
Harmony @ 1
Roberts Road Subdivision
Draft Environmental Impact Report

JUNE 2007

Prepared by:
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HARMONY @ 1 ROBERTS ROAD SUBDIVISION

DRAFT ENVIRONMENTAL IMPACT REPORT

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SUMMARY

S.1 PROJECT DESCRIPTION

The Project Applicant proposes a Planned Development on two parcels (APN 022-150-420 and APN, 022-150-310) comprising 65 acres. The parcels will be subdivided into 13 single family residential lots ranging in size from 1.8 acres to 8.7 acres. The net density of the development would be approximately 1 dwelling unit per more than five acres consistent with its Open Space Residential land use designation. The Project also includes development of the adjoining 2-acre parcel (APN 022-150-030) with a single family residence and second residential unit. The residences on this third parcel would be developed as a permitted use consistent with its Agricultural zoning district.

The intended design of the project is to be an ecologically friendly sustainable subdivision. Roughly 28.4 acres of the site are proposed as a conservation area to be held as common open space for project residents. Lots would be maintained by homeowners in natural landscape. Homes would be architecturally designed with low profiles to minimize the building mass visible on the hillside. Building materials and colors would blend into the natural environment. Each home would feature solar power technology, rainwater collection, and grey water recycling. Street lights would be powered by wind technology.

S.2 IMPACTS AND MITIGATION

The Roberts Road/Harmony @ 1 EIR identifies potentially significant impacts related to hazardous waste, traffic, air quality, and noise. With the exception of traffic, all impacts can be mitigated to a Less than Significant level. Table S-1 summarizes all significant impacts and the recommended mitigation to reduce impacts.

Table S-1 Summary of EIR Mitigation Measures	
AESTHETICS	
IMPACT: The custom homes could have a significant visual impact if they are not designed and constructed using the Coastal Green Architecture described in this EIR. Potentially Significant Impact	Measure AES-1: The Codes, Covenants and Restrictions (CC&Rs) for the Harmony @ 1 development shall, consistent with the Project Description (section 2.0) and Project Design Features (section 4.2.2) herein, fully define the intent of the term “Coastal Green Architecture.” The CC&Rs shall provide detailed descriptions of specific measures or features that shall be imposed to ensure that the custom homes conform to the definition of Coastal Green Architecture and incorporate the design measures discussed in this EIR that reduce or eliminate visual impacts. The specific features to be described in the CC&Rs shall include, but not be limited to, the following design and construction measures: • Homes shall be located in the building envelope presented in the Preliminary Grading Plan described in this EIR. • Excavation of the building pad. The homes shall be designed

Table S-1 Summary of EIR Mitigation Measures	
	with a lowered or excavated building pad in order to reduce the mass of the homes. The degree or amount of excavation shall be determined by the custom home architect, the Harmony @ 1 Architectural Control Committee, and the City's design review process. • Berming: The CC&Rs shall require berming of excavated soil to help hide homes, and shall describe desirable locations and methods for such berming. • Hidden garages: The CC&Rs shall describe what constitutes a "hidden garage" and establish when a home shall have the garage under the main structure in order to minimize visual impacts. • Living Roofs: The CC&Rs shall describe what constitutes a "living roofs" and establish when a home shall include a living roof in order to minimize visual impacts. • The CC&Rs shall describe appropriate exterior materials and color palette to ensure compatibility of the homes with the surrounding area. Less than Significant Impact After Mitigation
IMPACT: The proposed project could have nighttime light and glare impacts. Potentially Significant Impact	Measure AES-2: To ensure night light and glare from the project is minimized the following measures shall be implemented: • Exterior lighting shall include low mounted, downward casting and shielded light that does not cause spillover onto adjacent properties. • No flood lights shall be used in public areas or the conserved habitat areas. Night security lighting within residential lots shall be restricted to normal exterior lighting. • Language shall be added to the development's CC&Rs stating that lighting fixtures shall not be located at the periphery of individual lots. Lighting shall be restricted to the area immediately around the house and any landscaped areas. Less than Significant Impact After Mitigation
BIOLOGY	
IMPACT: Conserved private and common open space areas could be damaged if used for construction staging areas or if heavy construction equipment stray into conserved areas. Less than Significant Impact	Measure BIO-1: Prior to construction, a temporary barrier fence shall be erected along the northern open space habitat areas to prevent damage to the areas during construction of project infrastructure improvements. Authorized construction staging areas shall be designated on the final version of the site plan so all contractors know where they are allowed to park vehicles and equipment and store building materials. Appropriate construction staging areas would include areas slated for development or grading. Storm water runoff and management of any fluids would be according to the required Storm Water Pollution Prevention Plan, described in the Hydrology section. Storm water runoff from construction staging areas shall be directed away from conserved

Table S-1 Summary of EIR Mitigation Measures	
	habitat areas. Less than Significant Impact After Mitigation
IMPACT: The project proposes removal of 122 Monterey pine and 3 Monterey cypress trees most of which are diseased and in poor condition, but provide wildlife habitat. 31 trees occur in the project road and building envelope areas, 48 occur on individual lots outside of the construction zone, and 46 occur on a lot to be held in common open space (For impacts to Heritage Trees, see Measure BIO-3). Less than Significant Impact	Measure BIO-2: In order to provide continued wildlife values on the project site, trees in designated open space areas (Lot A, Lot B, and Parcel A) shall not be removed. Tree removal on individual lots shall be approved only upon demonstration that 1) the tree is within the designated building envelope and removal is required for construction, 2) the tree is close to the building envelope and its condition represents a safety hazard to the proposed residence, or 3) the location and condition of the tree would create a visual blight when viewed from the residence. Conditional tree removal would prevent unnecessary reductions in wildlife resources on the site while protecting the safety and enjoyment of property by landowners. All trees specified for removal in Specific Plans for individual lots shall be replaced with a native species. Less than Significant Impact After Mitigation
IMPACT: Construction of the proposed project would result in the removal of 12 trees that meet the definition of Heritage Tree in the local ordinance. With preservation of trees on the private open space parcel under Measure BIO-2, the number of Heritage Trees removed by the project is reduced to 7. Potentially Significant Impact	Measure BIO-3: The Applicant shall comply with all provisions of the City's Municipal Code (sec. 4-12-04) for preservation of Heritage Trees. Prior to the removal of the 7 Heritage Trees, the Applicant must obtain a Heritage Tree Removal Permit from the City. The Applicant shall replace the 7 Heritage Trees removed with 7 new native shrub/tree species suitable for the site (e.g. coast silk tassel (<i>Garrya elliptica</i>), California buckeye (<i>Aesculus californica</i>), or others). Recommended planting locations are shown in Figure 17 of this EIR. Less than Significant Impact After Mitigation
IMPACT: Impacts from the new residential use and increased human activity on the site could adversely impact biological resources found within the open space habitat areas and result in a significant decline of habitat values for wildlife over time. Potentially Significant Impact	Measure BIO-4: The development's Codes, Covenants and Restrictions (CCRs) shall contain language that shall ensure the protection of all open space habitat (including Lot A and other open space areas) from degradation as a result of resident activities and shall ensure that the open space habitat is managed and protected in a manner that will ensure the long-term viability of all the biological resources currently found on the project site. The CC&Rs shall include provisions that prevent activities within the open space habitat that would permanently damage native vegetation, cause erosion, or harass or harm wildlife. These restrictions do not apply to any authorized native habitat management efforts such as exotic species control, erosion repair, or native plant revegetation. The CCRs shall include the following restrictions on human activity: 1. New volunteer trails within the open space areas shall be controlled so that trails do not damage vegetation and cause erosion. 2. All pets (dogs and cats) shall be controlled within open

Table S-1 Summary of EIR Mitigation Measures	
	space areas so that they do not hunt, harm, or harass wildlife or otherwise damage biological resources. 3. Residents shall not store or dispose of items (including yard trimmings) within the open space areas. 4. The use of rodenticides within the open space areas shall be prohibited unless approved by CDFG. Management of the open space areas shall also include the control of feral cats, and limitations on domestic cat ownership 5. The large, vegetated drainage along the eastern boundary of the project property may contain USACE jurisdictional waters (this drainage does not support perennial flow, but has a defined drainage channel). The drainage shall be protected from impacts of runoff from urban areas, damage due to humans or pets, or other activities that degrade the natural habitat. In addition, through consultation with City of Pacifica, US Fish and Wildlife Service and the CDFG, a Management and Monitoring Plan shall be developed and implemented for the open space areas. The Plan shall include the following: 1. A description of the goals of the Management Plan. The goals should foster the protection of native habitat and wildlife diversity at the site, should protect the wildlife corridor, and should support a healthy ecosystem. 2. A description of methods to protect and enhance native habitat on the site, including coastal terrace prairie, coastal riparian scrub, and northern coastal scrub. 3. A description of the methods to protect and enhance habitat of sensitive species on the site, including the Mission blue butterfly, the San Francisco dusky-footed woodrat, the loggerhead shrike, and the white-tailed kite, and how individually-owned lots with restriction on them (see Measure BIO-10) may fit into the scheme. 4. A schedule of management and enhancement activities. 5. Annual monitoring and reporting, including surveys of the species of concern and the results of any enhancement activities undertaken at the site. 6. An educational component, so that lot owners understand the purpose of the management plan and can choose to apply the measures to their own lots. The applicant or homeowner's association shall request a letter of concurrence from the US Fish and Wildlife Service that the management plan will not result in take of the Mission blue butterfly or any other federally-listed species. Less than Significant Impact After Mitigation
IMPACT: Non-native, invasive plants could escape	Measure BIO-5: The development's CC&Rs shall contain language restricting all landscape planting so that those plants

Table S-1 Summary of EIR Mitigation Measures	
from landscaped areas within yards and colonize and spread into the open space areas, converting native habitat and significantly reducing biological diversity. Potentially Significant Impact	identified by the California Invasive Plant Council (Cal-IPC) in Table 1 of the California Invasive Plant Inventory shall not be planted. In addition, only native plant species may be used for landscaping that are consistent with the regional plant communities found in the local region. A qualified biologist shall review all proposed planting lists and compare it to the most recent Cal-IPC list to ensure no invasive plants on the list are planted. The biologist shall also check the plants to insure consistency with local native ecosystems. The biologist shall check the plants at the time of installation to make sure no substitutions have been made by the landscape contractor. The most recent version of the California Invasive Plant Inventory can be found at http://www.cal-ipc.org/ip/inventory/pdf/Inventory2006.pdf. This measure shall apply to all landscaping within the project site, including landscaping of common areas and within each of the housing lots. Less than Significant Impact After Mitigation
IMPACT: Construction of the proposed project would result in ground disturbance that could facilitate the spread of invasive plant species within the designated open space areas on site, and result in increased erosion that would adversely impact plant and wildlife habitat. Potentially Significant Impact	Measure BIO-6: Invasive species shall be removed during project construction on a quarterly basis within the graded areas and on adjacent open space lands. Species to be removed include existing invasive species on site, such as French broom, fennel, pampas grass, and cotoneaster as well as any others that establish as a result of project grading activities. In addition, to ensure longterm control of invasive species, this provision shall be included in the Management Plan required in Measure BIO-4. Less than Significant Impact After Mitigation
IMPACT: Special status bird species could use and potentially nest within the project site. Project construction could adversely impact the breeding of special status bird species resulting in violation of CDFG code and the Migratory Bird Treaty Act and a significant impact. Potentially Significant Impact	Measure BIO-7: If any trees or shrubs are proposed to be removed during the nesting season (February 15 to August 31), pre-construction surveys for nesting birds shall be conducted. This measure shall apply to all construction occurring on the project site, both the infrastructure improvements and construction within each of the housing lots. The surveys shall identify active nests and establish a disturbance buffer if nests are located. A minimum buffer of 50 feet is required by CDFG for songbird nests and a minimum of 250 feet for raptor nests. Construction activity within an established buffer area is prohibited until nesting is complete. Less than Significant Impact After Mitigation
IMPACT: Construction of the proposed project would result in the removal of four to six San Francisco dusky footed woodrat houses within the proposed roadway on the north side of the property, and potentially one more woodrat house from grading of building sites on the	Measure BIO-8: The following mitigation plan shall be implemented: 1. Preconstruction surveys for woodrat houses. A preconstruction survey for woodrat houses shall be conducted within all areas proposed for disturbance, prior to any disturbance on site. These surveys shall include surveys for carnivore dens (such as bobcat) on site. If any carnivore dens are detected within the construction area, CDFG shall be contacted for guidance to avoid impacting any dens.

Table S-1 Summary of EIR Mitigation Measures	
western portion of the property. Removal of coastal scrub habitat could adversely impact carnivores in violation of CDFG code if any are denning there. Potentially Significant Impact	2. <u>Preconstruction woodrat house dismantling and/or relocation.</u> For all woodrat houses that will be impacted by construction impacts, the houses shall be dismantled and relocated to appropriate locations within the open space areas on the project site, and any woodrats captured and released into their relocated houses. House dismantling and/ or relocation shall be conducted only when necessary, during the non-breeding season (September to February), and under guidance from the CDFG. 3. <u>Control of non-native species.</u> The management of the onsite common open space area (Lot A), per Measure BIO-5, shall include control of non-native invasive weeds to maintain the native plant species that provide important cover and food resources for the San Francisco dusky-footed woodrat, prohibit the use of rodenticides within the open space area shall be prohibited unless approved by CDFG and the control of feral cats and limitations on domestic cat ownership. Less than Significant Impact After Mitigation
IMPACT: While suitable aquatic habitat for California red-legged frog (CRLF) and San Francisco garter snake (SFGS) is not present with the project site, there remains an extremely low chance that CRLF and/or SFGS could disperse through the project site from the eastern border. Project construction has a low potential to impact dispersing CRLF and SFGS, however if take of either of these species occurred, it would be significant. Potentially Significant Impact	Measure BIO-9: A qualified biologist shall be retained by the applicant to oversee construction and ensure that take of the San Francisco garter snake or California red-legged frog does not occur during construction. The following procedures shall apply: • Prior to any grading or vegetation removal, a biologist shall conduct a preconstruction survey for San Francisco garter snake and California red-legged frog. During construction, a trained biologist or a trained on-site monitor (such as the construction foreman) shall check the site in the morning and in the evening for the presence of California red-legged frog and San Francisco garter snake. This includes checking holes, under vehicles and under boards left on the ground. If any CRLF or SFGS are found, construction shall be halted until they disperse naturally, and the monitor shall immediately notify the biologist in charge and the USFWS. Construction shall not proceed until adequate measures are taken to prevent dispersal of any individuals into the construction zone, as directed by the USFWS. Subsequent recommendations made by the USFWS shall be followed. The monitor shall not handle or otherwise harass the animal. The biologist in charge shall train the on-site monitor in the identification of CRLF and SFGS. The biologist in charge shall visit the site at least once a week during construction and confer with the trained on-site monitor. • Construction workers shall be informed of the potential presence of California red-legged frog and San Francisco garter snake, that these species are to be avoided, that the foreman must be notified if they are seen, and that construction shall be halted until authorization to proceed is obtained from the USFWS. Construction workers shall be informed that harassment of these species is a violation of federal law.

Table S-1 Summary of EIR Mitigation Measures	
	During construction, all holes shall be covered at night to prevent CRLF and/or SFGS from becoming trapped in holes on the construction site. Less than Significant Impact After Mitigation
IMPACT: Construction of the proposed project could impact the federally endangered Mission blue butterfly. Mission blue butterfly adults have not been observed on site during field surveys however eggs were found on the host plants. The site plan for Lot 11 has been redesigned to avoid the Mission blue host plant <i>Lupinus formosus</i> . Potentially Significant Impact	Measure BIO-10: Project development shall avoid Mission blue butterfly host plant <i>Lupinus formosus</i> and provide a minimum 50-foot setback from areas containing the host plant. Any parcel containing Mission blue butterfly host plants shall be subject to a CC&R provision that requires the owner to obtain permission from the US Fish and Wildlife Service to undertake any activities that result directly or indirectly in the removal of Mission blue butterfly host plants. The owners of lots containing Mission blue host plant shall also coordinate with the Homeowner's Association in the implementation of the open space management plan required in Measure BIO-4. Less than Significant Impact After Mitigation
GEOLOGY	
IMPACT: Strong groundshaking associated with a major earthquake in the region could impact the project development by causing damage or collapse of buildings or endanger the health and welfare of persons. Potentially Significant Impact	Measure GEO-1: The new residential construction and any other site improvements shall comply with the provisions of Title 24 of the California Administrative Code, and the most recent edition of the Uniform Building Code, Seismic Zone 4 standards, or local seismic requirements, which ever is most stringent. All recommendations included in the June 19, 2006 Earth Investigations Consultants (EIC) preliminary soil investigation report shall be met including: 1) City review of all plans and specifications and observation by the project geotechnical engineer of foundation excavations to ensure compliance with the recommendations in the project geotechnical report; and 2) Observation and testing of engineered fill, finish subgrade and aggregate base for new pavements by the project geotechnical engineer. Less than Significant Impact After Mitigation
IMPACT: Surficial landslides affecting the Roberts Road cut slope will continue to degrade the cut slope and produce sediment onto the traveled roadway. Potentially Significant Impact	Measure GEO-2: A detailed remediation plan that addresses the surficial landsliding affecting the Roberts Road cut slope shall be prepared by a qualified engineering geologist. The remediation plan shall identify any grading and drainage improvements necessary to prevent future landsliding. The remedial grading improvements shall be implemented by the applicant. Less than Significant Impact After Mitigation.
IMPACT: The potential for erosion of the clayey sand surface soils on the project site is moderate to high. Potentially Significant Impact	Measure GEO-3: The impacts from erosion can be mitigated by incorporating appropriate grading and drainage measures into the project design. A final grading plan and drainage plan shall be prepared for the project. These plans shall provide for positive drainage on building pads and removal of water from foundation areas into area drains and closed pipe systems which carry runoff to

Table S-1 Summary of EIR Mitigation Measures	
	a suitable drainage facility located below the erodible colluvial deposits which exist downhill of the ridgeline. Slopes shall be graded so that water is directed away from the slope face. Permanent slopes shall be protected from erosion through the use of erosion resistant vegetation and jute netting. Erosion control seed mixes used on site shall utilize native grasses and forbes appropriate for the site to replace and improve existing habitat values of grasslands disturbed on the site. Temporary erosion control measures such as positive gradients away from slopes, straw bales, silt fences and swales shall be used during construction. Less than Significant Impact After Mitigation
IMPACT: Although considered unlikely by the Earth Investigations Consultants (EIC) report (June 2006) deep erosion and landsliding on the southern slopes could impact Lots 9 and 10. Potentially Significant Impact	Measure GEO-4: Although the house sites appear to be sufficiently far from the deep erosion gullies and landsliding on the southern slopes and existing data indicates that the house sites are on shallow bedrock, design-level geotechnical investigations for Lots 9 and 10 shall be conducted to determine whether surface or subsurface drainage improvements are necessary to prevent accelerating erosion trends in these gully areas and to prevent encroachment into the building sites. Any necessary improvements shall be implemented by applicant or future owners of Lots 9 and 10. Less than Significant Impact After Mitigation
IMPACT: The near surface clay soils and bedrock have a moderate plasticity as discussed in the EIC report. Expansive soils can detrimentally affect building foundations, slabs, pavements, retaining walls and other site improvements. Potentially Significant Impact	Measure GEO-5: The EIC report provides recommended measures for mitigating the effects of expansive soils on the project improvements. These protective measures include: 1) mixing on-site soils to a plasticity index of 15 or less; 2) moisture conditioning of fill materials to three percent over optimum; and 3) overexcavation of slab subgrade areas. The following additional measures shall also be taken to minimize the effects of expansive soils: a) providing a layer of non-expansive granular materials beneath slabs-on-grade as a cushion against building slab movement; b) the use of aggregate base under exterior flatwork; and c) control of irrigation adjacent to the new buildings. Less than Significant Impact After Mitigation
HYDROLOGY	
IMPACT: The proposed project could result in water quality impacts to the city's storm drain line and Calera Creek as a result of increased siltation of surface water runoff from construction grading activities. Potentially Significant Impact	Measure HYD-1: The applicant shall apply to the RWQCB to obtain coverage under the State General Construction Activity National Pollutant Discharge Elimination System (NPDES) Permit. The applicant shall comply with all provisions and conditions of the general permit and prepare a Storm Water Pollution Prevention Plan (SWPPP). Project construction shall conform to the requirements of the general permit and the SWPPP. Construction BMPs that will be used to reduce or avoid impacts shall include: • Keeping materials out of the rain by covering exposed piles of soil or construction materials with plastic sheeting; sweeping paved surfaces that drain to creeks or wetlands; using dry cleanup methods whenever possible, and if water

Table S-1 Summary of EIR Mitigation Measures	
	must be used, use just enough to keep the dust down; • Use of hay bales or other mechanical barriers to trap sediment on the project site and prevent discharge into storm water drainage • Scheduling construction activities for periods of dry weather • Restricting fueling of construction vehicles to approved staging areas. Less than Significant Impact After Mitigation
IMPACT: Up to six acres of the project site will be developed with building envelopes and roads. Site development would introduce impervious surfaces to the property and increase the amount of stormwater runoff generated on site. Detention basins constructed for the project have adequate capacity to handle the increased runoff and would require routine maintenance. Potentially Significant Impact	Measure HYD-2: The Project shall implement the site design, source control, and stormwater treatment measures detailed in the Stormwater Control Plan, included as Appendix B. The project applicant shall also enter an Operations and Maintenance (O&M) agreement with the City, as required by the County-wide NPDES permit. This O&M agreement shall run with the land. Less than Significant Impact After Mitigation
TRAFFIC	
IMPACT: The project access road intersects Roberts Road on the inside of a curve where there are inadequate sight line distances for vehicles exiting the project street onto Roberts Road. The limited visibility creates unsafe an unsafe traffic condition. Potentially Significant Impact	Measure TRF-1: Project slopes at the intersection of the new access road and Roberts Road shall be trimmed back to establish the minimum safe sight line distance of 200 feet. The site distance at the driveway shall be increased as much as feasible beyond the minimum requirement to provide additional safety at the intersection. Landscaping placed in these areas shall be restricted in height to prevent reduction of the sight line distances. The site shall be inspected by the City to determine compliance with this measure prior to the issuance of occupancy permits. Less than Significant Impact After Mitigation

S.3 PROJECT ALTERNATIVES

The range of alternatives considered for this project has been limited to changes in project design that would lessen the project's environmental impacts. Alternate land uses were not considered due to the General Plan designation of the property for residential use. Alternate project locations were not considered since the project Applicant does not have control or access to other properties and would not meet the primary project objective of constructing a personal residence on this specific property.

Four project alternatives are considered for the Harmony @ 1 project: No Project Alternative, Reduced Lots Alternative, Clustered Development Alternative, and Elimination of Lot 11. Of the four project alternatives, the Reduced Lot Alternative is the environmentally superior alternative after the No Project Alternative.

