project site (see Visual Figure 1, Appendix B).

Although the project site is undeveloped, there is abundant evidence of past and current uses at the project site. Mature palms and other exotic vegetation indicate historic uses of the site for the medicinal water bottling company. Large debris and old cars scattered throughout the site indicate the site has also been used as a dumping ground. Extensive grading and vegetation removal onsite has occurred fairly recently to create a motorcycle track. With the exception of the track, the site is otherwise vacant.

Surrounding Views

Las Positas Road, while not in vicinity of any designated scenic highways, is a relatively scenic drive and is within close proximity to scenic coastal views. Currently, the project site offers open space views and visual relief from nearby suburban development as seen from Las Positas Road. Because the site is situated at a lower elevation in the valley, potential development on the site would not block coastal views. Views of the Pacific Ocean available from nearby public vista at Elings Park are seen in conjunction with the project site. The site may be glimpsed briefly from Las Positas Road, but is mostly screened with riparian vegetation and larger trees growing close to the road.

Visual Character

The visual character of a project area is defined as the landforms, water, vegetative patterns, and existing modifications that give an area its distinguishing qualities. This component is recorded in the baseline photographs of the project site (Appendix C) prior to photo-simulating the proposed development.

A substantial level of mechanical grading and vegetation removal has occurred over a portion of the proposed residential development area of the site to create a motorcycle track. The presence of mature exotic trees, such as the large palms and eucalyptus stand, piles of removed vegetation, old cars and other debris suggests that other historical uses occurred on this portion of the site.

The proposed development area is seen with the backdrop of Campanil Hill with its relatively undisturbed coastal scrub, and is bordered to the east by the green strand of riparian vegetation. Given the various forms and textures on and surrounding the project area, the visual character of the site is diverse, but lacking in continuity.

Visual Quality

Visual quality is concerned with the overall attractiveness of an area and the capability of preserving this attractiveness when new features are introduced.

The area proposed for development exhibits evidence of recent earth disturbance by motorcycling riding. Most of the project site to be developed has a disturbed appearance. It not visually pristine and gives an impression of poor visual quality. However, the adjacent Arroyo Burro Creek, Campanil Hill, and the 35-acre open space parcel appear relatively undisturbed, as seen from public viewpoints.

Views toward the proposed residential development area from surrounding public viewpoints are partially obscured with mature trees and fairly dense vegetation along the riparian corridor of Arroyo Burro Creek. The riparian vegetation serves to partially screen views of the disturbed central portion of the site, giving an effect of visual intactness. However, the center of the project site where the proposed development would occur is disturbed and does not have any features that are particularly noteworthy or memorable.

Overall, the project site is considered to have a moderate visual quality.

3.5.1.2 Elements of Viewer Response

Visual impacts result not only from changes to the visual environment but from viewer groups' perceptions of those changes. Viewers respond to changes differently based on their sensitivity and exposure.

Viewer Exposure

The number of viewers, distance of viewing location, as well as the duration of views, is considered in determining viewer exposure. There are three types of viewer groups considered in this analysis: travelers along Las Positas Road, local residents in the Alan Road neighborhood, and recreational users at Elings Park.

Travelers along Las Positas Road consist of both residents of nearby neighborhoods as well as residents of other parts of the City using Las Positas Road to reach other destinations. Views of the site from the road consist of only brief glimpses of the site (e.g., seconds) based on the rate of speed along Las Positas Road (speeds of approximately 35-55 mph were observed during field reconnaissance) and the intervening landforms and existing vegetation. Viewer distances from Las Positas Road to the site range from 300 to 1,000 feet. However, Las Positas Road provides access to neighborhoods and businesses from Highway 101 south to the coast and, as a result, the number of travelers per day is high (approximately 37,800 trips per day). Hence, the potential viewer exposure from Las Positas Road is considered high.

Alan Road does not have through access, so potential public views of the project site to residents of the neighborhood are limited. There are a limited number of houses in this areas, approximately 25 houses from Vista Del Mar to the end of Alan Road, and traffic counts are estimated to be no

greater than 200 trips per day. The project site is not visible from Alan Road due to screening by large trees and shrubs at the terminus of Alan Road. However, residents often visit the project site for hiking, walks, outdoor play, and dog walking. Hence, nearby residents have opportunities to view a portion of the project site for extended durations at very close proximity. Nevertheless, viewer exposure at Alan Road is considered moderately low.

Over 170,000 people use Elings Park annually for a daily average of approximately 500 users. While many park users may be involved in activities that are not oriented toward views of the project site, a moderate percentage of park users would utilize the vistas at the higher elevations in the park to take in views of the surrounding area. Duration of viewing may be moderate to extended. Hence, viewer exposure at Elings Park is considered moderate. It is important to note however, that the distance from park vistas to the project site is approximately 0.25 mile. Vistas of the majority of the site are relatively unobstructed, and the project site occupies roughly 25% of the horizontal plane of the view.

Sensitivity Level

The visual sensitivity level deals with the public's expectation of the area, and their reaction to development within the context of the area's visual quality. Relative sensitivity would vary with the viewer's activities, expectations, and attitudes.

Individuals viewing the site from Elings Park would be utilizing the public park for recreational activities and would be more sensitive to views than travelers along Las Positas Road. However, given the scenic nature of Las Positas Road, travelers would be moderately sensitive to views. Residents in the Alan Road neighborhood, while living in a suburban context, would be sensitive to changes of the project site which has provided open space and visual relief from the developed setting of the neighborhood.

3.5.1.3 Visual Observation Points

Visual observation points to assess the visual impacts of the project on public views are defined as publicly accessible locations selected to be representative of the most critical locations from which the project would be viewed by the public. The visual observation points are generally selected for one or two reasons: (1) the location provides representative views of the landscape along a specific route segment or in a general region of interest; and/or (2) the viewpoint effectively captures the presence or absence of a potentially significant project impact in that location. Observation points are typically established in locations that provide high visibility to relatively large numbers of viewers and/or sensitive viewing locations such as residential areas, recreation areas, and vista points. Three visual observation points were selected, as shown on Figure 3-15 and described below. While it is not possible to represent every view toward the project from public areas, the visual observation points identified are representative of typical impacts to visual resources generated by the proposed project and facilitate review and discussion of the proposed project. Photos 1A, 2A, and 3A (Appendix C) show the view from the three visual observation points.

- **Observation Point 1**. This observation point is a view west toward the project site from the Elings Park scenic overlook at the flag pole adjacent to Godric Grove. This view is

representative of the project site as seen by recreational users at various points in the park including the playing fields, Veterans Living Memorial, the Sierra Club Trail, the BMX course, and scenic overlook areas. From this vista point, 170 feet above the project site, a large portion of the site proposed for residential development (Lots 5 through 24) is clearly visible. Dramatic views of the Pacific Ocean can be seen beyond Campanil Hill on a clear day. This observation point represents an important public scenic view that would be affected by the project.

- **Observation Point 2.** This view is north toward the project site from Las Positas Road. Typical viewers at this location include local residents and tourists traveling to various locations in the Santa Barbara area. From this observation point, most of the site is obscured by dense riparian vegetation along Arroyo Burro Creek between the road and the proposed residential development area. This view is representative of the approximately 0.25 mile stretch of Las Positas Road where the project site may be glimpsed from Las Positas Road. The views of the site from Las Positas Road represents an important public scenic view, albeit very limited.

- **Observation Point 3**. This view is north from the end of Alan Road. Viewers at this location are generally limited to residents of Alan Road. Views of the majority of the site are obscured by large existing trees and shrubs on the site as well as by the asymmetrical shape of the site. This observation point does not represent an important public scenic view. However, it was included in the analyses due to the proximity of the Alan Road residences.

3.5.1.4 Existing Night Lighting Conditions

There are no existing light sources on the project site. Nighttime conditions at the project site are subject to limited ambient lighting from residential development in nearby neighborhoods. Some lighting fixtures of the older residences south of the project area are of the unshielded type. However, during summer and fall, nighttime softball games at Elings Park create a significant light effect throughout the Las Positas Valley, particularly when there is a low cloud cover.

3.5.2 Potential Impacts

3.5.2.1 Thresholds of Significance

Based on the criteria in the Environmental Checklist Form in Appendix G of the CEQA Guidelines, a proposed project would have a significant visual impact if it would result in one or more of the following conditions:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Substantially degrade the existing visual character or quality of the site and its surroundings?
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.5.2.2 Impact Assessment Methodology

During the field reconnaissance to select the visual observation points, the potentially affected landscape was photographed and project impact information compiled from each observation point. A description of the existing landscape characteristics and sensitivity was compiled that includes notes on existing visual quality, known viewer sensitivity, landscape visibility, visible evidence of historical and cultural influence, and potential viewer exposure. The evaluation of viewer exposure also included qualitative notations on potential numbers of viewers, distance zones, and duration of views.

Baseline photographs at the visual observation point were taken with a lens comparable to the human eye - none of the photographs are either wide angle or telephoto in scope. The baseline photographs were used to construct visual simulations. The baseline photos were compared to the photos with project simulations. This process allowed a determination of impact significance to be made from each observation point.

The simulations show existing conditions (Photos 1A, 2A, and 3A, Appendix C), and a simulation of the proposed project immediately after construction, before landscaping has matured (Photos 1B, 2B, and 3B, Appendix C), and after five years when landscaping begins to screen the structures (Photos 1C, 2C, and 3c, Appendix C). In order to create the computer simulations, eighteen-foot high pylons were placed at surveyed locations at the project site to establish scale and location references in the photographs. The project simulations were generated from applicant supplied designs including grading and landscape plans as would be in place when the project is occupied. Complete architectural elevations for all aspects of the residences were not supplied. Therefore, the simulations prepared for this evaluation are schematic in character and indicate overall mass and shape, but no architectural details such as doors, windows or building materials.

3.5.2.3 Project Impacts

The magnitude of visual impacts was determined through an evaluation of visual contrast, project dominance, and view impairment at each visual observation point, as described below. In effect, magnitude of the visual impact incorporates considerations of the project's physical characteristics and their likely effect on the existing landscape.

Observation Point 1 – Elings Park

When the project is added to the scene as viewed from observation point 1 (See Photo 1B, Appendix C) there is notable change from visual open space to that of development in the mid-ground of the view. From this viewpoint, individual building mass and the total mass of the project as a whole would contrast with the surrounding open space immediately adjacent to the development area. Lots 7-24, clustered together, create a visual contrast to the existing scene. The project would be co-dominant with the surrounding elements of the visual environment.

The proposed project would degrade a portion of the existing visual resources of the open space at the project site. However, a larger area of open space (i.e., the creek corridor and hillsides) would remain intact, preserving the overall visual character and quality of the project site. From the

observation point at Elings Park, the proposed development would be nested into the base of Campanil Hill and would not substantial impair or degrade public scenic views. The internal roads and bridge to the project site would be obscured by the large trees at the entry to the park.

When viewed in the larger context of the Las Positas Valley area, the project would blend in with the surrounding suburban development seen on the ridges above the project site, as well as with the residential neighborhoods to the south. Residential development at the project site would alter, but would not substantially degrade the character of the project site.

Other considerations that reduce the magnitude of the visual impact from this public observation point are the great distance from the viewing location, and the amount of grading at the existing site which has already degraded its visual quality.

Based on the above considerations, the visual impact of the proposed land development from Elings Park is considered **adverse, but not significant (Class III)**. This impact would be reduced over time as the landscaping acquires height and density (Photo 1C, Appendix C). To further reduce the visual impacts of the new residences from the views at Elings Park, Mitigation Measure VS-1 is recommended. This measure would require that the final color and texture scheme for the new residences be developed to reduce visual contrast, and that it be approved by the Architectural Board of Review.

Observation Point 2 - Las Positas Road

From this visual observation point, the roof forms of residences on Lots 15-24 ,which are at a higher elevation than Las Positas Road (12-30 foot difference), would be visible to travelers in vehicles if they direct their attention from the road. The rooflines of the residences on Lots 8-10 could also be glimpsed (See Photo 2B, Appendix C). Currently, vegetation along Arroyo Burro Creek obscures most views to the site. Some of the planned vegetation removal at the site may open up some brief views of the site, but most of the screening vegetation along the creek would remain intact. Roof forms of the houses at elevations equal to Las Positas Road (Lots 7-14) would be obscured by existing tall roadside vegetation.

While the visual change from this observation point may be noticeable to local residents initially, most travelers along Las Positas Road would view the project in the context of the surrounding suburban setting, or in many cases, would not view the development at all because their line of sight would be focused on the roadway. Even with the removal of mature trees, the project is not expected to substantially degrade views or significantly change existing visual character of the nearby suburban setting. However, the grouping of roof forms glimpsed against the surrounding undeveloped slopes has to the potential create a significant contrast until landscaping has matured to screen the view from the observation point.

When the dense tree planting along the riparian corridor matures, the houses would be mostly obscured from view, similar to the screening of the existing residences on Alan Road (Photo 2C, Appendix C). Based on these considerations, the visual impact of the proposed land development from brief views from vehicles traveling along Las Positas Road is considered **adverse, but not significant (Class III).**

Observation Point 3 – Alan Road

When viewed from Alan Road, the houses proposed for Lots 1 and 2 would be dominant in the existing neighborhood context (See Photo 3B, Appendix C). The mass of these residences, and the orientation and topography of the site preclude views of the remainder of the proposed structures from this observation point. While the removal of mature trees, completion of the cul-de-sac, and addition of the two story residences at the end of the street introduces changes to the current setting, these changes would be generally compatible with the existing residential character of the area. While the design of the residences planned for Lots 1 and 2 includes attached garages in keeping with the design of the Alan Road residences, the height and mass of the proposed residences would exceed that of the nearby single-story residences. Landscaping would slightly reduce this visual impact (Photo 3C, Appendix C).

The new residences at Lots 1 and 2 would not impair an important public scenic view. Most of the viewers at this observation point would be residents. As such, the visual impact of the new homes would not have a significant impact, and would be considered **a Class III impact**. However, it is recognized that the proposed new two-story homes may create a contrast with the architectural design and scale of homes in the neighborhood, which would be of concern to nearby residents. To increase the compatibility of the new homes with the neighborhood, Mitigation Measure VS-2 is recommended to reduce the height and contrast of the structures nearest to Alan Road.

Impact of Light and Glare

The proposed project would create new nighttime lighting from street lighting on Lane "A" and the bridge over Arroyo Burro Creek, landscape lighting on private lots, and lighting from within residences. Street lighting have the most potential to view from off site because streetlights due to their height and general brightness. Streetlights are essential for public safety and are generally recognized as such by residents and passersby. Streetlights that obscure a scenic nighttime view or that are exceptionally bright would have the potential to create significant visual impacts.

The proposed lighting at the project site would be primarily visible to travelers along Las Positas Road, and certain residences on the ridges south and east of Elings Park. Visitors to nighttime events at Elings Park are not expected to be adversely affected because they would be under the bright nighttime lights at the park for softball, soccer, or special events. The proposed streetlights on Lane "A" and on the bridge over Arroyo Burro Creek would not obscure a significant scenic view nor would it substantially affect nighttime public viewing locations. Residential and landscape lighting at the project site would be seen as a continuation of the standard residential lighting levels of the residential development to the south. While the project does create a new source of light, the visual impact of nighttime lighting on the public is considered **less than significant (Class III)**. This impact can be reduced further by Mitigation Measure VS-3.

3.5.3 Applicable Local Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. In addition, the policies in the State Coastal Act are also applicable. The consistency of the proposed project with goals and policies related to visual resources is evaluated below. The final determination of consistency will be made by the Planning Commission and City Council.

Coastal Act Policies

Protection of scenic and visual qualities of coastal resources is an issue of high importance, and thus is discussed in several sections of the Coastal Act. Specifically, the Coastal Act is concerned with protecting the public viewshed, including views from public areas such as highways, roads, beaches, coastal trails, and access ways, rather than views from private residences where no public views are available.

> ***Policy 30251:*** *Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of the surrounding area, and, where feasible, to restore and enhance visual quality in visually degraded areas.*

The proposed project would not result in a significant, unavoidable visual impact to the scenic open space areas of Las Positas Valley. The proposed development would be mostly screened, or would not be visible from public viewing locations. In addition, the proposed site layout and architecture would be compatible with the surrounding landscaping. Finally, the proposed project would not affect any coastal views. The proposed project is considered potentially consistent with the above policy.

City Local Coastal Plan

> ***Policy 9.1.*** *The existing views to, from, and along the ocean and scenic coastal areas shall be protected, preserved, and enhanced. This may be accomplished by: (1) Acquisition of land for parks and open space; (2) Requiring view easements or corridors in new development; (3) Specific development restrictions such as additional height limits, building orientation, and setback requirements for new development; or (4) Developing a system to evaluate view impairment of new development in the review process.*

The proposed project would not result in a significant, unavoidable visual impact to the scenic open space areas of Las Positas Valley. The proposed development would be mostly screened, or would not be visible from public viewing locations. In addition, the proposed site layout and architecture would be compatible with the surrounding landscaping. Finally, the proposed project would not affect any coastal views. The proposed project is considered potentially consistent with the above policy.

Conservation Element: Visual Resources

Goal. *Restore where feasible, maintain, enhance, and manage the creekside environments within the City as visual amenities, where consistent with sound flood control management and soil conservation techniques.*

Goal. *Prevent the scarring of hillside areas by inappropriate development.*

Goal. *Protect and enhance the scenic character of the City.*

Goal. *Protect significant open space areas from the type of development which would degrade the City's visual resources.*

Policy 1. *Development adjacent to creeks shall not degrade the creeks or their riparian environments.*

Policy 2. *Development on hillsides shall not significantly modify the natural topography and vegetation.*

Policy 3. *New development shall not obstruct scenic view corridors including those of the ocean and lower elevations of the City viewed respectively from the shoreline and upper foothills.*

Policy 4. *Trees enhance the general appearance of the City's landscape and should be preserved.*

Policy 5. *Significant open space should be protected to preserve the City's visual resources from degradation.*

The proposed project would be potentially compatible with the above policies as follows. The proposed project would enhance the visual qualities of Arroyo Burro Creek through the planned habitat restoration of the creek corridor. The proposed project would not obstruct any public scenic views of the coast or any scenic corridors. Development would not occur on hillsides. Mature trees at the site would be replaced with a larger number and more diverse array of trees. A substantial portion of the eucalyptus grove at the western end of the project site would remain intact. Finally, the proposed project includes the dedication of 35 acres of scenic hillside to open space. Based on these considerations, the proposed project is considered potentially consistent with the above policies.

3.5.4 Mitigation Measures

VS-1 The applicant shall submit final architectural plans and color/material boards to the Architectural Board of Review (ABR) for review and approval. The color and texture scheme shall be designed to minimize visual contrast with the surrounding landscape.

VS-2 The final architectural plans for residences at Lots 1 and 2 shall be designed to minimize the contrast of height and mass between the proposed two-story homes and the adjacent one-story homes along Alan Road. These plans shall be submitted to the Architectural Board of Review (ABR) for review and approval.

VS-3 To prevent nighttime glare, any exterior lighting installed on the project site shall be of low intensity, low glare design, and be hooded to direct light downward and prevent spill over onto adjacent parcels. All light fixtures shall be shielded so that neither the lamp nor the related reflective interior surface is visible from any of the observation points. All light poles, fixtures, and hoods shall be dark colored (non-reflective). Security and street lighting shall be shielded so as not to create glare when viewed from the observation points. The light poles and fixtures shall not be obtrusive to travelers along Las Positas Road, the Alan Road neighborhood, or the public open space areas.

3.6 LAND USE AND RECREATION

3.6.1 Existing Conditions

3.6.1.1 Land Use

The project site for the Specific Plan is located within the unincorporated area of the Las Positas Valley, between Arroyo Burro Creek and Campanil Hill (Figure 1-1). The site is currently undeveloped open space that is used informally by local residents for walking, outdoor play, and motorcycle recreation. Pedestrian access is available from the end of Alan Road where a locked gate blocks vehicular access. There are no improvements on the site; however, a well-worn trail traverses the site that was once used to inspect the City sewer line. This trail parallels the west bank of Arroyo Burro Creek. Another trail is located along the base of the hills at the western end of the property, traversing the eucalyptus grove. The motorcycle enthusiasts have constructed a series of trails and earthen ramps throughout the center of the site, and along the base of several hills.

The land uses surrounding the project site consists of residential, open space, and recreational. Single-family residences are located south of the project site in the Braemer Vista subdivision. The Stone Creek Condominiums are located north of the project site. Arroyo Burro Creek and open space occur along the eastern boundary of the project site. Las Positas Road is also present on the east side of the creek. Elings Park is located across Las Positas Road. Extensive open space and a large estate are located west of the project site on Campanil Hill.

3.6.1.2 Recreational Facilities

Although the project site is privately owned and access is restricted by the landowner, the property has and continues to be used informally and without authorization for hiking, biking, motorcycle riding, natural enjoyment, dog walking, and general outdoor recreation.

There are several major recreational facilities in the vicinity of the project site. The nearest is Elings Park, located across Las Positas Road from the project site.

<u>Elings Park</u>

The 94-acre property is owned by the City of Santa Barbara and the park is operated under lease arrangement by the non-profit Elings Park Foundation. It includes a variety of passive and active recreational facilities and uses. Daytime activities and facilities include two unlighted soccer fields, two playgrounds, two special event picnic areas, various individual picnic tables, Veteran's Memorial Walk and Terrace, amphitheater, hiking trails, and a hang-glider area. In addition, the lower plateau contains a temporary bicycle motocross track (BMX) that is also used by a Remote Control car club (RC Club); three softball fields, an outdoor venue for catered events; and a small structure that has office space for park operations staff. The Park is open from sunrise to sunset, but may be open in the evening for certain events, as described below.

The BMX club uses the track two evenings per week for about 20 to 30 riders. Occasional weekend BMX events attract up to 40 riders per day. In addition to the use of the BMX track by bike riders, a Remote Control car club (RC club) uses an area west of the BMX track on two Sunday evenings per month, occasionally between the hours of 4 and 5 P.M. during the weekdays, and at lunchtime. Events that extend into evening include softball games at three lighted softball fields that operate until 10 P.M; the lighted temporary bicycle motocross track (BMX) which operates until 9:00 P.M; and occasional special events that may extend to midnight on weekends.

The entrance to the park is at located along Las Positas Road, via Jerry Harwin Parkway. The entrance is gated when the park is closed to visitors. Most visitors drive to the park in passenger vehicles, and the park is served by one MTD bus stop located on the east side of Las Positas Road. Shuttle buses currently access the park on occasion when large events occur and satellite parking facilities are used. There are 175 existing on-street parking spaces along Harwin Parkway, 194 existing parking spaces within the park (near softball area, soccer area, office area, and Godric Grove), and 37 parking spaces at the City tennis courts.

Douglas Family Preserve

The Douglas Family Preserve is located about 0.75 miles south of the project site on the coast. It is a 70-acre open space park donated to the City, situated on a bluff above Arroyo Burro Creek Beach County Park and Hendry's Beach. The open space has a system of trails and ocean viewing spots. This is the only City park that allows dogs unleashed. Most visitors access the Preserve from the end of Medcliff Road & Selrose Lane in the adjacent Mesa neighborhood. There is no parking lot. Access is also available from the Oak Grove trail which begins at the intersection of Cliff Drive and Las Positas Road. The Preserve is open from sunrise to 10 pm.

Arroyo Burro County Beach Park

This is a County Park located within the City limits. It is a highly popular beach park that attracts hundreds of local and out of town visitors on weekends and holidays. The primary attraction at the park is beach access for surfing, beach play, and dog walking (leashes required.) The park has large free parking lots and a bus stop. Other amenities include a restaurant, BBQ grills, benches, picnic tables, a grassy area for picnics and parties, access for beach equestrian use, and public restrooms and showers. The Community Environmental Council's Watershed Resource Center is located at the park, which provides a venue for environmental education in the community.

Municipal Tennis Courts

Municipal Tennis Courts are located on the east side of Las Positas Road, across from the Stone Creek Condominiums and adjacent to Elings Park. Parking facilities and nighttime lighting are present at the courts.

3.6.2 Potential Impacts

Based on the criteria in the Environmental Checklist Form in Appendix G of the CEQA Guidelines, a proposed project would have a significant land use or recreation impact if it would result in one or more of the following conditions:

- Physically divide an established community?
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.6.2.1 Land Use Compatibility

The proposed project would convert an existing open space property to a combined residential and open space property. The residential land uses would consist of 24 single-family residences with associated driveways, yards and fencing, street lights, and landscaping. The character of the project site would be altered dramatically from its relatively quiet, undeveloped and remote nature to a fully occupied neighborhood with structures, vehicles, and human activity. Nearby residents that have become accustomed to the property in its undeveloped condition would be most affected by the land use conversion because it may affect their perception of the surrounding area, and also modify their use of the property.

In contrast, the property is not readily accessible and people that live outside the immediate neighborhood are probably unaware of the property and its amenities as an undeveloped parcel. Thousands of drivers pass by the property each day along Las Positas Road. Views of the property, at least the portion to be developed, are fleeting and obscured by roadside vegetation and trees along Arroyo Burro Creek. For these people, the change in land use may not be noticeable or would only register as a minor, distant change.

The proposed land uses at the project site would be compatible with the adjacent areas because these land uses would be similar in nature. That is, the nature and density of the proposed residential development would be similar to the adjacent Alan Road neighborhood , and would be compatible and complementary to the Stone Creek Condominiums. The proposed open space along the creek corridor would be compatible with the existing open space along the east side of the creek, and with the large expanse of open space on the hills west of the project site and at Elings Park.

In summary, the proposed land uses at the project site would be compatible with adjacent land uses, and in many cases, would be complementary with such lands uses.

3.6.2.2 Effect on Recreation Demand and Uses

The project would result in the addition of residential units to the area. Many of these residents would utilize City and County Parks in the immediate area, and elsewhere on the South Coast. The increased demand on City and County Parks would be negligible due to the small number of potential users from the proposed development. Elings Park is located directly east of the project site and would likely be used extensively by the new residents. The park has extensive capacity for more and different users.

Arroyo Burro County Beach Park is very crowded on warm weekends and on holidays. The parking lot is often full. The new residents at the project site would likely use the beach park on a regular basis. The park is sufficiently close that many users may walk or bike to the beach rather than drive. A significant impact on recreation demand at the beach park is not expected to occur due to the limited number of new residents from the proposed project.

The proposed development would not be zoned for keeping horses. The paths along Lane "A" and along Arroyo Burro Creek would not be constructed for horses. Horses are not allowed at nearby Elings Park. As such, it is unlikely that riders from Hope Ranch would travel to the project site.

The site does not have any existing or designated public recreational facilities. A five-foot wide pervious pathway is proposed along the western bank of Arroyo Burro Creek, for public pedestrian purposes. The path would begin at the northern end of Alan Road and would extend north, parallel to the creek, and terminate at Las Positas Road, across from Elings Park. Interpretive signs, describing the natural resources within the project site, would be installed along the meandering path. As proposed, the path would not extend north beyond the project site, to connect to the Hidden Valley area**.** A pedestrian crosswalk would be striped across Las Positas Road between Elings Park and the new development. Construction of the public path on the project site would create a route for pedestrians to walk from Elings Park to Arroyo Burro Beach. In addition, bicycle access would be provided through the project site for riders along the Class II bike lane on Las Positas Road to access Arroyo Burro Beach. These new access routes to the coast would represent a **beneficial impact (Class IV)** on local coastal recreation.

<u>The proposed project would result in the loss of 14.81 acres of open space to be developed for residential land uses. The loss of this open space is not considered significant because of the following factors: (1) the project includes the dedication of 35.71 acres of permanent open space on the hillsides north of the project site; and (2) the public path along the creek would provide a more widely accessible and enjoyable open space opportunity than under the current conditions, in which public access is prohibited at the site.</u>

3.6.3 Applicable Local Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. In addition,

the policies in the State Coastal Act are also applicable. The consistency of the proposed project with goals and policies related to recreation and land use is evaluated below. The final determination of consistency will be made by the Planning Commission and City Council.

City General Plan Designations and Zoning

The project site is located within the jurisdictional boundary of the County of Santa Barbara, with the exception of APN 047-061-026, which is already located within the City of Santa Barbara. The project site would be annexed into the City upon approval. As described in Section 2.0, the proposed City General Plan and zoning designations for the project site would be consistent with the existing County general plan designations and zoning, and would also be consistent with the City's Draft Las Positas Valley and Northside Annexation Update. Overall, the proposed development would result in a lower housing density than proposed under both County existing zoning and under the City's draft pre-annexation zoning.

Coastal Act Policies – Public Access

> ***Policy 30212.*** *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*
>
> ***Policy 30252****. The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.*

The proposed project would be potentially consistent with these public access policies because it would provide a public pedestrian path through the site, and roadways for bicyclists, to travel from Las Positas Road and Elings Park to Arroyo Burro County Beach Park.

3.6.4 Mitigation Measures

No significant land use compatibility or recreational impacts would occur due to the proposed project. As such, no mitigation measures are considered necessary or appropriate.

3.7 TRAFFIC AND CIRCULATION

The following section is based on a traffic study prepared by Associated Transportation Engineers (ATE, 2004) for the Veronica Meadows Specific Plan EIR, which is included in Appendix F.

3.7.1 Existing Conditions

Street Network

The project site is served by a network of highways, arterial streets and collector streets, as illustrated in Figure 3-16. The following text provides a brief discussion of the major components of the study area street network.

U.S. Highway 101, located north of the site, would provide regional access to the project site via the Las Positas Road interchange. U.S. Highway 101 connects the City of Santa Barbara with Goleta, Buellton and Santa Maria to the north, and with Montecito, Carpinteria and Ventura to the south. U.S. Highway 101 is a 6-lane freeway within the study-area. The intersections comprising the U.S. Highway 101/Las Positas Road interchange are signalized.

Calle Real, also located north of the site, is an east-west frontage road located on the north side of U.S. Highway 101. East of the Las Positas Road/Calle Real intersection, Calle Real is one-way westbound, and west of the intersection it is a two-way street. Calle Real is generally two lanes wide within the study area. Traffic signals control the Calle Real/U.S. 101 Northbound On-Ramp-Earl Warren Showgrounds intersection and the Calle Real/Las Positas Road intersection.

Modoc Road, located north of the site, is an east-west roadway that extends along the south side of U.S. Highway 101 from Hollister Avenue to Mission Street. This roadway is two lanes wide in the study area. The Modoc Road/Las Positas Road intersection is controlled by traffic signals.

Las Positas Road (State Route 225), located east of the site, extends from State Street on the north to Cliff Drive on the South. The segment between U.S. Highway 101 and Cliff Drive is a Caltrans facility (SR 225). From State Street to Modoc Road the roadway contains 4 lanes. Las Positas Road is a conventional two-lane highway between Modoc Road and Cliff Drive. Traffic signals control the intersections at the U.S. Highway 101/Las Positas Road interchange and the Las Positas Road/Modoc Road intersection. The Las Positas Road/Jerry Harwin Parkway intersection is controlled by a 1-way stop (Elings Park connection is stopped) and the Las Positas Road/Cliff Drive intersection is controlled by an all-way stop.

Jerry Harwin Parkway is a private road that connects to Las Positas Road opposite of the proposed access connection for the Veronica Meadows site. The roadway extends into Elings Park and does not connect with any of the surrounding City streets.

Cliff Drive (State Route 225) is an east-west roadway that connects to the south end of Las Positas Road in a "T" intersection. The segment east of Las Positas Road is a continuation of SR 225. This segment contains four lanes. The segment west of Las Positas Road is a two-lane road that serves

residential and recreational uses. The Las Positas Road/Cliff Drive intersection is controlled by an all-way stop.

Transit Facilities

The Las Positas Valley and outer State Street area are served by several transit lines operated by the Metropolitan Transit District (MTD). There are bus lines that provide frequent transit service between the study area and downtown Santa Barbara, as well as Goleta and UCSB to the west. There is a bus stop on Los Positas Road at the proposed access connection (Line 5). Line 5 serves the Mesa and part of Las Positas Road and connects to the transit center. Riders can connect to other MTD lines at the transit center.

Bicycle Facilities

On-street bike lanes (Class II) are provided on Las Positas Road, Modoc Road, Calle Real, and Cliff Drive. These bike lanes connect to the study area with the other bike routes in the City.

Intersection Operations

The key intersections within the study area that are analyzed in this report were determined in coordination with the City staff., and are listed below

- Calle Real/U.S.101 Northbound On-Ramp
- Las Positas Road/Calle Real
- Las Positas Road/U.S.101 Southbound Ramps
- Las Positas Road/Modoc Road
- Las Positas Road/Jerry Harwin Parkway/Project Entrance
- Las Positas Road/Cliff Drive

Because traffic flow on arterials street networks is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. In rating intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations. The City of Santa Barbara considers LOS C with a volume-to-capacity ratio of 0.77 as the minimum acceptable operating standard for signalized intersections. For unsignalized intersections, the City considers an average delay of 22 seconds per vehicle as the minimum standard.

Figures 3-16 and 3-17 show the existing A.M. and P.M. peak hour traffic volumes for the key study-area intersections. The peak hour volumes were obtained from counts conducted in February and March of 2004 for this study.

Table 3-12 lists the existing A.M. and P.M. peak hour levels of service for key intersections in the study area. Levels of service for the signalized intersections were calculated based on the

"Intersection Capacity Utilization" (ICU) methodology. Levels of service for the intersections controlled by stop signs were calculated using the operations methodology outlined in the Highway Capacity Manual.

TABLE 3-12
EXISTING A.M. AND P.M. INTERSECTION LEVELS OF SERVICE

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	V/C	LOS	V/C	LOS
1. Calle Real/U.S. 101 NB On-Ramp	**0.79**	**LOS C**	0.75	LOS C
2. Las Positas Road/Calle Real	0.69	LOS B	0.73	LOS C
3. Las Positas Road/U.S. 101 SB Ramps	**0.88**	**LOS D**	**0.84**	**LOS C**
4. Las Positas Road/Modoc Road	0.73	LOS C	0.71	LOS B
5. Las Positas Road/Elings Park/Project Entrance[a]	11.7 Sec.	LOS B	13.0 Sec.	LOS B
6. Las Positas Road/Cliff Drive[a]	**>50 Sec.**	**LOS F**	**> 50 Sec**	**LOS F**

[a] Unsignalized - ICU not applicable.
Bolded values exceed City standards.

The data presented in Table 3-11 show that existing operations exceed the City's standards at the following intersections:

- Calle Real/Highway 101 Northbound On-Ramp - A.M. Peak Hour
- Las Positas Road/Highway 101 Southbound Ramps - P.M. Peak Hour
- Las Positas Road/Cliff Drive - A.M. & P.M. Peak Hours

3.7.2 Potential Impacts

3.7.2.1 Thresholds of Significance

Project-Specific Threshold. The City's project-specific impact threshold states that if a development project would cause the V/C ratio at a signalized intersection to exceed 0.77, or if the project would increase the V/C ratio by 0.01 at a signalized intersection which already exceeds 0.77, the project's impact is considered significant. For unsignalized intersections, the City considers LOS C with an average delay of 22 seconds per vehicle as the minimum standard.

Cumulative Threshold. The City's cumulative impact threshold states that if a development project would add five or more trips to a signalized intersection that is forecast to operate above V/C 0.77 with cumulative traffic, or to an unsignalized intersection that is forecast to operate with more than 22 seconds of delay, the project's contribution is considered a significant cumulative impact.

3.7.2.2 Trip Generation

Trip generation estimates were calculated for the Veronica Meadows Project based on the Single-Family Detached Housing rates (ITE Land Use #210) presented in the Institute of Transportation

Engineers (ITE) Trip Generation Manual. Table 3-13 presents the results of the trip generation calculations.

TABLE 3-13
PROJECT TRIP GENERATION

Land Use	Size	ADT		A.M. PHT		P.M. PHT	
		Rate	Trips	Rate	Trips	Rate	Trips
Single-Family Dwelling Units	24 Units	9.57	230	0.75	18	1.01	25

ADT = average daily traffic. PHT = peak hour traffic

The data presented in Table 3-12 indicate that the project is expected to generate 230 ADT, with 18 trips occurring during the A.M. peak hour period and 25 trips occurring during the P.M. peak hour period.

Project-generated traffic was distributed and assigned to the study-area street system using the percentages listed in Table 3-14. The trip distribution pattern was developed in concert with City staff based on existing traffic patterns within the study area and a general knowledge of the residential, commercial and job sites in the region. Figures 3-18 and 3-19 show the project-added A.M. and P.M. peak trips at the key intersections in the study area. The distribution of trips follows the City's practice of tracking five or more trips through key intersections in the study area. This provides a statistical certainty for project-generated traffic additions at critical intersections on a day-to-day basis.

TABLE 3-14
PROJECT TRIP DISTRIBUTION

Origin/Destination	Direction	Percent
Highway 101	North	30%
	South	30%
Las Positas Road	North	10%
Calle Real	West	5%
Modoc Road	East	5%
	West	5%
Cliff Drive	East	15%
Total		**100%**

3.7.2.3 Project-Specific Impacts

Construction Related Impacts

As described in Section 2.4.2, construction related traffic would involve about 45 to 75 worker and truck trips (round trips, average days) at the project site during the two-year construction period. During Phase 1 (a six month period), all construction traffic would use Alan Road because there

would be no other access until the bridge is completed across Arroyo Burro Creek. For the remainder of the construction period, the primary site access would be from Las Positas Road. The additional worker and construction truck trips to and from the project site could affect the operation of the project area intersections during peak a.m. and p.m. hours. This impact is considered **adverse, but less than significant (Class III)** because the increased traffic during peak hours would be temporary and intermittent during the construction period, and because the applicant has agreed to avoid truck traffic at the Las Positas Road/Cliff Drive intersection during the a.m. and p.m. peak hours.

As noted above, truck traffic would occur along Alan Road during Phase 1. This is a narrow residential road with street parking on both sides. Hence, the passage of two trucks would be difficult. In addition, the residents along the road have not experienced truck traffic at this level. As with all other vehicles, trucks must follow the rules of the road, as defined in the California State Vehicle Code, which apply to the roadway and prevailing conditions. Hence, the impact on public safety due to truck traffic on Alan Road would be considered **adverse but less than significant (Class III).** However, to provide a higher level of public safety on this residential road, the precautions in Mitigation Measure TR-1 would be implemented during Phase 1.

Intersection Impacts

A.M. and P.M. peak hour levels of service were calculated for the study-area intersections assuming the Existing + Project peak hour volumes shown in Figures 3-20 and 3-21. Tables 3-15 and 3-16 present the results of the calculations and identify the significance of project-added traffic based on the City's project-specific threshold.

TABLE 3-15
EXISTING + PROJECT A.M. PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Existing	Existing + Project	V/C Increase or Delay Increase	Impact?
Calle Real/U.S. 101 NB Ramps	**0.79/LOS C**	**0.79/LOS C**	0	No
Las Positas/Calle Real	0.69/LOS B	0.69/LOS B	0	No
Las Positas/U.S. 101 SB Ramps	**0.88/LOS D**	**0.88/LOS D**	0	No
Las Positas/Modoc	0.73/LOS C	0.73/LOS C	0	No
Los Positas/Elings Park/Project Road[a]	11.7 Sec./LOS B	16.2 Sec./LOS C	4.5 Sec.	No
Las Positas/Cliff[a]	**>50 Sec./LOS F**	**>50 Sec./LOS F**	1.9 Sec.	No

[a] Unsignalized Intersection. ICU not applicable.
Bolded values exceed City standards.

TABLE 3-16
EXISTING + PROJECT P.M. PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Existing	Existing + Project	V/C Increase or Delay Increase	Impact?
Calle Real/U.S. 101 NB Ramps	0.75/LOS C	0.75/LOS C	0	No
Las Positas/Calle Real	0.73/LOS C	0.73/LOS C	0	No
Las Positas/U.S. 101 SB Ramps	**0.84/LOS D**	**0.84/LOS D**	0	No
Las Positas/Modoc	0.71/LOS C	0.71/LOS C	0	No
Los Positas/Elings Park/Project Road[a]	13.0 Sec./LOS B	15.1 Sec./LOS C	2.1 Sec.	No
Las Positas/Cliff[a]	**>50 Sec./LOS F**	**>50 Sec./LOS F**	2.8 Sec.	No

[a] Unsignalized Intersection. ICU not applicable.
Bolded values exceed City standards.

The data presented in Tables 3-15 and 3-16 indicate that most of the study-area intersections are forecast to operate at LOS C or better.

The Calle Real/U.S. 101 NB Ramps intersection is forecast to operate at V/C 0.79 during the A.M. peak hour period with Existing + Project traffic. The project would not change the existing V/C ratio. Hence, there would be no significant impact according to City thresholds.

The Las Positas/U.S. 101 SB Ramps intersection is forecast to operate at V/C 0.88 during the A.M. peak hour period and 0.84 during the P.M. peak hour with Existing + Project traffic. The project would not change the existing V/C ratios, which already exceed the City standards. Hence, there would be no significant impact according to City thresholds.

The Las Positas/Cliff Drive intersection currently operates at LOS F during the A.M. and P.M. peak hour periods. The project would increase the V/C ratio by less than 0.01 and the current delays by about 2-3 seconds. The intersection would continue to operate at LOS F, with or without the project. Hence, there would be no significant impact according to City thresholds.

The two-way uncontrolled intersection at Elings Park and Las Positas Road currently operates at LOS B during A.M. and P.M. peak hours. With the addition of the Lane "A" to the intersection, the peak hour operations would change to LOS C, which is the City's minimum standard.

The additional project-related traffic at the intersections of Las Positas Road and Calle Real, and Las Positas Road and Modoc Road, would not increase the V/C ratio or increase delays during A.M. and P.M. peak hours.

In summary, the proposed project would add a minor amount of traffic to intersections in the vicinity, several of which are currently operate at or below the City minimum standard. However, the additional peak hour traffic would not exceed any City thresholds for project-specific impacts.

Hence, the traffic impacts of the proposed project are considered **adverse, but less than significant (Class III).**

3.7.2.4 Cumulative Analysis

Cumulative Traffic Volume Forecasts

Cumulative traffic volume forecasts were developed using lists of approved and pending projects provided by the City of Santa Barbara (see Appendix G). Trip generation estimates for the cumulative projects were developed using rates presented in the ITE Trip Generation Manual. The traffic that would be generated by the cumulative projects was distributed and assigned onto the study-area street network and then added to the Existing volumes to produce the Cumulative traffic volume forecasts. Figures 3-22 and 3-23 illustrate the Cumulative forecasts at the study-area intersections during the A.M. and P.M. peak hour periods. Cumulative + Project A.M. and P.M. peak hour traffic volumes are shown on Figures 3-24 and 3-25.

Cumulative Intersection Impacts

Tables 3-17 and 3-18 compare the Cumulative and Cumulative + Project levels of service at the study-area intersections for the A.M. and P.M. peak hour periods and show the significance of project-generated traffic based on the City's cumulative impact threshold.

TABLE 3-17
CUMULATIVE + PROJECT A.M. PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Cumulative	Cumulative + Project	Project-Added Trips	Impact?
Calle Real/U.S. 101 NB Ramps	**0.83/LOS D**	**0.83/LOS D**	**5**	**Yes**
Las Positas/Calle Real	0.73/LOS C	0.74/LOS C	8	No
Las Positas/U.S. 101 SB Ramps	**0.91/LOS E**	**0.91/LOS E**	**14**	**Yes**
Las Positas/Modoc	**0.81/LOS D**	**0.82/LOS D**	**15**	**Yes**
Los Positas/Elings Park/Project Road[a]	12.3 Sec./LOS B	15.7 Sec./LOS C	18	No
Las Positas/Cliff[a]	**>50 Sec./LOS F**	**>50 Sec./LOS F**	**5**	**Yes**

[a] Unsignalized Intersection. ICU not applicable.
Bolded values exceed City standards.

TABLE 3-18
CUMULATIVE + PROJECT P.M. PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Cumulative	Cumulative + Project	Project-Added Trips	Impact?
Calle Real/U.S. 101 NB Ramps	**0.77/LOS C**	**0.78/LOS C**	**5**	**Yes**
Las Positas/Calle Real	0.75/LOS C	0.75/LOS C	13	No
Las Positas/U.S. 101 SB Ramps	**0.85/LOS D**	**0.85/LOS D**	**21**	**Yes**
Las Positas/Modoc	0.74/LOS C	0.74/LOS C	21	No
Los Positas/Elings Park/Project Road[a]	14.2 Sec./LOS B	15.3 Sec./LOS C	24	No
Las Positas/Cliff[a]	**>50 Sec./LOS F**	**>50 Sec./LOS F**	**5**	**Yes**
[a] Unsignalized Intersection. ICU not applicable. **Bolded values exceed City standards.**				

Several of the study-area intersection are forecast to exceed the City's LOS standard under cumulative conditions. The Veronica Meadows Project would add five or more trips to the following intersections that are forecast to exceed the City's LOS standard, contributing to a significant cumulative impact based on the City's cumulative impact threshold. The City has identified a mitigation measure to reduce the contribution of the proposed project to this significant cumulative impact, which is presented as Mitigation Measure TR-6 in Section 3.7.3. Under this measure, the applicant would be required to contribute a fair share contribution of funds for future capacity improvements of the affected intersections which are listed below:

- Calle Real/Hwy 101 NB Ramps - A.M. & P.M. Peak Hours
- Las Positas Road/Hwy 101 SB Ramps - A.M. & P.M. Peak Hours
- Las Positas Road/Modoc Road - A.M. Peak Hour
- Las Positas Road/Cliff Drive - A.M. & P.M. Peak Hours

As described in Section 3.7.3, Mitigation Measure TR-6 would reduce the magnitude of the cumulative traffic impacts at the four affected intersections if the proposed intersection improvements were implemented. However, a residual significant, unmitigable impact would remain due to the following factors.

The proposed improvement at Los Positas Road and Highway 101 southbound off-ramp would only partially mitigate cumulative effects, as traffic Level of Service after mitigation would not be improved to LOS "C" or better (at V/C of .77 or less). As such, a significant unavoidable impact would remain at this intersection even with Mitigation Measure TR-6 and the completion of the proposed intersection improvements

Residual significant unavoidable impacts may also occur at all four intersections because there would likely be at least short-term significant cumulative effects during any lag times that may occur

between project construction and occupation and construction of the road improvements. In addition, it is possible that some or all of the above improvements would not be completed within a reasonable timeframe due to factors of jurisdiction, funding and timing. The programming and funding of the projects are determined by Caltrans, not the City, and these projects are not presently fully funded or scheduled. There is uncertainty about the timing of these projects due to other competing projects, funding constraints, and the need for supporting engineering and environmental studies.

In light of the above considerations, the potential cumulative impact of the project-related traffic, when combined with other future projects, is considered **significant and not fully mitigable (Class I).** As required by CEQA, approval of a project with significant unavoidable impacts requires that the decision makers provide findings of overriding consideration of project benefits that make the significant effects acceptable.