S.4 ISSUES OF PUBLIC CONCERN

An Initial Study and Notice of Preparation (NOP) were prepared for the Roberts Road/Harmony @ 1 Project. In response to the NOP for the EIR, Caltrans submitted a letter regarding the agency's prior review of a traffic report. No response letters were received from other public agencies or community members. The Initial Study and NOP and Responses are attached in Appendix A. The likely issues of public concern are traffic and aesthetics.

1.0 INTRODUCTION

1.1 INTENDED USE OF EIR

The Roberts Road/Harmony @1 project is a Planned Development of 13 single family homes on 65 acres and development of an adjoining 2-acre lot with a single family home and secondary residential unit. The Planned Development requires a Tentative Map, Development Plan, and Rezoning. These are discretionary actions subject to environmental review. Subsequent approvals include Growth Allocation, Final Map, grading permits, permit for Heritage Trees, Specific Plan and coverage under the State General Construction Activity National Pollution Discharge Elimination System general permit. As the Lead Agency, the City of Pacifica will use this EIR to satisfy the requirements of CEQA when taking action on these items for the Harmony @ 1 Project. The 2-acre lot development requires a Use Permit.

Other responsible or trustee agencies may review this EIR to determine regulatory jurisdiction over the project. Such agencies may include the Bay Area Air Quality Management District, Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game. This EIR may be used by these agencies to support subsequent actions in approving permits for the Harmony@1 Project.

2.0 PROJECT DESCRIPTION

The City of Pacifica has received an application to develop 13 single family residential homes on 65 acres and the development of one single family home with a second unit on an adjoining two-acre lot. The project is located on vacant hillside property in Linda Mar south of Fassler Avenue at Roberts Road. The project requires City approval of a Tentative Map, Development Plan, and Rezoning for the Planned Development on 65 acres and approval of a Use Permit and Site Development Permit for the 2-acre lot development.

2.1 PROJECT LOCATION AND SITE DESCRIPTION

2.1.1 Location

The project property is located in the northwest section of the Linda Mar neighborhood in Pacifica. The site is bounded by Fassler Avenue on the north and by Roberts Road on the west (Figure 1, Project Location). Access to the site would be constructed on Roberts Road and Fassler Avenue. The proposed project site is located in the City of Pacifica, in San Mateo County. It is in the Linda Mar/Rockaway Beach area of Pacifica.

2.1.2 Zoning and General Plan Land Use

The project site comprises three parcels located south of Fassler Avenue and east of Roberts Road (APN 022-150-420, 022-150-310, and 022-150-030). The majority of the site is designated Open Space Residential by the Pacifica General Plan. The southern portion of the site is designated Very Low Density Residential. The Zoning District for the two large parcels (65 acres) is Planned Development with the exception of one corner of the parcel fronting Fassler Avenue which is zoned Commercial. Both project parcels are within the Hillside Preservation District overlay zone. The Zoning District for the third smaller parcel (2 acres) is Agricultural which permits development of one single family unit. The Agricultural parcel is designated as Open Space Residential in the General Plan and is within the Hillside Preservation District overly zone.

2.1.3 Existing Site Conditions

The property is set in the coastal hills east of Highway 1 outside of the City's coastal zone (Figure 2, USGS Map). The property has views of the Pacific Ocean coastline. The project property comprises two ridge lines, one trending east-west along Fassler Avenue and one trending south toward Crespi Drive. Elevations range from 36 feet at the south east corner near the intersection of Roberts Road and Crespi Drive to 397 feet on the ridgeline knoll above Fassler Avenue. The ridge is a prominent feature in the area and is visible from points west and south such as the Pedro Point and Linda Mar areas, Pacifica State Beach, and sections of Highway 1. Some portions of the project development may also be visible from the Rockaway Beach area.

The project parcels are vacant land. There has been no previous developed use of the project property. The hill is used informally by local residents for hiking and recreation.

The project site is dominated by Northern Coastal Scrub with patches of Northern Coastal Bluff Scrub on the upper south facing slopes and Central Coast Riparian Scrub on the lower south facing slopes. Patches of ruderal vegetation occur adjacent to Fassler Road. The parcel does not contain any sensitive plant species. Numerous Monterey pine and Monterey cypress occur on the property. Some are large enough to be considered heritage trees under Pacifica city ordinance. The site may contain habitat for sensitive bird species. The eastern portion of the project site may act as a dispersal corridor for the California red-legged frog from known populations both north and south of the site; the potential for site use by the frog is considered low. Two large erosion gorges occur on the southeast portion of the property. The smaller, new features on the lower southeast facing slope may be considered potentially jurisdictional wetlands.

2.1.4 Surrounding Land Uses

The land use surrounding the Harmony @ 1/Roberts Road project site is mixed (Figure 3, Surrounding Land Uses). The land immediately west of the site is zoned for or developed with residential housing. The land east is zoned Planned Development, vacant, and has a General Plan designation of Open Space Residential. Immediately north, the land is undeveloped and further north is the Rockaway Beach neighborhood. To the south is the urban development of the Linda Mar neighborhood.

Land use in the project site vicinity is open space to the north and east, multi-family residences and open space to the west and residences and the Cabrillo School to the south. The nearest commercial uses are Linda Mar Shopping Center to the south, the Sea Bowl bowling alley at the intersection of Highway 1 and Fassler Avenue, and the West Rockaway Beach commercial area to the west.

2.2 PROJECT OBJECTIVES

The Harmony @ 1/Roberts Road project is proposed as an eco-friendly sustainable subdivision. The project applicants are local Pacifica residents who intend to live on the property. The project applicants have collaborated with local activists, environmentalists, civic leaders, businesses, homeowners and artists with the intent to create an environmentally-friendly project that is in harmony with the earth and the community. The project objective is to create a future development of 13 lots and the development of a two-acre lot with a single family home for homeowners all with a desire to live in a sustainable development within a great community. Project objectives identified by the Project Applicant include:

- Create a flagship, environmentally-friendly development that is in harmony with the earth and the community.
- Integrate passive and active solar, wind power and other environmental technologies.
- Maintain a large portion of the property in natural open space.
- Promote a new concept called coastal green architecture that integrates the homes into the surrounding hillside.

Additional project objectives identified by the City include developing the project property with residential use consistent with its General Plan land use designation and the Planned Development and Hillside Preservation District zoning requirements.

2.3 PROJECT CHARACTERISTICS

2.3.1 Planned Development

The Project Applicant proposes a Planned Development on two parcels (APN 022-150-420 and APN, 022-150-310) comprising 65 acres. The parcels would be subdivided into 13 single family residential lots ranging in size from 1.8 acres to 8.7 acres (Figure 4, Tentative Map). The net density of the development would be approximately 1 dwelling unit per five acres. Proposed lots would be sold for custom development by individual lot owners. Each lot would contain one home site where an owner can build their home in compliance with the rules of the Hillside Preservation District and the Architectural Committee for the Homeowner's Association (HOA Architectural Association). A building envelope is specified for each lot as shown in the site development plan (Figure 4). Each building envelope is approximately 7,000 square feet which accommodates a residence and immediate yard space. Approximately 9% of the 65 acres is designated as buildable area (project road and building envelopes). The remainder of the project site would be maintained in natural landscape either within the individual lots or set aside in conservation as described below.

The Planned Development parcels are owned separately. The Planned Development project represents a collaborative planning effort for two separate development applications.

2.3.2 Agricultural Parcel

The project application includes development of an adjoining 2-acre parcel (APN 022-150-030) with a single family residence and second residential unit (Figure 5, Agricultural Parcel Site Plan). The main house would be owner occupied and the second house would serve as a guest house or rental unit. This parcel would be developed as a conditional permitted use in the Agricultural zoning district and requires a Site Development Permit. Project access and utilities would be extended from the Planned Development project to this parcel. However, the parcel would not be subject to the design requirements and Covenants, Codes and Restrictions (CC&R) which are associated with the 13 residential lots of the Planned Development.

Site development of this lot includes 10,425 square feet for the main house and driveway/parking area. Development of the second unit with its separate entry road and parking area encompasses 7,075 square feet (Figure 5).

2.3.3 Natural Landscape and Open Space Areas

The portion of each residential lot outside the specified building envelope would be maintained by the homeowner in natural landscape. Improvements to the natural landscape would be restricted by CC&Rs to native, non-invasive plant materials. The site plan aligns the lots in a linear cluster to link naturalized lot space with the proposed common open space.

Approximately 28.4 acres (Lot A on APN 022-150-420) on the central and southern portion of the site are proposed as a common open space for project residents. The open space area would be protected by the CC&Rs and maintained by the Homeowner's Association (HOA). Another 11 acres would be held in private open space on two separate lots located on

the northern section of the project site between Fassler Avenue and the project access road; parcel A on APN 022-150-310 is 7.5 acres and Lot B on APN 022-150-420 is 3.6 acres.

Additional trees would be planted, including trees within rear yards and around the homes, helping to minimize the visual impact of the residences. Trees would be included in the site plan phase of individual lot developments approved by the Planning Commission. All trees shall be native, non-invasive species. A street tree planting plan would be prepared and included with the Final Map.

2.3.4 Architectural Design

The proposed project consists of environmentally-friendly, low profile homes that blend with the natural landscape. The Applicant proposes a new style of architecture called “Coastal Green Architecture” which is intended to demonstrate harmony between the environment and the community. The Applicant defines Coastal Green Architecture as, “balancing the needs of the city, community, environmentalists and homeowners to create a beautiful ocean view project.” A more detailed explanation is below.

Building materials would include concrete and steel. Windows would use materials that can handle high winds associated with the coastal environment. CC&Rs would require the colors for the homes and materials to blend into the natural environment. The CC&Rs would dictate the color pallet from which the homes can be painted as well as encourage each homeowner to utilize concrete as a core building material to allow the homes to be aligned with the contours of the hill.

Each home would be custom designed by the individual owners. CC&Rs would restrict the maximum size of homes to 5,500 square feet in living area to minimize their footprint on the land. Every house would be designed with a low profile to appear as a natural extension of the landscape. The city allows homes to be constructed 35 feet above grade as measured from the finished grade between the lowest point of site covered by any portion of a building to the top most point of the roof. It is the goal of this development to have all homes lower than the 35 foot requirement.

Each lot would be developed to minimize the southern profile which is visible to residents of Linda Mar. This would be accomplished through architectural design, building siting, excavation, and berming. The siting for each home is based on the best location on each lot for the home to be placed that would minimize visual impact. It is the goal to excavate each home to help lower its profile and make the home appear smaller from homes in the Linda Mar area. The berms would be 3 to 10 feet in height depending on the lot and siting of the home. Berm height and location would be determined at the time individual lots are proposed for development. Site plans for each lot would be reviewed by the City of Pacifica and the HOA Architectural Committee. The planning commission would have oversight on all the home designs through the approval of a Specific Plan and all designs would be reviewed and approved through the Harmony @ 1 HOA Architectural Committee.

Coastal Green Architecture

“Coastal Green Architecture” is a term used to describe Field Architecture’s interpretation of an architectural language appropriate to this stretch of Northern Californian coast. Building form is derived primarily from the desire to minimize visual impact and the relationship of these man-made structures with the surrounding ecology. Site integration, building geometry, orientation, material palette and sustainable design are the main elements which together impart a sense of a community of houses which belong to this portion of coastal hills.

The houses would be nestled into the sloping hillside, using their rear walls for earth retention, and carve out a suitable living space which bends to conform to the natural contours of the ground. The lower portions of the houses use earth berms and natural concrete, which support the upper level of the houses. The low-profile rooflines are broken into discrete planes which slope up in the center of the house, and fall towards the edges of the house. The design continues the slope of the hill, resulting architecture reads as ‘indigenous’ and echoes the outcroppings of the surrounding hills and ravines.

An example of the coastal green architecture is shown in Figure 6, Architecture Design. The design principles include the following:

1. Minimize visual impact by maintaining the natural grade; prohibit padding or terracing.
2. Architectural design of house should have a low profile and appear as a natural extension of the landscape.
3. Maximize energy-efficiency by integrating passive and active solar design and ecological material choices.
4. Utilize colors and materials blend into the natural environment

2.3.5 Site Access and Grading

A new project road would be constructed from Roberts Road and Fassler Avenue to access project lots. Lot 11 would be directly accessed by a new road constructed directly off Roberts Road. The new project road would be publicly accessible and privately maintained by the HOA. The road would be constructed to a standard subdivision width of 26 feet. The project road includes a sidewalk on the south side of the street and street lights.

Construction of the project access road would require site grading (Figure 7, Grading Plan). The proposed grading would consist of maximum cut heights of 12 feet and fill heights up to 7 feet. Retaining walls would be constructed along the south side of the project road between lot driveways. The estimated earthwork quantities are 27,918 cubic yards of cut and 4,573 cubic yards for fill. The excess quantity of 23,616 cubic yards, would be removed from the site.

The hillside slopes at the project road entrance to Roberts Road would also be trimmed back to increase sight line distances for motorists leaving the project site (Figure 7).

A retaining wall ranging in height from two to eleven feet would be constructed along the entire length of the access road on the south side (Figure 8, Preliminary Retaining Wall Plan).

This includes the entrance to the access road at Roberts Road. The slope along the east side of Roberts Road south of the access road would be trimmed to improve site line distances (Figure 8).

2.3.6 Drainage and Utilities

2.3.6.1 Stormwater

A Stormwater Control Plan for the project is presented in Appendix B. Stormwater from the project road and individual lots would be collected and conveyed through drainage pipes to two detention basins constructed near Fassler Avenue one at the intersection of Fassler Ave and Roberts Road (North Pond) and one at Fassler Avenue and the project access road (South Pond) (Figure 7). The ponds would be designed as bio-retention basins and are designed according to the criteria included in the County Clean Water Program Stormwater C.3 Guidebook. The North Pond requires a depth of 5 feet and is designed to hold 15,162 cubic feet. The South pond requires a depth of 3 feet and is designed to hold 9,298 cubic feet of stormwater. Both ponds would drain completely in 48 hours. From the detention basins, the stormwater would be discharged into the City's existing collection system located within Fassler Avenue. Discharging to detention basins would allow sediment to settle out of the stormwater prior to entering the City's drainage system. The HOA would enter into an operation and maintenance agreement with the City of Pacifica for the ponds as required by the City.

The north pond would be created by excavating approximately 9 feet at the bottom of the basin. Because of physical topographic constraints, this design works for functionality and aesthetics. The basin side slopes are planned to be vertical, incorporating a reinforced concrete wall, sculptured and colored to blend in with the surrounding environment. This allows for a smaller footprint of grading the natural topography. The south pond would have the same character, incorporating a similar reinforced concrete wall, sculptured and colored to blend in with the surrounding environment. The downhill-lower wall would be 3 feet in height and would have access points from both ends.

2.3.6.2 Water Supply

Water service to the project site would be provided by North Coast County Water District (NCCWD). The NCCWD has confirmed water availability and adequate pressure to serve the project (NCCWD, April 2006). Water supply infrastructure in the vicinity of the project site consists of a 10-inch water main located beneath Roberts Road. The proposed project would connect to this system (with a series of 6- and 8-inch lines that would be placed within the street rights-of-way.)

2.3.6.3 Wastewater

The City of Pacifica provides wastewater service to the project area. The Calera Creek Water Treatment Plant is located less than 1 mile from the project site and has available capacity to serve the proposed project. A 6-inch sewer collection line is located beneath Roberts Road. The proposed project would connect to the City's sewer line system either through the existing manhole located at Roberts Road or through the sewage lift station located near Lots 1 and 2.

2.3.6.4 Power

The project development would utilize electricity and natural gas extended to the site by Pacific Gas and Electric (PG&E). Also refer to Section 2.3.7.1 regarding “clean” energy sources that would supply the subdivision. All power lines would be buried underground.

2.3.7 Sustainable Development

The project is proposed as a sustainable subdivision. The project integrates green building strategies from the San Mateo County Sustainable Building Checklist. Additional features include use of solar power, grey water recovery, rainwater collection, use of drought tolerant native plants, and earth-friendly construction materials as described below.

2.3.7.1 Clean Power

Solar and wind energy is proposed for use within the subdivision. Each homeowner would be required to integrate photovoltaic (PV) solar technology into the development of their homes. PV is a semiconductor-based technology used to convert light energy into direct current (DC) electricity, using no moving parts, consuming no conventional fuels and creating no pollution. Homeowners may select either: 1) polycrystalline silicon flat panels, which may be fixed on roofs, flat surfaces or mounted on automated tracking systems so that they follow the sun’s path; or 2) solar tiles which blend in to the roof appearance. Solar tiles are more expensive and less efficient than flat panels. The solar technology shall provide power to each individual homeowner and they would have the option to sell back any excess power to PG&E through a reverse line. The HOA Architectural Committee would review and approve the configuration of the solar installations when approving the home designs.

Windside Wind Turbines would be installed on the street light poles to convert wind energy into electricity for battery charging the street lights. The wind turbines have a vertical axis with a single twisted blade that rotates like a slotted drum. The turbines are soundless and work in speeds as low as 10 mph. Between 8 and 10 wind turbines would be installed. They are considered safe to use in population centers, public spaces, parks, wildlife parks and on buildings according to the manufacturer. Manufacturer specifications are presented in Appendix C.

2.3.7.2 Grey Water Recovery

Each home would be plumbed for grey water recovery for use in landscape irrigation. The grey water treatment and storage would operate as separate systems per lot. Shower and laundry wastewater streams from each home would be captured into a tank and pumped through a filter. The grey water is discharged through a network of subsurface drip irrigation emitters which irrigate the plant roots. Construction of the system and its use would be enforced through the CC&Rs. Each system would have a tank that captures the grey water. The devices are automated and do not require active management control by the homeowner. Any excess grey water would flow through the normal wastewater infrastructure. Once a year, the systems would need to be cleaned and checked for the correct amount of sand in the filter. The tanks would be 70 to 100 gallon surge tanks and any excess water would continue into the regular water discharge for the home.

2.3.7.3 Rainwater Collection

Each home would be designed with a rainwater collection and storage system for exterior home use such as landscape irrigation. Rainwater would be collected in 10 to 20 gallon barrels at the end of rain gutters. The Architectural Committee would review individual building plans to ensure that rainwater collection is included in project construction. Use would be enforced through the CC&Rs.

2.3.7.4 Native Plant Landscaping

All homeowners would be encouraged to landscape with California drought-tolerant native plantings. The HOA would monitor and enforce all yard requirements from the subdivision.

2.3.7.5 Earth-Friendly Construction Materials

Each home would be constructed using wool blended roofing and wall insulation. Each home would have energy efficient doors, windows and appliances. The use of toxic-free and FSC (Forest Stewardship Council)-approved timber and integrate recycled wood for decking would be encouraged. Construction debris would be recycled to the extent possible. The builder would bring tools and equipment to recycle as much of the debris as possible on site. Builders would be encouraged to use recycled products such as using steel made from recycled materials, use flyash in the concrete, use Structural Insulated Panels (prefabricated panels based on architect's specifications) and reduce waste at the construction site. The HOA would enforce compliance through site inspection.

2.3.8 Covenants Codes and Restrictions (CC&Rs)

Use of property with the Planned Development would be subject to restrictions as specified in the CCR&s approved for the project. The proposed CC&Rs are attached in Appendix D.

2.3.9 Construction Phasing

The applicant is proposing to complete the grading and site improvements in one phase. Grading and retaining walls work would last approximately 6 months. Other site improvements including construction of the residences would take 4 to 12 months. One phase of construction is proposed as the permits required for the residential development may take longer than those needed for site preparation.

3.0 LAND USE AND PLANNING

The project requires a Tentative Map, Final Map, Development Plan, Specific Plan, and Rezoning for the Planned Development component of the project on 65 acres. The single family residence with a secondary unit on the 2-acre Agricultural parcel requires a Use Permit and Site Development Permit. The proposed residential development is consistent with General Plan designations of the site. The rezoning of the site to Planned Development with a Development Plan would bring non-conforming commercial zoning on the property into compliance with the General Plan designation for Low Density Residential Use. The proposed density of residential development is consistent with the General Plan land use designations. There are no potential conflicts with adjacent uses. The land use impact of this project is not considered significant.

3.1 ENVIRONMENTAL SETTING

3.1.1 Surrounding Land Uses

The project site comprises three parcels located south of Fassler Avenue and east of Roberts Road in the north end of the Linda Mar Neighborhood. The two Planned Development project parcels front Fassler Avenue and Roberts Road. The Agriculture parcel is landlocked by the project PD parcels to the north, south, and west.

The predominant land use in the neighborhood is single-family residential developed at a low density. Land use in the project site vicinity is open space to the north and east, multi-family residences and open space to the west and residences and the Cabrillo School to the south. The nearest commercial uses are Linda Mar Shopping Center to the south, the Sea Bowl bowling alley at the intersection of Highway 1 and Fassler Avenue, and the West Rockaway Beach commercial area west of Highway 1 at Fassler Avenue.

3.1.2 Local Land Use Policies

3.1.2.1 City of Pacifica General Plan

The Pacifica General Plan was adopted by the City of Pacifica in 1980. The majority of the site is designated Open Space Residential by the Pacifica General Plan. The southern portion of the site is designated Very Low Residential (Figure 9, General Plan Land Use Map). The residential development density for Open Space Residential is an average density of more than five acres for each residential unit. The development density for Very Low Density is an average of one-half to five acres per dwelling unit. The appropriate density is determined by site conditions, availability of utilities, sewage treatment, and highway capacity. These two land use designations have been specified for large parcels in the project area due to constraints of access, potential traffic impacts, high visibility of the area, geotechnical concerns, and the limitations of the Hillside Preservation District overlay zone.

The General Plan discussion of the Linda Mar Neighborhood further specifies that the large vacant area fronting Fassler Avenue should be planned as a unit with access from Roberts

Road. If access to the eastern portion of the site is not feasible from Roberts Road, access should be focused at a single location off Fassler Avenue. The General Plan also states that the upper slopes of the small ridge extending south from the Fassler Ridge east of Roberts Road should be designated as Prominent Ridgeline and left open. The lower portion of this area is less steep and could be developed as Very Low Density Residential.

The following policies specified in the General Plan are relevant to the Roberts Road/Harmony @ 1 project.

Circulation Element

12. Employ individualized street improvement standards without violating the safety or character of the existing neighborhood.
14. Ensure adequate off-street parking in all development.
15. Promote orderly growth in land uses and circulation.

Community Design Element

1. Preserve the unique qualities of the City's neighborhoods.
3. Protect the City's irreplaceable scenic and visual amenities.
4. Establish development standards that would keep open the steep slopes and visually prominent ridgelines.
5. Require underground utilities in all new development.
6. Establish design review standards to be employed early in the planning process.
7. When determining level of development, the City shall consider views of the ridgelines from the Bay side of the Peninsula as well as from the Pacifica side.

Conservation Element

1. Conserve trees and encourage native forestation.
2. Require the protection and conservation of indigenous rare and endangered species.
3. Protect significant trees of neighborhood or area importance and encourage planting of appropriate trees and vegetation.
7. Promote the conservation of all water, soil, wildlife, vegetation, energy, minerals and other natural resources.