3.7.2.5 Site Access

Intersection Control

Site access for most of the units is proposed via one connection to Los Positas Road opposite the Elings Park connection. Access to two units would be provided via Alan Road. The proposed entrance to the project site (Lane "A") would have a 20-foot width with a 10.5-foot radii. As noted, Las Positas Road is a State facility and Caltrans criteria therefore apply. The site of the proposed intersection is currently configured with a southbound left-turn lane and northbound right-turn lane for access to/from Elings Park.

Las Positas Road is a Caltrans facility and in order to install traffic signals at an intersection it must be demonstrated that conditions warrant signals. Caltrans traffic signal warrant criteria were applied assuming the Existing + Project conditions at the intersection to determine if a traffic signal should control the intersection. The applicable warrants address the level of traffic at the intersection and safety considerations (accident experience & pedestrian activity). The analysis indicated that no warrants are satisfied. Traffic signal warrant worksheets are summarized in Table 3-19.

TABLE 3-19
SIGNAL WARRANTS
LAS POSITAS ROAD/ELINGS PARK ENTRANCE/PROJECT SITE ENTRANCE

Warrant #	Type	Minimum Warrant Met?	
		Yes	No
1	Minimum Vehicular Volume		X
2	Interruption of Continuous Traffic		X
3	Minimum Pedestrian Volume		X
6	Accident Experience		X
8	Combination Warrants		X
9	Four Hour Volume		X
11	Peak Hour Volume		X

Based on this analysis, the proposed traffic signal intersection for the project entrance would not be allowed by Caltrans. The only feasible intersection would be a two-way stop intersection with stop signs on the Jerry Harwin Parkway and the Veronica Meadows roadway connection ("Lane "A"). This intersection would operate at LOS C or better with Existing + Project and Cumulative + Project volumes with the two-way stop, which meets City standards for stop controlled intersections. As such, the proposed intersection with Las Positas Road at the project site entrance is assumed to be a stop-controlled intersection, as specified in Mitigation Measure TR-2.

Intersection Sight Distance

Stopping and corner sight distance analyses were conducted for the entrance to the project site at Las Positas Road. The analyses were based on the speeds measured along Las Positas Road and the existing sight distances at the proposed access point to determine if adequate sight distances are provided for access to/from the site. The speed surveys found that the predominant measured speed is 56 MPH for northbound traffic on Las Positas Road and 58 MPH for southbound traffic.

As referenced in the Caltrans Highway Design Manual, the corner sight distance and stopping sight distance should be considered when analyzing site access points. Corner sight distances allow drivers to find available gaps and enter the mainline roadway safely. The corner sight distance requirement for 58 MPH is 646 feet and the corner sight distance requirement for 56 MPH is 623 feet. Corner sight distances are measured from the driver's eye position on the side street approach (assumed to be 3.5 feet above the pavement surface) to an object 4.25 feet high on the mainline road. The corner sight distance that is available at the proposed access connection for the Veronica Meadows site looking to the south is more than 1,000 feet, which meets Caltrans standards. The corner sight distance looking to the north from the project driveway is about 420 feet, which does not satisfy Caltrans standards for at least 646 feet.

Stopping sight distance allows drivers on the mainline road to react and stop if a vehicle or object is in their path. The stopping sight distance for 58 MPH is 558 feet and the stopping sight distance for 56 MPH is 525 feet. Stopping sight distances are measured from the driver's eye position on mainline road (3.5 feet above the pavement surface) to an object 6 inches high on the mainline road. The stopping sight distance for northbound vehicles is about 810 feet from the proposed connection, which meets Caltrans standards. The stopping sight distance for southbound vehicles to the project driveway is about 510 feet from the proposed connection, which does not satisfy Caltrans standards for 558 feet.

Hence, sight distances at the project entrance for outgoing traffic are not adequate for southbound traffic on Las Positas Road, which could result in unsafe traffic movements through the proposed stop controlled intersection. This impact is considered **significant, but mitigable (Class II)** because adequate site distance can be achieved through modification of road side landscaping, as described below and specified in Mitigation Measure TR-3.

The existing sight distances to the north of the Veronica Meadows access connection are obscured by trees and other vegetation on the west side of Las Positas Road between the access connection and the Stone Creek Condominium complex access connection. Removing this vegetation would

provide about 650 feet of sight distance, which would meet Caltrans standards. Figure 3-26 shows the sight distance that would be created by removing the vegetation to the north of the project on the west side of the road. The existing vegetation could be replaced with landscaping that does not exceed 3.5 feet in height.

Intersection Geometry

ATE contacted Caltrans to discuss the proposed access connection. Caltrans indicated that a standard intersection with a southbound right-turn lane and northbound left-turn lane would be required at the Veronica Meadows access connection. This configuration would mirror the access lanes that serve the Elings Park access connection (Elings Park has a southbound left-turn lane and northbound right-turn lane).

The project access road at the intersection (Lane "A") is proposed to be 20 feet wide with a 10.5-foot radii. The access road crosses a bridge approximately 40 feet south of the connection. Car and truck turning templates were used to provide a preliminary assessment of geometry shown on the site plan. The results found that the driveway width and radii would not accommodate vehicles and trucks. A vehicle would not be able to enter the access road if there is a vehicle queued on the outbound approach at the intersection waiting to exit the site. Caltrans recommends a throat width of 30 feet and the radii would need to be increased to accommodate passenger vehicles and trucks.

An encroachment permit would be required from Caltrans for the access connection. The design of the intersection improvements, including turn lane lengths, roadway widths and curb-return radii, would be determine as part of the encroachment permit process. Preliminary review of Las Positas Road at the proposed connection shows that minor widening of the entrance to the site (before the bridge) may be required to provide adequate width for the turn lanes. This widening is expected to be less than 10 feet.

The proposed entrance road to the project site does not have adequate width to accommodate safe entry to the site under certain conditions. This impact is considered **significant, but mitigable (Class II)**. It can be avoided by widening the entrance to the site, as described above and in Mitigation Measure TR-4.

It is noted that the City may take ownership of the segment of Las Positas Road that is State Route 225 south of Modoc Road to Cliff Drive (and beyond) from Caltrans. The City has not yet begun negotiations with Caltrans and City staff have indicated that negotiations are not likely until after the road reconstruction is completed. The reconstruction of SR 225 is scheduled for the summer of 2004. The access requirements for the project described above may be altered if the roadway is under City ownership at the time that the proposed project is ready for construction.

Secondary Access

The proposed project does not include secondary access to the site. This has been reviewed and deemed accepted by the City Fire Department. The environmental impacts of a secondary emergency access is addressed in Section 4.0.

3.7.2.6 Site Circulation

Lane "A" is proposed to extend westerly from Las Positas Road and then make a one-half mile loop. Lane "A" would provide direct access to 17 of the 24 dwelling units. It would be 28 feet in width, which would allow for two-way traffic and on-street parking on one side of the lane. Driveway "A" would extend south from Lane "A" for access to 5 units. Driveway "A" would have a 20-foot width which would allow for two-way traffic, but parking would be prohibited to meet Fire Department standards.

3.7.2.7 Pedestrian Access and Circulation

Sidewalks are proposed along both sides of the bridge connection to Las Positas Road. The proposed project would have a 5-foot path on one side of Lane "A" and on one side of Driveway "A." A 10-foot pedestrian/bicycle path is also proposed between Driveway "A" and Alan Road. In addition, a 5-foot wide path would follow the creek corridor in a public open space from the bridge to Alan Road. The proposed pedestrian facilities would accommodate the on-site movements as well as connect the neighborhood to the pedestrian facilities outside of the site. They would also allow for pedestrian connections between Elings Park and Alan Road (and beyond to Arroyo Burro County Beach Park). The creation of pedestrian sidewalks and paths from Elings Park to Alan Road and the nearby park is considered a **beneficial impact on local circulation (Class IV**).

3.7.2.8 Bicycle Access and Circulation

Bicycle access at the project site would be provided through the site from Las Positas Road to Alan Road by the following routes: Lane "A," Driveway "A," and a 10-foot wide pedestrian/bicycle path (paved) at the southern end of the project site connecting Driveway "A" to Alan Road (Figure 2-5). Hence, bicyclists would have a fully paved route through the site to access the beach area, allowing them to by-pass the southern end of Las Positas Road. The establishment of this bicycle access from Las Positas Road to Alan Road and the nearby park is considered a beneficial impact on local circulation (Class IV).

The City's Bicycle Master Plan includes a Class I bike facility along with west side of Las Positas Road in the vicinity of the Veronica Meadows site. The proposed bicycle facilities would allow bicyclists to traverse the project site, but are not intended to serve as the Class I bike facility that is identified in the City's Bicycle Master Plan.

3.7.2.9 Onsite Parking

Two-car garages would be provided for each of the residential units, which would meet City parking standards. Additional parking would be provided on Lane "A." As noted above, Lane "A" would be 28 feet wide, which would accommodate parking on one side of the street. Driveway "A" would be 20 feet wide. "No Parking" signs would be placed on both sides of the driveway to adhere to the 20-foot clear space required by the Fire Department.

3.9.2.10 Pavement Impacts from Construction Traffic

Construction truck traffic would occur along Las Positas Road, Cliff Drive, and Alan Road. The pavement condition on portions of these roadways varies considerably. There are areas where cracking has occurred and/or the pavement has deteriorated to the base material (potholes). The number of trucks that would be generated during the construction period may further degrade pavement conditions. The impact to pavement is expected to be **adverse, but less than significant (Class III)** relative to other traffic. However, Mitigation Measure TR-5 would be implemented to ensure that any pavement damage is repaired.

3.9.2.11 Congestion Management Program Analysis

The Santa Barbara County Association of Governments (SBCAG) has developed a set of traffic impact thresholds to assess the impacts of land use decisions made by local jurisdictions on regional transportation facilities located within the Congestion Management Program (CMP) system. The CMP criteria requires a detail analyses of potential impacts to the CMP system if a project is estimated to generate more than 500 ADT or more than 50 peak hour trips. As shown in Table 3-13, the Veronica Meadows Project is expected to generate 230 ADT, with 18 trips during the A.M. peak hour period and 25 trips during the P.M. peak hour period. The project would therefore be consistent with CMP.

3.7.3 Applicable Plans and Policies

The project site is located in the Las Positas Valley within the jurisdictional boundary of the County of Santa Barbara, with the exception of one small parcel which is already located within the City of Santa Barbara. The project includes annexation of the project site into the City of Santa Barbara. The southern half of the project site (and the main parcel) is located within the Coastal Zone. The applicable plans for the project include the City's Local Coastal Plan and General Plan. The consistency of the proposed project with goals and policies related to traffic and circulation is evaluated below. The final determination of consistency will be made by the Planning Commission and City Council.

<u>Circulation Element</u>

The City of Santa Barbara's Circulation Element promotes the use of alternative transportation. Expanded use of alternative transportation such as ridesharing, transit, bicycling and walking could reduce both existing and future traffic volumes in the study area. Where applicable, the implementation strategies contained in the Circulation Element would be applied to new development to reduce traffic volumes. For example, pedestrian and bicycle linkages with adjacent properties would be incorporated into the design of future residential projects where such opportunities exist. The proposed project's consistency with applicable Circulation Element policies is summarized below.

Policy 2.1 *Work to achieve equality of convenience and choice among all modes of transportation.*

The entrance to the project site is located near existing Class II bike lanes and MTD bus routes (on Las Positas Road and Cliff Drive) serving the Mesa and downtown. The proposed project provides pedestrian and bicycle access to these facilities. Hence, there would be more opportunities for use of alternative modes of transportation for the new residents, as well as for existing adjacent residents. Therefore, the project is potentially consistent with this policy.

> ***Policy 4.2*** *The City shall -work to expand, enhance, and maintain the system of bikeways to serve current community needs and to develop increased ridership for bicycle transportation and recreation.*
>
> **Policy 4.2.3.** *Encourage facilities for bicycle travel and parking in any future development, construction or reconstruction projects during the review of new development and infrastructure improvements.*

The establishment of a bicycle access through the project site would enhance the local bike circulation. Therefore, the project is potentially consistent with the above policies.

> ***Policy 5.1.*** *The City shall create an integrated pedestrian system within and between City neighborhoods, schools, recreational areas, commercial areas, and places of interest.*
>
> ***Policy 5.1.5.*** *Encourage newly proposed development to include pedestrian connections to surrounding areas, adjacent transit facilities, or other travel facilities during development review.*
>
> ***Policy 5.5*** *The City shall create and foster a pedestrian friendly environment through physical and cultural improvements and amenities.*
>
> ***Policy 5.7.1*** *Include sidewalks, landscaping and other facilities in new public and private construction to promote pedestrian activity where appropriate.*

The creation of a public path through the creek corridor open space would provide a new and enjoyable pedestrian route for local residents, and create new pedestrian opportunities to access the beach from Elings Park. Therefore, the project is potentially consistent with the above policies.

3.9.4 Mitigation Measures

Project-Specific Measures

TR-1 The following measures are recommended to minimize truck conflicts on Alan Road with passenger vehicles, bicycles, pedestrians, and parked vehicles during Phase 1 of the construction:

- The project applicant shall prepare and implement a Traffic Control Plan that shall specify measures to ensure traffic safety on Alan Road. The plan shall include instructions and guidelines on signage, notification of residents, ingress/egress procedures for large trucks, contact person with phone number, possible need for traffic control attendant, and measures to avoid passage of two trucks on the narrow road.
- No trucks shall park or queue on Alan Road at any time

- The truck speed limit along Alan Road shall be 15 MPH
- Truck drivers shall be disciplined for non-compliance with safety regulations. All trucks shall be clearly marked with a number visible to residents on both sides of the road and from the rear in the event non-compliance needs to be reported.

TR-2 The proposed intersection at Las Positas Drive and project site entrance (Lane "A") shall consist of a stop-controlled intersection that meets all applicable Caltrans standards, including turn lane lengths, roadway widths and curb-return radii. Caltrans has indicated that a public road intersection with a southbound right-turn lane and northbound left-turn lane on Las Positas Road will be required at the intersection. Minor widening of Las Positas Road may be required to provide adequate width for the turn lanes. The project applicant shall acquire Caltrans' conceptual approval of the intersection prior to final action by the City Council on the proposed Specific Plan. The project applicant shall also acquire all necessary Caltrans approval, including an encroachment permit, for the intersection prior to submittal of plans for City building and grading permits. The final design of the intersection improvements will be determine as part of the encroachment permit process.

TR-3 The proposed intersection at Las Positas Road and the project site entrance (Lane "A") shall include pruning or otherwise modifying trees and other vegetation on the west side of Las Positas Road between the access connection and the Stone Creek Condominium complex access connection to create sight distances that meet Caltrans standards. The shrubs and trees to be pruned are ornamental and do not provide wildlife habitat.

TR-4 The entrance to the project site (Lane "A") from Las Positas Road shall be modified to permit adequate clearance for incoming trucks and vehicle queued on the outbound approach at the intersection waiting to exit the site vehicles. The modifications shall meet Caltrans standards.

TR-5 The project applicant shall video document the pavement conditions on Alan Road, Cliff Drive, and Las Positas Drive before and after the construction project to determine the level of impact caused by the project. This documentation shall be provided to the City of Santa Barbara, Transportation Department. If the project traffic has caused damage to the roadway surface, the project applicant shall repair or resurface the affected reaches.

Cumulative Mitigation Measure:

TR-6 The applicant shall provide the City with a fair share contribution to fund capacity or operational improvements by the City or Caltrans to the intersections listed below, where the project would have a significant contribution to cumulative impacts.

- Calle Real/Hwy 101 NB Ramps
- Las Positas Road/Hwy 101 SB Ramps
- Las Positas Road/Modoc Road
- Las Positas Road/Cliff Drive

These intersections are currently Caltrans facilities. Capacity improvement projects have been identified at each intersection, but specific projects have not yet been programmed or funded at this time except at Las Positas and Cliff Drive. At this intersection, the City proposes to install a roundabout to improve traffic conditions, if and when Highway 225 is relinquished to the City. The City has prepared a Project Study Report (PSR) for the roundabout project and has initiated the relinquishment request process with Caltrans.

The applicant shall contribute fair share funding for improvements at all four intersections based on the peak hour traffic volume contributed by the proposed project as a percentage of the existing and future volume that exceeds the City's significance impact threshold of 0.77 volume/capacity (V/C) ratio. The fair share contribution shall be determined by multiplying the above percentages times the estimated construction costs of the intersection improvements, and then summing the amount for each intersection. The estimated fair share contribution for this project is presented below:

ESTIMATES OF TRAFFIC IMPROVEMENT FUNDING CONTRIBUTION

Intersection	Proposed Improvements	Planning Level Cost Estimates for Improvements	Project Trips that Contribute to Cumulative Impact (AM/PM)	Percentage of Cumulative Impact Traffic*	Estimate of Fair Share Contribution
Calle Real/U.S. 101 NB Ramps	Reconfigure westbound approach to ramp to contain one left-turn lane and one shared left+through+right-turn lane	$700,000	5/5	7.4%	$51,800
Las Positas/U.S. 101 SB Ramps	Widen off-ramp to provide two left-turn lanes and one through+right-turn lane	$700,000	14/21	3.1%	$21,700
Las Positas/Modoc	Restripe eastbound Modoc Road approach to provide one left-turn lane, one shared left-through lane, and one right-turn	$50,000	15/21	8.2%	$4,100
Las Positas/Cliff	Roundabout intersection	$750,000	5/5	1.5%	$11,250
Total=		$2,300,000			$88,850

* Percentage = Project Trips/(Total Future Traffic minus Traffic above the 0.77 V/C value)

The applicant shall execute a contract with the City prior to issuance of certificates of occupancy for the project that specifies the total fair share contribution, contract period, and the mechanism for transferring funds to the City and then making them available to Caltrans as needed. The fair share contribution shall be made prior to the issuance of the certificate of occupancy. The amount shall be $88,850, unless refined construction estimates are developed for one or more of the intersection projects prior to the execution of the contract. The contribution shall be revised based on new construction estimates and utilizing traffic

information in the Final EIR, but would not exceed a total contribution of $88,850 or the amount established in the final project conditions of approval. The contract period shall be 10 years.

The City shall allocate the funds to any of the four intersection projects if they are constructed during this 10-year timeframe only in the amounts as identified for each intersection mitigation, unless the City has the adopted a fee mitigation program that allows the allocation of the entire contribution to one or more projects. Any unallocated funds at the end of 10 years shall be returned to the homeowners in proportion to their lot size.

This measure may be superceded if a formal traffic mitigation fee program is adopted by City Council prior to the approval of this project, and the City determines that the mitigation under the program is consistent with this measure. The total contribution shall not exceed the amount established by project condition of approval.

3.8 PUBLIC HEALTH AND SAFETY

3.8.1 Hazardous Materials

The project residences would not be located in proximity to major oil or gas pipelines or storage, transmission lines, industrial processes, or other sources of public safety risk of upset. The development and use of 24 additional residential units, and the installation of access roads and associated improvements, does not have the potential to create health hazards. Residential use of small quantities of hazardous materials, such as cleansers, paint, oil, pesticides and fertilizers, is subject to state and federal requirements for proper storage and disposal on private property.

The project site is not identified on any of the lists of sites with known contaminated soils or groundwater as enumerated under Section 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, and hazardous waste disposal sites. There are no known site contamination or prior uses on the site involving hazardous materials.

Elings Park, located east of the project site, was used as an unlined municipal solid waste landfill from about 1955 or earlier, until 1965 when the operations ceased. The landfill site was subsequently closed through the import of clean fill deposited over the landfill, and converted to open space and park/recreational uses. The former landfill underlies about 34 acres of the overall park site in what was initially a steep-sided, west-to-east trending canyon. The closed landfill is estimated to be 55 feet in depth at the deepest point.

Maintenance of the closed landfill is the responsibility of the owner, the City of Santa Barbara, under State regulatory oversight implemented by County of Santa Barbara Environmental Health Services. The closed landfill site continues to be subject to monitoring and maintenance regulations to ensure public safety, and there are methane gas monitoring wells located on the site to monitor potential landfill gas creation. Observations at monitoring wells at the edge of the park adjacent to the landfill have detected landfill gas in quantities that could potentially be explosive if confined in a structure at the appropriate concentration and ignited.

Ongoing studies by the City indicate that when landfill gas is exposed to the open atmosphere the gas concentrations rapidly decrease and hazardous materials that may be found in landfill gas already at very low concentrations are further reduced to insignificant levels. Landfill emissions are highly regulated for the protection of public health, and the landfill would continue to be monitored by the City, County Department of Health/Local Enforcement Agency, Air Pollution Control District, and Regional Water Quality Control Board.

There is no evidence that landfill activities occurred west of Las Positas Road on or near the project site, nor that landfill material has migrated across the road or creek. The landfill gases are emitted on the Elings Park property and dissipated quickly; hence, there is no potential for residents at the project site to be exposed to methane gases from the park property. As such, no impact on public health from the hazardous landfill gases at the park is anticipated at the proposed Veronica Meadows project site.

3.8.2 Pesticides

Approximately four acres (Lots 26 and 28, see Figure 2-5) would be dedicated as open space along Arroyo Burro Creek for public use. This area would be landscaped and a public path and signage would be installed. In addition, about 3.7 acres of open space would be created on the hillsides around the residences (Lot 27) and in the center of the site (Lot 25). These areas would be landscaped and managed as passive open space with no public trails or improvements. However, a drainage channel and bioswale would be installed in Lot 25. The landscaping in all these open space areas would be maintained by the homeowner's association in perpetuity. The landscaping in the hillside open space area is not expected to require significant maintenance over the years. The primary activity would be periodic brush control for fire abatement purposes. In contrast, landscaping maintenance in the central open space (which is near homes and would contain the bioswale) and in the creek corridor (where public use would be frequent) would be ongoing. This maintenance is expected to involve weed control using herbicides, insect control using insecticides, and rodent control using rodenticides. The use of these hazardous materials in proximity to residences (in the central open space) and along a public path adjacent to a creek could result in inadvertent or accidental exposure to people. This impact is considered potentially **significant, but mitigable (Class II).**

In 2003, the City of Santa Barbara adopted an Integrated Pest Management (IPM) program designed to minimize the use of pesticides (including herbicides, insecticides, and rodenticides) on public property. The plan requires that an assessment be conducted prior to pesticide use to determine if there are other effective means of achieving the eradication of pest plants and organisms. If it is determined that pesticide use is the only effective option, the IPM requires that the amount of pesticide use be minimized, the pesticides be applied by licensed applicators, and manufacturer's directions for transportation, storage, and application be followed. In addition, the IPM requires public noticing of pesticide applications, and tracking the amounts and types of pesticides used. To prevent a potentially significant health impact from accidental or prolonged exposure to residents and the visiting public, the use of pesticides in the open space portions of the project site would be required to comply with the provisions of the City's IPM program (Mitigation Measure H-1).

3.8.3 Radon

The project area is underlain by Rincon Shale, a known geologic stratum that emits radon gas that is produced by the natural decay of minerals in this formation. Rincon Shale is known to produce radon gas at some locations on the South Coast, but not at all locations underlain by this material. The radon readily escapes from the soil or rock where it is generated and enters surrounding water or air. The most common pathway for human exposure is through the permeation of underlying soil gas into buildings. Prolonged exposure to radon gas can lead to lung cancer.

The potential long-term human health impact of constructing residences over formations that emit radon is considered **significant, but mitigable (Class II)**. This impact can be readily mitigated by first assessing the potential for radon gas to be emitted from the project soils after grading (using EPA approved gas sampling devices and methods). If it appears that radon is present, there are EPA-approved construction methods and design features for new homes that would prevent the exposure of residents to the gas. The most common method is to capture seeping gas under the

house and vent it before it can enter the structure. These precautions, specified in Mitigation Measure H-2, would avoid a significant human health impact.

3.8.4 Fire Hazard

The project site is located within the City's designated High Fire Hazard Area. The City recently updated its Wildland Fire Management Plan and designated different sub-areas based on wildland fire hazard. The project site is located in the "Coastal Fire Hazard Zone." The potential fire behavior in this zone is considered moderate to high depending on weather conditions. The majority of fuels are moderate and intermixed with residential areas; slopes range from 10 to 35 percent, and aspects in this zone vary. The ocean influence dominates this area for much of the year; however, there are a number of canyons directly aligned to periodic hot dry wind conditions that occur during late summer and fall months. Isolated areas of heavy fuel, consisting of eucalyptus and oak vegetation, increase the hazard in specific areas within this zone.

Under Municipal Code Title 8 (Fire Protection), the Department requires that landowners maintain vegetation (native and ornamental) surrounding existing and new structures in the High Fire Hazard Area to reduce the risk of wildland fire igniting the structures. The zone where vegetation is managed for fire hazard is called "defensible space." Under the Municipal Code, landowners must cut, thin, or remove hazardous brush, shrubs, and flammable vegetation within the specified defensible space distance (for the appropriate Fire Hazard Zone) of any structure. They must also: (1) clear flammable vegetation on each side of a street or driveway for a distance of 10 feet and a vertical distance of 13 feet, 6 inches; (2) remove dead wood, trim the lower branches, and limb all live trees to 6 feet above the ground; (3) trim tree limbs back a minimum distance of 10 feet from any chimney opening; (4) remove all dead trees from the property; (5) maintain the roof of all structures free of leaves, needles or other vegetative debris; and (6) dispose of all cut vegetation, including any debris left from previous tree trimming and brush removal.

The standard defensible space requirement for the Coastal Fire Hazard Zone is now 50 to 70 feet. It was reduced from 100 feet based on the Fire Department's recent hazard and risk assessment However, the defensible space distances may be increased up to 100 feet if there are slopes greater than 30 percent near a structure. Due to the presence of steep slopes on the west side of the project site, it is assumed that the Fire Department will require 70 to 100 feet of defensible space on the west side of Lots 1-7, and Lots 12 – 23. With the presence of the perimeter road, it is anticipated tha the defensible space requirement for lots along the creek would be 50 feet.

The Uniform Fire Code currently requires the use of fire-resistance or fire-safe landscaping for all new development in the High Fire Hazard Area. The Fire Department recommends certain types of landscaping in the defensible space. Key guidelines for fire-safe landscaping in the defensible space are summarized below.

- The nature and density of landscaping in the defensible space should be designed for four zones surrounding the structure: Zone 1 - (0-30 feet from structure), Zone 2 - (30 to 50 feet from structure), Zone 3 - (50 to 70 feet from the structure), and Zone 4 - (70 to 100 feet or greater from the structure).

- All landscape plant species should be fire resistant – either native or non-native species

- Highly flammable species should be avoided in the defensible space Zone 4.

The applicant has prepared a fire protection zone plan as an overlay to the proposed landscaping plan. The applicant proposes to modify the proposed planting density and heights within 100 feet of each residence in the following manner to meet the defensible space requirements. Note that the proposed planting guidelines were prepared prior to the approval of the City's new Wildland Fire Plan in which the defensible space requirement for the project site has been reduced to 50-70 feet. Hence, these planting guidelines would be modified accordingly.

- Zone 1 (0-30 feet from structure): Lawn and ground cover only.
- Zone 2 (30-50 feet from structure): Open planting design. Low to medium shrubs or clusters of shrubs that are no more than 10 feet in diameter, planted with at least 18 feet between plants or clusters of plants. No shrubs beneath trees. Trees spaced at 30 feet prevent crowns from overlapping.
- Zone 3: (50-70 feet from structure): Shrubs or clusters of shrubs that are 5-7 feet in height and no more than 10 feet in diameter, planted with at least 18 feet between plants or clusters of plants. No shrubs beneath trees. Trees spaced at 30 feet to prevent crowns from overlapping.
- Zone 4 (70-100 feet from structure): No limit on shrub height. Shrubs or clusters of shrubs no more than 10 feet in diameter, planted with at least 18 feet between plants or clusters of plants. Trees spaced at 30 feet to prevent crowns from overlapping.

The future residential development would increase the number of people potentially exposed to a fire in this area. In addition, the increase in the people to the site could increase the potential for accidental fires. This condition would be more than offset by the presence of homeowners at the site that would be vigilant for fires and would be able to respond to incidents. The potential for accidental fires is greater under current conditions due to the unmanaged and unpopulated condition of the project site, which could facilitate illegal activities (e.g., campfires, fireworks, playing with matches, etc).

The proposed development would be required to meet the Uniform Fire Code regulations and any other conditions imposed by the Fire Department, which may pertain to structural materials resistant to ignition, hydrant flows, hydrant spacing, emergency equipment access and evacuation, on-site fire suppression, and landscaping design and maintenance. Uniform Fire Code requirements are implemented at the building permit stage of development and would be incorporated into project structure design.

Fire truck access would be provided by the proposed public loop road (Lane "A") and private drive extending towards Alan Road (Driveway "A"), both of which are accessed from the proposed bridge that would cross Arroyo Burro Creek. The total width of the vehicular travel lanes for proposed Lane "A" would be approximately 28 feet, and Driveway "A" would be approximately 20 feet in width. A hammerhead is proposed near the end of Driveway "A" to provide the necessary fire truck

turnaround area. These roads would have sufficient width, turning radii, and strength to provide for a 60,000 lbs fire truck.

The Fire Department has reviewed the proposed site plan and road widths, and determined that they would meet City emergency access requirements. The Department has determined that a secondary emergency access route to the site from Alan Road is not required based on the number of residences at the site, the anticipated reliability of the primary access point and bridge over Arroyo Burro Creek, and the ability to evacuate people along the pedestrian/bike path at Alan Road. However, establishment of a secondary emergency access road on the pedestrian/bike path at Alan Road would enhance emergency response and evacuation options; the environmental impacts of this secondary emergency access is evaluated as an alternative in Section 4.0.

Currently, the project site is served by Station 13 of the Santa Barbara County Fire Department, located at 4570 Hollister Avenue. Following annexation, the subject parcels would detach from the County's Fire District, and the project would then be served by Station 5 of the City of Santa Barbara Fire Department, located at 2505 Modoc Road. Another City station is located at 1802 Cliff Drive. Both are located within a 5-minute response time. In addition, there is a County sub-station located on Veronica Springs Road that could be dispatched in the event of an emergency, under City and County mutual assistance agreements.

The proposed project would result in an incremental additional demand on the City of Santa Barbara Fire Department that would be accommodated by the Department. No changes in City Fire Department staffing or fire delivery systems would be required to serve the project. Hence, the impact to fire services would be less than significant.

Based on the above considerations, the impact of fire hazard on residents at the new development and for residents at adjacent existing neighborhoods is **considered less than significant (Class III).** The proposed project would not significantly increase the fire hazard in the area and would not create a significant demand on fire services.

3.8.5 Mitigation Measures

H-1 Prior to issuance of building and grading permits, the applicant shall submit a pesticide management plan that addresses the selection, application, storage, and transport of herbicides, insecticides, and rodenticides that would be used in managing the public open spaces at the project site by the homeowner's association. The plan shall be consistent with the City's Integrated Pest Management (IPM) program, and shall be designed to minimize the use of pesticides over time and to avoid public exposure.

H-2 Prior to the issuance of building and grading permits, the applicant shall conduct a study to determine the potential for radon gas to be emitted from the project soils after grading. If it appears that radon is present, the building plans shall incorporate EPA-approved construction methods and design features to prevent the exposure of residents to the gas.

3.9 NOISE

The following impacts associated with the proposed project are evaluated in this section: (1) the potential for construction related noise at the project site and haul truck routes along nearby public roads to adversely affect residences in the vicinity of the project site; and (2) the potential for traffic-associated noise along Las Positas Road to adversely affect ambient noise conditions in outdoor and indoor living areas at the new development.

3.9.1 Definitions

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and which interferes with or disrupts normal activities. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise, perceived importance and suitability of the noise in a setting, time of day and type of activity during which the noise occurs, and sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium such as air and are sensed by the human ear. Sound is generally characterized by a number of variables including frequency and intensity. Frequency describes the sound's pitch and is measured in Hertz (Hz), while intensity describes the sound's loudness and is measured in decibels (dB). Decibels are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels. The minimum change in the sound level of individual events that an average human ear can reliably detect in a community environment is approximately 3 dB. A change in sound level of 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness; this relation holds true for loud sounds and for quieter sounds.

The method commonly used to quantify environmental sounds consists of evaluating sound according to a weighting system that replicates human hearing, which is less sensitive to low frequencies and high frequencies than mid-range frequencies. This frequency-dependent modification is called A-weighting, and the decibel level measured is called the A-weighted sound level (dBA).

Although the A-weighted sound level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a mixture of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. A single descriptor called the L_{eq} (equivalent sound level) is used. L_{eq} is the energy-mean A-weighted sound level present or predicted to occur during a specified time interval. It is the "equivalent" constant sound level that a given source would need to produce to equal the fluctuating level measured.

Other descriptors of noise are also commonly used to help determine noise/land use compatibility and to predict an average community reaction to adverse effects of environmental noise including traffic-generated and industrial noise. One of the most universal descriptors is the Day-Night Average Noise Level (DNL). The DNL (shown in formulae as L_{dn}) noise metric represents a 24-hour period and applies a time-weighted factor designed to penalize noise events that occur during nighttime hours, when relaxation and sleep disturbance is of more concern. Noise occurring during the daytime hours between 7:00 a.m. and 10:00 p.m. receives no penalty. Noise occurring between 10:00 p.m. and 7:00 a.m. is penalized by adding 10 dB to the measured level. Community Noise Equivalence Level(CNEL) is similar to Ld_n but includes a separate 5 dB(A) penalty for noise occurring between the hours of 7:00 p.m. and 10:00 p.m. CNEL and L<dn values usually agree with one another within 1 dB(A).

3.9.2 Existing Conditions

3.9.2.1 Setting

The land uses surrounding the project site consist of residential, open space, and recreational. Arroyo Burro Creek and open space occur along the eastern boundary of the project site. Las Positas Road is located on the other side of the creek and represents the major noise source in the area. Noise generated by traffic on Las Positas Valley is deflected by the hills in the valley, often increasing the noise level in areas that would not otherwise be exposed to traffic noise. Elings Park is located in a canyon on the east side of Las Positas Valley; it represents an occasional noise source due to model car racing and large soccer games.

Residential development occurs on the north and south sides of the project site. The west side of the project site contains open space with steep hills. A single house occurs on the top of Campanil Hill, about 1,500 feet from the project site. The project site is undeveloped and does not typically represent a noise source, except when motorcycle riders use the site in the evenings or on weekends (an unauthorized use). The nearest noise-sensitive receptors to the project site are Stone Creek Condominiums on the north boundary and the residences along Alan Road on the south side of the project site.

3.9.2.2 Noise Measurements

URS Corporation conducted a noise survey of the project site during March 31 - April 1, 2004 in order to evaluate existing sound levels, assess the potential for traffic noise impacts at future residences and project noise impacts on the surrounding community. Sound level measurements were performed at noise-sensitive receptors at, and adjacent to, the project area as shown on Figure 3-27.

Short-term (1 hour or less) attended sound level measurements were conducted with a Brüel and Kjær Model 2231 Sound Level Meter (SLM). Two long-term (24 hours), unattended Community Noise Analyzers (CNAs) measured noise levels continuously, in 15-minute intervals, during a 24-hour period from March 31 to April 1, 2004. The monitoring location designated Long-Term 1 (LT-1) was located on a palm tree in the southern portion of the project area. LT-2 was located on a tree

in the northern portion of the project area. The instruments used for the long-term noise measurements were Metrosonics db-308 CNAs.

The sound measuring instruments used for the survey were set to the slow time response and the A-weighted decibel (dBA) scale for all of the noise measurements. To ensure accuracy, the laboratory calibration of the instruments was field checked before and after each measurement period. In all cases, the microphone height was 5 feet above the ground and the microphone was equipped with a windscreen.

During the field measurements, physical observations of the predominant noise sources were noted. The noise sources in the project area typically included traffic on Las Positas Road, birds, and distant aircraft. At measurement location ST-5 (Elings Park, near the radio-control model car track), distant residential construction activity noise could be heard in addition to the model car racing activities. Chart 3-1 shows the hourly L_{eq} sound levels measured at the long-term monitoring locations LT-1 and LT-2. The measured L_{dn} values at LT-1 and LT-2 were 53 dBA L_{dn} and 58 dBA L_{dn}, respectively.

Examination of Figure 3-27 shows unusually high noise levels occurred during the 5 p.m. and 6 p.m. measurements at LT-2. The most likely cause of this was dirt-bike (motorcycle) activities on a homemade track currently located near the LT-2 measurement site. Whereas, throughout the rest of the noise measurement period, LT-2 noise levels tracked very closely with LT-1 levels (LT-2 levels being zero to three decibels higher than LT-1 levels), during the 5 P.M. and 6 P.M. hours, LT-2 noise levels were 13 to 14 decibels higher. Adjusting for these anomalous hours (by using the two neighboring hours' LT-2/LT-1 "offsets"), the adjusted LT-2 levels correspond to an L_{dn} of 55 dBA.

The results of the attended short-term sound level measurements are summarized in Table 3-20. As shown in Table 3-20, measured noise levels during daytime and early-morning hours in the project area varied from 46 dBA L_{eq} (at ST-2) to 56 dBA L_{eq} (at ST-4).

TABLE 3-20
AMBIENT NOISE CONDITIONS AT AND NEAR THE PROJECT SITE
(BASED ON SHORT TERM NOISE MEASUREMENTS)

Location (see Fig. 3-27)	Measurement Location	Measurement Period			Noise Sources	dBA		
		Date	Start Time	Duration (minutes)		L_{eq}	L_{max}	L_{min}
ST-1	Lot 11 (Closest planned lot to Las Positas Road,).	3/31/2004	11:30	20	Traffic on Las Positas Road, distant aircraft, birds	49.8	57.5	38.7
ST-1A	Same as ST-1	3/31/2004	15:45	20	Traffic on Las Positas Road, distant aircraft, birds	48.3	56.7	37.3
ST-1B	Same as ST-1	4/1/2004	7:40	20	Traffic on Las Positas Road, distant aircraft, birds	49.9	62.4	36.8
ST-2	On-site at at Lot 5 (southern area of project site).	3/31/2004	11:55	20	Traffic on Las Positas Road, rustling leaves, birds	46.4	57.1	37.8
ST-2A	Same as ST-2	3/31/2004	16:10	20	Traffic on Las Positas Road, rustling leaves, birds	48.4	58.5	35.7
ST-2B	Same as ST-2	4/1/2004	7:00	20	Traffic on Las Positas Road, distant aircraft, birds	50.5	62.0	34.4
ST-3	561 Alan Road (adjacent to southern end of project site).	3/31/2004	12:20	20	Traffic on Las Positas Road, distant aircraft, birds, rustling leaves	51.4	62.5	36.2
ST-4	1201 Rebecca Lane, Unit A (adjacent to northern end of project site).	3/31/2004	13:40	20	Traffic on Las Positas Road, distant aircraft, birds, rustling leaves, brief dog barking.	56.3	79.8	37.8
ST-5	Elings Park, at model car track area.	3/31/2004	14:10	20	Traffic on Las Positas, occasional park road, model car activity, distant construction activity	49.8	65.1	35.6
ST-6	On-site at stake V-7.	3/31/2004	15:20	20	Traffic on Las Positas Road, distant aircraft, birds, rustling leaves, model car activity barely audible	48.8	66.1	34.7

3.9.3 Potential Impacts

3.9.3.1 Impact Thresholds

The proposed project would be annexed to the City of Santa Barbara, and as such, would be subject to the City's noise policies and regulations. Guidelines for long-term exterior noise levels compatible with various land uses are established in the City's *Noise Element* of the General Plan. The goal of the Noise Element is "*to ensure that the City of Santa Barbara is free from excessive noise and abusive sounds.*" The Noise Element identifies the maximum acceptable ambient exterior Day-Night Noise Level (L_{dn}) for outdoor living areas of residential use as 60 dBA L_{dn}. For parks, the maximum acceptable exterior noise level is 65 dB(A) L_{dn}. The Uniform Building Code and City guidelines establish the maximum residential interior noise level as 45 dBA L_{dn}.

The City's Noise Ordinance, Chapter 9.16 of the City's Municipal Code, regulates temporary and intermittent noise, such as noise from construction activities. The Ordinance sets forth limitations on construction noise and criteria for nuisance noise. The Ordinance prohibits construction activities between 8 p.m. and 7 a.m. if the resultant noise exceeds the ambient noise level by 5 dBA or more at the nearest residential property line, unless a special permit has been applied for and granted by the Chief of Building and Zoning (see Section 9.16.015).

3.9.3.2 Construction Noise

Project construction would temporarily increase noise levels at residences adjacent to the project site. The magnitude of the increases would depend on the type of construction activity, the noise level generated by various pieces of construction equipment, site geometry (i.e. shielding from intervening terrain or other structures), and the distance between the noise source and receiver. As described in Section 3.4.1, construction would in the following two phases:

- Phase 1 would require about 6 months and involve the following concurrent construction activities: (1) construction of the bridge; (2) landslide stabilization (i.e., earthwork, installation of caissons); and (3) site grading and infrastructure improvements (e.g., utilities, drains). Access to the site during this phase would occur from Alan Road.

- Phase 2 would begin upon completion of the bridge and site grading. At that time, all access to the site would occur from Las Positas Road. This phase includes home construction and site landscaping, and would require about one year.

The applicant has proposed that construction and all haul truck deliveries would occur between 7 a.m. and 5 p.m. Monday through Friday. When using Alan Road for construction traffic during Phase 1, all haul trucks would avoid the peak traffic hours of 7 a.m. to 9 a.m. and 4 p.m. to 5 p.m.

Noise from construction activity would be generated by the broad array of powered, noise-producing mechanical equipment used in the construction process. This equipment would range from hand-held pneumatic tools to bulldozers, dump trucks, and front-end loaders. The exact complement of noise-producing equipment that would be in use during any particular period has

not been determined, but the maximum number and type of heavy equipment operating at any one time at the site is anticipated to be 3 to 5 pieces of heavy equipment as shown in Table 2-7. Construction areas and activities that have the greatest potential to affect off-site residences include the following:

- Construction of the bridge across Arroyo Burro Creek, which is about 200 feet from the nearest unit at Stone Creek Condominiums
- Stabilization of the landslide above Lot 12, which is about 400 feet from the nearest unit at Stone Creek Condominiums
- Stabilization of the landslide above Lot 1, which is about 50 to 100 feet from the nearest residence on Alan Road

To assess the potential noise effects from construction, this noise analysis used data from an extensive field study of various types of construction projects including public works projects (US EPA, Bolt, Beranek and Newman, 1971). Noise levels associated with various construction phases where all pertinent equipment is present and operating, at a reference distance of 50 feet, are shown in Table 3-21. Because of vehicle technology improvements and more strict noise regulations since the field study was published, this analysis uses the average noise levels shown in Table 3-21 for the loudest construction phase. This information indicates that the overall average noise level generated on a construction site could be 88 dBA at a distance of 50 feet during excavation and finishing phases. The noise levels presented are value ranges; the magnitude of construction noise emission typically varies over time because construction activity is intermittent and the power demands on construction equipment (and the resulting noise output) are cyclical.

TABLE 3-21
TYPICAL NOISE LEVELS FROM CONSTRUCTION ACTIVITIES FOR PUBLIC WORKS PROJECTS

Construction Activity	Average Sound Level at 50 feet (dBA L_{eq}) [1]	Standard Deviation (dB)
Ground Clearing	83	8
Excavation	88	8
Foundations	81	10
Erection	81	10
Finishing	88	7

Source: Bolt, Beranek and Newman (Prepared under contract for the U.S. Environmental Protection Agency), Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 31, 1971.

[1] Sound level with all pertinent equipment operating.

Noise levels generated by construction equipment (or by any "point source") decrease at a rate of approximately 6 decibels per doubling of distance from the source. Therefore, if a particular construction activity generated average noise levels of 88 dBA at 50 feet, the L_{eq} would be 82 dBA at 100 feet, 76 dBA at 200 feet, 70 dBA at 400 feet, etc. This calculated reduction in noise level is based on the loss of energy resulting from the geometric spreading of the sound wave as it leaves the source and travels outward; this is also referred to as the inverse square law effect. Intervening

structures that block the line of sight, such as buildings or topographical features, would further decrease the resultant noise level by a minimum of 5 dBA. The effects of molecular air absorption would reduce the noise level from construction activities at more distant locations at the rate of approximately one decibel per 1,000 feet.

The nearest noise-sensitive receptors to the project site are the existing residences at the Alan Road cul-de-sac. The nearest existing residence is approximately 80 feet from the southernmost proposed residential unit (Lot 1) and approximately 230 feet from the center of the slope stabilization above Lot 1. Existing residences are also located southwest of the project site, approximately 200 feet away from the project limits, but these residences are acoustically shielded from the project by a ridgeline. The Stone Creek Condominiums at the north end of the project site are located approximately 200 feet from the nearest proposed Lot 12, and approximately 200 feet from the proposed bridge.

The nearest activity areas at Elings Park (the model car racetrack and bicycle motocross (BMX) track) are more than 750 feet east of the project site, on the other side of Las Positas Road (a noise generating source). Noise-sensitive uses in the park such as hiking areas are located further away, approximately 1,200 feet or more east of the project site.

A construction noise level of 88 dBA L_{eq} at 50 feet would attenuate to approximately 84 dBA L_{eq} at the Alan Road residence adjacent to the new lot, approximately 80 feet south of Lot 1. These same noise levels would attenuate to 75 dBA L_{eq} at the last residence on Alan Road on the east side of the road. These noise level is approximately substantially higher than the typical daytime noise level measured at ST-3 of 51 dBA L_{eq}. Noise level increases of this magnitude, although temporary, would be readily audible and would dominate the noise environment in the area during construction operations. However, noise levels of this magnitude would be experienced for a relatively short period, because most of the construction work would take place at other portions of the site which are at greater distances from the Allan Road residences.

Residences to the north of the project (i.e., Stone Creek Condominiums), located 200 feet away from the nearest major construction work, are anticipated to experience construction noise levels as high as 77 dBA L_{eq} during the noisiest phases of project construction (i.e., excavation and finishing). Based upon ambient noise measurements conducted in this area (at ST-4), this would represent a noise increase of approximately 21 decibels, which would be readily audible and would dominate the noise environment in the area during construction operations.

Construction noise at use areas at Elings Park is predicted to be as high as 64 dBA L_{eq} during the noisiest phases of project construction (i.e., excavation and finishing). Based upon ambient noise measurements conducted in this area (at ST-5), this would represent a noise increase of approximately 14 decibels, which would be readily audible and would dominate the noise environment in the area during construction operations.