Land Use Element

5. Ridgelines designated as visually prominent shall be protected from residential and commercial development.
6. Local access roads and trails may be allowed on visually prominent ridgelines provided they follow contours, minimize grading and are unobtrusive in their design.
8. Land Use and development shall protect and enhance the individual character of each neighborhood.

3.1.2.2 City of Pacifica Zoning Ordinance

Planned Development Zoning District

The Zoning District for the two large project parcels (65 acres) is Planned Development with the exception of the northwest corner of the parcel fronting Fassler Avenue which is zoned Commercial. Both project parcels are within the Hillside Preservation District overlay zone.

The Hillside Preservation District (HPD) is applied to hillside areas of the City for the purpose of preserving and enhancing the hillside resource, protecting people and property from hazardous conditions, assuring economically sound development, and encouraging innovative design solutions. HPD encourages clustering development to preserve larger areas of open space and maximum retention of natural topographic features. Outstanding natural physical features, such as the highest crest of a hill, natural rock outcroppings, major tree belts, and the like should be preserved. Padding or terracing of building sites is prohibited insofar as it is feasible and reasonable. Hillside streets should follow natural topography to minimize cutting and grading and subsequent scarring effects from construction. Utility wires are to be installed underground. Imaginative and innovative building techniques are encouraged to create buildings suited to natural hillside surroundings. Detailed and effective arrangements are to be formulated for the preservation, maintenance, and control of open space and recreational lands resulting from planned unit development.

With respect to development of ridgelines, the HPD states:

It is the intent of this section to discourage the development of ridgelines; however, where a parcel has ridgelines that are the only buildable portion of the property, or where it can be demonstrated that the sensitive development of other portions of such a parcel would significantly frustrate the other purposes of this article, then some development of such ridgelines may be permitted provided most of the ridgeline remains undisturbed, and any such ridgeline development is of low profile, has minimum visual impact, and utilizes a minimum of grading. (Article 22.5 Section 9-4.2252)

The maximum allowable land coverage for any development within the Hillside Preservation District is controlled by a slope density formula. Based on the formula, the higher the average percent of the natural slope, the lower the maximum percent of site coverage that is allowed. Coverage includes all areas of the site occupied or covered by buildings, pavement, and grading. All non-coverage areas are to remain undisturbed in their native or natural state.

The HPD also requires that parking be provided off-street. Two covered spaces and two uncovered spaces (such as driveways outside garages, or carports and off-street parking bays) must be provided per each single family dwelling unit. In addition, one guest space must be provided for every ten dwelling units.

Agriculture Zoning District

The Zoning District for the third smaller parcel (2 acres) APN 022-150-030 is Agricultural which permits development of one single family residents and a secondary residential unit with approval of a Use Permit and Site Development Permit.

3.1.2.3 Design Guidelines

The City of Pacifica adopted Design Guidelines to maintain or improve the quality of the City's physical development. The Design Guidelines provide a framework for the review and evaluation of new construction. Design Guidelines generally address site planning, building design, landscaping, and water conservation. Specific guidelines are identified for hillside development projects such as the proposed Harmony @ 1 project. They address slope stability and erosion, excavation, visual impact, and access difficulty as described below.

Slope Stability and Erosion: Hillside areas are subject to instability through creep and slippage and have potential drainage and erosion problems. Design Guidelines require that projects obtain input from geologist, avoid construction near geologically fragile or unstable areas, use engineering techniques such as drainage swales and channels, catch basins to control runoff, use landscaping techniques such as netting and hydroseeding and plant selection to aid stabilizing the soil.

Excavation: Large amounts of cut and/or fill on hillsides can be unattractive and have a detrimental impact on the immediate and surrounding environment. Design Guidelines require that structures relate to and follow site topography to work with the slope. Buildings and roads should be sited to align with existing contours of the land whenever feasible. Retaining walls should be avoided or their height reduced to the minimum feasible. Multi-level structures which can step down the slope and minimize cut and fill are favored over one-level structures which result in excessive lot coverage and more disruption of the site.

Visual Impact: Development on hillsides and ridges is often visible to neighbors and residents in the project vicinity as well as to those at a distance such as motorists traveling on Highway 1. Hillside development also has the potential to block established views from existing development. Design Guidelines require that development is located below ridges and hilltops so that ridgelines are left open. A linear arrangement of buildings is to be avoided. Building forms, particularly rooftops, should complement the contours and slopes of the hillside to increase integration of structure and site. Buildings should be designed with low profiles. Massive roof overhangs and building cantilevers on downhill faces are to be avoided along with long pole supports on downhill faces. Terracing into the hillside can be used to help reduce the impact of the structure bulk. Multi-level designs to conform to the hillside are encouraged while avoiding excessive height. Landscaping should be used to soften building appearance and screen views from below. New buildings should be located to minimize view blockage from primary viewing areas of existing development with an emphasis on quality of the view not quantity of the view.

Access Difficulty: Vehicular access and circulation in hillside development can often be unsafe or dangerous due to excessive slope and lack of adequate sight distance. Design Guidelines require that driveways and access roads should follow the contours of the hillside. Roads and driveways should be designed with less than the maximum slope allowed by City standards. Circulation should depend on a minimum number of roadways. On-street parking turnouts should be provided where appropriate and driveway lengths should accommodate a parked vehicle.

3.1.2.4 Heritage Tree Protection Ordinance

The City of Pacifica values preservation of heritage trees on public and private property to provide environmental benefit and protect and conserve aesthetic and scenic beauty and historic atmosphere of the City. Heritage trees are defined as trees which have a trunk with a circumference of 50 inches or 16 inches in diameter measured at 24 inches above natural grade.

The Heritage Tree Protection Ordinance prohibits the cutting down, destruction, removal, moving, or construction within the dripline of a heritage tree without a permit. The granting of a permit is based on the following factors: 1) the health of the tree; 2) whether tree removal is necessary for the economic viability of the property; 3) the topography of the land; 4) the

number, size and species of other trees in the area and the effect of the requested permit upon shade, noise buffers, protection from wind damage, air pollution, historic value, scenic beauty and upon the health, safety, historic value, and general welfare of the area and the City as a whole; 5) the number of healthy trees the parcel is able to support; and 6) good forestry practices.

Tree protection plans are required for any development project which requires a discretionary permit approval such as the proposed Harmony@1 project. The protection plan must identify the size, species, aesthetics, and health of each tree located within 20 feet of the proposed development area. Trees proposed for removal must be identified as well as measures to protect the survival of remaining trees through the construction process must be identified. The plan must also show the size, species and location of trees proposed to replace those proposed for removal.

3.1.2.5 Inclusionary Housing Ordinance

The Inclusionary Housing Ordinance was recently adopted by the City of Pacifica. The purpose of the ordinance is to establish below market rate (BMR) housing requirements for residential development projects of eight or more units. Not less than fifteen (15) percent of all units, lots or parcels in a residential development shall be BMR Units restricted for occupancy by Very Low, Lower or Moderate Income Households. In the non-Redevelopment Areas of the City, at least fifty (50) percent of the required BMR Units shall be restricted to occupancy by Lower Income Households and up to fifty (50) percent of the required BMR Units shall be restricted to occupancy by Moderate Income Households. A developer may propose an alternate means of complying with the ordinance including off-site construction, land dedication, in-lieu fees, or any combination of these three.

3.1.3 Regional and State Regulations

3.1.3.1 California Regional Water Quality Control Board

The Porter-Cologne Act of 1969 is the primary state regulation that addresses water quality. The requirements of the Act are implemented by the State Water Resources Control Board (SWRCB) at the state level and, at the local level, Regional Water Quality Control Boards (RWQCB). Under the direction of the SWRCB, the RWQCBs carry out planning, permitting, and enforcement activities related to water quality in California. The project is within the jurisdiction of the San Francisco Bay RWQCB.

The Clean Water Act requires a National Pollutant Discharge Elimination System (NPDES) general permit for storm water discharges associated with construction and industrial activities. A NPDES general permit for industrial discharges has been issued by the state. Individual dischargers may apply to the RWQCB to be covered by the general permit. The general permit requires that dischargers develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which identifies pollution sources and Best Management Practices (BMPs) to reduce pollutants. A monitoring program must also be developed to 1) demonstrate compliance with the permit, 2) aid in the implementation of the SWPPP and 3) measure the effectiveness of the BMPs in removing pollutants in industrial storm water discharge.

3.1.3.2 California Department of Fish and Game

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFG has the responsibility for maintaining a list of threatened species and endangered species (California Fish and Game Code 2070). The CDFG also maintains a list of "candidate species" which are species that the CDFG has formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. The CDFG also maintains lists of "species of special concern" (CSC) which serve as "watch lists."

California Species of Special Concern (CSC) are species that are declining at a rate that could result in listing under the federal Endangered Species Act or the California Endangered Species Act, and/or have historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals and is intended to focus attention on the species to help avert the need for costly listing under Federal and State endangered species laws. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them (CDFG, 2003).

As a trustee agency, the California Department of Fish and Game comments on the biological impacts of development projects reviewed under CEQA. As such it must consider species listed as endangered or threatened, candidate species, and species of special concern.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present in the project area and determine whether the proposed project would have a potentially significant impact on such species. In addition, the Department encourages informal consultation on any proposed project that could impact a candidate species or a species of special concern.

The state special status species that could potentially be present within the Harmony @ 1 project site include five Species of Special Concern: Ferruginous hawk, Loggerhead shrike, Bell's sage sparrow, California red-legged frog (CRLF), and the San Francisco dusky-footed woodrat. The San Francisco garter snake, a State Endangered Species, may also occur on the project site.

California Fish and Game Code

A variety of species are protected under the California Fish and Game Code, separate from the protection afforded under the CESA. For example, birds that do not qualify as game birds, migratory game birds, or fully protected birds may be protected under Sections 3503, 3503.5 and 3800 of the Fish and Game Code.

Certain species are also "fully-protected". This classification was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take

except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. The only fully-protected species that are of concern at the Harmony@1 project are the white-tailed kite and San Francisco garter snake. White-tailed kite occurs at the site, but habitat for the San Francisco garter snake is not present, and there are substantial barriers between the site and known occupied habitat.

The mountain lion is a “specially protected” species under Sections 4800 *et seq.* of the Fish and Game Code. It is unlawful to take mountain lion except in instances and methods allowed in the Fish and Game Code. Mountain lion would not be adversely affected by the project, since the project would not inhibit wildlife movement through the area.

3.1.4 Federal Agencies

3.1.4.1 US Fish and Wildlife Service

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533[c]). Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species could be present in the project area and determine whether the proposed project would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]).

The USFWS also publishes a list of candidate species. Species on this list receive "special attention" from federal agencies during environmental review, although they are not protected otherwise under the FESA. The candidate species are taxa for which the USFWS has sufficient biological information to support a proposal to list as endangered or threatened.

California red-legged frog (CRLF), a Federal Threatened Species, and San Francisco garter snake (SFGS), a Federal Endangered Species, may potentially use the Harmony@1 project site as a migration corridor between known breeding areas. Ten bird species identified as a federal Species of Special Concern (Table 5-1) may potentially use the project site. Host plants for the Mission blue butterfly and callippe silverspot butterfly, both Federal Endangered Species, occur on the project site.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 U.S.C., Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Birds of Prey are protected in California under the State Fish and Game Code, (Section 3503.5, 1992). Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or

destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted.

3.2 PROJECT IMPACTS

3.2.1 Thresholds of Significance

The project would have a significant effect on the environment if it would:

- 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; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

3.2.2 Division of Established Community

The project proposes development of 14 residences on 67 acres off Fassler Avenue and Roberts Road. The proposed project use is consistent with the existing land use designations of the property. Use of the project site for residential purposes would not result in the physical division of the Pacifica community or surrounding Linda Mar neighborhood.

3.2.3 Conformance with Local Planning Policies

3.2.3.1 General Plan

The proposed project's use of the site for low density residential is consistent with the residential land use designation in the General Plan. APN 022-150-310 is 12 acres and designated Open Space Residential. APN 022-150-420 is 53 acres and has a split General Plan designation of Very Low Residential and Open Space Residential. The two designations allow different development densities. The proposed development of 13 homes on 65 acres has an overall development density of 5 acres per unit. This is consistent with the development density of the Open Space Residential designation which permits a maximum of one unit per 5 acres. The overall density is consistent with the Very Low Residential designation which permits a density range of one unit per one-half acres to 5 acres.

The proposed development of the 2-acre parcel APN 022-150-030 with a single family residence and guest house is consistent with the residential land use designation in the General Plan. The parcel is designated Open Space Residential which allows for one residential unit to be constructed on the property.

Circulation Element

The proposed project would construct a new road between Roberts Road and Fassler Avenue to access the new residential lots. The project access road would be constructed in

accordance with city standards. Neighborhood character would not be impacted by street construction. Each residential lot and driveway has adequate size to accommodate off-street parking requirements and seven on-street turnouts (Figure 4) would provide additional guest parking. The Development of the project property is consistent with the General Plan land use designation for the property and follows existing residential development in the area. The project represents orderly growth in conformance with city policy.

Community Design Element

The Community Design Element provides guidance for city development that will protect the scenic qualities of the Pacifica community. The project property contains ridgelines highly visible to the Linda Mar neighborhood. The development is subject to the provisions of the Hillside Preservation District and Design Review Guidelines which govern hillside development and help reduce visual impact. The proposed residential development has been designed to minimize the impact to views of the ridgeline (see Land Use Element discussion below). Homes would be sited off the ridgeline and designed with a low profile to reduce the amount of the structures that is visible from off-site locations. Natural color building materials would be used to visually blend the residential structures in with the hillside landscape. All utilities extended to the new homes would be constructed underground. The visual impact of the project is discussed in Aesthetics (Section 4.0). The proposed project is consistent with the Community Design Element policies.

Conservation Element

The proposed project is designed based on conservation principles. The number of residential units proposed is based on land use densities determined by the General Plan as appropriate for the hillside constraints of the project property. The residential development incorporates passive energy design (wind and solar power) and promotes water conservation through use of rain water capture and grey water reclamation per individual residence. Twenty-eight acres of undeveloped hillside would be conserved in private open space. This open space area would continue to provide habitat for various bird species of concern (see Biology, Section 4.0). Heritage trees which have been removed from the development area would be replaced in accordance with the proposed Tree Protection Plan. The design of the project is consistent with the policies of the Conservation Element.

Land Use Element

The land use policies germane to the proposed project involve protection of visually prominent ridgelines from development and protection of the neighborhood character. The project site contains ridgelines highly visible to the Linda Mar neighborhood. The project conforms to the Land Use Element policies because it has been designed to protect ridgelines. Homes would be sited outside of the Prominent Ridgeline designation areas (Figure 10, Prominent Ridgeline) and would be designed with a low profile to reduce the amount of structure that is visible from off-site locations (see Aesthetics Section 4.0 for additional discussion). The project access road follows contours, minimizes grading, and would be designed so as to be unobtrusive. The Linda Mar neighborhood character would be protected by the following design features which carry out the Land Use Element policy.

- **Site integration** – The homes would be excavated in order to lower their profile, which creates a series of retaining walls behind the houses. This allows the first floor, and in some cases parts of the second floors, to be hidden from view and impart a sense of the homes being nestled into the hillside. The CC&Rs encourage that homes utilize living roofs that seamlessly continue the indigenous landscape of the hillside onto surfaces of the building.
- **Building geometry** - The homes use their rear walls for earth retention, and carve out a suitable living space which bends to conform to the natural contours of the ground. The lower portions of the houses use earth berms and natural concrete, which support the upper levels of the houses. By articulating each floor with a distinct material, the houses are read as horizontal bands following the landscape, rather than creating a vertical imposition on it. The low-profile rooflines are broken into discrete planes which slope up in the center of the house, and fall towards the edges of the house. The design continues the slope of the hill, resulting in an architecture which reads as ‘indigenous’ and echoes the outcroppings of the surrounding hills and ravines.
- **Berming** – Each building site includes berming (the use of earth to shield structures). These would be strategically placed on each lot in order to minimize the visual impact from our neighbors in Linda Mar and Highway 1. The use of berming as fencing is encouraged as described below.
- **Fences** – No fences would be allowed that cut off the movement of wildlife across their natural habitat. Limited pet or children enclosures within close proximity to the dwellings may be permitted so long as they are incorporated with native vegetation and landscaping. Berming and sloped retaining walls would be used as an integral way to fence in areas directly adjacent to the building pads.
- **Orientation** – Each home is designed to reveal the narrow profile of the house to Linda Mar residents and drivers along Fassler. The configuration of each house as two connected volumes which are independently orientated, minimizes the area of each structure that is visible to our neighbors on either side of the hill.
- **Sustainable design** – Rather than use large, black solar panels, efficient solar solutions would be used that blend into the roof and roof lines. Artistic wind columns would be strategically located on the low polluting light poles.
- **Colors** – The palette of exterior colors and accents would be an expression of natural materials consistent with the architectural language described above.
- **Compliance** – The City of Pacifica requires strict adherence to the Hillside Preservation District calculations which determines how much land a project may disturb. The project is within its lot coverage allotment and does not seek any variances.
- **Landscaping** – The project would utilize strategic placement of native plants to help integrate the natural and built form. Additionally, there are dozens of trees, many 10-30 feet high, which would remain on site and act as a natural screening of the homes from Highway One and Fassler.

3.2.3.2 Zoning District

The proposed residential development is consistent with the Planned Development (PD) zoning designation for the site. The project site does have non-conforming zoning on a small portion of the 12-acre parcel APN 022-150-310. The commercial zoning designation on this project parcel does not conform to the General Plan designation of Open Space Residential. Because the project parcels are located in the Hillside Preservation District, subdividing the 65-acre property requires a rezoning from PD and commercial districts to PD with a Development Plan. This rezoning action would remove the non-conforming commercial district on APN 022-150-310 and bring the zoning for the property into compliance with the General Plan designation.

The 2-acre parcel included in the project application is zoned Agricultural. This parcel would not be subdivided and is proposed for development with a single family residence and second residential unit as permitted under the Agricultural zoning district. No rezoning is required or proposed for this agricultural parcel.

The HPD limits the amount of site coverage that is permissible on the project site based on a slope density formula. Using this formula, roughly 6 acres of the 67-acre project site may be developed. This comprises 9% of the 67 acres in the total project site (Planned Development plus the one single family residence). The proposed project access road, retaining walls, lot driveways, landscaping, and building envelopes comprise less than 6 acres which is consistent with the HPD requirements.

3.2.3.3 Design Guidelines

The project is consistent with City Design Guidelines. Buildings would be uniquely designed by each individual lot owner. Structures would be designed using Coastal Green Architectural principles of low profile architecture and berming to reduce building mass visibility. Building materials and colors would be selected to blend with the natural environment. Only native plant landscaping would be used to preserve the natural landscape appearance of the hillside. The project's specific conformance with the Hillside Development Design Guidelines is as follows:

Slope Stability and Erosion: In accordance with the Design Guidelines, the project site has been evaluated by an engineering geologist, Earth Investigation Consultants (see Geology, Section 6.0). Proposed residential lots have been located to avoid construction near geologically fragile or unstable areas such as steep slopes and debris flow or erosion areas. These areas would remain in natural open space. Runoff would be controlled on individual lots and erosion control measures are required during construction and replanting of graded slopes is required after construction to stabilize disturbed soils.

Excavation: In accordance with the Design Guidelines, project buildings would be designed with a coastal green architectural style which is intended to blend into the project site topography. Homes would be low profile and multi-level to terrace into the hillside and avoid excessive lot coverage. The project access road follows the existing contours of the land. The retaining wall along the southside of the access road is minimal.

Visual Impact: Design Guidelines require that development is located below ridges and hilltops so that ridgelines are left open. Although a linear arrangement of buildings is to be avoided, this arrangement suits the project property and allows open space of lots to be linked to the 30 acres of proposed common open space. Building forms would be architecturally designed to compliment the contours and slopes of the hillside (Figure 6) to increase integration of structure and site. Buildings would be designed with low profiles in multi-levels to conform to the hillside. Berming is proposed to screen the bulk of the buildings from offsite views. New buildings would not block views from existing development.

Access Difficulty: In accordance with Design Guidelines, the project access road follows the contours of the hillside. The access road and lot driveways would have less than the maximum slope allowed by City standards. The number of access roads constructed on the project site has been minimized by providing only one road which would access both Roberts Road and Fassler Avenue. Driveway lengths would accommodate parked vehicles and seven on-street parking turnouts are provided along the length of the access road to provide additional guest parking.

3.2.3.4 Heritage Tree Ordinance

A Heritage Tree Survey and Tree Protection Plan was prepared by Howard Linacre, I.S.A. Certified Arborist (Appendix E) in accordance with the Heritage Tree Ordinance. Twelve Heritage Trees were identified on the project site. The trees are diseased and have not been recommended for protection by the arborist. Five of the Heritage Trees are located on a private parcel to be held in open space and would not be impacted by project construction. Therefore, the EIR recommends that these five Heritage Trees be protected. The biological impact of Heritage Tree removal is further discussed in Biology (Section 5.2.4 and Section 5.2.7).

3.2.3.5 Inclusionary Housing Ordinance

Based on the project size of 13 residential units, the Inclusionary Housing Ordinance requires that the Planned Development project include two BMR units. One BMR unit should be restricted to occupancy by Lower Income Households and the second BMR unit should be restricted to occupancy by Moderate Income Households. The Planned Development as proposed does not provide BMR units. Therefore, the developer must meet the requirements of the Inclusionary Housing Ordinance through alternate means of off-site construction, land dedication, or in lieu fees. Compliance with this ordinance shall be demonstrated as a condition of Final Map.

3.2.4 Conformance with Regional and State Policies

3.2.4.1 Regional Water Quality Control Board

The project is subject to the State Water Resources Control Board's state-wide National Pollutant Discharge Elimination System (NPDES) General Construction Activity Storm Water Permit. The NPDES permit regulations are intended to control pollution in stormwater associated with construction activities. Appropriate best management practices for the control of erosion would be implemented through the NPDES. The proposed project would prepare a

construction-related Stormwater Pollution Prevention Program (SWPPP) and also would prepare a post-construction Stormwater Management Plan, as applicable.

3.2.4.2 California Department of Fish and Game

The project site contains habitat for three bird species which are State Species of Special Concern (Table 5-1): the Ferruginous hawk, Loggerhead shrike, and Bell's sage sparrow. The California red-legged frog (CRLF), a State Species of Special Concern, may occur on the southeast fringes of the property which would not be disturbed by the project. CRLF would be protected through project avoidance. The San Francisco dusky-footed woodrat, a State Species of Special Concern, occurs on the project site in the vicinity of the proposed project access road. Several woodrat houses would be impacted by the proposed project. Impacts to the woodrat are mitigated through implementation of a management plan and habitat conservation in private open space. Impacts to the listed birds are not significant due to the minimal loss of habitat. Preconstruction surveys would be conducted to avoid impact to nesting birds. The biological impacts of the project are discussed in Biology (Section 5.0).