The City's noise ordinance exempts construction activities from any noise standard (provided that such activities take place between the hours of 7 a.m. to 8 p.m.) because these impacts are temporary, localized, and intermittent. The increased ambient noise levels at adjacent residences and portions of Elings Park may cause a periodic distraction or nuisance when peak noise levels are generated during certain construction activities. However, construction related noise impacts are

considered less than significant (Class III) because the proposed construction schedule would be consistent with the Municipal Code (Section 9.16.015), and the construction noise would be temporary and intermittent. However, to reduce the magnitude of construction noise impacts at the three work areas nearest adjacent residences, construction activities shall be restricted to 8 a.m. to 5 p.m. at these locations (Mitigation Measure N-1). Additional measures are recommended in Mitigation Measure N-3.

Based upon the construction noise data, noise levels on the construction site could exceed federal Occupational Safety and Health Act (OSHA) and California Department of Industrial Relations, Division of Occupational Safety and Health (Cal OSHA) regulations (8 CCR, General Industrial Safety Orders, Article 105, Control of Noise Exposure, §5095, et seq.) for worker noise exposure. Compliance with Cal/OSHA regulations would ensure that construction personnel are adequately protected from potential noise hazards. The noise exposure level to protect hearing of workers is regulated at 90 dBA Time-Weighted Average (TWA) over an eight-hour work shift. Areas above 85 dBA sound pressure level would be posted as high noise level areas and hearing protection would be provided and required to be worn. The project applicant would implement or require implementation of a hearing conservation program for applicable employees as outlined in Cal/OSHA regulations. Hence, no adverse noise impacts to workers are anticipated.

Construction trucks would access the project site from Alan Road for about six months during Phase 1. The average and peak daily truck trips during this phase would be 30 and 40 round trips per day, respectively. When using Alan Road for construction traffic during Phase 1, all haul trucks would avoid the peak traffic hours of 7 a.m. to 9 a.m. and 4 p.m. to 5 p.m. The trips are expected be evenly distributed throughout the day; thus, approximately 4-5 truck trips per hour would occur along Alan Road per day. The estimated noise level of a moving truck would be 60-65 dBA L_{eq} at a distance of 50 feet.

Living areas in the residences along Alan Road are located 25 to 50 feet from the edge of the road. Noise from haul trucks along Alan Road would increase the ambient sound levels in outdoor and indoor living areas of residences along the road. The increased noise level would be intermittent. In addition, there are no City noise standards for construction related noise impacts on public roads. As such, this impact would typically be considered less than significant. However, this impact has the potential to cause a nuisance to residents along Alan Road who are at home during the week, particularly considering the current low ambient noise conditions along the road, which is a dead end street that does not have through traffic. There are no feasible mitigation measures or alternatives to avoid the use of Alan Road during Phase 1 of the project because there is no other access to the site until the bridge is constructed during Phase 1. Temporary sound barriers would not be effective for screening construction related noise at the site due to the complex topography and large construction area.

Based on the above information, the temporary noise impact to Alan Road residences due to truck traffic during Phase 1 is considered s**ignificant and unmitigable (Class I).** The impact can be further reduced by the following restriction in Mitigation Measure N-2 – all haul truck traffic on Alan Road shall be restricted to the time period 9 a.m. to 4 p.m. during weekdays.

3.9.3.3 Long Term Road Noise Impact on Residences

Following construction, the project itself would not materially contribute to noise from traffic at nearby noise-sensitive uses because of the small number of residential units (i.e., 24) that would be constructed. The residential units would not generate traffic in numbers that would result in a measurable increase in traffic noise, nor would residential land use create a significant new noise source.

Noise from traffic on Las Positas Road, adjacent to the project site, would be the predominant noise source at the newly constructed residences. The on-site noise levels from traffic on Las Positas Road have been estimated to determine if the noise levels are within City noise standards for residential land use. Traffic noise level predictions were made using a personal computer version of the FHWA Stamina 2.0 Traffic Noise Prediction Model called Sound32 Version 1.41. This model was developed by Caltrans' Division of New Technology, Materials, and Research and can use either national or California-specific Reference Mean Emission Levels. The input parameters used in this study for modeling traffic noise included distance from source to receptor, selection of California Reference Energy Mean Emission Levels ("Calveno curves"), existing traffic volumes (in the form of AM and PM peak noise hour volumes), truck/auto percentages, and speeds. The traffic volume data input was based upon the transportation consultants' (ATE) traffic study. Typical source-receptor distances were based upon aerial photo and site plan information and modeled travel speeds used the posted speed on Las Positas Road. The resultant noise model results were compared with field data (as measured at LT-1, LT-2) and found to correspond very well with real-world measurements.

The resultant noise modeling results (shown in Table 3-22) indicate that traffic noise levels at planned residential lots in the Veronica Meadows project would not exceed City of Santa Barbara residential noise standards of 60 dBA L_{dn}. Traffic noise levels at modeled on-site receptors are predicted to range from 53 dBA L_{dn} to 55 dBA L_{dn}. Therefore, as currently planned, no significant operational impacts would result from the proposed project.

TABLE 3-22
NOISE MODELING RESULTS FROM TRAFFIC ON LAS POSITAS ROAD

Representative Receptor	Predicted Traffic Noise Level (AM/PM peak-traffic hour) (dBA L_{eq})	Predicted Traffic Noise Level (dBA L_{dn})
M-1 (Lot 2)	53	53
M-2 (Lot 5)	53	53
M-3 (Lot 11)	54	55
M-4 (Lot 12)	54	54
LT-1	53	53
LT-2	55	55

3.9.4 Applicable Plans and Policies

The following goals and policies from the City's Noise Element of the General Plan are directly applicable to the proposed project:

Goal:

- *To ensure that the City of Santa Barbara is free from excessive noise and abusive sounds such that: a) sufficient information concerning the city noise environment is provided for land use planning; b) strategies are developed for abatement of excessive noise levels; and c) existing low noise levels are maintained and protected.*

Policies:

- *Existing and potential incompatible noise levels in problem areas should be reduced through land use planning, building and subdivision code enforcement, and other administrative means.*
- *Existing and potential incompatible noise levels in problem areas should be reduced through operational or source controls where the City has responsibility for such controls.*

The proposed project would be consistent with the above goals and policies because: (1) the construction activities would adhere to the City's noise ordinance; (2) the residential land use would not be exposed to high ambient noise levels from nearby roads; and (3) mitigation measures would reduce construction related noise impacts to the extent practicable.

3.9.5 Mitigation Measures

N-1 Clearing and grubbing, earthwork, drilling, concrete placement, and other major construction activities involving heavy equipment shall be restricted to 8 a.m. to 5 p.m. at the following locations: bridge site, landslide stabilization site above Lot 12, and landslide stabilization site above Lot 1.

N-2 No haul, dump, or supply trucks shall use Alan Road for access during Phase 2, except as needed to construct residences at Lots 1 and 2. During Phase 1, all haul trucks, dump trucks, and heavy equipment traffic on Alan Road shall be restricted to the time period 9 a.m. to 4 p.m. during weekdays.

N-3 The following measures should be incorporated into the project contract specifications to minimize general construction noise impacts:

a) Construction operations shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday and no time on Saturday, Sunday or on holidays, consistent with the City of Santa Barbara Municipal Code. Holidays are defined as those days that are observed by the City of Santa Barbara as official holidays, and include New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the following Friday, and Christmas Day. Further restrictions on construction operations are provided in Mitigation Measure N-1.

b) All noise-producing project equipment and vehicles using internal combustion engines (including haul trucks) shall be professionally fitted with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features. These devices shall be professionally maintained in good operating condition so as to meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

c) Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from Alan Road and the Stone Creek Condominiums.

d) The speed limit at the construction site during prior to completion of paved roads shall be 15 MPH.

e) The use of noise-producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only.

f) No project-related music system shall be audible at any adjacent receptor.

g) At least 20 days prior to commencement of construction, the project applicant shall provide a notice of construction schedule to property owners, residents, and neighborhood organizations within 500 feet of the site boundary and post information on the site in a location visible to the public, including the hours of operation and contact person with a telephone number who can address questions and problems that may arise during construction.

h) All project workers exposed to noise levels above 80 dBA shall be provided with personal protective equipment for hearing protection (i.e., earplugs and/or earmuffs); areas where noise levels are routinely expected to exceed 80 dBA shall be clearly posted with signs stating "Hearing Protection Required in this Area."

i) Survey work, construction within residential units with completed walls, and landscaping (manual labor only) may occur at the project site on Saturday. No construction work can occur on Saturday if it involves the use of haul trucks or construction equipment (e.g., loaders, backhoes, generators, compressors, etc).

j) Construction staging areas where vehicles may idle or other noise-generating activities take place shall be located as far from adjacent residential areas as feasible.

3.10 AIR QUALITY

3.10.1 Existing Conditions

3.10.1.1 Meteorological Setting

The climate of the South Coast region is characterized by relatively low rainfall, with warm summers and mild winters. Annual precipitation averages 16 inches, with approximately 95 percent of that falling between November and April. Average monthly temperatures range from a high of 75 degrees Fahrenheit (°F) in September to a low of 40°F in December.

Santa Barbara County's air quality is influenced by both local topography and meteorological conditions. Surface and upper-level wind flow varies both seasonally and geographically in the County, and inversion conditions common to the area can affect the vertical mixing and dispersion of pollutants. The prevailing wind flow patterns in the County are not necessarily those that cause high ozone values. In fact, high ozone values are often associated with unusual wind flow patterns. Key meteorological and topographical influences that are important to air quality in the County are summarized below.

- Semi-permanent high pressure that lies off the Pacific Coast leads to limited rainfall; warm, dry summers; and wet winters. Cool, humid marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer. The fog and low clouds can persist for several days until broken up by a change in the weather pattern.
- Santa Ana winds are northeasterly winds that occur primarily during fall and winter, but occasionally in spring. These are warm, dry winds blown from the high inland desert that descend down the slopes of a mountain range. Wind speeds associated with Santa Ana winds are generally 15 to 20 miles per hour (mph), though they can sometimes reach speeds in excess of 60 mph. During Santa Ana conditions, pollutants emitted in Santa Barbara County, Ventura County, and the South Coast Air Basin (the Los Angeles region) are moved out to sea. These pollutants can then be moved back onshore into Santa Barbara County in what is called a "post-Santa Ana condition."
- Upper-level winds are generally from the north or northwest throughout the year, but occurrences of southerly and easterly winds do occur in winter, especially during the morning. When they do occur, they are usually associated with periods of high ozone levels. As with the surface winds, upper level winds can move pollutants that originate in other areas into the County.
- Surface temperature inversions (0 to 500 feet above ground surface) are most frequent during the winter, and subsidence inversions (1,000 to 2,000 feet) are most frequent during the summer. Inversions are an increase in temperature with height and are directly related to the stability of the atmosphere. Inversions act as a cap to the pollutants that are emitted below or within them, and ozone concentrations are often higher directly below the base of elevated inversions than they are at the earth's surface. For this reason, elevated monitoring sites would occasionally record higher ozone concentrations than sites at lower elevations. Generally, the lower the inversion base height and the greater the rate of temperature increase from the base to the top,

the more pronounced effect the inversion would have on inhibiting vertical dispersion. The subsidence inversion is very common during summer along the California coast, and is one of the principal causes of air stagnation. Poor air quality is usually associated with "air stagnation" (high stability/restricted air movement).

3.10.1.2 Air Quality

The Federal Clean Air Act Amendments of 1970 established National Ambient Air Quality Standards (NAAQS) for six "criteria pollutants." These include photochemical ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, and lead. The California Clean Air Act of 1977 created stricter California Ambient Air Quality Standards (CAAQS) for the state. Additionally, the California Air Resources Board has designated areas of the state that are in attainment or nonattainment of the CAAQS. An area is in nonattainment for a pollutant if the applicable CAAQS for that pollutant has been exceeded more than once in three years. Presently, the County of Santa Barbara is in nonattainment with CAAQS for ozone (O_3) and particulate matter (PM_{10}). There are also heavily congested intersections within the City that may approach the California 1-hour standard of 20 parts per million for carbon monoxide (CO) during peak traffic hours.

Ozone is formed in the atmosphere through a series of chemical reactions involving NO_X, reactive organic compounds (ROC), and sunlight. Ozone is classified as a "secondary" pollutant because it is not emitted directly into the atmosphere. The major sources of ozone in the County are motor vehicles, the petroleum industry, and the use of solvents (paint, consumer products, and certain industrial processes). PM_{10} is generated by a variety of sources, including windblown dust, grading, agricultural tilling, road dust, and quarries.

The Santa Barbara County Air Pollution Control District (APCD) has responsibility for maintaining and improving air quality within Santa Barbara County. The 2001 Clean Air Plan developed by the APCD identifies actions to meet the requirements in the federal Clean Air Act and California Clean Air Act. The Clean Air Plan is periodically updated by the APCD. The 1998 Clean Air Plan has been adopted as part of the State Implementation Plan. The 2001 Clean Air Plan is the most recent prepared by the APCD.

The APCD has a network of 20 air quality monitoring stations throughout the County. Since 1988, there has been steady improvement in ozone pollution in the County. The number of exceedances of the state and federal ozone standards has decreased as follows:

	State 1-hour Standard	Federal 1-hour Standard	Federal 8-hour Standard
1988	43	8	30
2003	7	0	5
2004 (through Aug.)	2	0	2

There have been no exceedances of the federal 1-hour ozone standards in the County in recent years. However, the 8-hour standard has been exceeded 2-5 times in the past several years. As of

August 8, 2003, the County has been re-designated as a federal ozone attainment area for the one-hour ozone standard.

The state ozone standard (1-hour) has been exceeded 3 to 15 times during the period 1998-2003. Santa Barbara County remains nonattainment for the state ozone standard.

The state particulate matter standard for PM_{10} was exceeded twice in 2001. There have been no exceedances since that year. However, Santa Barbara County remains nonattainment for the state PM_{10} standard.

3.10.2 Potential Impacts

3.10.2.1 Impact Thresholds

The City utilizes the APCD's thresholds of significance for evaluating air quality impacts of projects that involve new land uses or activities. The APCD has determined that a proposed project would not have significant air quality impact on the environment, if operation of the project will:

- Emit (from all project sources, both stationary and mobile) less than the daily trigger for offsets or Air Quality Impact Analysis set in the APCD New Source Review Rule 1, for any pollutant (i.e., 240 pounds/day for ROC or NOx; and 80 lbs/day for PM_{10}. There is no daily operational threshold for CO; it is an attainment pollutant)
- Emit less than 25 pounds per day of NOx or ROC from motor vehicle trips only
- Not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone)
- Not exceed the APCD health risk public notification thresholds adopted by the APCD Board
- Be consistent with the adopted federal and state air quality plans for Santa Barbara County

The City of Santa Barbara also utilizes the additional guidelines for identifying significant air quality impacts from a proposed project: A project may create a significant air quality impact from the following:

- Exposing sensitive receptors, such as children, the elderly, or sick people to substantial pollutant exposure
- Substantial or unmitigated nuisance dust during earth-moving or construction operations
- Creation of nuisance odors inconsistent with APCD regulations

The APCD has not established thresholds of significance for temporary construction related emissions. However, the APCD recommends that construction-related ROC, PM_{10} and NO_X emissions from diesel and gasoline powered equipment and truck traffic be quantified in environmental documents. The City has adopted the following guidance on evaluating construction

related emissions. Construction projects involving grading, paving, and landscaping activities may cause localized nuisance dust impacts and increased particulate matter (PM_{10}). Substantial dust-related impacts may be considered potentially significant, but mitigable with the application of standard dust control mitigation measures. As a guideline, APCD Rule 202.F.3 identifies a substantial effect associated with projects having combined emissions from all construction equipment that exceed 25 tons of any pollutant (except carbon monoxide) within a 12-month period. Standard dust mitigation measures are applied to projects with either significant or less than significant effects.

3.10.2.2 Impacts of Construction Related Emissions

Construction of the proposed land development project would result in temporary emissions of gaseous pollutants and particulate matter from:

- Haul trucks, employee vehicles, and supply trucks accessing the project site;
- Earthmoving equipment that are engaged in excavation, backfilling, and compacting at the project site
- Construction equipment involved in concrete and pavement work, welding, painting, and hauling materials

In addition, excavation and earthwork activities at the project site would generate fugitive dust.

Construction would occur over an 18-month period in two phases. Phase 1 would require about six months and involve the following concurrent construction activities: (1) construction of the bridge; (2) landslide stabilization (i.e., earthwork, installation of caissons); and (3) site grading and infrastructure improvements (e.g., utilities, drains). Phase 2 would begin upon completion of the bridge and site grading. This phase includes home construction and site landscaping, and would require about one year.

Pollutants include nitrogen oxides, particulate matter, carbon monoxide, sulfur dioxide, and reactive hydrocarbons. Emissions from the construction activities during Phases 1 and 2 at the project site were estimated using the URBEMIS 2002 emissions software, in accordance with the recommendations in APCD's *Scope and Content of Air Quality Sections in Environmental Documents, 2004*. The results are presented in Table 3-23 for daily emission estimates, and in Table 3-24 for total project emissions. The emission inventory included the following standard emission reduction measures: use of soil stabilizers for inactive barren areas or stockpiles; water unpaved roads three times a day; and limit speeds on unpaved roads to less than 15 miles per hour.

TABLE 3-23
TOTAL ESTIMATED CONSTRUCTION EMISSIONS (TONS PER YEAR)*

	ROC	NO_X	PM_{10}		
			Total	Exhaust	Dust
Phase 1					
Total, with standard dust controls	0.78	5.64	3.96	0.24	3.90
Phase II					
Total, without mitigation for diesel emissions	1.85	5.95	8.76	0.44	2.15

*Emissions based on URBEMIS 2002 emissions inventory software. Includes construction equipment and haul truck emissions.

TABLE 3-24
MAXIMUM DAILY ESTIMATED CONSTRUCTION EMISSIONS (POUNDS PER DAY)*

	ROC	NO_X	PM_{10}		
			Total	Exhaust	Dust
Phase 1					
Total, with standard dust controls	12.49	86.47	62.59	3.57	59.02
Phase II					
Total, with standard controls	86.26	49.84	2.20	2.16	0.04

*Emissions based on URBEMIS 2002 emissions inventory software. Includes construction equipment and haul truck emissions.

Phase 1 would involve substantial earthwork associated with landslide and slope stabilization, followed by site grading for building pads, roads, and drainage. The project has been designed for a balanced cut and fill grading operation. The applicant has estimated that grading of the project site would require 13,459 cubic yards of cut and 10,390 cubic yards of fill. However, as noted in the proposed plans, these estimates do not take into account shrinkage or compaction. The applicant has estimated that there may be a need for up to 16,000 cubic yards of imported fill to develop the site. These cut and fill quantities reflect grading from roads, building pads, and contouring of open space areas. Several landslides on the hills would require geologic stabilization and would result in approximately 61,500 cubic yards of cut and 61,500 cubic yards of fill. The geologic stabilization would occur prior to the mass grading of the site. It is estimated that the maximum area to be disturbed by mass grading and slope stabilization during Phase 1 would be about 9 acres.

Hence, there is a potential for substantial fugitive dust generation due to the large areas of exposed soil, high volume of material to be excavated and filled, and high level of construction vehicle activity on the site during Phase 1. Given these considerations, construction activities could result in **potentially significant, but mitigable (Class II)** fugitive dust impacts. Fugitive dust generation and air quality impacts can be reduced to less than significant levels through the implementation of dust control measures presented in Mitigation Measure AQ-1.

Air quality impacts from construction equipment emissions would be a**dverse, but less than significant (Class III)** because they would be temporary in nature and comprise a very small fraction of the total County-wide emissions from all point, mobile, and area sources. No local emission impact thresholds would be exceeded. All construction activities would be carried out in accordance with applicable Federal, State, and local laws and regulations concerning the prevention and control of air pollution. In addition, emissions from construction equipment would be reduced using standard APCD required emission controls, as listed in Mitigation Measure AQ-2.

3.10.2.3 Impacts of Residential Vehicle Use

The proposed land development project would result in new long-term emissions from motor vehicles use by residents, and by service vehicles. The proposed project would result in 230 new average daily trips (ADTs) and 18 AM and 25 PM peak-hour trips. Because the proposed project would generate less than 800 peak hour trips to an existing congested intersection, CO impacts are considered less than significant. Utilizing the URBEMIS computer model, City Planning staff estimated that the proposed project would generate 1.29 pounds per day of NO_x and 1.04 pounds per day of ROC. These emission estimates are well below the applicable APCD thresholds. Hence, the proposed project would have a **less than significant long-term air quality impact (Class III)**.

3.10.2.4 Other Impacts

Sensitive receptors are defined as children, elderly, or ill people, who can be more adversely affected by poor air quality or pollutant emissions. Land uses typically associated with sensitive receptors include schools, playgrounds, child care centers, retirement homes, convalescent homes, hospitals, and clinics. No sensitive receptors are located adjacent to, or in close proximity to, the project site. Hence, the air quality impacts noted above related to construction would not affect sensitive receptors.

The proposed project does not contain any features with the potential to emit odorous emissions from sources such as commercial cooking equipment, combustion or evaporation of fuels, sewer treatment, or solvents and surface coatings.

The proposed residences would include fireplaces. Periodic use by residents would generate particulate matter and smoke. These emissions would be periodic, seasonal, and short-term. They would not exceed any significance threshold, but would represent a minor and localized contribution to the regional air quality conditions in which particulate matter is a pollutant of concern. These emissions would be considered less than significant.

3.10.3 Consistency with Clean Air Plan

For commercial, industrial, and residential development projects, the City of Santa Barbara and the APCD require that a project's consistency with the Clean Air Plan (CAP) growth projections be evaluated. By definition, consistency with the CAP, means that direct and indirect emissions associated with the project are accounted for in the CAP's emissions growth assumptions and the

project is consistent with policies adopted in the CAP. The CAP relies primarily on the land use and population projections provided by the Santa Barbara County Association of Governments and Air Resources Board on-road emissions forecast as a basis for vehicle emission forecasting. If a residential project provides for an increased population growth above that forecasted in the most recently adopted CAP, then the project is inconsistent with the CAP and may have a significant impact on air quality. The population growth associated with the proposed project was included in the most recently adopted CAP. Therefore, the proposed project is consistent with the CAP.

3.10.4 Mitigation Measures

AQ-1 The following measures would reduce fugitive dust emissions related to construction activities and haul trucks. They are based on the standard dust mitigation measures of the APCD.

a) Areas subject to clearing, grading, earth moving or excavation shall be kept sufficiently moist, through use of either water trucks or sprinkler systems, to prevent dust from leaving the site. Water trucks or sprinkler systems shall also be used to keep on-site roads (paved and unpaved) damp enough to prevent dust raised from leaving the site. At a minimum, this shall include wetting down these areas in the late morning and after work is completed for the day. At the end of the day, areas with disturbed soil shall be sufficiently moistened to create a crust. Increased watering frequency shall be required whenever the wind speed exceeds 15 mph. These areas must also be kept moist during weekends and days when no construction activities are occurring.

b) Reclaimed water shall be used for dust control if the Public Works Director determines that it is reasonably available.

c) Stockpiles and barren areas at the project site that would be disturbed on a periodic basis (at least once every 5 days) shall be kept sufficiently moist by the use of water trucks or sprinklers to prevent dust from leaving the site.

d) Stockpiles and barren areas at the project site that would remain undisturbed for more than 5 days shall be stabilized by the use of tackifiers, soil binders, or other measures. These stabilization agents shall be replenished throughout the dry season on an as-needed basis to prevent dust emissions.

e) On-site vehicle speeds shall be limited to 15 miles per hour or less.

f) Gravel pads or similar devices shall be installed at all access points to prevent tracking of mud on to public roads.

g) Alan Road, Cliff Drive (between Alan Road and Las Positas Road), and Las Positas Road (between Cliff Drive and Veronica Springs Road) shall be inspected daily (midday and at the end of the day) during periods of truck hauling to determine if there is an accumulation of silt on the road that could cause fugitive dust. These road segments shall be kept clean of such silt by the use of a street sweeper or watering truck.

h) Trucks transporting fill material to and from the site shall be tarped from the point of origin.

i) Upon the completion of construction, all disturbed areas shall be stabilized by the use of rock protection or perennial vegetation.

j) The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD prior to initiation of construction. All dust control requirements shall be shown on grading and building plans.

AQ-2 The following measures would reduce NO_X emissions from construction equipment and haul trucks. They are based on the standard mitigation measures of the APCD.

a) Heavy-duty diesel-powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) should be utilized wherever feasible.

b) The engine size of construction equipment shall be the minimum practical size.

c) The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.

d) Construction equipment shall be maintained in tune per the manufacturer's specifications.

e) Construction equipment operating onsite shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines.

f) Catalytic converters shall be installed on gasoline-powered equipment, if feasible.

g) Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California shall be installed, if available and if determine to be reasonable and feasible by the City Public Works Department.

h) Construction worker trips should be minimized by encouraging carpooling and by providing for lunch onsite.

3.11 IMPACTS PREVIOUSLY ADDRESSED IN THE INITIAL STUDY

The following impact analyses were presented in the Initial Study prepared by the City Community Development Department. They are repeated in the EIR for the sake of completeness. For both issue areas, the City determined that impacts would be less than significant.

3.11.1 Public Services

Facilities and Services

The project site is located within an urban area. The project would result in 24 additional residential units, a limited amount of additional development. The development would be accessed off Las Positas Road, via a proposed bridge and public road. The project would be serviced with connections to existing public services for water, gas, electricity and telephone traversing the site. No substantial impacts on existing public services such as roads, governmental services, electric power, gas, and water treatment and distribution of facilities would occur as a result of the project. Because this project is an infill project resulting in a relatively small increase in residential units, the project would not generate a significant demand for increased fire or police services.

Schools

Children living in this residential development would attend Monroe Elementary School, in the Santa Barbara School District, La Cumbre Junior High, and Santa Barbara High School. None of the school districts in the South Coast have been determined to be "overcrowded" as defined by California State law, and additional students could be accommodated by the schools. Impact fees in accordance with State law would be required for the project. Impacts to schools would be less than significant.

Sewer

According to the Public Works Water Resources Division, sewage generation for residential projects is approximately 87% of water demand (the remaining 13% is used for landscaping, etc., and is not captured by the sewage system). The project's estimated net new water demand is 12.55 acre feet/yr, or 11,205 gallons/day. Therefore, the project would produce approximately 9,748 net new gallons of sewage per day. The maximum capacity of the El Estero Treatment Plant is 11 million gallons per day and there is adequate capacity at the El Estero Treatment Plant for planned future growth. The project would have a less than significant impact on the City's sewer system.

Water Demand

The City of Santa Barbara's water supply comes from the following sources, with the actual share of each determined by availability and level of customer demand: Cachuma Reservoir and Tecolote Tunnel, Gibraltar Reservoir and Mission Tunnel, 300 Acre Feet per Year (AFY) of contractual transfer from Montecito Water district, groundwater, State Water Project entitlement, desalination, and recycled water. Conservation and efficiency improvements are projected to contribute to the

supply by displacing demand that would otherwise have to be supplied by additional sources. In 1994, based on the comprehensive review of the City's water supply in the Long Term Water Supply Alternatives Analysis (LTWSAA), the City Council approved the Long Term Water Supply Program (LTWSP). The LTWSP outlines a strategy to use the above sources to meet the projected demand of 17,900 AFY (including 1,500 AFY of demand projected to be met with conservation) plus a 10 percent safety margin for a total of 19,700 AFY. Therefore, the target for the amount of water the system would actually have to supply, including the safety margin, is 18,200 AFY. For the year 2001-2002, the demand as measured by the system production was 14,291 Acre Feet (AF). Of the total system production, 95% was potable water and 5% was reclaimed water.

The existing development on the site demands zero (0) AFY of water. The proposed project is estimated to demand 12.55 AFY (based on the City's Water Demand Factor and Conservation Study "User's Guide" Document No. 2). Therefore, the change in water use would be approximately 12.55 AFY, which would not significantly impact the City's water supply.

Solid Waste

Most of the waste generated in the City is transported for disposal to Tajiguas landfill or other landfills located around the County. The County of Santa Barbara, which operates the landfills, has developed significance thresholds for the impacts of development on remaining landfill capacity. The County's thresholds are based on the projected average solid waste generation for Santa Barbara County from 1990-2005. The County assumes a 1.2% annual increase (approximately 4000 tons per year) in solid waste generation over the 15-year period.

The County's threshold for a significant project-specific impact to the solid waste system is 196 tons per year (this figure represents 5% of the expected average annual increase in solid waste generation [4000 tons/year]). Source reduction, recycling, and composting can reduce a project's waste disposal by as much as 50%. If a proposed project generates 196 or more tons per year after reduction and recycling measures, impacts would be considered significant and unavoidable.

Proposed projects with a project-specific impact as identified above (196 tons/year or more) would also be considered cumulatively significant, as the project-specific threshold of significance is based on a cumulative growth scenario. However, as landfill space is already extremely limited, any increase in solid waste of 1% or more of the expected average annual increase in solid waste generation [4000 tons/year], which equates to 40 tons per year, is considered an adverse cumulative impact.

Using methodology and factors in the County's Environmental Thresholds and Guidelines Manual (1995), the proposed project's estimated annual solid waste generation is 57.3 tons/year. This amount of solid waste is considered a less than significant project-specific impact and adverse contribution to cumulative impact.

3.11.2 Population and Housing

Implementation of the proposed project would not require the extension or expansion of infrastructure or services that could induce or serve additional growth beyond the project.

Currently, a water main passes through the site. Water service would be provided by the City of Santa Barbara through an existing connection at the end of Alan Road. The existing water line would be relocated beneath the proposed roads and the water line that crosses Arroyo Burro Creek would be relocated beneath the proposed access bridge. The abandoned sewer line located along the top of the west bank of Arroyo Burro Creek would be left in place. The sewer line that extends from the western boundary of the project site to Alan Road would be replaced with a new line installed in the access roads at the site.

Future development of 24 residential units would not result in a substantial growth or concentration of population, given the size of the surrounding population and the project's location in a developed residential area. Although the proposed bridge and roads would provide access to the project site, which is currently only accessible via Alan Road, the potential development of the area is limited due to topographical and geological constraints. Both the Stone Creek Condominiums development to the north and the Alan Road neighborhood to the south are currently accessed via public streets. The proposed bridge and roads would serve only the new development and are not expected to provide access for future surrounding development. Thus, the project is not expected to induce substantial growth in this area.

3.12 IMPACTS OF 35-ACRE OPEN SPACE PARCEL

The Specific Plan includes a 14.81-acre parcel to be formed for residential uses, and a 35.71-acre parcel that would be dedicated to open space, for a total Specific Plan acreage of 50.52 acres. The open space parcel is located north of the project site to be developed, as shown on Figure 3-28. The proposed General Plan designation for the 35.71-acre open space parcel would change from the County's designation of Residential Ranchette to the City's designation as Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail. The zoning would be SP-8, Specific Plan.

The 35.71-acre parcel would remain as undeveloped open space. While a Pedestrian/Equestrian Trail Overlay is proposed along the creek portion, no physical improvements for public trails or access are proposed due to erosion, steep slopes, and landslide hazards on this parcel. The applicant is also not proposing any new land management activities on the parcel. The parcel would remain in private ownership, although the applicant has indicated an willingness to transfer ownership or easements to the City or other public entities to be managed for open space.

The proposed open space parcel is dominated by steep, and often, unstable slopes. Arroyo Burro Creek occurs along the north and east sides of the parcel; however, as shown on Figure 3-28, the creek is mostly located outside the open space parcel. Prior to 1995, an informal trail was present along the west side of the creek, occurring on portions of the open space parcel. The trail originated in the Hidden Valley neighborhood and provided informal access to residents from the neighborhood to the open space lands at the project site, and to the beach. A landslide in 1995 across from Stone Creek Condominiums destroyed the trail, which has not been re-established. At this time, there is no safe access to the open space parcel.

Designating the 35.71-acre parcel as permanent open space and annexing it to the City would prevent the development of the parcel, and thereby protect the existing open space benefits of this land – a scenic hillside, extensive undisturbed wildlife habitat, a buffer zone for the west side of Arroyo Burro Creek, and a local watershed to regulate hydrologic conditions. Dedicating this parcel to open space would not result in any significant environmental impacts because no actions would occur on the land to disturb, modify, or remove natural resources.

The existing landslides near the creek may become active again during a significant flooding event, which could modify the creek alignment and cause a loss of riparian habitat and short-term sedimentation. These events are considered natural processes, and are not due to the proposed dedication of the land to open space. Currently, disturbed portions of both banks of Arroyo Burro Creek on, and adjacent to, the open space parcel contain the invasive giant reed. These plants have increased in size and vigor over the past eight years, and may represent a chronic source of invasive material for the lower reaches of the creek. The majority of the giant reed is located outside the open space parcel, on land owned by others. Hence, the continued growth of this weed and possible management to control it are outside the scope of this project.

4.0 ALTERNATIVES

4.1 CEQA REQUIREMENTS

The key requirements under CEQA to identify and evaluate alternatives in an Environmental Impact Report are listed below:

- CEQA Guidelines Section 15126.6(a) states that "*An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*" Section 15364 defines "feasible" as follows: "*Feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.*"

- Section 15126.6 (b) states that "*…the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.*"

- 15126.6(c) states "*The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.*"

Under CEQA, the City must identify feasible alternatives that will avoid, or at least lessen, any significant impacts associated with the project. The City must determine what represents a feasible alternative, taking into account factors such as costs and engineering feasibility with available information. In addition, the City must evaluate how an alternative may affect meeting the overall project objective. An alternative cannot be dismissed simply because it prevents the project objective from being fully realized, nor can an alternative be rejected because it would not achieve all of the project objectives.

As described in Section 2.1, the overall goal of the Veronica Meadows Specific Plan is to develop the vacant lands at the project site for residential use in accordance with the City of Santa Barbara General Plan. The applicant has elected to utilize the Specific Plan process to allow for flexibility in achieving various project objectives, some of which are derived from economic considerations inherent in developing a project, while others may involve benefits to the future residents and the general public.

Under CEQA, any significant environmental impacts of an alternative must also be identified and considered in the comparison with the proposed project. In addition, the No Project Alternative must be evaluated in an EIR for information to the decision-makers.

4.2 NO PROJECT ALTERNATIVE

4.2.1 Description of the Alternative

Under the No Project Alternative, the proposed land development and associated public open space, trail, and creek restoration would not be implemented. The project site would remain undeveloped. Property management and activities on the property would remain the same as today. Public access to the site is prohibited and trespassers can be removed or cited if the landowner wishes to enforce the prohibition. However, the current and previous landowners have not fully enforced this prohibition, and the following activities occur on the property with or without the landowner's express consent:

- Walking or hiking. Local residents traverse the property during walks or jogs. It appears that residences from both the Alan Road neighborhood, and from the Stone Creek Condominiums travel through the property as part of longer walking or jogging trips. The main trail through the property is well known and used by local residents.
- Dog walking. The site is used by adjacent residences for dog walking.

- Motorcycle and BMX Use. The site is periodically used by residents for riding motorcycles and BMX bicycles. Courses are periodically constructed in the center of the site with often very large ramps (over 4 feet high) and banked curves. The courses are constructed by hand, and by the action of the bike riders. They are often well maintained and used frequently (2-3 times per week) during the summer. The main users are teenagers and young adults. The access the property from Alan Road.

- Outdoor Play. The site is also used by local residents for general play (e.g., kid games, rope swings, building forts), nature enjoyment (general bird watching, feeding mourning doves near Alan Road), and outdoor painting. In addition, the site has been used on occasion by teenagers for congregating, which may include smoking, drinking, and drug use.

- Other Possible Activities. The following other activities may have occurred in the past, and/or may occur in the future if access to the site is not fully precluded: paintball games, rocketry, model airplanes, Frisbee games, and archery. In addition, equestrian riders from Hope Ranch have visited the site in the past, using informal trails on the west side of the property for access.

Brush clearing and/or mowing occurs periodically for fire abatement purposes. Annual weeds are typically removed 1 or 2 times per year in the open grassy areas of the property to prevent the build up of fuel in areas where people walk. The City periodically inspects, and maintains as necessary, the existing sewer line from Campanil Hill to Alan Road and the water line from Stone Creek Condominiums to Alan Road.

The 35.71-acre open space parcel would remain unchanged under this alternative.

The current site conditions reflect the above activities and property management. As such, under this scenario, the environmental conditions of the site in the near future would likely remain similar to what is observed today. These conditions are summarized below:

- The site is subject to periodic, extensive disturbance from motorcycle use, which removes vegetation and creates erosion problems by exposing soil, creating gullies and ruts, and loosening soils on hillsides by forming trails in steep terrain. These areas are exposed to erosion due to rainfall and runoff, eventually causing sedimentation to Arroyo Burro Creek that is higher than under natural conditions.

- The creation of trails on the lower slopes of the property have the potential to destabilize landslides over time, which could cause minor to major land movement and the associated increase in winter erosion.

- The current unmanaged activities at the property support the current dominance of non-native weedy plant species in the flat grassy areas and along the trail in the creek corridor. The continued disturbance of the ground by motorcycle riders and by pedestrians facilitates the continued colonization by invasive species.
- The banks and stream terraces of Arroyo Burro Creek at the project site contain a high amount of non-native weedy species, such as giant reed and German ivy. These species have colonized the creek corridor due to many factors, including a continuing source of seeds and plants from upstream areas, eroding banks that provide colonization opportunities, and introduction of plants and seeds to the site from users. These plants have become firmly established at the site, and they are expected to continue their expansion over time. The habitat conditions along the creek corridor are considered degraded under current conditions, due primarily to the abundance of non-native species. This degradation would continue unabated under current land use activities and property management. It is anticipated that the giant reed would dominate most of the riparian corridor in the next 10 years.

- There are several locations along the Arroyo Burro Creek banks that are highly eroded. Some of this erosion is due to channel downcutting which appears to be in response to the cumulative development of the watershed since the development of the South Coast. This erosion consists of very high, oversteepened banks that continually slough or fail due to the effects of gravity and overbank runoff. There are two locations along the creek at the project site where bank erosion was caused by bank failure during El Nino storms that redirected the stream, which in turn, eroded the banks and cut into upland areas. Both types of bank erosion would continue in the future. The frequency of episodic erosion may increase because the channel is becoming clogged with dense giant reed thickets which would increase water elevations and re-direct stream energy into the banks.

- The landslides at the project site are considered inactive, and would likely remain intact unless there is significant land disturbance at the toes of the landslides due to trail building for motorcycles.

- The potential for wildfires originating from the property would remain the same under the No Project Alternative, as the types of activities on the site would not change substantially. Similarly, the fire hazard at the site would also remain the same, as the nature, extent, and density of fuel would not change appreciably over time. The project site is located in a City-designated High Fire Hazard Area due to the combination of topography, fuel, and difficult access.

4.2.2 Feasibility and Meeting the Overall Project Objective

This alternative is not expected to be feasible, as the project applicant purchased the property for the purposes of developing a project. Without development, it may not be economically feasible for the landowner to maintain ownership and manage the property.

The No Project Alternative would not meet the overall project objective of developing the site for residential use consistent with the City General Plan.

4.2.3 Environmental Impacts

Under this alternative, the environmental impacts associated with the proposed project would not occur. The significant impacts of the proposed project include the following (Class I and II impacts):

Biological Resources

- Loss of large oak tree, loss of riparian vegetation, and creation of gap in the riparian corridor due to the bridge over Arroyo Burro Creek
- Permanent loss of about 6.8 acres of mostly non-native habitats and seven oak trees due to the construction of residential lots and roads. [Note: The project also involves the restoration/enhancement of 6.8 acres or riparian habitat on and off the project site, and restoration of 3.8 acres of upland habitat]
- Loss of up to 7 coast live oak trees from the project site
- Disturbance and possible displacement of wildlife from the creek corridor due to construction activities
- Adverse effect of noise, lighting, human activity, pets, and pesticides associated with the residential development on aquatic and riparian habitats and species of Arroyo Burro Creek

Drainage, Flooding, and Water Quality

- Collecting on- and off-site runoff in a storm drain system and directing it only two storm drain outlets would reduce infiltration and bank seepage along Arroyo Burro Creek; construction and maintenance of large storm drain outlets could cause hydraulic impacts
- Proposed riparian corridor restoration plans and bank repair could cause unintended adverse impacts by increasing bank erosion and instability along Arroyo Burro Creek
- Temporary adverse effects on water quality in Arroyo Burro Creek due to construction activities

- Adverse effect of stormwater pollution from land development on Arroyo Burro Creek water quality

Geologic Hazards

- Potential liquefiable soils, expansive soils, and high groundwater conditions could adversely affect proposed development
- Landslide hazards are present at the project site

Cultural Resources

- Adverse effect of development on historic properties of the site

Traffic and Circulation

- Traffic associated with the residential development would add additional trips to local intersections, and when combined with other future projects, would be significant
- The proposed traffic light controlled intersection at the site entrance and Las Positas Road is not warranted by Caltrans standards. The use of a one-way stop controlled intersection is feasible, but would cause traffic safety hazards unless certain improvements were implemented
- Construction truck traffic along Las Positas Road, Cliff Drive, and Alan Road could degrade pavement conditions.

Public Health and Safety

- Potential public exposure to pesticides used for maintenance of open space landscaping
- Potential public exposure to radon gas that may be emitted from underlying geologic formations

Air Quality

- Generation of fugitive dust during major site grading and earthwork

Noise

- Increased noise affecting residents during Phase 1 construction due truck traffic along Alan Road

However, the following environmental impacts of current property management and site activities would continue to occur:

- Soil disturbance and erosion which causes sedimentation of Arroyo Burro Creek
- Destabilization of landslides by unmanaged trail creation and building
- Increase in the density and extent of non-native invasive weeds at the site, including within the creek corridor
- Bank erosion and sedimentation along Arroyo Burro Creek

In addition, the environmental benefits of the proposed creek corridor restoration (6.8 acres), upland habitat restoration (3.8 acres), and the public access benefits of a trail and public open space would not occur under this alternative.

4.3 NO ANNEXATION ALTERNATIVE

4.3.1 Description of the Alternative

Under this alternative, the following three parcels owned by the project applicant and proposed for annexation for the residential development would not be annexed as planned:

047-010-016	10.28 acres	Proposed for 24 housing units and open space.
047-010-053	4.49 acres	
047-010-011	35.71 acres	Proposed for open space

Parcel No. 047-010-009 is a 5.89-acre property along Las Positas Road that is owned by the City of Santa Barbara. The applicant would require an easement to construct the access bridge and road to the site. The City of Santa Barbara initiated annexation of this parcel on November 18, 1993, pursuant to Planning Commission Resolution No. 078-93. It is assumed that this parcel would be annexed under this alternative - the same as under the proposed project.

The applicant has requested that the above properties be annexed to the City. The annexation of parcel 047-010-016 was initiated by the Planning Commission on November 18, 1993, pursuant to Planning Commission Resolution No. 078-93. The annexation of the 4.49-acre portion of parcel 047-010-053 (to be subdivided) was initiated by the Planning Commission on February 3, 2000, pursuant to Planning Commission Resolution No. 004-00.

The City believes that annexation of these parcels is appropriate to ensure logical and consistent land use planning in the Las Positas Valley, efficient public services, and orderly development, as concluded in the City's Draft Annexation Policy Update for this area. However, for the sake of evaluating all major alternatives to the proposed project, the City has included this alternative. Under this alternative, the parcels would be developed under the jurisdiction of the County, and in accordance with the County Comprehensive Plan and zoning designations. A summary of the potential land use and housing units on the subject parcels if the land were not annexed is provided in Tables 4-1 and 4-2.

Under this alternative, the County's Comprehensive Plan land use designation would allow for a higher density of housing units on parcel 047-010-016 (Table 4-1). The current land use designation for the 4.49-acre subdivided parcel 047-010-053 would not allow any development because the parcel would be too small.

TABLE 4-1
EXISTING AND PROPOSED GENERAL PLAN DESIGNATIONS OF AFFECTED PARCELS

Parcel Number	Size (ac.)	Proposed City General Plan Designation	Existing County General Plan Designation	Comparison to Development under the Proposed Project
047-010-016	10.28	Residential – 2 Dwelling Units per Acre	Residential, 4.6 units/acre and Public or Private Open Space (for Arroyo Burro Creek)	Theoretical build out of 47 units outside creek corridor
047-010-053 (derived from adjusting the larger parcel)	4.49	Residential – 2 Dwelling Units per Acre	Residential Ranchette, 1 unit/20 acres	Insufficient land for residential development
047-061-026	0.04	Residential – 2 Dwelling Units per Acre	N/A	N/A
047-010-011	35.11	Major Hillside, Open Space, Buffer/ Stream	Residential Ranchette, 1 unit/20 acres	Theoretical build out of one unit, but unlikely due to site slope and landslide constraints

With current County zoning, the minimum lot size on the 10.28-acre parcel would be 8,000 square feet (Table 4-2). Under the proposed project, the average lot size would be 8,775 square feet, and 13 units would be located on this parcel. No units would be allowed on the 4.49-acre parcel (047-010-053) due to its small size and current low density zoning (Table 4-2). Under the proposed project, 11 units would be located on the smaller parcel.

The number of units that could be developed on the 10.28-acre under this alternative is based on the following assumptions. The setback from the creek would be the same as the proposed project. The public open space along the creek corridor created by the creek setback under the proposed project encompasses 4.28 acres. Hence, the available land for development on the 10.28-acre parcel would be 6.0 acres. The maximum allowable density of residential units in this area would be 32 units under the County zoning. It is likely that the number of units that would be constructed would be less because of the steep slopes and landslide constraints on the west side of this parcel. Hence, the number of units on the 10.28-acre parcel would likely be similar (i.e., 20 to 25 units) to the total number of units under the proposed project. However, the density of units under this alternative could be higher than for the proposed project. In addition, very little open space would be included in the development of the 10.28-acre parcel.

TABLE 4-2
EXISTING AND PROPOSED ZONING OF AFFECTED PARCELS

Parcel Number	Size (ac.)	Proposed City Zoning after Annexation	Existing County Zoning	Comparison to Development under the Proposed Project
047-010-016	10.28	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	8-R-1, Single Family Residential, (8,000 sq. ft. minimum lot size)	Increase in housing units on this parcel from proposed 13 to up to 56 units
047-010-053 (derived from adjusting larger parcel)	4.49	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	RR-20 Rural Residential (20 acre minimum lot size)	Insufficient land to construct any housing unit. Hence, a reduction in proposed 11 housing units on this parcel.
047-061-026	0.04	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	Not specified	Insufficient land to be considered
047-010-011	35.11	SP-8, Specific Plan	RR-20 Rural Residential (20 acre minimum lot size)	Theoretical build out of one unit, but unlikely due to site slope and landslide constraints

Under this alternative, the project site would be restricted to the 10.28-acre parcel. The 4.49-acre parcel would not be developed and would remain as open space.