3.2.5 Conformance with Federal Policies

3.2.5.1 US Fish and Wildlife Service

The project development area contains host plants for two federal listed Endangered Species, the Mission blue butterfly and Callippe silverspot butterfly. In addition, there is low potential that the California red-legged frog (CRLF), a federal Threatened Species, and San Francisco garter snake (SFGS), a federal Endangered Species may disperse through the project site. Ten bird species listed as Federal Species of Special Concern may occur on the project site. Potential project impacts to these species are described in Biology (Section 5.0). The Callippe silverspot is not expected to be present on site. The Mission blue butterfly is likely present and project impacts to the host plant have been avoided through redesign of Lot 11. Potential impacts to CRLF and SFGS during project construction would be avoided through preconstruction surveys and monitoring by a qualified biologist. Impacts to the listed birds are not significant due to the minimal loss of habitat. Preconstruction surveys would be conducted to avoid impact to nesting birds. No federal permits are necessary for the project. The biological impacts of the project are discussed in Biology (Section 5.0).

3.2.6 Land Use Compatibility

The proposed project does not conflict with adjacent land uses in the project vicinity. The residential development is consistent with the general plan land use designations for the property. Residential development occurs adjacent to the project site on the west side of Roberts Road. Residential development is proposed adjacent to the project site on the north side of Fassler Avenue. The project would not result in excessive noise or traffic impacts which could impact these neighbors.

3.2.7 Cumulative Impacts

Other development in the City of Pacifica is identified in Section 11.4 Cumulative Impacts. The Harmony @1 Project is consistent with land use planning policies governing the

project site. The compatibility of the proposed project with adjacent land uses is specific to the project site and does not contribute to land use compatibility impacts on other sites. Therefore, there are no cumulative land use impacts associated with the project.

3.3 MITIGATION MEASURES

The project would not result in significant land use impacts. No mitigation is required.

4.0 AESTHETICS

Development on the project site could potentially result in a significant change in the visual character of the parcel and degrade the quality of views of the project site. As proposed, the project incorporates many design features that reduce or eliminate aesthetic impacts. The development's Covenants, Codes and Restrictions (CC&Rs) would provide detailed descriptions of the required features that would reduce or eliminate visual impacts. Additional measures would minimize night light and glare. With these mitigation measures, the visual impact of the project is reduced to less than significant.

4.1 ENVIRONMENTAL SETTING

4.1.1 Site and Vicinity Description

The project site is located in the southwest portion of the City, east of Highway 1 in the Linda Mar Neighborhood of Pacifica. The project site is comprised of three parcels; two large parcels totaling 65 acres and a third smaller parcel that is two acres. The site is bordered on the north by Fassler Avenue and on the east by Roberts Road. Beyond Fassler Avenue the area is currently open space but a portion of this area is proposed for development under the Prospects Residential Project, currently under review. A townhouse development is across from the project site on Roberts Road. The project's western boundary is bordered by open space and multi-family residences beyond that. Residences and Cabrillo School are south of the project site. The nearest commercial use is Linda Mar Shopping Center to the south, the Sea Bowl bowling alley at the intersection of Highway 1 and Fassler Avenue, and the West Rockaway Beach commercial area located west of Highway 1.

The project site primarily consists of south facing slopes leading up to a ridge with site elevations ranging from 36 feet mean sea level (MSL) at the southeast corner near the intersection of Roberts Road and Crespi Drive to 397 feet MSL on the ridgeline knoll above Fassler Avenue. The project parcels are vacant land. There has been no previous developed use of the project property. Local residents use the hill for hiking and recreation. The parcels offer spectacular views of the Pacific Ocean and surrounding ridgelines and valleys.

Vegetation on the project site is primarily Northern Coastal Scrub and California Annual Grassland. Numerous Monterey pine and Monterey cypress trees occur on the property although the Heritage Tree Survey report for the project determined that most of the trees on site are diseased and recommended their removal. Two large erosion gorges occur on the southeast portion of the property.

4.1.2 Scenic Vistas

The Open Space and Recreation Element of the Pacifica General Plan acknowledges Pacifica's unique setting along the Pacific Ocean coastline with hills, valleys, and ridgelines meeting the coastline. The hills and beaches combine to give the City a sense of wildness and an

open quality in an urban setting. The Open Space Element states that ridges make a major contribution to the open space quality of Pacifica.

The ridgeline traveling through the project site, along with the undeveloped lower slopes, are prominent features in the area and are visible from many locations south of the project site, including from homes on Pedro Point and the Linda Mar area, Pacifica State Beach, as well as drivers along sections of Highway 1. Some portions of the project development may also be visible from the Rockaway Beach area. Currently, the undeveloped site provides an aesthetically pleasing backdrop against urban development at sea level and on the lower slopes of surrounding ridges. The project site is a major feature in the scenic view from the western part of the Linda Mar area looking north.

The project site is not only part of scenic vistas from locations in the surrounding area. From within the site, viewers are able to look out on a spectacular view of the Pacific Ocean, the lower slopes of the project site, and more distant ridgelines and valleys.

Public vantage points in the general project area include Highway 1, the Golden Gate National Recreation Areas located approximately 0.75 miles east of the project site, Oddstad Park located approximately 0.60 miles south of the project site, and Frontierland Park located approximately 1.5 miles southeast of the project site. The project site is visible from portions of Highway 1 (described below) but not from the Golden Gate National Recreation Areas, Oddstad Park, or Frontierland Park.

4.1.3 Scenic Roadways

The Scenic Highway Element of the General Plan describes the Linda Mar Boulevard – Oddstad – Terra Nova Boulevard – Fassler Avenue loop as “providing spectacular views of the coastal ridge and ocean and connecting major recreation areas (San Pedro Valley County Park, Sanchez Adobe, and the Discovery Trail at the end of Fassler) and points of historic interest and scenic beauty. The General Plan proposes this loop as a local scenic roadway. To enact a local scenic roadway designation, the City must prepare a corridor study, a program to protect and enhance the scenic qualities from the proposed roadway, and adopt the roadway with its protection program. The City has no immediate plans to designate this loop as a scenic roadway (Lee Diaz, City Planning Department, personal communication). The project abuts Fassler Avenue and portions of the project would be visible from the stretch of Fassler Avenue adjacent to the project.

Highway 1 does not have a state Scenic Highway designation within the City of Pacifica; however, the City considers scenic views from the highway to be important. The Visual Characteristics Map of the Community Design Element shows the most prominent characteristics seen from Highway 1. The ridgeline and hillsides of the project site are designated as prominent features seen from Highway 1. The prominent ridgelines are shown on the General Plan Land Use Map in Figure 9.

4.1.4 Viewpoint Locations

Views of the project site were photographed from various locations near the project (Figure 11, Viewpoint Locations). These photos are intended to show representative views of

the project site from surroundings areas (Figure 12, Viewpoint Photos). The photographs are not meant to be a comprehensive collection of all the views that include the project site from all vantage points. The photographs represent short-, medium-, and long-range views of the project site.

In general, views of the project site from areas north of the site are generally limited by topography, vegetation or intervening development. In contrast, the site comprises a major portion of the scenic vista from areas south of the site.

4.1.5 Regulatory Setting

The Pacifica General Plan and Zoning Ordinance apply land use designations and development and design guidelines that regulate the development of the project site and aesthetic impacts. The proposed project is within the City's Hillside Preservation District (HPD). The HPD regulates lot coverage based on the average slope of a property and provides design and siting criteria for developments to protect natural resources and scenic qualities. The City of Pacifica also has adopted Design Guidelines as one step in a continuing effort to maintain the quality of the City's physical development where desirable attributes exist, and to improve the quality of development within the City. A detailed discussion of the HPD ordinance and Design Guidelines is provided in Section 3.0, Land Use.

The General Plan Land Use Map (Figure 9) identifies two areas of the project site as Prominent Ridgelines. The General Plan defines the Prominent Ridgeline designation as being:

“A designation assigned to the most scenic of the City's ridges in order to protect their visual importance. The intent is to limit development on these ridges as much as possible. Zoning would require owners to focus development on suitable portions of their property off the ridges. Where there is no suitable property off the ridge itself, then carefully designed and regulated development could be permitted on the ridge. Such ridgeline development would be required to use creative grading and structural design to make the resulting residential units as inconspicuous as possible to those viewing them from a distance. Roadways would be permitted on prominent ridgelines provided they are graded into the contours of the hillside.”

The Visual Characteristics Map in the Community Design Element identifies the main ridgeline and the slopes on the project site as areas that are visually prominent from Highway 1. The Community Design Element states that in-fill development on hillside sites should be considered for its potential relationship to, or effect on visually significant slopes, open space, to natural grade and topography of the area, and existing vegetation. Guidelines which the City applies to hillside development to minimize its impact on the terrain and to ensure the safety of residents include:

1. Preserve “visually significant” slopes and ridgelines, maintain natural open space between areas of development, set aside and preserve natural features.
2. Allocate areas not suited to development to open space recreation.
3. Fit development to the topography; place man-made structures to complement the natural environment.

4. Minimize grading; discourage mass grading and terracing for construction pads.
5. Shape the grading that is required so it conforms to natural landforms.
6. Landscape developed areas to blend with the natural landscape and require minimum maintenance and water.
7. Minimize the disruption of existing plant life.
8. Phase grading and construction to coincide with periods of dry weather.

4.2 PROJECT IMPACTS

4.2.1 Thresholds of Significance

According to CEQA Guidelines, a project is normally considered to have significant effect on the environment if it will have a “substantial, demonstrable negative aesthetic effect” (CEQA Guidelines, Appendix G). More specifically, the visual impact of the project would be considered significant if project development would:

- 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.

4.2.2 Project Design Features

Design features of the proposed project are discussed in detail in Section 2.0, Project Description. The Applicant describes the proposed project as consisting of environmentally-friendly, low profile homes that would blend with the natural landscape. The project would be constructed according to a style of architecture called “Coastal Green Architecture” which is intended to demonstrate harmony between the environment and the community. The Applicant’s architect defines Coastal Green Architecture as creating:

“Building forms that are derived primarily from a desire to minimize visual impact and create a congruous relationship between man-made structure and surrounding ecology. Site integration, building geometry, orientation, material palette and sustainable design are the main elements which together impart a sense of a community of houses which belong to this portion of coastal hills. The houses are nestled into the sloping hillside, using their rear walls for earth retention, and carve out a suitable living space which bends to conform to the natural contours of the ground. The lower portions of the houses use earth berms and natural concrete, which support the upper level of the houses. The low-profile rooflines are broken into discrete planes which slope up at the center of the house, and fall towards the edges of the house. The design reinforces the character of the hill, generating an architecture which reads as 'indigenous' and echoes the surrounding outcroppings and ravines (Field Architecture, 2007).”

The design principles of Coastal Green Architecture would be incorporated into the development’s CC&Rs and state that the visual impact of the project shall be minimized by

maintaining the natural grade, prohibiting padding or terracing. The custom homes constructed on site would be required to be “low-profile”, would be limited in size, and could only use approved exterior colors. The CC&Rs for the project identify specific restrictions intended to control the visual impact of the proposed project (see Appendix D).

Grading: Grading would be required for the access roads, the private driveway to Lot 11 and for each house pad (see Grading Plan, Figure 7). The project layout has been designed to minimize grading although grading for the road would require cuts and fill up to ten feet thick. The hillside slopes at the project road entrance to Roberts Road would also be trimmed back to increase sight line distances for motorists leaving the project site (Figure 7). Except for the Lot 11 driveway, the roads would be slightly north of the main ridgeline and would not be visible from the Linda Mar neighborhood. The roads would however, be visible from Fassler Avenue.

Retaining Walls: Retaining walls would be constructed along the south side of the project road between lot driveways because the road is at a lower elevation than the lots. The retaining walls are shown in Figure 8, Preliminary Retaining Wall Plan. The hillside slopes at the project road entrance to Roberts Road would also be trimmed back to increase sight line distances for motorists leaving the project site and this slope would also be stabilized by a retaining wall (Figure 8). The retaining walls would not be a prominent visual feature of the project.

Utilities and Retention Ponds: The Hillside Preservation District overlay requires utility wires and television lines to be installed underground. Thus, there would not be any overhead utility wires within the project development.

The sustainable development features of the project including solar panels on all houses, wind turbines attached to street light poles, grey water recovery systems for each house, and rainwater collection are all described in the Project Description. These features of the proposed project would not have visual or aesthetic impacts as they are included into the design of each home and except for solar panels and small wind turbines won't be visible off-site.

The project requires the construction of two retention ponds as described in Project Description. The ponds would be visible from Fassler Road.

Design of Individual Homes: Individual lot owners would design and construct their own custom homes according to Pacifica's design requirements and those contained in the developments CC&Rs (see discussion in Project Description). The net density of the development would be approximately one dwelling unit per more than five acres. A building envelope is specified for each lot as shown in the site development plan (Figure 4). Each building envelope is approximately 7,000 square feet which accommodates a residence and immediate yard space. The CC&Rs would restrict the maximum size of homes to 5,500 square feet in living area to minimize their footprint on the land. Approximately 9% of the 65 acres is designated as buildable area (project road and building envelopes).

Although the homes would be custom built, every house must be designed using the Coastal Green Architecture concepts. The homes would have a low profile and each lot would be developed to minimize the southern profile which is visible to residents of the Linda Mar and Pedro Point neighborhoods and motorists on Highway 1. This would be accomplished through

architectural design, building siting, excavation, and berming. The siting for each home is based on the best location on each lot for the home to be placed that would minimize visual impact (as determined by the Applicants architect). It is the goal to excavate each home to help lower its profile and make the home appear smaller from the Linda Mar area. The berms would be 3-10 feet in height depending on the lot and siting of the home. Berm height and location would be determined at the time individual lots are proposed for development. The Grading Plan (Figure 7) shows berming for Lots one through five. The berms are oval shaped graded areas located behind the building envelope. The berms would be constructed of concrete and earth and would be about five feet wide, 20 feet long and three to five feet high depending on the slope, location, and necessary height to hide the home.

CC&Rs would require the colors for the homes and materials to blend into the natural environment and would dictate the color pallet from which the homes can be painted. The CC&Rs would also encourage each homeowner to utilize concrete as a core building material to allow the homes to be aligned with the contours of the hill.

The homeowner would maintain the portion of each residential lot outside the specified building envelope in natural landscape. Improvements to the natural landscape would be restricted by CC&Rs to native plant materials.

An example of Coastal Green Architecture is shown in Figure 6. This visual rendering shows the house proposed for Lot 8, the most visually prominent lot in the development. With the excavation of the house pad, shape of the house, and berming, much of the house would be shielded from view.

Landscaping: The project is not required to prepare a Landscape Plan because the common areas won't be landscaped. Instead, common areas would be left (or revegetated if disturbed during construction) with native species. Each lot owner would prepare their own landscaping plan for the area immediately around the house. Each landscaping plan must be submitted as part of the Specific Plan approval by the Planning Commission for each home and then a finalized landscaping plan is submitted to the City during the building permit approval process, as well as the development's Architectural Control Committee (see discussion of CC&Rs below).

The proposed project would remove 7 heritage trees that are within the development construction zone. A Tree Planting Plan is presented in the Biology discussion (Section 5.0) to replace these trees. This is further described in Biology, Section 5.0.

Permanent Open Space: Roughly 28 acres of the site are proposed as common open space for project residents. The Homeowner's Association would maintain all open space habitat in the conservation areas.

Homeowners Association/CC&Rs: The development would be approved with CC&Rs (see discussion in Project Description and Appendix D). The CC&Rs would contain language designed to minimize the visual impact of the project through controls on house design, size, appearance, and placement and provide for the long-term maintenance of the permanent open space and the exterior of each individual lot. The CC&Rs establish architectural controls through design guidelines and an Architectural Control Committee to review plans of individual

lots. Article VI of the Draft CC&Rs states the following regarding the requirement for approval of Plans:

- “No residence, residential improvement, or any other building, fence, wall, pool, spa, obstruction, outside or exterior wiring, balcony, screen, patio, patio cover, tent, awning, carport, carport cover, trellis, improvement, or structure of any kind shall be commenced, installed, erected, painted or maintained upon the Project, nor shall any alteration or improvement of any kind be made thereto, or to the exterior of any residence, until the same has been approved in writing by the HOA governing body (Board), or by an Architectural Control Committee appointed by the Board”.
- “The Architectural Control Committee may consider the impact of views from other lots along with other factors, including reasonable privacy right claims, passage of light and air, beneficial shading and other factors in reviewing, approving, or disapproving any proposed landscaping, construction or other improvements”.
- “Landscaping: No landscaping or other physical improvements or additions shall be made or added to any decks, balconies, patios or yards or portions of Lots which are visible from the street or from any Common Area by any Owner until plans and specifications showing the nature, kind, shape, and location of the materials shall have been submitted to and approved in writing by the Architectural Control Committee, or the Board”.
- “Initial Front Yard Landscaping: Unless installed by Declarant [the project Applicant], the first purchaser of each lot shall submit landscaping plans for the unfenced portion of the front yard of the purchaser’s Lot to the Architectural Control Committee within sixty (60) days after close of escrow and shall complete the installation of the landscaping within one hundred eight (180) days after close of escrow or by such later date as the Committee may approve”.

4.2.3 Scenic Vistas

The existing appearance of the project site is shown in the coastal aerial photograph in Figure 3 and the project site views in Figure 12. Figure 6 shows a rendering of a sample house exhibiting Coastal Green Architectural features. The sample house has been placed on Lot 8, the most prominently visible lot located on top of the knoll along the main ridgeline. A rendering of the project from the Linda Mar neighborhood is shown in Figure 13, Visual Rendering.

The majority of the project would be located along a prominent ridgeline of the coastal hills visible from the Linda Mar and Pedro Point areas of Pacifica. The access roadway would be constructed to the north and slightly below the ridgeline peak. The building envelopes for Lots 12 and 13 would also be located below the ridgeline. Lot 11 is not located on the ridgeline but its driveway and house would be visible on the slopes of the hillside.

Portions of the development would be visible from a segment of Fassler Avenue, a proposed local scenic roadway. The homes on the ridgeline and Lot 11 would be visible from various portions of Pedro Point, the Linda Mar neighborhood, and northbound Highway 1 south of the project. The project would be located in an area with a Prominent Ridgeline and would be widely visible.

The project is not widely visible from the Rockaway Beach area or from Highway 1 north of Fassler Avenue.

The project would be located in an area with a Prominent Ridgeline designation by the Pacifica General Plan. The Prominent Ridgeline designation is intended to limit development on ridges as much as possible. The zoning requires owners to focus development on suitable portions of their property off the ridges. Where there is no suitable property off the ridge itself, carefully designed and regulated development could be permitted on the ridge. Such ridgeline development is required to use creative grading and structural design to make the resulting residential units as inconspicuous as possible to those viewing them from a distance. Roadways are permitted on prominent ridgelines provided they are graded into the contours of the hillside.

Consistent with the requirements of the Prominent Ridgeline designation, portions of the project are located off the ridgeline. The roadway, the two detention basins, and Lots 11, 12, and 13 are not on the ridgeline. The project does propose creative grading, berming, and structural design to lessen the visual impact of the project. The Coastal Green Architecture proposed by the Applicant meets the requirements of the Prominent Ridgeline designation.

To ensure that the project is designed and constructed according to the Coastal Green Architectural principles discussed in this EIR, Mitigation Measure AES-1 has been recommended so that the development's CC&Rs clearly specify the design and construction requirements of Coastal Green Architecture.

The project would not block scenic vistas from publicly accessible areas, from other existing residential development or from one house to another within the development.

While the project would be widely visible from surrounding areas, the implementation of the Coastal Green Architectural features described above would ensure the project is consistent with Pacifica General Plan and zoning requirements for developments on hillsides and prominent ridgelines. The project would have a less than significant impact on scenic vistas.

4.2.4 Scenic Resources within a State Scenic Highway

The proposed project is not within the viewing corridor of a state designated Scenic Highway. Highway 1 is not a state designated scenic highway within the City of Pacifica, although the City considers it a sensitive scenic receptor. The project would be visible from portions of Highway 1 both north and south of the project site. Views of the project site from Highway 1 south of the site consist of relatively long views of the south-facing slopes on site. Once project construction is completed, portions of the houses and rooflines would be visible depending on the amount the house pad is excavated, the houses' shape and location, and any screening berms that are constructed.

Motorists on Highway 1 north of the site have more limited views of the project parcel. Portions of the interior road and some of the houses would be visible for short stretches. The project would be viewed along with urban development along Highway 1 and on lower portions of adjacent hillsides.

Visual impacts to motorists on Highway 1 are considered less than significant because of the urban setting of Highway 1 within Pacifica. In addition, the design and construction of the project incorporates many features to minimize the visual impact of the project.

The City's General Plan proposes to designate the Linda Mar Boulevard – Oddstad – Terra Nova Boulevard – Fassler Avenue loop as a scenic roadway. Views along Fassler Avenue are considered a scenic resource. Portions of the project would be visible from a segment of Fassler Avenue. The visual impact to motorists on Fassler Avenue is considered to be less than significant because motorists would only see a portion of the project development and the project does not block or significantly impact the panoramic ocean view from Fassler, and incorporates many design features that would significantly reduce the visual impact of the development (see Section 4.2.2). In addition, tree planting planned for the replacement of heritage trees would help provide screening of the project.

The proposed project would have a less than significant impact on scenic highways and roadways.

4.2.5 Existing Visual Character of the Site and Surroundings

The proposed project would introduce low density residential uses onto a currently undeveloped site that has superior scenic qualities. The project would change the existing character of the site through grading for road construction and the construction of homes along the ridgeline.

Changes to the project site would be controlled through the design and construction of the project infrastructure (roads, utilities, retention ponds, etc) during this phase of the project and the provisions of the CC&Rs which would restrict the design of the custom homes to the Coastal Green Architecture proposed by the Applicant. The Site Plan approved during this phase of the project (and described in this EIR) identifies a building envelope for each lot. The building envelope has been identified by the Applicants engineer and architect and have been selected to minimize the visual impacts of each home. The CC&Rs would restrict the maximum size of homes to 5,500 square feet in living area to minimize their footprint on the land. Each home would also have to undergo design review by both the development's Architectural Control Committee (described above) and the City's design review process (described in the Land Use section of this EIR).

The proposed building envelopes are located in a linear pattern along the ridgeline to minimize the potential impact of having homes too close together. As proposed, none of the homes would conflict with a neighboring home in terms of blocking ocean views or shadowing living areas. The linear pattern of lots is contrary to the Design Guidelines; however, the visual impact is mitigated by site planning and architectural design as described in Land Use, Section 3.2.2.3.

The proposed project is considered to be very low density. The project would develop slightly less than the 6 acres which is permitted as buildable area (project road and building envelopes) by the Hillside Preservation District. Approximately 28 acres would be held in common open space and another 11 acres would be held in private open space. The majority of

the southern slopes which comprise a major portion of the scenic vista from Pedro Point and Linda Mar neighborhoods would be left in open space.

As described above under Scenic Vistas, the project incorporates design measures for construction on ridgelines to be consistent with the City's General Plan designation of Prominent Ridge Line and the City's guidelines for hillside development.

The area surrounding the project site has existing residential development including the Sea Crest development to the east on Fassler Avenue, two different residential developments on the west side of Roberts Road, the Prospects, a proposed development across the street from Harmony@1 on Fassler Avenue, and commercial and residential development at the intersection of Roberts Road and Crespi Drive. Once constructed, the proposed project would be consistent with surrounding development and would not conflict with the visual character of surrounding development.

The proposed project incorporates design features to minimize its visual impact. Once constructed, the project would be consistent with the visual character or surrounding development. The proposed project would have a less than significant impact on the visual character of the project site and its surroundings. Mitigation Measure AES-1 would ensure the project is developed as proposed.

4.2.6 Light and Glare

The project would have normal residential subdivision lighting such as street lights and exterior home lighting. The project would be a new source of night light on a ridgeline that currently does not have any lighting. The introduction of light and glare from the proposed project would be noticeable to viewers in the surrounding area, particularly to drivers traveling along Fassler Avenue and to residents located in the Linda Mar and Pedro Point neighborhoods. On-site screening shall be used to shield some night lighting from view.

The project's exterior lighting would be consistent with all local and state regulations for exterior light fixtures that are designed to be energy efficient and minimize light and glare. Consistent with the "Coastal Green Architecture" theme of the Harmony@1 project, the applicant proposes to use energy efficient LED streetlights that produce less light pollution than many other types of street lights. In comparison to other types of residential development, the proposed low profile homes would lower the height of exterior lighting fixtures, which would help reduce nighttime light and glare impacts. During the design review process, the types and location of proposed lighting fixtures would be reviewed for excessive light and glare impacts.

The project's night lighting would be viewed in conjunction with the night lighting from all other development in the adjacent area, including commercial development along Highway 1 and residential development further up the hillsides. Although the project site is currently undeveloped and the project would bring night lighting to an otherwise dark ridgeline, development exists on all side of the project. The night lighting from the project would blend with existing lighting and would not create a significant light and glare impact.

To ensure exterior night lighting is minimized as much as possible Mitigation Measure AES-2 has been recommended. Implementation of this mitigation measure would ensure all

applicable guidelines are integrated into the proposed project. The light and glare impacts of the proposed project are considered to be less than significant.

4.2.7 Cumulative Impacts

A list of other development projects identified by the City of Pacifica is presented in Section 11.4 Cumulative Impacts. Projects occurring in the project vicinity include the Prospects project on Fassler Avenue and a Mixed Use project on Old County Road. The remaining projects are not located within the same viewshed of the project property. The Harmony@1 Project primarily impacts views of the property ridgeline from the Linda Mar area of the City. The Prospects project and Old County Road project are not visible from the Linda Mar area and therefore these projects do not add to a cumulative aesthetic impact from Linda Mar viewpoints. The Mixed Use project on Old County Road is located west of Highway 1 and does not contribute cumulatively to the visual impacts from Fassler Avenue whereas the Prospect project and the Harmony@1 project are both hillside developments visible from Fassler Avenue. These two projects would change the character of the immediate vicinity by introducing developed uses into the Fassler Avenue viewshed corridor. However, because the Harmony@1 project does not block ocean views along Fassler, the project does not contribute to significant cumulative impacts on a scenic vista. The project's cumulative impact to visual resources is less than significant.

4.3 MITIGATION MEASURES

The following mitigation measures are recommended to reduce the aesthetic impact of the proposed project to a less than significant level.

IMPACT: *The custom homes could have a significant visual impact if they are not designed and constructed using the Coastal Green Architecture described in this EIR.*

Measure AES-1: The Codes, Covenants and Restrictions (CC&Rs) for the Harmony@1 development shall, consistent with the Project Description (section 2.0) and Project Design Features (section 4.2.2) herein, fully define the term “Coastal Green Architecture.” The CC&Rs shall provide detailed descriptions of specific measures or features that shall be imposed to ensure that the custom homes conform to the definition of Coastal Green Architecture and incorporate the design measures discussed in this EIR that reduce or eliminate visual impacts. The specific features to be described in the CC&Rs shall include those identified in Exhibit D, including, but not be limited to, the following design and construction measures:

- Homes shall be located in the building envelope presented in the Preliminary Grading Plan described in this EIR. Homes located outside the identified building envelope could have greater visual impact than what was analyzed in this EIR.
- Excavation of the building pad. The homes shall be designed with a lowered or excavated building pad in order to reduce the mass of the homes. The degree or amount of excavation shall be determined by the custom home architect, the Harmony@1 Architectural Control Committee, and the City's design review process.
- Berming: The CC&Rs shall require berming of excavated soil to help hide homes and describe desirable locations and methods for such berming.

- Hidden garages: The CC&Rs shall describe what constitutes a “hidden garage” and establish when a home shall have the garage under the main structure in order to minimize visual impacts.
- Living Roofs: The CC&Rs shall describe what constitutes a “living roofs” and establish when a home shall include a living roof in order to minimize visual impacts.
- The CC&Rs shall describe appropriate exterior materials and color palette to ensure compatibility of the homes with the surrounding areas.

IMPACT: *The proposed project could have nighttime light and glare impacts.*

Measure AES-2: To ensure night light and glare from the project is minimized the following measures shall be implemented:

- Exterior lighting shall include low mounted, downward casting and shielded light that does not cause spillover onto adjacent properties.
- No flood lights shall be used in public areas or the conserved habitat areas. Night security lighting within residential lots shall be restricted to normal exterior lighting.
- Language shall be added to the development’s CC&Rs stating that lighting fixtures shall not be located at the periphery of individual lots. Lighting shall be restricted to the area immediately around the house and any landscaped areas.

5.0 BIOLOGY

This chapter describes the biological resources and natural communities occurring within the project area. The project would remove roughly 3.0 acres of grassland, 2.2 acres of coastal scrub, and 0.1 acres of Monterey pine forest. No special status plants were detected during rare plant surveys of the site. The project would require the removal of up to seven Heritage Trees (six Monterey pines and one Monterey cypress). The removal of the trees would be mitigated by replacing them with native tree and/or shrub species at a 1:1 ratio. Mitigation is identified to reduce potential impacts from increased human activity on site and control of invasive plant species during project construction.

Three California Species of Special Concern (San Francisco dusky-footed woodrat, California thrasher, and loggerhead shrike) and one CDFG Fully Protected Species (white-tailed kite) were confirmed present. Approximately four to six woodrat houses would be impacted by construction of the project access road and two detention basins. The majority of woodrat habitat is unimpacted and would remain in private open space. A management plan including specific protection measures is required as mitigation to minimize impacts to woodrat. Preconstruction surveys and avoidance protocols required as project mitigation eliminate impacts to nesting birds (including white tailed-kite, loggerhead shrike, and California thrasher).

*Habitat for the federally endangered Mission blue butterfly occurs on two areas of the project site. Initial surveys conducted in spring 2007 during the flight season of the Mission blue butterfly have not detected adults of the species, however other evidence (presence of eggs, density of host plants, and distance to other mission blue colonies) suggests that the butterfly is likely present. It may not be present every year. The proposed project would avoid impacts to the Mission blue host plants (*Lupinus formosus*) on the south side of the project area (Lot #11). The project would impact the small patch of *Lupinus variicolor* on the northwest side of the parcel which is not expected to be used by the Mission blue butterfly. A management plan for the open space is required as mitigation, including specific habitat protection measures to protect and preserve host plant habitat.*

California red-legged frog (federal threatened; California Species of Special Concern) and San Francisco garter snake (federal endangered; California endangered; California fully-protected) are known to occur in the Pacifica area, but are highly unlikely to occur on the project site. In order to avoid take preconstruction surveys and monitoring are recommended as mitigation.

5.1 ENVIRONMENTAL SETTING

Biological surveys of the project site were completed in 2005 and 2006 and reported in WRA Environmental Consultants (WRA) 2/14/06 and 4/21/06 (attached in Appendices F-1 and F-2). WRA conducted reconnaissance surveys and follow up rare plant surveys on the northern section of the property.

TRA Environmental Sciences (TRA) reviewed that work, updated the CNDDB database search results, and conducted additional surveys in 2006 and 2007 (attached in Appendix F-3). The combined results from all biological surveys are reported here.

5.1.1 Vegetation Communities

Vegetation communities are assemblages of plant species that occur together and are defined by species composition and relative abundance. A list of plants identified by WRA during its field surveys is included in Appendix F in two reports: one for APN 022-150-420 (53 acres) and one for the adjacent 12 acre parcel (APN 022-150-310). In addition to these areas a 2-acre parcel (APN 022-150-030) was added as part of the project. Four plant communities (grassland, northern coastal scrub, central coast riparian scrub, and Monterey pine forest) occur on the 67-acre project site (Figure 14, Plant Communities). These plant communities are described below.

Grassland

Grassland dominates the south and west-facing slopes of the parcel and covers 42.7 acres. Within this community is a mixture of both California annual grassland (comprised of non-native species) and coastal terrace prairie grassland (comprised of native species). These types are mixed together throughout the grasslands located on the parcel and therefore were not delineated as separate communities. Scattered patches of coastal scrub and small shrub to small tree-sized Monterey pine (*Pinus radiata*) trees are also found in the grasslands, especially on the northwest corner of the property. Also included within this community type are patches of disturbed ruderal vegetation that includes Pampas grass (*Cortaderia ssp.*), French broom (*Genista monspessulana*) and fennel (*Foeniculum vulgare*).

California Annual Grassland. The California annual grassland on site consists of non-native annual grasses such as wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), and Italian wild rye (*Lolium multiflorum*). Other non-native species common within the grassland on site include velvet grass (*Holcus lanatus*), English plantain (*Plantago lanceolata*), and Queen Anne's lace (*Daucus carota*), among others.

Coastal Terrace Prairie Grassland. Several extensive patches of coastal terrace prairie grassland (as defined in CDFG, 2005) are located on steep slopes and moist exposures, where generally less disturbance has historically occurred. These areas are dominated by California oat grass (*Danthonia californica*), California brome (*Bromus carinatus*), tufted hair-grass (*Deschampsia cespitosa*), Idaho fescue (*Festuca idahoensis*), red fescue (*Festuca rubra*), blue wild rye (*Elymus glaucus*) and purple needle grass (*Nassella pulchra*). Dense stands of California oat grass also occur along trail edges where soils are compacted.

Northern Coastal Scrub

Northern coastal scrub occurs on north-facing slopes along Fassler Avenue, west facing slopes along Roberts Road, and near the ridgelines of south-facing slopes. The native scrub habitat covers 20.2 acres on site and is dominated by dense thickets of blackberry (*Rubus ssp.*), poison oak (*Toxicodendron diversilobum*) and coyote brush (*Baccharis pilularis*).

Central Coast Riparian Scrub

The site contains two large erosional features and several smaller erosion gullies on the lower southeast facing slope. The two larger gullies are defined drainage courses and contain central coast riparian scrub at the base of the large gullies, on the southern boundary of the project site. The riparian scrub encompasses 1.4 acres. This plant community is dominated by arroyo willow (*Salix lasiolepis*) and coyote brush. A few sitka willows (*Salix sitchensis*) are also found in this community. Several smaller erosional features located between and immediately east of the gully features may qualify as jurisdictional waters or wetlands (WRA, 2005).

Monterey Pine Forest

A dense stand of Monterey pine (*Pinus radiata*) occurs on the west side of the property along Roberts Road. The patches of Monterey pine forest comprise a total of 3.0 acres. There are also several Monterey pines scattered within the grassland and coastal scrub plant communities. Tree surveys by Howard Linacre, I.S.A. Certified Arborist identified 125 trees within the development area of the project site. All trees are Monterey pine (*Pinus radiata*) except for three Monterey cypress (*Cupressus macrocarpa*). Most of these trees are shrub to small tree-sized, and 12 trees qualify as Heritage Trees under City Ordinance. The canyon on the adjacent property to the southeast is heavily forested with Monterey pine trees.

An estimated 90 percent of the Monterey pines on the project site are diseased with pine pitch canker (*Fusarium circinatum*) and have been recommended for removal by an arborist (Appendix E). Pine pitch canker is a bacterial disease that constricts the flow of nutrients up and down the tree and kills branches, roots and stems. Disease symptoms include oozing of pitch or sap on the branches, roots and stems, as well as dieback on the branch tips or death of the entire branch, root, or stem.

5.1.2 Wildlife

5.1.2.1 Wildlife Habitat

Wildlife habitat values are based on the availability of surface water, food plants, and prey associations. While some wildlife species are restricted to specific vegetation communities, others range across communities. Many common wildlife species are expected to occur among the various plant communities throughout the study area, including the project site and surrounding lands. The project site and the parcels to the east provide valuable wildlife resources due to the diversity of habitats present (scrub, grassland and forest). Numerous wildlife species were observed on the project site during field surveys including a bobcat (*Lynx rufus*) on two occasions. Lists of all wildlife species observed in this area during biological surveys in 2005, 2006, and 2007 are included in Appendix F.

The grassland on site provides extensive open habitat for a variety of species that forage within grasslands including seed eating birds such as housefinch (*Carpodacus mexicanus*) and western meadowlark (*Sturnella neglecta*); burrowing rodents such as California meadow vole (*Microtus californica*) and Botta's pocket gopher (*Thomomys bottae*). Predators found throughout all habitats within the study area including the grassland are red-tailed hawk (*Buteo jamaicensis*), barn owl (*Tyto alba*), great horned owl (*Bulbo virginianus*), loggerhead shrike

(*Lanius ludovicianus*), American kestrel (*Falco sparverius*), bobcat, coyote (*Canis latrans*), gopher snake (*Pituophis melanoleucus*), and racer (*Coluber constrictor*) among others.

The northern coastal scrub habitat provides wildlife food plants and cover for a variety of species. Species that use coastal scrub habitat include spotted towhee (*Pipilo maculatus*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), Anna's hummingbird (*Calypte anna*), white-crowned sparrow (*Zonotrichia leucophrys*), and western scrub jay (*Aphelocoma californica*), California kingsnake (*Lampropeltis getula californiae*), ring-necked snake (*Diadophis punctatus amabilis*), western fence lizard (*Sceloporus occidentalis*), California mouse (*Peromyscus californicus*) and black-tailed jackrabbit (*Lepus californicus*) among others. The scrub provides dense cover and could be used as a den site for larger carnivores such as bobcat, coyote or fox.

The riparian scrub on site provides food sources and cover for a variety of wildlife including coast garter snake (*Thamnophis elegans*), Pacific tree frog (*Hyla regilla*), western toad (*Bufo boreas*), deer mouse (*Peromyscus maniculatus*), striped skunk (*Mephitis mephitis*), song sparrow (*Melospiza melodia*), Townsend's warbler (*Dendroica townsendii*) and 'Myrtle' yellow-rumped warbler (*Dendroica coronata*), among others.

Although the Monterey pine forest is not native to the area, it provides habitat for species such as alligator lizard (*Elgaria coerulea*), ruby crowned kinglet (*Regulus calendula*), chestnut backed chickadee (*Poecile rufescens*), and common raven (*Corvus corax*), among others.

5.1.2.2 Wildlife Movement Corridors

The project is located on the western flank of Sweeney Ridge and is connected with regional open space. This includes approximately 100 acres to the east toward Fassler Park, and extensive open space associated with Sweeney Ridge and the Golden Gate National Recreation Area to the northeast (Figure 15, Wildlife Movement Corridors). There is significant residential and commercial development to the west and south, and residential development along Crespi Drive east of the site forms a barrier to wildlife movement. Hence, the project site provides a corridor for wildlife to move between the Sweeney Ridge and Fassler Park open space areas. Wildlife could also move through the site west toward the ocean, however housing, Roberts Road and Highway 1 lie between the site and open space to the west and pose significant barriers to movement in that direction.

5.1.3 Special Status Species

Special-status plant and animal species are those that could occur on or in the vicinity of the project site that are recognized as rare and vulnerable to habitat loss or population decline. Some of these species receive specific protection as defined in federal or state endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts, to meet local conservation objectives. These species are referred to collectively as "special-status species" in this EIR.

A list of special-status plant and animal species reported to occur within 5 miles of the project site was compiled and is presented in Appendix F. This list was created from data in the California Natural Diversity Database (CNDDDB), the U.S. Fish and Wildlife Service Quadrangle Species Lists (USFWS 2006), consultation with the California Department of Fish and Game (CDFG) and a review of the California Native Plant Society Electronic Inventory Records (CNPS 2005).

The project site was surveyed by both WRA and by TRA for habitat and species presence. Each of the species on the list in Appendix F was evaluated for its potential to occur on the project site. Table 5-1 lists those special status wildlife species that were confirmed present, those that are expected to occur but were not observed, and those that may occur but were not observed. For the species identified as “expected to occur”, the project site and adjacent lands contain suitable habitat to support these species, and they are known to occur in the vicinity. The potential for these species to occur is moderate to high. For species that “may occur”, the site and adjacent lands contain habitat that is small in area or is of poor quality, and these species do not occur nearby. While these species could not be ruled out, the potential for them to occur is low.

Surveys were also done for rare plants during the bloom period. The list of plants that were searched for is included in Table 5-2. No rare plants were found present on the project site.

Table 5-1 Special Status Wildlife Known or Expected to Occur at the Project

SPECIES ¹	STATUS	HABITAT REQUIREMENTS
Species Confirmed Present		
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	CSC	Deciduous and mixed woodlands, scrub
White-tailed kite <i>Elanus leucurus</i> (Nesting)	FSC, CFP	Forages in open to herbaceous stages of many habitats. Nests in shrubs and trees adjacent to grasslands.
Loggerhead shrike <i>Lanius ludovicianus</i> (Nesting)	FSC, CSC	Open country with short vegetation such as pastures with fence rows, old orchards, mowed roadsides, agricultural fields, and open woodlands. Breeders usually settle near isolated trees or large shrubs
California thrasher <i>Toxostoma redivivum</i>	FSC	Common resident of foothills and lowlands in cismontane California. Occupies moderate to dense chaparral habitats and extensive thickets in young or open valley foothill riparian habitat.
Species Expected to Occur (moderate to high potential based on local habitat; not observed)		

¹ Species potential for presence determined from research using the CNDDDB, biological surveys conducted by WRA in 2005 and 2006, and biological surveys conducted by TRA in 2006 and 2007.

Table 5-1 Special Status Wildlife Known or Expected to Occur at the Project

SPECIES ¹	STATUS	HABITAT REQUIREMENTS
Ferruginous hawk <i>Buteo regalis</i> (Wintering)	FSC, CSC	Found in open grasslands, sagebrush flats, desert scrub, low foothills & fringes of pinyon juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.
Northern Harrier (<i>Circus cyaneus</i>) (Nesting)	FSC, CSC	Forages in open grassland, coastal scrub, chaparral and marshlands. Nests in shrubs on ground usually near wetlands.
Rufous hummingbird <i>Selasphorus rufus</i>	FSC	Found in a wide variety of habitats that provide nectar-producing flowers. A common migrant and uncommon summer resident of California.
Allen's hummingbird <i>Selasphorus sasin</i>	FSC	Breeds in sparse and open woodlands, coastal redwoods, and sparse to dense scrub habitats. Distribution highly dependent on abundance of nectar sources.
Red-breasted sapsucker <i>Sphyrapicus rubber</i>	FSC	Aspen-pine association and coniferous forest, including humid coastal lowlands; in migration and winter also in open woodland and parks. Nests in trees; bores its own nest-hole cavity.
Olive-sided flycatcher <i>Contopus cooperi</i>	FSC	Most often found in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.
Salt marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC, CSC	Resident in salt and fresh water marshes; requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.
San Francisco forktail damselfly <i>Ischnura gemina</i>	None, but considered special status by CDFG	Endemic to the San Francisco bay area and Santa Cruz. Found in weedy ditches, often near saltwater.
Mission blue butterfly <i>Icaricia icarioides missionensis</i>	FE	Inhabits grasslands of the San Francisco peninsula. Associated with three larval host plants: <i>Lupinus formosus</i> var. <i>formosus</i> , <i>Lupinus albifrons</i> var. <i>collinus</i> , and <i>Lupinus variicolor</i> .
Species that May Occur (low potential based on local habitat; not observed)		

Table 5-1 Special Status Wildlife Known or Expected to Occur at the Project

SPECIES¹	STATUS	HABITAT REQUIREMENTS
Costa's hummingbird <i>Calypte costae</i>	FSC	Occurs in arid habitats such as desert washes, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oases.
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE, SE	Vicinity of freshwater marshes, ponds, and slow moving streams. Prefers dense cover and water depths of at least one foot. Upland areas near water are important.
California red-legged frog <i>Rana aurora draytonii</i>	FT, CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	FE	Restricted to grassland and mixed grassland and coastal scrub on San Bruno Mountain. Host plant is Johnny jump-up (<i>Viola pedunculata</i>).
Myrtle's silverspot	FE	Restricted to areas adjacent to the coast with suitable nectar plants and patches of its host plant, <i>Viola adunca</i> .

1. Species such as Bell's sage sparrow, Costa's hummingbird, and Ferruginous hawk, identified by WRA as having a high potential for occurrence on the project site, were not carried forward to this table due to the rarity of these species on the coast side and the lack of any observations of these species during following up surveys in Winter 2006 and Spring 2007.

NOTES

United States Fish and Wildlife Service classifications:

FE = Species in danger of extinction throughout all or significant portion of its range.

FT = Species likely to become endangered within foreseeable future throughout all or significant portion of its range.

PE = Species proposed endangered.

PT = Species proposed threatened.

FC = Candidate information now available indicates that listing may be appropriate with supporting data currently on file.

FSC= Species of special concern.

California Department of Fish and Game classifications:

CE = State listed as endangered. Species whose continued existence in California is jeopardized.

CT = State listed as threatened. Species, although not presently threatened with extinction, may become endangered in the foreseeable future.

CR = State listed as rare. Plant species, although not presently threatened with extinction, may become endangered in the foreseeable future.

CSC = California species of special concern. Animal species with California breeding populations that may face extinction in the near future.

CP = Fully protected by the State of California under Section 3511 and 4700 of the CDFG Code.

SOURCE: CDFG, 2003; USFWS, 2003

Table 5-2 Rare Plant Species Surveyed

SPECIES	STATUS	HABITAT REQUIREMENTS
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	List 1B	Coastal bluff scrub, cismontane-woodland, valley and foothill grassland; 3-500m.
<i>Centromadia parryi parryi</i> pappose tarplant	List 1B	Chaparral, coastal prairie, meadows and seeps, valley and foothill grassland; 2-420 m.
<i>Cirsium andrewsii</i> Franciscan thistle	List 1B	On coastal bluffs, prairie, ravines, scrub, and seeps. Sometimes ultramafic; 0-135 m.
<i>Cirsium occidentale</i> var. <i>compactum</i>	FSC, List 1B	Chaparral, coastal dunes, coastal prairie, coastal scrub. On dunes and on clay in chaparral; also in grassland. 5-150 m.
<i>Gilia capitata</i> ssp. <i>chamissonis</i> dune gilia	List 1B	Coastal dunes, coastal scrub; 2-200 m.
<i>Helianthella castanea</i> Diablo helianthella	FSC, List 1B	Open grassy sites in chaparral, coastal scrub, riparian woodland, valley and foothill grasslands; 60-1300 m.
<i>Lilium maritimum</i> coast lily	List 1B	Broadleafed upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, freshwater marshes and swamps, North Coast coniferous forest; 5-335 m.
<i>Leptosiphon croceus</i> coast yellow leptosiphon	List 1B	Coastal bluff scrub, coastal prairie, usually by the ocean; 10-150 m.
<i>Leptosiphon rosaceus</i> rose leptosiphon	FSC, List 1B	Coastal bluff scrub, usually by the ocean; 0-100 m.
<i>Malacothamnus davidsonii</i> Davidson's bush mallow	List 1B	Chaparral, Cismontane woodland, coastal scrub, and riparian woodland; 185-855 m.