All other aspects of this alternative would be similar to the proposed project. Hence, the alternative would include a new intersection at Las Positas Road, a bridge across Arroyo Burro Creek, stabilization of several landslides, a public trail and open space along the creek, and a creek restoration project.

4.3.2 Feasibility and Meeting the Overall Project Objective

This alternative is considered feasible because the applicant has the option of withdrawing the request for annexation and submitting a new land use application to the County of Santa Barbara.

This alternative would generally meet the overall project objective, although the development would be governed by the Santa Barbara County Comprehensive Plan, not the City General Plan.

4.3.3 Environmental Impacts

A comparison of the significant (Class I and II) environmental impacts of this alternative with the proposed project is provided in Table 4-3. This alternative could increase the following impacts due to the potentially higher density of units: stormwater pollution, adverse effect on hydraulic

conditions in Arroyo Burro Creek and riparian vegetation due to modified site drainage, and adverse effects of humans and pets on creek habitat. The following impacts would be reduced due to the smaller project site: construction-related erosion, exposure to landslide hazards, and impacts to native and non-native vegetation.

TABLE 4-3
COMPARATIVE IMPACTS OF THE NO ANNEXATION AND DRAFT PRE-ANNEXATION DESIGNATION ALTERNATIVES

Potentially Significant Impacts of the Proposed Project (all are fully mitigable except impacts #8 and #16)	Impacts of Alternatives Compared to the Proposed Project	
	No Annexation Alternative	Draft Pre-Annexation Zoning Alternative
1. Adverse effect on hydraulic conditions in Arroyo Burro Creek due to modified site drainage	**Greater** impact due to potentially higher density	**Greater** impact due to potentially increased density and number of units
2. Unintended adverse effects on bank erosion conditions due to proposed riparian corridor restoration plans	No difference	v
3. Temporary adverse effects on Arroyo Burro Creek water quality due to construction activities	Less impact because of smaller site	Less impact because of smaller site
4. Adverse effect of stormwater pollution from land development on Arroyo Burro Creek water quality	**Greater** impact due to potentially higher density	**Greater** impact due to potentially increased density and number of units
5. Potential liquefiable soils, expansive soils, and high groundwater conditions could adversely affect proposed development	No difference	No difference
6. Geologic hazard associated with landslides at the project site	Less impact because of fewer landslides affected	Less impact because of fewer landslides affected
7. Permanent loss of about 6.8 acres of mostly non-native habitats due to the construction of residential lots and roads	Less impact because of smaller site	Less impact because of smaller site
8. Loss of large oak tree, loss of riparian vegetation, and creation of gap in the riparian corridor due to the bridge over Arroyo Burro Creek	No difference	v
9. Disturbance and possible displacement of wildlife from the creek corridor due to construction activities	No difference	No difference
10. Adverse effect of noise, human activity, and pets associated with the residential development on aquatic and riparian habitats and species of Arroyo Burro Creek	**Greater** impact due to potentially higher density	**Greater** impact due to potentially increased density and number of units
11. Redirecting the flows to only two storm drain outlets would reduce infiltration and bank seepage along Arroyo Burro Creek	**Greater** impact due to potentially higher density	**Greater** impact due to potentially increased density and number of units

Potentially Significant Impacts of the Proposed Project (all are fully mitigable except impacts #8 and #16)	Impacts of Alternatives Compared to the Proposed Project	
	No Annexation Alternative	Draft Pre-Annexation Zoning Alternative
12. Adverse effect of development on historic properties of the site	No difference	No difference
13. Traffic associated with the residential development would add additional trips local intersections, and when combined with other future projects, would be significant	No difference	**Greater** impact due to potentially increased number of units
14. The proposed traffic light controlled intersection at the site entrance and Las Positas Road is not warranted by Caltrans standards. The use of a one-way stop controlled intersection is feasible, but would cause traffic safety hazards unless certain improvements were implemented	No difference	No difference
15. Construction truck traffic along Las Positas Road, Cliff Drive, and Alan Road could degrade pavement conditions.	No difference	No difference
16. Temporary construction noise impacts on residents of Alan Road during Phase 1	No difference	No difference
17. Potential public exposure to pesticides used for maintenance of open space landscaping	No difference	No difference
18. Potential public exposure to radon gas that may be emitted from underlying geologic formations	No difference	No difference
19. Generation of fugitive dust during major site grading and earthwork	No difference	No difference

4.4 USE OF DRAFT PRE-ANNEXATION ZONING DESIGNATIONS

4.4.1 Description of the Alternative

Under this alternative, the four parcels owned by the project applicant and proposed for annexation for the residential development would be developed in accordance with the City's General Plan designations and zoning presented in the Draft Annexation Policy Update in 1995. The proposed development would be require approval of a Planned Unit Development (PUD) instead of a Specific Plan.

Under this alternative, the 10.28-acre parcel which includes developable land for housing units as well as the creek corridor would receive a General Plan land use designation of 5 units per acre. As noted above in Section 4.3.1, the developable land on this parcel encompasses about 6.0 acres. Hence, the maximum allowable units would be 30 units. The number of actual units approved for this parcel is likely to be less, similar to the 24 units associated with the proposed project.

The 4.49-acre parcel created by the lot line adjustment would receive a land use designation of Major Hillside and Open Space, thereby restricting and possibly precluding any future development on this parcel (Table 4-4). The proposed use of the 35.71-acre parcel for open space would not change under this alternative.

TABLE 4-4
EXISTING AND PROPOSED GENERAL PLAN DESIGNATIONS OF AFFECTED PARCELS

Parcel Number	Size (ac.)	Proposed City General Plan Designation (proposed project)	City General Plan Designations from Pre-Annexation Study	Consistent with General Plan Designation from Pre-Annexation Study?
047-010-016	10.28	Residential – 2 Dwelling Units per Acre	Residential – 5 Dwelling Units per Acre	Yes
047-010-053 (adjusted from larger parcel)	4.49	Residential – 2 Dwelling Units per Acre	Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail	No
047-061-026	0.04	Residential – 2 Dwelling Units per Acre	N/A	N/A
047-010-011	35.71	Major Hillside, Open Space, Buffer/ Stream	Major Hillside, Open Space, Stream/Buffer, & Pedestrian/Equestrian Trail	Yes

Using the suggested pre-annexation zoning, the 10.28-acre parcel would receive a zoning designation of E-3 (minimum lot size of 7,500 square feet). As noted above, the developable land on this parcel encompasses about 6.0 acres. Hence, the maximum allowable units would be 34 units. The number of actual units approved for this parcel is likely to be less, similar to the 24 units associated with the proposed project (Table 4-5).

The 4.49-acre parcel created by a lot line adjustment would receive a zoning designation of 20-A-1 (Table 4-5). Due to the small size of this parcel and the General Plan designation of Open Space, it would not be developable.

The proposed use of the 35.71-acre parcel for open space would not change under this alternative.

TABLE 4-5
EXISTING AND PROPOSED ZONING OF AFFECTED PARCELS

Parcel Number	Size (ac.)	Proposed City Zoning after Annexation	City Zoning from Draft Pre-Annexation Study
047-010-016	10.28	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	E-3 One Family Residence/ PUD Planned Unit Development
047-010-053 (subdivided from larger parcel)	4.49	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	20-A-1/SD-3, One Family Residence 20 acre minimum lot size/Coastal Zone Overlay
047-061-026	0.04	SP-8/SD-3, Specific Plan/ Coastal Zone Overlay	20-A-1/SD-3, One Family Residence 20 acre minimum lot size/Coastal Zone Overlay
047-010-011	35.71	SP-8, Specific Plan	20-A-1/SD-3, One Family Residence 20 acre minimum lot size/Coastal Zone Overlay
047-010-009	5.89	P-R/S-D-3, Park and Recreation/ Coastal Overlay Zone	E-3 One Family Residence/ PUD Planned Unit Development

In summary, the number of residential units under this alternative would be similar, or slightly higher, than under the proposed project. The units would be restricted to the 10.28-acre parcel, compared to the proposed 14.81-acre project site. There could be a higher density of units and less open space under this alternative. All other aspects of this alternative would be similar to the proposed project. For example, the alternative would include a new intersection at Las Positas Road, a bridge across Arroyo Burro Creek, stabilization of several landslides, a public trail and open space along the creek, and a creek restoration project.

4.4.2 Feasibility and Meeting the Overall Project Objective

This alternative is considered feasible because the applicant could revise the proposal to be consistent with the Draft Pre-Annexation Policy Update Study and process a PUD, or the City could request that the applicant revise the proposal as such.

This alternative would generally meet the overall project objective of developing the site for residential use consistent with the City General Plan.

4.4.3 Environmental Impacts

A comparison of the significant (Class I and II) environmental impacts of this alternative with the proposed project is provided in Table 4-3. This alternative could increase the following impacts due to the potentially higher density of units: stormwater pollution, adverse effect on hydraulic conditions in Arroyo Burro Creek and riparian vegetation due to modified site drainage, adverse effects of humans and pets on creek habitat, and traffic impacts on local intersections. The following

impacts would be reduced due to the smaller project site: construction related erosion, exposure to landslide hazards, and impact to native and non-native vegetation.

4.5 ALAN ROAD ACCESS ALTERNATIVE

4.5.1 Description of the Alternative

Under this alternative, the sole access to the project site would be from Alan Road. Lots 1 and 2 at the south end of project site would be reconfigured to provide a vehicular connection from the development to Alan Road. The rest of the project layout would remain the same, except that the entire internal roadway system would be a public road. The bridge over Arroyo Burro Creek and intersection with Las Positas Road would not be constructed.

4.5.2 Feasibility and Meeting the Overall Project Objective

This alternative is feasible because there is sufficient roadway capacity along Alan Road to provide access to the project site, and because the proposed site plan would only require slight modification to provide for this alternative access. This alternative would be consistent with the City Circulation Element policies and transportation planning criteria for increasing road connections to improve mobility. The City Fire Department has indicated that a this access to the site is suitable for purposes of emergency access and evacuation. As such, this alternative is considered feasible.

This alternative would meet the overall project objective of developing residential uses at the site. This alternative would attain the objectives of developing compatible with existing development in the surrounding area to a lesser extent compared to the proposed project. It would attain the objective of developing compatible with the natural setting to a greater degree than the proposed project.

4.5.3 Environmental Impacts

This alternative would involve several new environmental impacts compared to the proposed project, listed below, and would conflict with neighborhood concerns as described in detail in *Topical Response No. 1. Use of Alan Road for Access to the Project Site (Appendix F)*:

- The additional traffic would create new traffic, parking, and noise effects to residents that now live on a dead end street, although no traffic or noise impact threshold would be exceeded
- The additional traffic and noise could affect resident's perception of the quality of life currently experienced on a semi-rural, quiet street
- The use of Alan Road would contribute to the current congestion at Cliff Drive/Las Positas Road intersection, until such time that the intersection improvements are completed

It is concluded that the Alan Road Access Alternative would result in adverse, but not significant traffic and noise impacts (Class III) on the Alan Road neighborhood. See further discussion of the effects of this alternative in Appendix F.

The Alan Road Access alternative would avoid the following significant impacts associated with the bridge at Las Positas Road:

- Adverse effect of the bridge over Arroyo Burro Creek on riparian habitat and wildlife species (Class I impact)

- The one-way stop controlled intersection at Las Positas Road would cause traffic safety hazards unless certain sight distance and lane striping improvements are implemented (Class II impact)

This alternative would forego the following beneficial impact: providing new pedestrian and bicycle coastal access from Las Positas Road and Elings Park. However, this alternative could be modified to include a pedestrian/bike bridge over Arroyo Burro Creek, thereby achieving this beneficial circulation element in another manner.

4.6 SECONDARY EMERGENCY ACCESS ALTERNATIVE

4.6.1 Description of the Alternative

Under this alternative, a secondary emergency access would be provided at the south end of the project site. The proposed 10-foot wide, 180-foot long paved bike path that would connect Alan Road and Driveway "A" would be widened to 16 feet and that pavement would be strengthened to provide emergency vehicle access for vehicles (one vehicle width only). Bollards would be placed at both ends of the roadway segment to prevent non-emergency vehicle use. The secondary emergency access would provide additional options for evacuation and access during earthquakes, floods, and wildfire affecting the project site, or the Alan Road neighborhood.

4.6.2 Feasibility and Meeting the Overall Project Objective

This alternative is feasible and would have no effect on meeting the overall project objective.

4.6.3 Environmental Impacts

This alternative would not result in any new adverse environmental impacts. The environmental impacts of this alternative would be the same as for the proposed project. It would provide an additional level of safety for residents of both the proposed development, and the Alan Road neighborhood.

4.7 CONCRETE SIDEWALK ALTERNATIVE

4.7.1 Description of the Alternative

Under this alternative, concrete sidewalks would be constructed along roads at the project site instead of the proposed 5-foot wide pervious sidewalks.

4.7.2 Feasibility and Meeting the Overall Project Objective

This alternative is feasible and would have a negligible effect on meeting the overall project objective.

4.7.3 Environmental Impacts

This alternative would not result in any new significant adverse environmental impacts. The environmental impacts of this alternative would be the same as for the proposed project. This alternative would remove one of the key project features designed to reduce runoff and increase stormwater infiltration for water quality protection. It could be partially mitigated if the proposed concrete ribbon drainage along the site roads was constructed with a permeable surface.

4.8 AVOID LANDSLIDES ALTERNATIVE

4.8.1 Description of Alternative

As described in Section 3.2.1, there are several dormant bedrock landslides that occur in the Rincon shale along the base of the westernmost ridge on the project site (Figure 4-1). These landslides are considered to be deep-seated features that may have moved up to several hundred feet over the past several thousand years. Under this alternative, residential units located below these landslides would not be constructed. Hence, the proposed landslide stabilization using caissons and toe buttresses would not be required. Up to eleven (11) lots would be removed from the project layout, as shown on Figure 4-1 (Lots 1-6, 20, 21, and 12-14). These portions of the project site would be available for open space and roads. It is possible one or two lots could be constructed adjacent to Lot 7 and Lot 11. Hence, this alternative would result in a reduction of 9 to 11 lots. All other aspects of this alternative would be similar to the proposed project.

4.8.2 Feasibility and Meeting the Overall Project Objective

This alternative may be potentially infeasible because the reduction in residential units would be substantial (up to 11 lots), and could make the proposed project economically infeasible for the applicant. However, under this alternative, the extensive landslide stabilization would not be required, which would substantially reduce site development costs, and therefore, possibly make this alternative feasible. A final determination of feasibility of this alternative would be made by City decision-makers if they conclude that this alternative is the preferred alternative based on the EIR analysis and input from the applicant and public during the public hearing process.

This alternative would not meet the overall project objective if the reduction in lots would prevent any type of residential development at the site and a reasonable return on investment.

4.8.3 Environmental Impacts

This alternative would avoid the following significant, but mitigable impacts (Class II) associated with the landslide stabilization and inherent hazards:

- Exposure of homeowners to a landslide hazard
- Temporary increase in local landslide hazard due to earthwork and construction activity associated with stabilization at the toe of the landslide during the construction period
- Increased hazards from adjacent landslides due to stabilization work

The reduction in the number of residential units would reduce the habitat, visual, and certain temporary construction-related impacts, as follows:

- Temporary adverse effects on Arroyo Burro Creek water quality due to construction activities
- Temporary and permanent loss of mostly non-native habitat due to site development
- Indirect adverse effects of residential development on wildlife using creek corridor
- Adverse effect of human activity and pets (using the pedestrian path) on aquatic and riparian habitats and species of Arroyo Burro Creek
- Visual impacts of site development
- Short-term, intermittent increase in ambient daytime noise levels at residences adjacent to the project site due to certain construction activities at Lots 1 and 2

The alternative would not cause any new impacts, or exacerbate previously identified impacts associated with the proposed project. It would provide additional open space and/or habitat area at the project site, which may be a beneficial impact to the biological resources, depending upon the nature and management of the undeveloped areas.

4.9 ALTERNATIVE LANDSLIDE STABILIZATION

4.9.1 Description of Alternative

As described in Section 2.2.8, the proposed method to stabilize the landslides at the project site involve the construction of a toe buttress (= keyway) at the base of each landslide impinging on the development. A buttress would consist of engineered fill seated on bedrock or below the slide plane. The buttress would provide support and mass to prevent the landslide from further slippage. Subdrains would convey seepage from above to below the buttress fill. Prior to excavating a large trench for the buttress, caissons would be placed in the landslide immediately above the buttress fill area to stabilize the landslide during construction. The caissons would remain in place, providing additional support. The use of caissons avoids the need to remove a portion of the landslide above

the buttress trench prior to construction. Hence, there would be less earthwork and a smaller footprint with caissons.

There are two alternative methods of stabilizing the landslides:

- Construct toe buttresses as proposed, but without the use of caissons. As noted above, this would require excavating portions of the landslides above the toe buttress area prior to excavation. The upslope extent of this excavation is unknown, but would likely involve several hundred feet. This work would occur on adjacent properties and require landowner permission and County permits. The disturbed landslides above the toe buttress would be stabilized by a combination of grading, geotextiles, subdrain systems, and vegetation.

- A second approach would be to construct retaining walls at the toe of each landslide, immediately above the lots adjacent to the landslides. The height of the retaining walls would vary up to 20 feet. Construction of the walls may require the use of caissons and/or excavation of a portion of the landslide mass above the wall locations prior to installing the walls.

The construction period for both alternatives would be slightly longer than for the proposed stabilization method. There may be excess fill associated with each alternative compared to the proposed project, as well as more prolonged noise impacts. However, much of this excess fill could be used on site for building pad development, and as such, may not result in additional truck trips for removal from the site.

4.9.2 Feasibility and Meeting the Overall Project Objective

The alternative stabilization method (without using caissons) is considered infeasible for several reasons. It is uncertain if the adjacent landowner would grant permission to work on landslides on their property due to the potential liability involved, and the disturbance to the hillsides. In addition, the City would not grant land use permits and grading permits for project-related actions on land not owned by the applicant unless the other landowner is part of the application request..

The retaining wall alternative is considered feasible but not desirable from an engineering viewpoint due to the extensive foundations required for large retaining walls.

This alternative would meet the overall project objective as it would stabilize the landslides similar to the proposed project and allow for site improvements.

4.9.3 Environmental Impacts

This alternative would not avoid or significantly reduce any significant impacts (Classes I and II) associated with the proposed project (see Table 4-3). It would cause the following new, potentially significant impacts:

- Temporary, and possibly permanent, loss of native and non-native vegetation on steep slopes above the project site due to landslide removal or reduction during the construction of the toe buttresses
- Potential exacerbation of landslide hazards due to work directly on the face of the landslides above the toe buttress site
- Degradation of the visual setting on the adjacent hillsides due to earthwork on the landside face, possibly leaving barren or weedy areas
- Degradation of the visual setting at the project site by the construction of retaining walls
- Increased construction duration, including associated noise and traffic impacts

4.10 ALTERNATIVE CREEK SETBACKS

4.10.1 Description of the Alternative

Background Information

The proposed project site plan includes the following setbacks from the top of bank along the west side of Arroyo Burro Creek, as described in Section 2.2 and shown on Figure 4-2:

- A 50-foot setback for all roads and structures. The buffer zone created by this setback would contain open space to be restored with native plants and a 5-foot wide permeable pedestrian path along the creek open space corridor.

- A 100-foot setback for structures only. The area between the 50-foot setback and the 100-foot setback would contain paved roads, pedestrian paths, storm drains, buried electrical conduits, street lights, landscaped yards, and fencing.

The City does not have a standard setback requirement for development along creeks except along Mission Creek. Protective setbacks are determined on a case-by-case basis, depending upon specific conditions of each site and proposed development. In 2003, the City issued draft Creek Development Standards for projects located next to all creeks in the City. Public hearings were conducted on the proposed standards, which resulted in a high level of interest and controversy. The City staff has indicated that the development of standards will require more time and further public participation and hearings beyond the hearing timeframe for this project.

The riparian resources that are protected by setbacks and the associated buffer zone include water quality in the creek, aquatic habitat and species, and wildlife habitat and species. Additional public benefits from setbacks include reduced bank erosion, public safety, and aesthetics. The determination of the appropriate setback distance from creeks depends on many factors, including the specific objectives of the setback distance, the condition of the resources in the creek adjacent to the site, and the proposed land uses in the buffer.

In Section 3.3.2, the effects of the proposed setback distances and land uses in the associated buffer zones on biological resources in Arroyo Burro Creek were evaluated. It was concluded that the proposed project could result in the following significant, but mitigable (Class II) impacts on creek resources, even with the proposed setback. EIR mitigation measures have been developed to reduce these impacts to less than significant levels.

- Adverse effect of residential development and use of public open space on wildlife using the project site and creek corridor - this impact can be mitigated to a less than significant level by reducing nighttime lighting illumination of the corridor; restoring native habitats with wildlife value in the open space areas of the project site; and long-term management of the creek corridor to protect riparian resources.
- Adverse effect of human activity, pets, and pesticides on aquatic and riparian habitats and species of Arroyo Burro Creek - this impact can be mitigated to a less than significant level by properly managing public access and uses in the public open space adjacent to the creek; use of IPM approaches to pest and weed management in the creek open space corridor; and strategic placement of the pedestrian path in order to protect riparian habitats and species.

The use of the above management actions to protect creek resources does not necessarily imply that they are more effective in protecting or enhancing riparian and aquatic habitat, water quality, or wildlife than a larger creek setback – only that management actions can also reduce impacts.

Setback Alternatives

Several alternative setback distances are described and evaluated in this section that provide a range of approaches to protecting riparian resources beyond the proposed setbacks with the EIR mitigation measures. These alternatives are presented in the EIR to provide the City decision-makers with another approach (i.e., a larger setback) to reducing impacts to the riparian resources of Arroyo Burro Creek. The alternative setbacks are described below and shown on Figures 4-3 through 4-5.

1. 100-foot Setback Alternative (Applicant's Top of Bank). Under this alternative, a uniform 100-foot wide setback would be established at the project site from the applicant's defined top of bank, as shown on Figure 4-3. No roads or structures would occur in the 100-foot wide buffer zone created by the setback. Native plant landscaping and a pedestrian path would occur in the buffer zone, the same as for the 50-foot setback zone under the proposed project. This alternative would require relocating the main road and Driveway A to the west. Shifting the road alignment would reduce the depth of Lots 2-6 and 7-11. These lots would need to be reconfigured to provide buildable land. This alternative would result in the loss of five lots. In addition, Driveway A would traverse the base of a hill, requiring a cut slope (Figure 4-3). All other aspects of the alternative would remain the same as the proposed project, including a new intersection and bridge at Las Positas Road, stabilization of several landslides, a public trail and open space along the creek, and restoration of the creek corridor.

2. 100-foot Setback Alternative (Adjusted Top of Bank). Under this alternative, a uniform 100-foot wide setback would be established at the project site using a revised top of bank developed during the EIR studies, as shown on Figure 4-4. The adjusted top of bank was

based on a careful review of the topographic map and field observations. It differs from the applicant's top of bank by including several areas where the creek bank was eroded by the 1998 flood events. These areas were included for the following reasons: (1) they represent the current grade break between upland areas and areas influenced by the creek; (2) riparian vegetation is present on the slope face in these areas, indicating that they are riparian zones, and not upland areas; and (3) although these new banks were formed during major floods, their presence indicates that outer extent of the creek influence that is evident and observable.