Table 5-2 Rare Plant Species Surveyed

SPECIES	STATUS	HABITAT REQUIREMENTS
<i>Microseris paludosa</i> marsh microseris	FSC, List 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland; 5 300 m elevation.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	FE, SE, List 1B	Coastal bluff scrub, closed-cone coniferous forest, vernal mesic meadows, freshwater marshes and swamps; 10-135 m.
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	FSC, List 1B	Sand hills and rocky soils in coastal scrub, strand, and prairie; 30-645 m.
<i>Triphysaria floribunda</i> San Francisco owl's clover	FSC, List 1B	Coastal prairie, valley and foothill grasslands sometimes ultramafic; 10-160 m.

Notes

California Native Plant Society classifications:

List 1A = Plants that are presumed extinct in California.

List 1B = Plants that are Rare, Threatened, or Endangered in California and elsewhere.

List 2 = Plants that are Rare, Threatened or Endangered in California but more common elsewhere.

List 3 = Plants for which more information is needed.

List 4 = Plants of limited distribution.

CNPS, 2001

5.1.3.1 Special Status Wildlife Species

All wildlife species identified as having a moderate to high potential for being present on the project site in Table 5-1 are discussed in greater detail in the sections below. Two additional species, the California red-legged frog and the San Francisco garter snake, are also discussed in Table 5-1 due to their State and federal listing status and presence in the surrounding region. The known occurrences of all special status wildlife species within 5 miles of the project site is shown in Appendix F, Figure 1, CNDDDB Wildlife Occurrences within 5-mile Radius of Study Area. (The location of San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) is not included on the map in order to protect the species from illegal collection).

San Francisco Dusky-footed Woodrat

San Francisco Dusky-footed woodrat (*Neotoma fuscipes annectens*) is one of eleven subspecies of the dusky-footed woodrat that live throughout California and the arid west. The species is a California Species of Special Concern. The range of the San Francisco dusky-footed woodrat includes the coastal belt of San Francisco as far north as the Golden Gate, as far east as Walnut Creek in Contra Costa County and Niles Canyon in Alameda County and south at least until the campus of UC Santa Cruz (Hooper 1944). Although the dusky-footed woodrat is generally considered common throughout its range, their complex social structure makes them sensitive to disturbance (Santa Cruz Mountains Bioregional Council (SCMBC, 2004).

The woodrat, a nocturnal mammal, occurs in a variety of brushy and wooded areas that provide cover from aerial and ground predators. Suitable woodrat habitat in San Mateo County includes coastal scrub, riparian scrub, and forested habitats. They are typically not found within open habitats such as grassland, but would traverse through such habitat for mating or range expansion even at the expense of temporary vulnerability to predators. Kelly (1990) reports a male woodrat traveling 30 meters (100 feet) across a meadow with little cover to reach estrous females for mating.

Dusky-footed woodrats eat primarily woody plants, including leaves, flowers, nuts and berries. Specific food sources used throughout the Santa Cruz Mountains include coast live oak, coffeeberry, blackberry, gooseberry, poison oak, and honeysuckle.

The woodrat builds stick structures for nesting that average five feet long and four feet in height. Woodrats are typically found living in colonies of 3 to 25 houses. These elaborate dwellings help protect the woodrat from seasonal temperature extremes and predators. Various chambers can be found within the houses, each serving a different purpose for its resident woodrat including food storage, nesting, and latrine. Other wildlife such as amphibians, reptiles and invertebrates are commensal users of active woodrat nests. It is common for one woodrat to use several houses. However, some female woodrats would occupy the same nest for their entire lifespan, at which time one of her female offspring take over the nest. Therefore, some woodrat nests are actively used for as long as 30 years (SCMBC 2004).

Female woodrats generally have one to two litters per year between February and September. Male and female woodrats do not share nests, however, a female would share the nest with her litter for several months. A male woodrat territory typically overlaps 1 to 5 female woodrat territories but no other male territories. However, female territories would overlap with each other. Territory size varies greatly but male territories are typically larger than female territories. Male territories range from 0.3 to 0.6 acres and female territories range from 0.1 to 0.5 acre.

Twenty-four San Francisco dusky-footed woodrat houses were found on the project site, and several showed signs of current activity. Woodrat is occupying the coastal scrub on the north facing slope of the property along Fassler Avenue and within the willow scrub just off the eastern boundary of the site near Cabrillo School (Figure 16, Potential Special Status Species Habitat Map). Woodrat houses also occur on the Prospects residential project site, on the north side of Fassler Avenue across from the Harmony @ 1 project site. It is likely that there are several more woodrat houses within the dense coastal scrub vegetation on the north side of the project site along Fassler Avenue, which could not be penetrated by biologists due to the high density of shrubs and poison oak (Figure 16).

Birds

Three special status bird species were observed on site during biological surveys. A loggerhead shrike was observed on the southeast boundary of the site in November 2006, a California thrasher was observed on the northeast corner of the property in March 2007, and a white-tailed kite was observed foraging over the grassland. None of the other bird species of concern identified as having a high or moderate potential were observed on site during surveys.

Loggerhead Shrike (California Species of Special Concern). Shrikes are small predatory birds that feed on insects, mice and small amphibians and reptiles. Shrikes use open grasslands and savannah habitats as well as fencerows, old orchards, mowed roadsides, agricultural fields, and open woodlands. Breeding shrikes usually settle near isolated trees or large shrubs. This species was identified on the southeast boundary of the project site.

One loggerhead shrike was observed on the southeast boundary of the project site in November 2006. This species nests in shrubs and small trees, and there is a moderate potential that this species is nesting on the project site. No nesting activity however was observed for this species during following up nesting bird surveys conducted in March and April 2007.

California Thrasher (Federal Species of Concern). California thrasher is a jay-sized bird with a large recurved bill. It feeds on insects, spiders, acorns, and seeds primarily on the ground. Thrasher is found in chaparral, coastal scrub and riparian habitats with dense canopies and openings. They build a cup nest two to nine feet above ground.

One California thrasher was observed on the western edge of the property, near Roberts Road in March 2007. This species could nest on site within the dense coastal scrub vegetation.

White-tailed Kite (Federal Species of Concern and a California Fully-Protected Species). White-tailed kite is a predatory bird that primarily feeds on rodents, and occasionally on birds, reptiles, amphibians, and insects. The species forages over open grasslands, farmlands, and marshlands, often hovering while searching for prey. White-tailed kites require trees for nesting, and typically nest in tall trees such as pines near open foraging areas.

One white-tailed kite was observed foraging over the project site, and roosting in a small Monterey pine tree on the western side of the project site in May 2007. This species could nest within the tall Monterey pine trees on the western side of the project site near Roberts Road, or within the large Monterey pine grove within the large ravine to the east of the project site.

Other Bird Species of Concern. Suitable habitat is present onsite for eight other special-status bird species (Table 5-1). These include Ferruginous hawk, Northern harrier, Costa's hummingbird, Allen's hummingbird, Red-breasted sapsucker, Olive-sided flycatcher, and Salt marsh common yellowthroat. These birds could variously use all of the habitats at the site, as explained in Table 5-1. None of these species were observed there during field surveys.

San Francisco Forktail Damselfly

The San Francisco forktail damselfly (*Ischnura gemina*) does not have a listing status, but is considered a special status species by the California Department of Fish and Game. There is currently a lack of information on the distribution and habitat requirements for this species (personal communication Dave Johnston, CDFG). This species was noted by WRA as having a high potential for occurrence on the project site, however there is very little wetland habitat on site that could support this species. Potential habitat for this species on the project site is located at the seep area on the west side of the site adjacent to Roberts Road, and in the large erosion gullies on the south slope that have riparian vegetation. All of these areas are outside of the proposed project and would not be impacted by the project.

Mission Blue Butterfly

The Mission blue butterfly (*Icaricia icarioides missionensis*) is a federally listed endangered species. The Mission blue requires three larval host plants, silver lupine (*Lupinus albifrons* var. *collinus*), summer lupine (*Lupinus formosus* var. *formosus*) and varied-color lupine (*Lupinus variicolor*). Presence of one or more species of host plants is necessary for Mission blue survival, however presence of host plants does not indicate presence of the butterfly. Host plant density, availability of nectar plants, microclimate and distance to existing Mission blue populations are determining factors in whether Mission blues are present at a given location (TRA, 1982).

Mission blue habitat consists of grasslands, rocky outcrops, disturbed roadcuts and landslide areas with abundant host plants and nectar plants. Typical host plant patches range from twenty to thirty large plants to several hundred plants. Mission blues use a variety of nectar plants including non-native thistles such as Italian thistle (*Carduus pycnocephalus*), and native herbs such as California phacelia (*Phacelia californica*), coastal buckwheat (*Eriogonum latifolium*), California horkelia (*Horkelia californica*) and golden aster (*Heterotheca bollanderi*), among others. Areas such as roadcuts can often provide important wind-protected habitat for the species. Without control methods and/or disturbance, invasive plant species and coastal scrub succession would eliminate Mission blue habitat.

On average, Mission blues begin adult flight in March, are most abundant in April and May, and observations begin to drop off by late May or early June. Early flying Mission blues typically fly between March and May and are associated with silver lupine, whereas late flying Mission blues are associated with summer lupine. Both silver lupine and summer lupine are commonly used by the Mission blue butterfly within the range of the species, while varied-color lupine is used less commonly. Varied-color lupine is typically used by Mission blue when in association with either silver lupine and/or summer lupine, though large patches of varied-color lupine can also support Mission blue butterflies.

Female mission blues lay their eggs on their host plant lupines throughout the adult flight period. Larvae hatch in 4 to 10 days and feed on the mesophyll layer within the leaves of the lupines. After about 3 weeks the larvae begin diapause, typically within the leaf litter at the base of the host plant. The following spring, the larvae emerge and begin feeding again for approximately 1 month before pupating. Pupation lasts approximately 3 weeks until the pupae transform into the adult form.

Mission blues are known to move up to approximately 0.25 miles between habitat patches (TRA, 1982), however it is likely that greater distances can be covered by the species if there are no significant barriers (urbanization, forest) between habitat patches. The closest known colony of Mission blue butterflies is located to the northeast of the project site on Sweeney Ridge. The nearest Mission blue host plants on Sweeney Ridge are located approximately 1.3 miles northeast of the project site (National Park Service, 2006), and are currently separated from the project site by coastal scrub and forest vegetation. In the past it is feasible that more grassland occurred between the project site and the known population, and that Mission blue was more widely spread.

Two species of lupine (summer lupine and varied-color lupine) were observed on the project site. Approximately 300 summer lupine plants were found on the project site on the southwestern slope, and approximately 45 varied-color lupine plants were found on the western ridge during field surveys in March, April, and May 2007 by TRA biologists (Figure 16). A variety of nectar sources were also observed on site including California horkelia, coastal buckwheat, beach strawberry (*Fragaria chiloensis*), golden aster, and several species of thistles. Both lupine plant species found on the site are used by the Mission blue butterfly as larval host plants, however the Mission blue is found less often on varied-color lupine. Varied-color lupine is commonly found within coastal prairie on the coast side, but Mission blue is not. Subtle factors such as microclimate may preclude presence of the Mission blue butterfly in many areas where varied-color lupine occurs.

In subsequent surveys done during the flight season, TRA biologists did not observe adult Mission blue butterflies at the site but did find the eggs of a Lycaenid family butterfly on the summer lupine there. Other common Lycaenid butterflies that occur in the area include the acmon blue and the silvery blue. However, it is unlikely that the other Lycaenid species would lay eggs on the *L. formosus*, since the *L. formosus* is not out during the silvery blues flight period (early spring), and the acmon blues primarily use coastal buckwheat as their host plant in our area (D. Arnold, pers. comm.). Thus it is assumed that the eggs found at the site belong to Mission blue. Additional surveys, possibly multi-year surveys, would be necessary to confirm presence of the species.

Callippe Silverspot Butterfly

The Callippe silverspot (*Speyeria callippe callippe*) is a federally listed threatened species. The Callippe silverspot (Callippe) is a large butterfly, approximately 2.5 inches across, and is distinguishable by its yellow/orange/brown coloration, teardrop-shaped silver spots on the undersides of the wings, and distinctive flight pattern. Callippe is limited in its distribution to the San Francisco Bay Area, and is found on San Bruno Mountain near San Francisco and in a few locations in the East Bay Hills. Callippe is locally abundant on San Bruno Mountain (San Bruno Mountain Ecological Database, TRA Environmental Sciences). Habitat for Callippe includes grassy slopes that support dense stands of its host plant, Johnny jump-up (*Viola pedunculata*), in conjunction with suitable nectar plants, and hilltops and ridgelines which provide important mating territories. Suitable host plant habitat for Callippe includes patches of several hundred to a few thousand or more *Viola pedunculata* plants on broad, open grassland slopes.

The species does not migrate, however it has been recorded traveling as far as 0.75 miles between habitat areas on San Bruno Mountain, where no significant barriers such as dense forests or developments are present (TRA, 1982). Three patches of *Viola pedunculata* (approximately 80 plants total) occur on the southeast ridgeline of the property (Figure 16). It is unlikely that Callippe occurs at the site due to the low amount of host plant, the distance to known populations, and the intervening barriers to migration. Even if this were a historic isolated population, the low numbers of host plant are not likely to support a population of this species.

Myrtle's silverspot butterfly

The Myrtle's silverspot (*Speyeria zerene myrtleae*) is a federally listed Endangered species in the brush foot family (Nymphalidae). The Myrtle's silverspot is approximately 2.2 inches across and golden brown with numerous black spots and lines. The wing's undersides are brown, orange-brown and tan with black lines and distinctive silver and black spots. Myrtle's silverspot can be found in sheltered areas of coastal dune or prairie habitat within several miles of the coast. The host plant for Myrtle's silverspot is Western dog violet (*Viola adunca*), and females would lay their eggs in the debris and dried stems of these plants. The adult flight season generally ranges from late June to early September. Adults feed on nectar from flowers including gumplant (*Grindelia* spp.), yellow sand verbena (*Abronia latifolia*), mints (*Monardella* spp.), bull thistle (*Cirsium vulgare*) and seaside daisy (*Erigeron glaucus*).

The historic range of this species included coastal areas as far south as Pescadero in San Mateo County and as far north as the mouth of the Russian River in Sonoma County. Recent surveys were completed for this species in the early 1990's by the Center of Conservation Biology at Stanford University. These surveys found only three existing populations all within Marin County and estimated the total population at less than 10,000 individuals. The Myrtle's silverspot has been considered extirpated from San Mateo and San Francisco counties since the 1970's.

No larval host plants (western dog violets) were observed on the project site. Adult nectar plants found on the property included bull thistle, seaside daisy, hairy gumplant (*Grindelia hirsutula* var. *hirsutula*), and coyote mint (*Monardella villosa*). Because no larval host plants were found onsite and given the lack of observations of this species in San Mateo County since the 1970's, there is no potential for Myrtle's silverspot to occur on site.

California Red-legged Frog (CRLF) and San Francisco Garter Snake (SFGS)

These species are treated together because they use similar habitat in the region, but that habitat is not present on the project site. However, these species move between breeding locations and could move through the site. The assessment of the likelihood that these species could cross the site is the same for both. An explanation of each species' ecology is provided first, followed by a discussion of the likelihood of presence. Although the likelihood of presence is extremely low, these species (particularly the SFGS) are highly protected, and any impact would be significant. Hence, an in-depth description is provided, and mitigation is recommended in the impacts analysis.

California Red-legged Frog. The California red-legged frog (*Rana aurora draytonii*) is a federally listed Threatened species and a California Species of Special Concern. The project site is not within any proposed Critical Habitat area for CRLF.

The California red-legged frog occurs in grassland, riparian woodland, oak woodland, and coniferous forest but prefers quiet freshwater pools, slow-flowing streams, and freshwater marshes with heavily vegetated shores for breeding. These frogs typically stay near the shore hidden in vegetation rather than in open water. Red-legged frogs frequently occupy seasonal bodies of water, and in some areas these habitats may be critical for persistence. It is speculated

that CRLF may lie dormant during dry periods of the year or during drought. CRLF are thought to disperse widely during autumn, winter, and spring rains. Juveniles use the wet periods to expand outward from their pond of origin and adults may move between aquatic areas. Frogs disperse through many types of upland vegetation and use a broader range of habitats outside of breeding season.

The project site does not support any aquatic habitats that could provide potential breeding habitat for CRLF. There is a low potential for CRLF to use the project area as a dispersal corridor because it lies between two breeding sites, and there are significant barriers to movement. According to the Critical Habitat definition for a CRLF dispersal corridor, an area must provide a movement corridor between two known breeding populations. The site lies between breeding habitat on Calera Creek to the north and San Pedro Creek to the south (Appendix F-1, Figure 1). At present, there is significant urban and suburban development between these locations that would very likely prevent CRLF movement between these sites through the project area.

San Francisco Garter Snake

San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), is a state and federally listed Endangered Species, and a state Fully-protected species. SFGS are secretive residents of wetlands, grasslands near ponds, marshes, and sloughs and are likely to retreat into water when disturbed. They are usually found around ponds and marshes that support large populations of tree frogs (*Hyla regilla*), red-legged frogs and/or bullfrogs (*Rana catesbeiana*). SFGS are also known to disperse through a variety of vegetation types to reach breeding pond locations and they may spend some time in upland areas, especially during the autumn and winter. There are no ponds, marshes, or riparian areas located on or adjacent to the project area that could support the SFGS. The site does contain upland habitat and there is a low potential for SFGS to use the site.

There is a low likelihood that CRLF and/or SFGS occur on site based on 1) the lack of aquatic breeding habitat for these species on site and within the project vicinity, 2) the presence of significant urbanization barriers between the project site and known occurrences of SFGS and CRLF, and 3) the steep upland topography of the site. These points are explained as follows.

1) Lack of Aquatic Habitat on the Project site and in the Vicinity

The project site is located in an upland area and there are no intermittent or perennial aquatic features on site or within the vicinity of the site that would potentially attract CRLF and/or SFGS. Several smaller erosional features located between and immediately east of the gully features may qualify as jurisdictional waters or wetlands (WRA, 2005), however these features do not provide suitable habitat for CRLF and/or SFGS. On the east side of the project site, there is a canyon with riparian cover (Figure 14), however the drainage within the canyon is ephemeral and is unlikely to support CRLF or SFGS. The nearest perennial water source is approximately 1,000 feet to the north within a small creek adjacent to Rockaway Beach Avenue (Figure 3). It is unlikely that the small perennial drainage provides breeding habitat for CRLF due to the lack of suitable ponds. There is also an extremely low likelihood that SFGS would be present within the drainage, since SFGS require wetland areas with emergent vegetation for

cover, with an abundance of both Pacific tree frogs and *Ranid* frogs (i.e. CRLF and/or bullfrog (*Rana catesbeiana*)).

2) Significant Barriers between Project Site and CRLF/SFGS Breeding Habitat.

Though these species can move through upland habitats, the site is over 1 mile from any known habitat areas for CRLF and SFGS, and there is significant urbanization that lies between these areas and the project site. The two known locations that provide breeding habitat for CRLF and SFGS are: San Pedro Creek on the south, and Calera Creek marsh on the north. The Linda Mar residential and commercial areas between San Pedro Creek and the project site pose a significant urban barrier to movement. On the west and northwest side of the project site, Highway 1 and residential and commercial development in the Rockaway Beach area create a significant barrier between the Calera Creek Marsh and the project site. It is highly unlikely that CRLF and/or SFGS could successfully cross Highway 1, and/or through the commercial and/or residential areas of the City of Pacifica to get to the project site.

3) Upland Topography of Site Decreases Likelihood of SFGS and/or CRLF Presence.

The project site is located on a ridgeline, between 200 and 400 feet elevation, and is separated from the nearest perennial wetland habitat by approximately 1,000 feet. The slope separating the project site from the drainage to the northeast is very steep (approximately 30 percent slope) and is covered with dense coastal scrub vegetation. Fassler Avenue, a heavily used roadway, also presents a partial barrier to amphibian and reptile movement, and is located between the slope and the project site. Though CRLF and SFGS can be found in upland habitats, they are typically only found in upland habitats that are contiguous with breeding habitats for these species.

5.1.3.2 Special Status Plant Communities

Central Coast Riparian Scrub

Central coast riparian scrub is considered a special status plant community by DFG and has a ranking of G3 S3¹. The dominant species of this community is arroyo willow (*Salix lasiolepis*). Central coast riparian scrub is found within the drainages on the south and east boundaries of the property (Figure 14). In addition, the two large and several smaller erosional features (rills) on the lower southeast-facing slope contain pockets of central coast riparian scrub. These rills drain into a larger riparian scrub feature that is adjacent to Cabrillo School, and forms the southeast boundary of the site.

Coastal Terrace Prairie

Coastal terrace prairie is considered a special status plant community by DFG and has a ranking of G2 S2.1² (CNDDB). This plant community is interspersed throughout the grasslands

² 1. CNDDB RANKS

CNDDB ranks are shorthand formulas that provide information on the rarity of a species or subspecies, both throughout its global range and its range within the State. We use the best information available to assign these ranks and they are regularly updated as new information becomes available.

GLOBAL RANKS: Worldwide status of a *full species*: G1 to G5

G1 = Extremely endangered: <6 viable occurrences (EO's) or <1,000 individuals, or < 2,000 acres of occupied habitat

on site (Figure 14), but is more prevalent on north facing exposures and within areas where shade or coastal fog provides additional moisture to support this plant community.

Wetland

The two large and several smaller erosional features on the lower southeast-facing slope may be jurisdictional wetlands according to CDFG guidelines (WRA, 2005). The two larger gullies (rills) contain defined drainage courses and Central Coast Riparian Scrub. The smaller features exhibit wetland hydrology. One additional wetland feature was identified on site during follow up biological surveys by TRA. A small seep area (approximately 0.1 acres in size) is located on the west-facing slope adjacent to Roberts Road (Figure 14). There is also a small roadside cement drainage ditch near the corner of Fassler Avenue and Roberts Road. The drainage ditch is cement lined, does not support wetland vegetation and only holds water temporarily (observed to be approximately 1-2" deep in March 2007), and is therefore not considered a wetland feature. No other wetlands, waters, or sensitive aquatic habitats are located within the project site.