The 100-foot setback based on the adjusted top of bank is shown on Figure 4-4. No roads or structures would occur in the 100-foot wide buffer zone. Native plant landscaping and a pedestrian path would occur in the buffer zone, the same as for the 50-foot setback zone under the proposed project. The Lane "A" and Driveway "A" would be shifted 30 to 50 feet to the west. This change in the road alignment would eliminate Driveway "A," eliminate Lot 7, reduce Lots 8 -11 to only two lots, and reduce Lots 1-6 to only three lots. There would be a net loss of six lots. In addition, the site would not be fully accessible from the north. Alan Road would be extended into the site in order to access three new lots at the southern end of the site. All other aspects of the alternative would remain the same as the proposed project, including a new intersection and bridge at Las Positas Road, stabilization of several landslides, a public trail and open space along the creek, and restoration of the creek corridor.

3. Increased Setback Alternative in Selected Locations. Under this alternative, the main road and Driveway "A" would be shifted up to 25 feet to the west in order to increase the setback from the creek, as shown on Figure 4-5. The intent of this alternative is to increase the setback to the maximum extent feasible, while still maintaining Driveway "A" and Lots 3 – 6. This alternative would result in the loss of Lot 7, and a reduction in the sizes of Lots 2 – 6, and Lots 8 -11. All other aspects of the alternative would remain the same as the proposed project, including a new intersection and bridge at Las Positas Road, stabilization of several landslides, a public trail and open space along the creek, and restoration of the creek corridor.

4.10.2 Feasibility and Meeting the Overall Project Objective

All three of the alternative creek setbacks are technically feasible. That is, there are no engineering, circulation, drainage or geological obstacles to increasing the setback distance and modifying the project site layout.

The economic feasibility of the alternative creek setbacks is unknown at this time. It would be based on the economic effect of: (1) reducing the number of lots and/or reducing lots sizes which would reduce the revenues generated from home sales used to fund site improvements and to realize a return on investment; and (2) modifying the proposed site improvements (roads, drainage, earthwork), which may increase development costs. A final determination of feasibility of the setback alternatives would be made by the City decision-makers if they conclude that one these alternatives is the preferred alternative based on the EIR analysis and input from the applicant and public during the public hearing process.

The creek setback alternatives would meet the overall project objective of developing the site for residential use consistent with the City General Plan unless the economic impact of the loss of units renders the project infeasible, or if the reduction in revenue substantially reduces the applicant's financial ability to implement the creek corridor open space improvements (i.e., trail and restoration).

4.10.3 Environmental Impacts

The larger creek setback alternatives would reduce the following significant, but mitigable impacts (Class II) associated with the proposed project. The amount of reduction is generally related to the size of the setback.

1. Temporary adverse effects on Arroyo Burro Creek water quality due to construction activities that increase on-site erosion potential and introduce potential contaminants to the site. The setback alternatives would increase the distance between construction activities and the creek, thereby providing more land for infiltration and Best Management Practices to further reduce construction stormwater pollution.

2. Adverse, indirect effect of residential development and use of public open space on wildlife and aquatic habitats in creek corridor. The setback alternatives would increase the distance between development and the creek to varying degrees, and as such, would further reduce these impacts by the following mechanisms:

    - By its very nature, a creek setback provides soil and vegetation where rainfall and runoff can be filtered through percolation or through interaction with rooted vegetation and leaf litter. Vegetated creek buffer zones can be very effective at capturing and retaining sediment, pesticides, oil/grease, and metals from upgradient areas. A larger setback provides more space for this biofiltering effect, and more residence time for the stormwater to be treated.

    - Riparian habitat on and above creek banks, including creek buffer zones, support aquatic habitat in the creek bottom by providing shade trees on the banks, providing replacement shade trees due to natural plant reproduction, and creating moist and shaded areas to support insect populations that are used as food sources for fish and amphibians in the creek. A larger setback provides more habitat to support the riparian functions in the creek corridor.

    - A larger creek setback provides a greater amount of native habitat in which natural processes of plant growth, reproduction, and senescence can occur. A larger population of plants provides a greater resiliency and buffer from invasive weeds which may degrade habitat values for wildlife.

3. Loss of up to seven large coast live oak trees. A larger creek setback would reduce the loss of these trees, depending upon the final setback distance and configuration.

The setback alternatives would reduce the above impacts to varying degrees based on the distance between development and the creek. The magnitude of the reduction in impacts by the setback alternatives would be as follows, in order of decreasing reduction in impact magnitude:

- 100-foot Setback Alternative (Adjusted Top of Bank) (Figure 4-4)
- 100-foot Setback Alternative (Applicant's Top of Bank) (Figure 4-3)
- Increased Setback Alternative in Selected Locations (Figure 4-5)

No significant unavoidable impacts to creek resources would occur under the proposed project (as mitigated), nor under the three setback alternatives. However, the setback alternatives would provide greater protection to creek resources than the proposed project, as well as provide additional incidental benefits of greater public open space and more visual screening at the project site. These alternatives are presented in the EIR to provide the City decision-makers with another approach (i.e., a larger setback) to reducing impacts to the riparian resources of Arroyo Burro Creek.

The setback alternatives would not cause any new significant impacts. The 100-foot Setback Alternative using the applicant's top of bank would require a cut slope along Driveway "A.." No significant geologic impact is anticipated, as the landslide above the cut slope would be stabilized appropriately. No significant visual impact is anticipated as the cut slope is not expected to be visible off site. The 100-foot Setback Alternative based on the adjusted top of bank would slightly increase the traffic along Alan Road because there would be one additional residences at the cul-de-sac. This impact would not be significant.

4.11 ALTERNATIVE DRAINAGE AND STORMWATER TREATMENT PLAN

4.11.1 Description of the Alternative

As described in Section 2.2.7, the proposed project includes a storm drain system that collects runoff through storm drain inlets in the street and along the main drainage through center of the site, and then discharges the runoff at two locations along Arroyo Burro Creek. Runoff from most of the site would be collected; however, portions of the site would drain by overland flow to the creek. Runoff in the main drainage and a portion of the street runoff would be directed to a basin for detention and stormwater treatment.

As described in Section 3.1.3, the proposed storm drain system and stormwater treatment plan would result in the following impacts:

- Adverse effects of site development (i.e., impermeable surfaces) and site drainage (i.e., storm drain system) on the hydraulic conditions of Arroyo Burro Creek, possibly causing localized channel or bank erosion and on the bank storage conditions – these impacts can be effectively mitigated to a less than significant level by modifying the site drainage system to provide more infiltration and a greater number of outlets to the creek (Class II impact).

- Adverse effect of stormwater pollution from land development and public open space in the creek corridor on Arroyo Burro Creek water quality - this impact can be effectively mitigated to

a less than significant level by incorporating appropriate stormwater management and treatment into the site drainage plan and by implementing Best Management Practices in the public open space (Class II impact).

For both impacts, the primary mitigation to avoid significant impacts is to modify the proposed site drainage and stormwater treatment layout and approach (see Mitigation Measures W-1 and W-4) An alternative is shown on Figure 4-6 that incorporates various drainage modifications and stormwater treatment facilities intended by these mitigation measures. The primary elements of this alternative are as follows:

The objectives of this alternative are to:

- Separate the off-site runoff from the Campanil Hill drainage from the on-site runoff
- Treat stormwater runoff from the project site in accordance with the City's requirements under the NPDES municipal stormwater permit and current Stormwater Management Plan, using applicable City and County design standards for volumetric treatment
- Maximize stormwater infiltration and minimize discharge to the creek from onsite drainage

The main off site drainage can be separated from the on-site runoff by modifying the proposed grading plan. Site runoff can be detained in swales and small infiltration basins to facilitate infiltration at various locations on the site. Potential bioswales and stormwater detention basins are shown on Figure 4-6. Excess runoff from these basins would be discharged to the creek via multiple outlets. The increase in the number of bioswales and detention basins under this alternative would reduce the discharge rates to the creek from individual storm drain outlets, increase infiltration which will retain alluvial groundwater onsite to support riparian habitat, and increase stormwater treatment by biological filtering and infiltration. The bioswales and detention basins can be incorporated into the creek habitat restoration plan under the proposed project, and provide wildlife habitat benefits too.

4.11.2 Feasibility and Meeting the Overall Project Objective

The modified drainage and stormwater treatment alternative is technically feasible.

This alternative would meet the overall project objective.

4.11.3 Environmental Impacts

This alternative would reduce the magnitude of the following significant stormwater quality impacts (Class II) associated with the proposed project:

- Adverse effects of site development (i.e., impermeable surfaces) and site drainage (i.e., storm drain system) on the hydraulic conditions of Arroyo Burro Creek, possibly causing localized channel or bank erosion – this impact can be effectively mitigated to a less than significant level

by modifying the site drainage system to provide more infiltration and a greater number of outlets to the creek. (Class II impact)

- Adverse effect of stormwater pollution from land development and public open space in the creek corridor on Arroyo Burro Creek water quality - this impact can be effectively mitigated to a less than significant level by incorporating appropriate stormwater management and treatment into the site drainage plan and by implementing Best Management Practices in the public open space. (Class II impact)

This alternative would not cause any new significant environmental impacts.

4.12 ALTERNATIVE BRIDGE SITES

4.12.1 Description of the Alternative

Under this alternative, the bridge across Arroyo Burro Creek would be relocated to one of the following sites:

Site 1. About 100 feet north of the existing bridge alignment. This would require an easement from the Stone Creek Condominiums. The length of the bridge would be similar to the proposed bridge. However, the entrance to the bridge would not align with the entrance to Elings Park.

Site 2. Along the narrow historic bridge easement that extends about 500 feet from Las Positas Road to the project site in a northeast to southwest direction. This alternative woujld require a 400 to 500 foot span across the creek because the bridge would be aligned with the axis of the creek. The entrance to the bridge would not align with the entrance to Elings Park.

Site 3. About 500 feet south of the existing bridge. This site would require a larger easement across the City owned parcel compared to the proposed project, and would require an additional 100 feet of approach road. The entrance to the bridge would not align with the entrance to Elings Park.

4.12.2 Feasibility and Meeting the Overall Project Objective

Sites 1 and 2 are not considered technically feasible because of traffic and intersection conflicts would occur because the entrances to Elings Park and the bridge would not align, but would occur in close proximity, causing driver confusion. Site 3 is considered technically feasible, although the potential for a larger easement from the City is unknown.

This alternative would not meet the overall project objective.

4.12.3 Environmental Impacts

Use of Site 1 would avoid the loss of a large oak and sycamore tree; however, the overall impact of the bridge at this site would remain the same as for the proposed bridge. Use of Site 2 would increase the magnitude of the impacts to the riparian resources of the creek. Use of Site 3 would

have similar impacts to riparian resources as the proposed bridge, but would increase the impacts on adjacent upland habitats.

4.13 SUMMARY

A summary of the comparative impacts of the project alternatives is provided below.

The following alternatives appear to be technically or economically infeasible:

- No Project Alternative – without development, the property may not be retained by the owner
- Avoid Landslides Alternative - if the reduction in the number of lots is severe and the avoided costs of landslide stabilization do not fully offset the economic loss
- Alternative Landslide Stabilization - due to need for off-site stabilization
- Creek Setback Alternatives – if the reduction in the number of lots is severe
- Alternative Bridge Sites (Nos. 1 and 2) – due to traffic conflicts

The following alternative does not appear to meet the overall project objective

- No Project Alternative – no residential development would occur

The following alternative would result in new significant impacts (Class I) compared to the proposed project:

- Alternative Landslide Stabilization – significant impact due to greater earthwork

The following alternatives would increase certain impacts of the proposed project or create new, but less than significant impacts

- No Annexation Alternative
- Pre-Annexation Zoning Alternative
- Alan Road Access Alternative – adverse impact on neighborhood quality of life

The following alternative would avoid a significant, unmitigable impact (Class I) of the proposed project:

- Alan Road Access Alternative – it would avoid the impact of the bridge on riparian habitat and wildlife

The following alternatives would avoid a significant, but mitigable impacts (Class II) of the proposed project:

- Alternative Creek Setbacks – they would reduce the magnitude of impacts on riparian resources, wildlife, aquatic habitats, and water quality in the Arroyo Burro Creek corridor
- Alternative Drainage and Stormwater Treatment Alternative – it would reduce the magnitude of hydraulic and water quality impacts on Arroyo Burro Creek

Under the CEQA Guidelines, the EIR must identify the environmentally superior alternative, other than the No Project Alternative, as information for the City's decision makers to consider. The environmentally superior alternative should have fewer significant impacts (Class I and II) and less-than significant impacts (Class III) with lower magnitudes compared to the proposed project, while still meeting the overall project objective.

The EIR identifies several alternative creek setback distances that would increase the buffer zone between Arroyo Burro Creek and the proposed land development. Increasing the setback distance and managing the resultant creek buffer zone for riparian habitat would reduce the following impacts associated with the proposed project (even though these impacts can be mitigated to a less than significant level by the EIR mitigation measures):

- Disturbance of riparian-associated wildlife due to noise, night-time lighting, human activity, pets, and traffic
- Adverse effects of herbicide use in residential areas on aquatic and riparian resources
- Adverse effects of stormwater runoff from roads and residential areas on creek water quality
- Potential degradation of riparian vegetation due to invasive exotic plants from residential areas.

A wider buffer zone provides greater distance and vegetation to "filter" or otherwise screen the creek from the adverse impacts of residential land uses. There is substantial evidence in the scientific literature and natural resource management fields that demonstrate larger and deeper habitat areas are generally more productive, support greater abundance and variety of wildlife, and are more resilient to human disturbances. The larger buffer zones associated with the alternative creek setbacks would also provide a greater assurance that a creek buffer zone would be present indefinitely, even after catastrophic flood events that could erode the creek banks and adjacent buffer zone.

Based on the above considerations, the environmentally superior alternative is the Alternative Creek Setbacks. Increasing the setback distance and enlarging the creek corridor buffer zone would further reduce water quality and biological impacts to Arroyo Burro Creek resources compared to the proposed project and the applicant's proposed creek protection measures. This alternative would meet the overall project objective.

There are three scenarios of larger creek setbacks presented in the EIR, all of which involve the loss of residential lots. The loss of these lots would reduce the applicant's ability to develop the project, and as such, could cause the project to be infeasible. The environmentally superior alternative would be a revised site layout with a balance between a greater creek setback and the loss or

reconfiguration of developable lots. A range of setback alternatives with varying effects on the site layout is presented in this section for consideration if and when this balance is required.

As noted above, CEQA only requires that an EIR identify the environmentally superior alternative for information for the decision-makers. The identification of a preferred alternative by the City's decision-makers will involve many factors, including feasibility of alternatives, balance between public benefits and environmental impacts, consideration of one type of impact compared to another impact, and public concerns and comments during the hearing process.

5.0 CUMULATIVE IMPACTS

Under CEQA Guidelines Section 15130, an EIR must discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," which means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Section 15065). Section 15355 of the CEQA Guidelines defines cumulative impacts as two or more individual effects, that when considered together, are either considerable or compound other environmental impacts. These cumulative impacts are changes in the environment that result from the incremental impact of the proposed project and other nearby related projects. Other nearby current and future projects are listed below (see Appendix G for complete list):

Elings Park Lower Plateau Improvement Plan. This project involves the development of 26 acres with the following new facilities: multi-purpose community building, new soccer field with restrooms and concessionaire stand, two handball courts, a basketball court, two sand volleyball courts, a playground, a BMX Facility with restrooms and concessionaire stand, picnic sites, additional lighting for special nighttime events, road improvements and new roadway connections to the east, and new parking lots.

Hillside House Project. Proposal to annex the property, demolish the existing buildings, and construct up to 178 new residential units, an administration office, community center, pool, and non-profit lease space. Located adjacent to Arroyo Burro Creek.

Arroyo Burro Estuary Restoration Project. A project by the City's Creek Division to enlarge and enhance the upper estuary near Cliff Drive, re-construct the Mesa Creek channel, install a pedestrian bridge over Mesa Creek, and provide native plant landscaping.

401 Las Positas Road. Annexation and construction of a new single family residence on a 1.56 acre lot near the intersection with Cliff Drive.

The following cumulative impacts are anticipated to occur amongst the proposed project and the above, nearby projects:

- Construction related traffic during periods of peak construction activity. Construction of the proposed project and Elings Park Improvement Project are likely to partially coincide. A significant impact can be avoided through coordination of peak truck trips that may be scheduled at the same time and affect the same intersections.

- Construction related emissions from truck trips and equipment. As noted above, it is likely that the construction periods of the proposed project and the Elings Park project would at least partially coincide. Hence, both projects may be causing temporary air quality impacts at the same time. This impact is not expected to be significant because of the emission reduction measures to be imposed on the individual projects.

- Long-term traffic impacts at key intersections. The proposed residential development would add traffic to the following intersections, most of which are operating at LOS C or lower: Calle Real/Hwy 101 NB Ramps; Las Positas Road/Hwy 101 SB Ramps; Las Positas Road/Modoc Road; and Las Positas Road/Cliff Drive. The contribution of the project to the AM and PM peak hour traffic, when combined with traffic from other future projects, would be significant.

- Water quality impacts to Arroyo Burro Creek. All of the above projects drain to Arroyo Burro Creek, and as such, would affect water quality during and after construction. A significant cumulative impact is not expected because of the project-specific requirement to treat stormwater pollution during and after construction.

- Impacts to Arroyo Burro Creek habitats. The proposed project, 401 Las Positas Road, and the Hillside House project would introduce new or intensified residential uses near the creek. These projects will include creek setbacks and restoration measures to avoid significant impacts to creek habitats. These measures would be sufficient to avoid a significant cumulative impact on the creek habitats.

- Visual Impacts from Nighttime Lightning. The nighttime lighting of the proposed project, when combined with the potential for additional nighttime lighting at Elings Park for nighttime events and recreation, could result in a cumulative impact. The contribution from the proposed project is not expected to create a significant cumulative impact because the lighting would be very low intensity, highly directional, and blocked from most public views by distance and vegetation.

6.0 GROWTH INDUCING IMPACTS

Implementation of the proposed project would not require the extension or expansion of infrastructure or services that could induce or serve additional growth beyond the project. Currently, a water main passes through the site. Water service would be provided by the City of Santa Barbara through an existing connection at the end of Alan Road. The existing water line would be relocated beneath the proposed roads and the water line that crosses Arroyo Burro would be relocated beneath the proposed access bridge. The abandoned sewer line located along the top of the west bank of Arroyo Burro Creek would be left in place. The sewer line that extends from the western boundary of the project site to Alan Road would be replaced with a new line installed in the access roads at the site.

Future development of 24 residential units would not result in a substantial growth or concentration of population, given the size of the surrounding population and the project's location in a developed residential area. Although the proposed bridge and roads would provide access to the project site, which is currently only accessible via Alan Road, the potential development of the area is limited due to topographical and geological constraints. Both the Stone Creek Condominiums development to the north and the Alan Road neighborhood to the south are currently accessed via public streets. The proposed bridge and roads would serve only the new development and are not expected to provide access for future surrounding development. Thus, the project is not expected to induce substantial growth in this area.

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8.0 REFERENCES

Althouse and Meade, Inc., 2000. Monarch Butterfly Site Assessment (Santa Barbara County Site 82). January 18, 2000.

Associated Transportation Engineers, Traffic and Circulation Study, Veronica Meadows Project, City of Santa Barbara, California (ATE # 03157). Santa Barbara, CA

Barry, T.M. and Reagan, J.A. December 1978. FHWA Highway Traffic Noise Prediction Model, Report number FHWA-RD-77-108, Federal Highway Administration,.

Beranek, L.L. and I.L. Ver, eds. 1992. *Noise and Vibration Control Engineering.* John Wiley & Sons, Inc. New York, NY.

Caltrans, 2003. 2002 Annual Average Daily Truck Traffic on the California State Highway System. Department of Transportation.

Calvert, William, 1991. Monarch Butterfly overwintering site locations in Santa Barbara County, California.. December 1991.

City of Santa Barbara, 1999. Draft Las Positas Valley and Northside Pre-Annexation Study and Environmental Impact Report.

City of Santa Barbara, 2003. Initial Study/Environmental Checklist, Veroncia Meadows Specific Plan, MST 99-00608 Community Development Department Planning Division.

Collins, Paul, 2001. Letter to Mark Lee regarding habitat Assessment and nocturnal spotlight surveys for California red-legged frog (*Rana aurora draytonii*) along Lower Arroyo Burro Creek adjacent to the proposed Peak Las Positas Development, Santa Barbara, Santa Barbara County, California. August 11, 2001.

Conejo Archaeological Consultants, 1999. Negative Phase I Archaeological Survey. Las Positas Valley Subdivision. May 1999.

Geolith Consultants, 2000a. Geotechnical Input, Shear Keys for Recompacted Buttress Fill Embankments for Proposed Subdivision, 900-1100 block of Las Positas Road, Santa Barbara, CA, dated November 28, 2000.

Geolith Consultants, 2000b. Geotechnical Input, Shear Keys for Recommended Buttress Fill Embankments for Proposed Subdivision, 900-1100 block of Las Positas Road, Santa Barbara, CA, dated January 21, 2000

Geolith Consultants, 2001. Response to Geotechnical Concerns, Tentative Map, Las Positas Valley Development, Santa Barbara, California, dated November 23, 2001.

Geolith Consultants, 2003. Geotechnical Plan Review, Tentative Map, Veronica Meadows Development, Santa Barbara, California, dated May 17, 2003.

Geolith Consultants, 2004. Consolidated Report, Geological and Geotechnical Conditions and Geotechnical Recommendations for Proposed Veronica Meadows Development, dated January 30, 2004.

Harris, Cyril M., ed. 1979. Handbook of Noise Control. Second Edition. McGraw-Hill, Inc. New York, NY.

Hoover & Associates, Inc., 1999. Preliminary Geologic Hazards and Soil Engineering Evaluation, Las Positas Valley Project, Santa Barbara, CA, dated July 19, 1999.

Hunt, Larry, Letter to Mark Lee regarding red-legged frogs, tidewater goby, and western pond turtle at the Veronica Meadows project site. November 23, 1999.

Meade, Dan, 1999. Monarch Butterfly Overwintering Sites in Santa Barbara County, California. August 1999.

Padre Associates, 2004. Health and Safety Plan for continued use of Elings Park, former Las Positas Landfill, Santa Barbara. For the City of Santa Barbara.

Penfield & Smith, 2003a. Preliminary hydrologic and hydraulic drainage report, Veronica Meadows. Dated June 10, 2003.

Penfield & Smith, 2003b. Hydrologic Analysis for the Arroyo Burro Creek Re-Study. Dated February 2003.

Penfield & Smith. June 2003c. Veronica Meadows Specific Plan, MST # 99-00608. Santa Barbara, CA.

Post/Hazetline Associates, 1999. Phase I Historic Resources Management Report for 425 Las Positas Road, Santa Barbara, California. Prepared for Peak-Las Positas Partnership.

Rachel Tierney Consulting, 2000. Biological Resources Analysis. Riparian Restoration and Management Plan. Las Positas Valley, Santa Barbara, California. (Revised July 28, 1999 and December 15, 2000).

RJR Engineering Group, 1999. Site Feasibility Study, 10 acre Site, Las Positas Road, Santa Barbara, CA, dated March 24, 1999.

San Buenaventura Research Associates, 2001. Phase 2 Historic Structure Report, Las Positas Valley Subdivision Project, Santa Barbara, CA. July 2001.

URS Corporation, 2004. Slope Stability and Seismic Deformation Analyses. Lots 1-4, Lot 12. Internal memo for the Veronica Meadows EIR for the City of Santa Barbara.

U.S. Environmental Protection Agency (USEPA), 1971, *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances*. Prepared under contract by Bolt, Beranek & Newman, Boston,