As shown on the Site Grading Plan (Figure 7), and the Vegetation Communities Map (Figure 14), the erosional features and the small seep area are well outside the proposed area of development and are included in the areas designated for common open space. These areas would not be impacted by the proposed project and would be protected by restrictions contained in the development's Codes, Covenants, and Restrictions (CC&Rs), (see Mitigation Measure BIO-5). Since the project would not affect any of these features, a wetland delineation was not performed.

5.1.3.3 Special Status Plant Species

In preparation of a biological assessment for the subject property in 2006, WRA considered 32 special-status plant species for their potential to occur on site (Appendix F-2, Table 1). A total of 26 special-status plant species were determined potentially to occur on site based on the species' habitat requirements and occurrences elsewhere in the region (CNDDDB 2007, Corelli 1995, WRA 2005). Thirteen species were determined to have a moderate to high potential for occurrence. Field surveys were completed for these species during the appropriate bloom period both by WRA and TRA. No rare plants were found there. A list of the species that were surveyed for is provided in Table 5-2. A list of all of the species considered is included in Appendix F.

G2 = Endangered: about 6-20 EO's or 1,000 - 3,000 individuals, or 2,000 to 10,000 acres of occupied habitat

G3 = Restricted range, rare: about 21-80 EO's, or 3,000 - 10,000 individuals, or 10,000 - 50,000 acres of occupied habitat

G4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continuing threats

G5 = Demonstrably secure; commonly found throughout its historic range.

STATE RANKS: Statewide status of a *full species* or a *subspecies*: S1 to S5

Same general definitions as global ranks, but just for the range of the taxa within California.

5.2 PROJECT IMPACTS

5.2.1 Thresholds of Significance and Summary of Impacts

The following thresholds of significance are adapted from the Initial Study Checklist included in the CEQA *Guidelines*. A project would have a significant biological impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- 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;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- 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 project would have no effect on riparian habitat or wetland areas. The proposed project is not subject to nor would it conflict with any local policies or ordinances protecting biological resources, nor provisions of an adopted Habitat Conservation Plan, a Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Project compliance with local, state and federal policies governing biological resources are discussed in Land Use, Section 3.0.

5.2.2 Vegetation Impacts

5.2.2.1 Vegetation Communities

Grassland and Northern Coastal Scrub

Construction grading would include disturbance of 3.0 acres of grassland and 2.2 acres of northern coastal scrub for the purpose of road building, home site development, and construction of two stormwater debris basins (Table 5-3). The loss of these areas is approximately 8 percent of the project site and poses no substantial adverse effects on protected species through habitat modification, will not impact riparian, wetland or special status vegetation communities, interfere with wildlife movement, or conflict with local policies. The removal of this vegetation is a less than significant impact because it is confined to a small portion of the site, and all of the remaining habitat will be protected in a common area with a management plan.

Table 5-3 Planned Development Vegetation Impacts		
	Acreage Impacted	Total Acreage
Grassland (Coastal Terrace Prairie and California Annual Grassland)	3.0	42.7
Northern Coastal Scrub	2.2	20.2
Monterey Pine Forest	0.1	3.0
Central Coast Riparian Scrub	0	1.4
Total*	5.3	67.3
Source: TRA, 2007. Acreages are estimated.		

However, construction equipment staging or movement into areas intended for open space could extend the area of project impact and increase the loss or damage to vegetation communities and associated wildlife values. If the damage is extensive, so that the actual impacts to vegetation exceed thirty percent of the area of natural communities currently existing on the site, the impacts to natural habitats discussed above would be changed from less-than-significant to significant. This is because the impacts could result in removal of habitat for sensitive species, including San Francisco dusky-footed woodrat and the Mission blue butterfly. It is recommended that temporary construction fencing be erected to protect the open space areas from construction vehicles. This is identified as Measure BIO-1. This measure would ensure that impacts to vegetation communities remain confined to the intended development area. With this mitigation, the impact to vegetation communities would remain less than significant. Authorized construction staging areas shall be designated on the final version of the site plan so all contractors know where they are allowed to park vehicles and equipment and store building materials. Appropriate construction staging areas would include areas slated for development or grading.

Monterey Pine Forest

The project proposes removal of 122 Monterey pine and 3 Monterey cypress trees. Of the 125 trees, 31 occur within the building envelopes or access road footprint, 48 occur in individual lots outside of the construction zone, and the remaining 46 trees occur on Lot A proposed as common open space (Table 5-4). Removal of the 94 trees outside of the building envelopes or in the open space area is not necessary for lot development but is recommended by the project arborist due to their diseased condition (Appendix E).

Monterey pine and Monterey cypress are fast growing trees and are not native to the Pacifica area. Because the trees are in poor condition, their removal for site development is

generally not considered a significant biological impact. However, trees in poor condition can still provide cover and nesting habitat for wildlife. Removal of these trees during nesting season could result in a violation of both CDFG code and the Migratory Bird Treaty Act. In some cases the trees provide structural support for San Francisco dusky-footed woodrat houses. It is recommended that diseased trees located in the common open space area (Lot A) and private open space areas (Lot B and Parcel A) be retained for their wildlife value. Any tree removal occurring in Lots A and B could disrupt woodrat habitat and therefore should only be done under guidance from CDFG consistent with see Mitigation Measure BIO -2.

Table 5-4 Planned Development Tree Removal			
	Trees Located in Building Envelope	Trees Located outside of Building Envelope	Tree Total
Lot 1	0	1	1
Lot 2	0	18 (2 heritage)	18
Lot 3	1	8 (1 heritage)	9
Lot 4	1	3	4
Lot 5	1	0	1
Lot 6	0	0	0
Lot 7	1 (1 heritage)	1	2
Lot 8	0	2	2
Lot 9	1	0	1
Lot 10	0	0	0
Lot 11	0	0	0
Parcel A	0	3	3
Lot B	4 (1 heritage)	12	16
Project Road	22 (2 heritage)	0	22
Lot A Common Open Space	n/a	46 (5 heritage)	46
Totals	31	94	125
Source: Howard Linacre, December 2006; TRA 2007			

Furthermore, it is recommended that tree removal on individual lots be identified on the Specific Plan to be submitted to the City of Pacifica Planning Commission for review and approval prior to lot development. Tree removal on individual lots shall be approved only upon demonstration that 1) the tree is within the designated building envelope and removal is required for construction, 2) the tree is close to the building envelope and its condition represents a safety hazard to the proposed residence, or 3) the location and condition of the tree would create a visual blight when viewed from the residence. Heritage Trees may be removed only pursuant to the City Heritage Tree Ordinance (discussed further in Section 5.2.2.4 below). Conditional tree removal would protect wildlife resources on the site, including birds and the San Francisco dusky-footed woodrat, while protecting the safety and enjoyment of property by landowners. All trees specified for removal in Specific Plans for individual lots shall be replaced with species native to the Pacifica area. This mitigation is identified in Measure BIO-2 below and would further reduce the biological impact of tree removal. This impact is less than significant.

5.2.2.2 Special Status Plant Communities

Two sensitive plant communities were identified on site, Central Coast Riparian Scrub and coastal terrace prairie. A sensitive plant community is accorded special status in the CNDDDB, and hence impacts to such a community could be significant under CEQA. No central coast riparian scrub would be impacted by the project, as all proposed development areas are several hundred feet away from this plant community. Since the project would not affect this sensitive community, it would not exceed the thresholds of significance for special status “species”. The proposed project would impact approximately 3.0 acres (7 percent) of the approximately 42.7 acres of total grassland on site. Coastal terrace prairie is present within the 3.0 acres of grassland that would be impacted by the project, however this is not considered a significant impact since most of the coastal terrace prairie on site (93 percent) would be protected within the designated open space areas of the property.

5.2.2.3 Special Status Plant Species

The site was surveyed by WRA in December 2005 and in February and April 2006. The April 2006 survey was conducted during the spring bloom period for plants, however only the northern 12-acre parcel along Fassler Road was surveyed for special status plant species. WRA did not observe any special status plant species during this survey. Follow up biological surveys of the entire site were conducted by TRA in November 2006, and March, April and May 2007. Thirteen special status plant species were identified as having moderate potential for presence on the site. However, after surveying the site during the bloom season, it has been determined that these plants are not present in the proposed construction areas of the site. Therefore, the project would not impact special status plants.

5.2.2.4 Heritage Trees

The City of Pacifica Heritage Tree Ordinance regulates the removal of Heritage Trees (see Heritage Tree Ordinance discussion in Land Use, Section 3.1.2.4). Trees preserved on development sites must be carefully selected to make sure they may survive demolition or construction impacts, adapt to a new environment and perform well in the landscape. The goal is for long-term health, structural stability, and longevity.

In accordance with Section 4-12.07 of this ordinance, a certified arborist has prepared a Heritage Tree Survey and Tree Protection Plan (see Appendix E). The surveys identified heritage trees that would be impacted by project construction. Removal of Heritage Trees is a significant impact that would be mitigated by compliance with City ordinance. All trees were measured and tagged and appropriate tree species were identified for replacing the Heritage Trees that would be removed as a result of the project.

Of the 125 trees surveyed within the development area, 12 are Heritage Trees. Eleven of the Heritage Trees are Monterey pine and one is a Monterey cypress. Five Heritage Trees are located on the Lot A private open space area and do not need to be removed for project construction. Four Heritage Trees are located in the project access road or building envelopes and require removal for project construction (see Figure 17, Heritage Tree Locations and Table 5-3). Three Heritage Trees on Lots 2 and 3 are outside of building envelopes but may be conditionally removed by lot owners as specified in Measure BIO-2. All of the Heritage Trees

show symptoms of pine pitch canker disease and are in poor condition. The arborist report recommends removal of all diseased trees on site including the 12 Heritage Trees (Linacre, 2006). As discussed above, it is recommended that the trees located on the open space parcel (Lot A) not be removed but rather preserved to contribute to the wildlife habitat values on that parcel.

The Heritage tree ordinance states, “in order to mitigate the adverse effects of tree removal, a tree removal permit may be conditioned upon tree relocation on-site, planting of replacement trees, or payment of in-lieu fees.” In order to replace wildlife habitat lost as a result of removing the heritage trees, the tree removal permit should be conditioned to require replacement of the trees at a 1:1 ratio using species native to the area such as California buckeye (*Aesculus californica*) or coast silk tassel (*Garrya elliptica*) that provide suitable wildlife forage and bird nesting habitat (Biedleman and Kozloff, 2003). The proposed planting locations of the replacement trees are shown in Figure 17, Heritage Trees. Compliance with the City’s Heritage Tree Ordinance and replacement planting of heritage trees as specified in Measure BIO-3 reduces the impact to a less than significant level.

5.2.2.5 Increased Human Activity

Currently the project site is used by local residents as a vista point and for dog walking. The site receives both pedestrian traffic and off-road vehicle use on occasion. The project includes 14 units on the northern ridgeline and one unit (Lot 11) on the southwest slope of the parcel. Human use of the open space area of the project site would likely be increased by the project. Off-road vehicle use would not be permitted by the project, so this use would be halted.

Biological resources at the site, including sensitive species and plant communities, could be adversely affected by the increase in human use of the site. Such impacts include loss of vegetation, increased erosion, loss of wildlife from off leash pets, and introduction of exotic plant species from home gardening. The impacts would be reduced to a less than significant impact through habitat management actions identified in Measures BIO-4 and BIO-5 which will ensure that increased human activity does not trigger one of identified thresholds of significance.

5.2.2.6 Invasive Plant Species

The project area currently has infestations of non-native invasive species such as French broom, fennel and pampas grass. These plants form dense, single-species stands that replace the grassland and significantly reduce biological diversity. Invasive plant species are of state-wide concern because of impacts on natural resources and on agriculture (Cal-IPC.com). The project could exacerbate this problem in two ways; one is by ground disturbance that provides habitat for the species, and the other is by adding or introducing invasive plant species to the site through landscaping. The introduction or expansion of non-native invasive plant species at the site would result in a significant adverse biological impact by converting coastal terrace prairie, and habitat for the Mission blue and the San Francisco dusky-footed woodrat. Although these species are of statewide concern, some of them continue to be sold in nurseries. Mitigation Measures BIO-4, BIO-5, and BIO-6 require that invasive species be controlled at the site to avoid this impact. In addition, a management and monitoring plan for the common open space areas and the linked individual lot space areas would be developed for the site and submitted to the City of Pacifica (Measure BIO-4). This plan would need to incorporate ongoing invasive

species control as a management component (See also Measures BIO-5 and BIO-6). With these measures, the impact is reduced to a less than significant level.

5.2.3 Wildlife

5.2.3.1 Wildlife Movement Corridors

While the proposed project would allow urban development in an otherwise undeveloped parcel, it would not substantially interfere with the movement of any resident or migratory species. The net density of the development is one dwelling unit per five acres, which is low density. The 67-acre lot yields approximately 6 acres of buildable area based on the lot coverage limits established by the Hillside Preservation District (see Section 3.0). The remainder of the project site would be maintained in natural landscape within individual lots and common open space.

The proposed site plan (Figure 4) aligns the lots in a linear cluster along the northern ridge, and minimizes the effect on wildlife movement. Fencing would be prohibited so that wildlife can move throughout the property. This would link the individual lot space with the proposed common open space. In addition, improvements (i.e. modifications) to the natural landscape would be restricted by CC&Rs to native plant materials and native habitats consistent with regional plant communities as listed in Measure BIO-5.

The proposed site plan provides open space and natural areas for animal movement within and through the site. The project would not interfere with the movement of resident or migratory fish or wildlife species (see discussion of CRLF below). The proposed project would have a less than significant impact on resident or migratory animal species. A management and monitoring plan for the common open space areas and the linked individual lot space areas would be developed for the site and submitted to the City of Pacifica (Measure BIO-4). This plan would assure suitable habitat for wildlife movement through the parcel.

5.2.3.2 Bird Nesting Habitat

The project would remove 2.2 acres of northern coastal scrub vegetation that supports an abundance of bird nesting activity. Thus, there is strong potential for nesting birds to be disturbed by project construction activities. While most of the nesting birds potentially impacted by the project are common species, the Migratory Bird Treaty Act and California Department of Fish and Game Code prohibit disruption of nests during the nesting season. It is therefore recommended that pre-construction surveys be completed in the coastal scrub vegetation prior to construction of subdivision improvements (road, utilities, etc.) and prior to development of individual lots that impact coastal scrub habitat. Coastal scrub vegetation occurs primarily on the north side of the proposed project road. Pre-construction surveys are recommended on lots marked as Lot A and Lot B and on Lots 4 through 11. Alternatively, scrub vegetation potentially providing nesting habitat could be removed during the time of year when birds are not nesting (September 1 through February 15).

The pre-construction surveys shall identify the location of active nests and establish a disturbance buffer if nests are located. A minimum buffer of 50 feet is typically required by CDFG for songbird nests, and a minimum of 250 feet for raptor nests. If active nests were found

during a preconstruction survey, a buffer would need to be established and construction would not be allowed to occur within this buffer area. This mitigation is identified in Measure BIO-7, and reduces project construction impacts to nesting birds to less than significant.

5.2.3.3 Special Status Wildlife Species

San Francisco Dusky-footed Woodrat

The San Francisco dusky-footed woodrat (SFDW) inhabits the coastal scrub area on the north side of the project along Fassler Avenue (Figure 18, Biological Constraints). Construction of the proposed project would result in the removal of four to six SFDW houses within the access road and stormwater control basin areas and potentially one woodrat house on the building sites on the western portion of the property.

The project would result in the loss of 2.2 acres of coastal scrub in the northern part of the project area which could be used as SFDW habitat. Much of the SFDW habitat area would be avoided by the project development and protected as private open space on Parcel A and Lot B (Figure 18).

Road construction and debris basin areas should be staked and vegetation to be removed within the construction zone shall be surveyed for woodrat houses prior to vegetation clearance and grading activity. Woodrat houses found within construction zone shall be dismantled and rebuilt elsewhere on site during the non-breeding season (September to February), with guidance and approval from CDFG. This mitigation is identified in Measure BIO-8.

Fish and Game code also protects non-game mammals such as bobcat, fox and coyote. If these animals are denning in the dense coastal scrub vegetation the project could result in the loss of individual animals when grading is done. It is recommended that the survey for woodrat houses also include a survey for carnivore dens.

Birds

Three special-status bird species are confirmed to use the site (white-tailed kit, loggerhead shrike, and California thrasher). In addition, there are other species that are expected to use the site. These species are Ferruginous hawk, northern harrier, Costa's hummingbird, rufous hummingbird, Allen's hummingbird, red-breasted sapsucker, olive-sided flycatcher, and salt marsh common yellow throat.

The project would remove 3.0 acres of grassland, 2.2 acres of coastal scrub, and 0.1 acres of Monterey pine forest (Table 5-2). Approximately 39.4 acres of grassland and coastal scrub would remain in a natural state (common and private open space areas of Lot A, Lot B, and Parcel A) and an additional 22 acres of grassland and coastal scrub habitats would remain natural within the individual lots. As a result, approximately 92 percent of the property would be left in a natural state. These combined open space areas would continue to provide foraging and nesting opportunities for these special status birds. The vegetation removal needed for project development would not substantially diminish the foraging and nesting opportunities for special status bird species. Therefore, given the small impact of the project on potential habitat, the impact on special status birds is not significant. Pre-construction surveys recommended for

nesting birds in Measure BIO-7 would further ensure that special status birds potentially nesting in project trees would be protected from construction disturbance and that the project impact remains less than significant.

Mission Blue Butterfly

Due to the high number of *Lupinus formosus* plants (approximately 300) on the southwest side of the project site, the proximity to occupied Mission blue habitat on Sweeney Ridge, and the observation of Lycaenid family butterfly eggs on the lupines during the flight season of the Mission blue butterfly, it is highly possible that Mission Blue occur at the site.

The patches of *L. variicolor* occur on the western portion of the property, (Lots 2 and 4) and the patches of *L. formosus* occur on the southwestern portion (Lot 11) of the site (Figure 18). The quality of the Mission blue habitat on the southwest portion of the site is good due to the high number of *L. formosus* plants, whereas the quality of habitat on the northwest portion of the site is poor, due to the relatively low number of *L. variicolor* plants and the fact that this is not a preferred host plant for the species. Typically areas with low numbers of lupines, small-sized lupine, and/or areas that only contain *L. variicolor* plants are not used by the Mission blue butterfly (personal observations on San Bruno Mountain 1995 - 2007).

To avoid impacting the Mission blue butterfly, the buildable area within Lot 11 has been modified to avoid all *L. formosus* plants on site, and provide a 50-foot buffer between impacted areas and most of the *L. formosus* patches (Figure 19, Mitigated Design for Lot 11). The project as proposed would not avoid the *L. variicolor* patches on the western portion of the site, however this would not significantly affect the Mission blue because a) *L. variicolor* is not a preferred Mission blue butterfly host plant, b) the lupines are small in number and size, and c) the site is separated from the *L. formosus* patches by approximately 1,000 feet.

Ten surveys are scheduled to determine presence/absence of the Mission blue butterfly. Four surveys had been conducted at the time of the writing of this report. Surveys are conducted within all potential Mission blue habitat on site (including the *L. formosus* and *L. variicolor* patches). Surveys are scheduled to continue through the Mission blue flight season (mid to late June) to evaluate Mission blue use of the site. Though no adults have been detected, butterfly eggs were recorded on some of the *L. formosus* plants on May 24, 2007. This suggests that Mission blues use the site. No butterfly eggs or adults have been detected on the *L. variicolor* plants on the western portion of the project site.

For the purposes of this EIR, it is assumed that Mission blue butterfly occurs at the site, and mitigation to avoid take of the species is recommended (see Measures BIO-4 and BIO-10).

Callippe Silverspot Butterfly

Three small patches (total of approximately 80 plants) of *Viola pedunculata* (the Callippe silverspots' host plant) were found on the project site along the southern edge of proposed Lot 8 (Figure 18). These plants would be removed by the project.

Callippe silverspots require extensive patches of *Viola pedunculata* (several hundred to several thousand plants), in combination with hilltop topography. Though the project site

supports three small patches of *Viola pedunculata* and there is hilltop topography on site, the project site is outside of the known distribution of the species and does not provide adequate habitat to support this species. *Viola pedunculata* is found in coastal areas in San Mateo County to the north and south of the project site, and these areas do not support the Callippe silverspot butterfly. The closest known population of the Callippe silverspot butterfly is on San Bruno Mountain approximately six miles northeast of the project site. Due to the small number of host plants on site combined with the distance from known extant populations, the project is not expected to impact this species.

California Red-legged Frog (CRLF)

Suitable aquatic habitat for CRLF breeding is not present within the project site, however there remains a low potential for CRLF to disperse through the project site from the eastern and northeastern borders. In the surrounding region, small drainages and isolated ponds within the canyons associated with Sweeney Ridge may provide some breeding and dispersal habitat for the species. CRLF can travel through a variety of habitats including uplands when moving between breeding habitats. They have been found in upland areas up to 2.2 miles from breeding areas (Bulger, 2003 *in* Federal Register, 2006). Therefore, there is a low potential that CRLF could traverse the site.

Measures to avoid take of CRLF which may disperse onto the project property during construction are included in Mitigation Measure BIO-9. These measures depend mainly on monitoring. Installation of a barrier fence, as is usually recommended, is not recommended in this case because the likelihood of CRLF presence is very low and the installation and presence of a barrier fence could result in more adverse impacts to biological resources that outweigh the need for the fence. Implementation of this mitigation measure would prevent adverse project impacts on CRLF.

San Francisco Garter Snake

There is a very low likelihood that the project area would support this species. The nearest known location of San Francisco garter snakes is approximately 1.3 miles northwest of the project site. There is significant urban development and upland topography between the project site and known occupied locations. However, if this species did occur at the project site, the project construction could result in take and cause a significant impact.

Measures to avoid take of SFGS which may disperse onto the project property during construction are included in Mitigation Measure BIO-9. These measures depend mainly on monitoring. Installation of a barrier fence, as is usually recommended, is not recommended in this case because the likelihood of SFGS presence is very low and the installation and presence of a barrier fence could result in more adverse impacts to biological resources that outweigh the need for the fence. Implementation of this mitigation measure would prevent adverse project impacts on CRLF. Implementation of this mitigation measure would reduce project impacts to SFGS to a less than significant level.

5.2.4 Cumulative Impacts

To assess cumulative impacts, the proposed project is considered in light of other projects occurring in the same area. A small subdivision is currently proposed for the north side of Fassler Avenue (The Prospects project), across from the Harmony@1 project site. The Prospects project would require the removal of 4.8 acres of coastal scrub and non-native grassland habitat. Mitigation measures for the Prospects project include avoidance and relocation of San Francisco dusky-footed woodrat, pre-construction surveys and a biological monitor to avoid take of San Francisco garter snake and California red-legged frog, avoidance of nesting birds, revegetation of coastal scrub, avoidance of willow riparian habitat, and measures to minimize the human impact on the open space (control of pets, restrictions on landscaping to reduce the spread of non-native invasive plants). The Prospects development has a clustered design, so that the housing units are confined to a 2-acre area, and 9 acres are protected as open space. Due to its design it would not create a significant barrier to wildlife movement across local and regional open space.

Coastal terrace prairie was not found to occur on the Prospects project site. Willow riparian would be avoided on both the Prospects and the Harmony@1 project sites. After mitigation neither project would result in significant unavoidable adverse biological impacts. Without mitigation these projects would have an adverse cumulative effect on San Francisco dusky-footed woodrat, possibly on nesting birds, and on overall habitat quality. After mitigation there would not be a significant cumulative impact on biological resources.

The measures recommended to mitigate potential impacts of the project on sensitive biological resources also would ensure that any project-related contribution to cumulative biological impacts is insignificant.

5.3 MITIGATION MEASURES

The following mitigation measures would reduce significant impacts to biological resources to a less than significant level. For impacts that are not significant, additional mitigation measures are provided to further reduce impacts to the maximum extent possible.

IMPACT: *Conserved open space areas could be damaged if used for construction staging areas or if heavy construction equipment strays into open space areas.*

Measure BIO-1: Prior to construction, a temporary barrier fence shall be erected along the northern open space habitat areas to prevent damage to the areas during construction of project infrastructure improvements. Authorized construction staging areas shall be designated on the final version of the site plan so all contractors know where they are allowed to park vehicles and equipment and store building materials. Appropriate construction staging areas would include existing roads or areas slated for development or grading. Storm water runoff and management of any fluids would be according to the required Storm Water Pollution Prevention Plan, described in the Hydrology section. Storm water runoff from construction staging areas shall be directed away from open space habitat areas.

IMPACT: *The project proposes removal of 122 Monterey pine and 3 Monterey cypress trees most of which are diseased and in poor condition, but provide wildlife habitat. 31 trees occur in*

the project road and building envelope areas, 48 occur on individual lots outside of the construction zone, and 46 occur on a lot to be held in private open space. (For impacts to Heritage Trees, see Measure BIO-3).

Measure BIO-2: In order to provide continued wildlife values on the project site, trees in designated open space areas (Lot A, Lot B and Parcel A) shall not be removed. Tree removal on individual lots shall be approved only upon demonstration that 1) the tree is within the designated building envelope and removal is required for construction, 2) the tree is close to the building envelope and its condition represents a safety hazard to the proposed residence, or 3) the location and condition of the tree would create a visual blight when viewed from the residence. Conditional tree removal would prevent unnecessary reductions in wildlife resources on the site while protecting the safety and enjoyment of property by landowners. All trees specified for removal in Specific Plans for individual lots shall be replaced with a native species.

IMPACT: *Construction of the proposed project would result in the removal of 12 trees that meet the definition of Heritage Tree in the local ordinance. With preservation of trees on the private open space parcel under Measure BIO-2, the number of heritage trees removed by the project is reduced to 7.*

Measure BIO-3: The Applicant shall comply with all provisions of the City's Municipal Code (sec. 4-12-04) for preservation of Heritage Trees. Prior to the removal of the 7 Heritage Trees, the Applicant must obtain a Heritage Tree Removal Permit from the City. The Applicant shall replace the 7 Heritage Trees removed with 7 new native shrub/tree species suitable for the site (e.g. coast silk tassel (*Garrya elliptica*), California buckeye (*Aesculus californica*), or others). Recommended planting locations are shown in Figure 17 of this EIR.

IMPACT: *The new residential use and increased human activity on the site could adversely impact biological resources found within the open space habitat areas and result in a significant decline of habitat values for wildlife over time.*

Measure BIO-4: The development's Covenants, Codes, and Restrictions (CCRs) shall contain language that shall ensure the protection of all open space habitat (including Lot A and other open space areas) from degradation as a result of resident activities and shall ensure that the open space habitat is managed and protected in a manner that would ensure the long-term viability of all the biological resources currently found on the project site. The CCRs shall include provisions that prevent activities within the open space habitat that would permanently damage native vegetation, cause erosion, or harass or harm wildlife. These restrictions do not apply to any authorized native habitat management efforts such as invasive species control, erosion repair, or native plant revegetation. The CCRs shall include the following restrictions on human activity:

1. New volunteer trails within the open space areas shall be controlled so that trails do not damage vegetation and cause erosion.
2. All pets (dogs and cats) shall be controlled within open space areas so that they do not hunt, harm, or harass wildlife or otherwise damage biological resources.
3. Residents shall not store or dispose of items (including yard trimmings) within the open space areas.

4. The use of rodenticides within the open space areas shall be prohibited unless approved by CDFG. Management of the open space areas shall also include the control of feral cats, and limitations on domestic cat ownership
5. The large, vegetated drainage along the eastern boundary of the project property may contain USACE jurisdictional waters (this drainage does not support perennial flow, but has a defined drainage channel). The drainage shall be protected from impacts of runoff from urban areas, damage due to humans or pets, or other activities that degrade the natural habitat.

In addition, through consultation with City of Pacifica, US Fish and Wildlife Service and the CDFG, a Management and Monitoring Plan shall be developed and implemented for the open space areas. The Plan shall include the following:

1. A description of the goals of the Management Plan. The goals should foster the protection of native habitat and wildlife diversity at the site, should protect the wildlife corridor, and should support a healthy ecosystem.
2. A description of methods to protect and enhance native habitat on the site, including coastal terrace prairie, coastal riparian scrub, and northern coastal scrub.
3. A description of the methods to protect and enhance habitat of sensitive species on the site, including the Mission blue butterfly, the San Francisco dusky-footed woodrat, the loggerhead shrike, and the white-tailed kite, and how individually-owned lots with restriction on them (see Measure BIO-10) may fit into the scheme.
4. A schedule of management and enhancement activities.
5. Annual monitoring and reporting, including surveys of the species of concern and the results of any enhancement activities undertaken at the site.
6. An educational component, so that lot owners understand the purpose of the management plan and can choose to apply the measures to their own lots.

The applicant or homeowner's association shall request a letter of concurrence from the US Fish and Wildlife Service that the management plan will not result in take of the Mission blue butterfly or any other federally-listed species.

IMPACT: *Non-native, invasive plants could escape from landscaped areas within yards and colonize and spread into the open space areas, converting native habitat and significantly reducing biological diversity.*

Measure BIO-5: The development's Covenants, Codes, and Restrictions shall contain language restricting all landscape planting so that those plants identified by the California Invasive Plant Council (Cal-IPC) in Table 1 of the California Invasive Plant Inventory shall not be planted. In addition, only native plant species may be used for landscaping that are consistent with the regional plant communities found in the local region. A qualified biologist shall review all proposed planting lists and compare it to the most recent Cal-IPC list to ensure no invasive plants on the list are planted. The biologist shall also check the plants to insure consistency with local native ecosystems. The biologist shall inspect the plants at the time of installation to make sure that no substitutions have been made by the landscape contractor. (The most recent version of the California Invasive Plant Inventory can be found at <http://www.cal-ipc.org/ip/inventory/pdf/Inventory2006.pdf>). This measure shall apply to all landscaping within the project site, including landscaping of common areas and within each of the housing lots.

IMPACT: *Construction of the proposed project would result in ground disturbance that could facilitate the spread of invasive plant species within the designated open space areas on site, and result in increased erosion that would adversely impact plant and wildlife habitat.*

Measure BIO-6: Invasive species shall be removed during project construction on a quarterly basis within the graded areas and on adjacent open space lands. Species to be removed include existing invasive species on site, such as French broom, fennel, pampas grass, and cotoneaster as well as any others that establish as a result of project grading activities. In addition, to ensure longterm control of invasive species, this provision shall be included in the Management Plan required in Measure BIO-4.

IMPACT: *Special status bird species could use and potentially nest within the project site. Project construction could adversely impact the breeding of special status bird species resulting in violation of CDFG code and the Migratory Bird Treaty Act and a significant impact.*

Measure BIO-7: If any trees or shrubs are proposed to be removed during the nesting season (February 15 to August 31), pre-construction surveys for nesting birds shall be conducted. This measure shall apply to all construction occurring on the project site, both the infrastructure improvements and construction within each of the housing lots. The surveys shall identify active nests and establish a disturbance buffer if nests are located. A minimum buffer of 50 feet is required by CDFG for songbird nests and a minimum of 250 feet for raptor nests. Construction activity within an established buffer area is prohibited until nesting is complete.

IMPACT: *Construction of the proposed project would result in the removal of four to six San Francisco dusky footed woodrat houses within the proposed roadway on the north side of the property, and potentially one more woodrat house from grading of building sites on the western portion of the property. Removal of coastal scrub habitat could adversely impact carnivores in violation of CDFG code if any are denning there.*

Measure BIO-8: The following mitigation plan shall be implemented:

1. Preconstruction surveys for woodrat houses. A preconstruction survey for woodrat houses shall be conducted within all areas proposed for disturbance, prior to any disturbance on site. These surveys shall include surveys for carnivore dens (such as bobcat) on site. If any carnivore dens are detected within the construction area, CDFG shall be contacted for guidance to avoid impacting any dens.
2. Preconstruction woodrat house dismantling and/or relocation. For all woodrat houses that will be impacted by construction impacts, the houses shall be dismantled and relocated to appropriate locations within the open space areas on the project site, and any woodrats captured and released into their relocated houses. House dismantling and/ or relocation shall be conducted only when necessary, during the non-breeding season (September to February), and under guidance from the CDFG.
3. Control of non-native species. The management of the onsite common open space area (Lot A) per Measure BIO-5, shall include control of non-native invasive weeds to maintain the native plant species that provide important cover and food resources for the San Francisco dusky-footed woodrat, prohibit the use of rodenticides within the open

space area unless approved by CDFG and the control of feral cats and limitations on domestic cat ownership.

IMPACT: *While suitable aquatic habitat for California red-legged frog (CRLF) and San Francisco garter snake (SFGS) is not present with the project site, there remains an extremely low chance that CRLF and/or SFGS could disperse through the project site from the eastern border. Project construction has a low potential to impact dispersing CRLF and SFGS, however if take of either of these species occurred, it would be significant.*

Measure BIO-9: A qualified biologist shall be retained by the applicant to oversee construction and ensure that take of the San Francisco garter snake or California red-legged frog does not occur during construction. The following procedures shall apply:

- Prior to any grading or vegetation removal, a biologist shall conduct a preconstruction survey for San Francisco garter snake and California red-legged frog. During construction, a trained biologist or a trained on-site monitor (such as the construction foreman) shall check the site in the morning and in the evening for the presence of California red-legged frog and San Francisco garter snake. This includes checking holes, under vehicles and under boards left on the ground. If any CRLF or SFGS are found, construction shall be halted until they disperse naturally, and the monitor shall immediately notify the biologist in charge and the USFWS. Construction shall not proceed until adequate measures are taken to prevent dispersal of any individuals into the construction zone, as directed by the USFWS. Subsequent recommendations made by the USFWS shall be followed. The monitor shall not handle or otherwise harass the animal. The biologist in charge shall train the on-site monitor in the identification of CRLF and SFGS. The biologist in charge shall visit the site at least once a week during construction and confer with the trained on-site monitor.
- Construction workers shall be informed of the potential presence of California red-legged frog and San Francisco garter snake, that these species are to be avoided, that the foreman must be notified if they are seen, and that construction shall be halted until authorization to proceed is obtained from the USFWS. Construction workers shall be informed that harassment of these species is a violation of federal law.
- During construction, all holes shall be covered at night to prevent CRLF and/or SFGS from becoming trapped in holes on the construction site.

IMPACT: *Construction of the proposed project could impact the federally endangered Mission blue butterfly. Mission blue butterfly adults have not been observed on site during field surveys however eggs were found on the host plants. The site plan for Lot 11 has been redesigned to avoid the Mission blue host plant *Lupinus formosus*.*

Measure BIO-10: Project development shall avoid Mission blue butterfly host plant *Lupinus formosus* and provide a minimum 50-foot setback from areas containing the host plant. Any parcel containing Mission blue butterfly host plants shall be subject to a CC&R provision that requires the owner to obtain permission from the US Fish and Wildlife Service to undertake any activities that result directly or indirectly in the removal of Mission blue butterfly host plants. The owners of lots containing Mission blue host plant shall also coordinate with the

Homeowner's Association in the implementation of the open space management plan required in Measure BIO-4.

6.0 GEOLOGY AND SOILS

This section addresses the geologic conditions of the Harmony @ 1 property and the potential effects of the development. A peer review of the Applicant's geotechnical reports concurs that the proposed project is feasible from the geotechnical standpoint. Compliance with seismic standards as well as engineering review and testing would reduce earthquake risks. Remedial grading and installation of surface and subsurface drainage is recommended to mitigate existing erosion on the steep cut slope above Roberts Road, repair and prevent landslides, and control deep gully erosion in the open space areas on the south-southeastern portion of the site. Finally, measures would be implemented to mitigate the effects of expansive soils. This analysis concludes that potential impacts from seismic shaking, landslides, soil erosion and expansive soils can be mitigated to a level of insignificance.

An Engineering Geologic Feasibility Study (December 2005) and a Preliminary Geotechnical Investigation (June 2006) were prepared by Earth Investigations Consultants (EIC) to address the existing geologic conditions of the site and its suitability for residential construction. These reports were peer reviewed by Cleary Consultants who conducted several site visits during the period from August 30, 2006 to January 5, 2007. A geotechnical investigation performed by GeoForensics Inc. for the adjacent 2-acre parcel dated March 2000, and received on May 11, 2007, was also reviewed. Stereographic aerial photographs of the site vicinity covering the last 60 years were studied as part of the review process.

6.1 ENVIRONMENTAL SETTING

Historical photographs reveal the site was used for grazing prior to 1946 and that the grading for public roadways that currently borders the north and west sides of the property was also present at that time.

6.1.1 Regional Geology

The City of Pacifica lies within the California Coastal Range Geomorphic Province, which is characterized by a series of northwest trending mountain ranges and valleys. The subject property is underlain by slope wash, ravine fill and colluvium of Holocene age and bedrock of the Franciscan Complex of Cretaceous and Jurassic age (Pampeyan, 1994), consisting of friable to indurated sandstone, siltstone, shale, greenstone and sheared rock (mélange). Outcrops of the sandstone, shale and siltstone bedrock are present along the ridgelines and cutslopes, and outcrops of greenstone are present in cutslopes in the northwest corner of the site. Bedding at the site generally strikes northwest with dips to the northeast ranging from 25 degrees to 80 degrees (Pampeyan, 1994; Brabb & Pampeyan, 1972; EIC, 2006).

Surficial geologic units in the site vicinity include recent and dormant landslides, colluvial deposits in several deep erosional gorges and smaller erosional gullies.

Figure 20, Regional Geologic Map shows the geologic conditions in the site vicinity (Pampeyan, 1994). The site geology is presented on Figure 21, Local Geologic Map.

6.1.2 Site Topography

The project site is located on the northwesterly end of a dissected ridgeline on the western flank of Sweeny Ridge. Elevations range from 390 feet above sea level on the ridge crest in the central part of the site to approximately 40 feet in the southern part near the intersection between Crespi Drive and Roberts Road. The property is bordered on the south, west, and north sides by man-made cut slopes up to 45 feet high with gradients averaging 35 degrees. Undocumented site grading for vehicular access created steep cut slopes in the northern and southern parts. Irregular terrain bordering the northeastern part of the property is related to rock quarrying activity, apparently through the 1960's.

At the northern end of the project site, just south of Fassler Avenue, surface drainage ditches, discontinuous asphalt pavement and a cut slope remain from the previous alignment of Fassler Avenue. This former road led to the now abandoned quarry located in the northeastern corner of the site. Partially to well-vegetated cut slopes up to about 100 feet in height also exist along Roberts Road.

Well-incised erosional gorges, locally at least 50 feet deep, are present at two locations on the south facing hillside below Lots 9 and 10. These long standing non-bedrock features have undergone only minor changes over the past 60 years and are confined to the deeply mantled colluvial swales; the upslope erosional limits end at least 100 feet from the ridgeline crest where the homesites are planned. A seasonally active landslide is located below the 2-acre parcel on the west side of the property in a drainage swale, approximately 100 feet southeast of the ridge top. Evidence of a 300 to 400 foot long debris flow track on the western portion of the property was observed on 1943 aerial photographs, where it appeared to be a recent or fresh feature, and on 1956 aerial photographs within the colluvium filled swale in the area of the 90 degree bend in Roberts Road; the upper limit of this now obscured debris flow feature is 250 to 300 feet west, and downslope, of the Lot 6 and 7 homesites.

6.1.3 Soils and Groundwater

The USDA Soil Conservation Service (SCS) Soil Survey for San Mateo County (1991) maps a single soil type on the property – the Candlestick-Barnabe Complex, 30-50 percent slopes. The Candlestick-Barnabe Complex forms in material weathered from hard, fractured sandstone. Permeability on the soil type is moderate to moderately slow, runoff is rapid and the hazard of erosion is high.

The EIC geotechnical investigation (June 2006) delineated five different earth materials on site, including four Quaternary surficial deposits, and bedrock materials of the Franciscan complex. Surficial deposits include undocumented fill mainly from historic quarry activity in the northeastern part of the site, two generations of colluvium derived from decomposed bedrock, erosion, and deposition of pre-existing surficial deposits, and surficial landslides. The bedrock materials exposed on the ridge lines and bordering cut slopes include sandstone, shale, siltstone, greenstone, and sheared rock.

The potential for erosion of the surface soils on the project site is high. Therefore, permanent slopes should be protected against erosion through the use of erosion resistant vegetation and jute netting. Slopes should be graded so that water is directed away from the slope face and runoff from new impervious improvements should be carried in closed pipes or lined conveyances to suitable non-erodible discharge locations.

Deep gully erosion has occurred on the south-southeastern parts of the site. The extent of this erosion is clearly visible on the 1943 aerial photographs, suggesting it has been active for more than 60 years, and probably for a considerably longer period of time. Deep gully erosion was also observed in the lower reach of the broad swale extending from the center of the property to Roberts Road. More recent, very surficial erosion and debris slide scars in the colluvial soil and deeply weathered and closely fractured bedrock were observed at several locations along the Roberts Road cut slope and on the private driveway cut slope leading to the house bordering the southern extremity of the site. No evidence of deep-seated landsliding was observed affecting the site.

Several old landslides associated with the construction of the Roberts Road cutslope exist uphill of the roadway, and the upper five feet or so of the soil-mantled portion of the cutslope above Roberts Road has experienced shallow erosion, rilling and local soil flow popouts. Erosional gulleys have also developed at several locations on the property, primarily from unchannelled flows along existing trails.

Neither springs nor seepage were observed on the site. Perched ground water on the greenstone bedrock was encountered in Boring No. 1 at a depth of nine feet below existing grade during the EIC soil investigation. The other borings did not encounter subsurface water. Water puddles, resulting from perched runoff on the Franciscan bedrock, were observed following a recent storm during our January 2007 visit in wheel ruts along the ridgeline.

6.1.4 Seismicity, Ground Shaking and Liquefaction Potential

The site is located within a tectonically active area that is dominated by the San Andreas Fault system. The San Andreas Fault, the primary fault within this system, separates the northwest moving Pacific Plate (west of the fault) from the North American Plate which lies to the east. In Northern California, movement on the San Andreas Fault system is distributed across a complex system of predominantly strike slip, right lateral, northwest trending active faults which include the San Andreas, Seal Cove, Hayward, and Calaveras faults, among others.

In the vicinity of the site, the San Andreas, Hayward and Calaveras Faults are located approximately three miles, 22 miles, and 30 miles, respectively to the northeast and the offshore segment of the Seal Cove fault is located approximately four miles to the southwest. Figure 22, San Francisco Bay Area Fault Map, shows the site's relationships to the regional faults in the San Francisco Bay Area.

One published report (Brabb and Pampeyan, 1972) mapped a northwest trending concealed fault through the southwest portion of the site. A later, more detailed geologic map by Pampeyan (1994) omits the fault through the property. Another unnamed fault mapped by Brabb and Pampeyan is shown about 0.7 miles to the northeast.

The concealed trace of the Pilarcitos Fault, shown to lie about ½ mile southwest of the property, is considered “possibly seismically active” (Brabb and Olsen, 1986). The Pilarcitos Fault is shown as a branch of the right-lateral strike-slip San Andreas Fault system. No displacement has been found in the Holocene aged alluvial deposits that cover the fault indicating no recent movement and a very low potential for surface fault rupture.

No active faults are known to exist on or in close proximity to the site, and the site is not within an Earthquake Fault Zone as defined by the State of California. Therefore, the potential for on-site surface fault rupture is considered very low.

However, the property is likely to be subjected to strong ground shaking during the design life of the project from an earthquake originating on the San Andreas or other active fault in the Northern California area.

The basis for predicting ground shaking intensity is based on the magnitude of the earthquake, distance from the epicenter, topography, and the type and density of materials underlying the site. It has been estimated that a major earthquake on the nearby trace of the San Andreas Fault would subject the project site to an estimated peak ground acceleration of 0.6g (percent of gravity) and a repeatable ground acceleration of 0.4g.

United States Geological Survey Open-File Report 03-214 predicts a 62 percent chance of a magnitude 6.7 or greater earthquake on one of the active faults which exist within the San Francisco Bay Area during the next 25 years. The study estimates a 21 percent probability of such an earthquake on the San Andreas Fault during this period. The EIC report (June 2006) states that the maximum probable Richter earthquake magnitudes described by the California Division of Mines and Geology for future seismic events in the Bay region along the San Andreas fault is 7.9.

The investigation by EIC indicates that the site is generally underlain by medium dense clayey sands and firm sandy clays and medium dense to dense sandstone and greenstone to depths of 5-20 feet. Perched ground water was encountered in one of the borings at a depth of nine feet. Loose, saturated, granular soils were not found, however and the likelihood of soil liquefaction during ground shaking at the site is considered low.

The study by Geoforensics (2000) for the 2-acre parcel encountered generally similar materials, with some sheared Franciscan serpentine bedrock. No free groundwater was encountered.

6.1.5 Regulatory Setting

6.1.5.1 State of California

The major state legislation regarding earthquake fault zones is the Alquist-Priolo Earthquake Fault Zoning Act of 1972. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults

and to issue appropriate maps. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet).

The project site is not within an Alquist-Priolo Earthquake Fault Zone.

The major regulations regarding geotechnical design criteria for new development are contained in the Uniform Building Code (UBC). The UBC will apply to all construction within the project site.

6.2 PROJECT IMPACTS

6.2.1 Significance Threshold

According to the CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if the following conditions occur:

- Exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of an earthquake fault, seismic shaking, seismic related ground failure, or landsliding.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

6.2.2 Project Grading

The preliminary grading plan (Figure 7) indicates that moderate cutting and filling would be performed on the property to create the required access road and associated driveways. Cuts of up to 12 feet and fills of up to 7 feet are shown along the ridges and in sloping areas for the new roads. The grading for the new lots, as shown on the grading plans, would result in building pads that are compound graded with roughly equal amounts of cut and fill.

The geotechnical investigation performed by EIC includes the following recommendations: Grading should be performed during the dry months and existing fill should be removed prior to new fill placement. Fill should be placed in 6-8 inch thick lifts, compacted to a minimum of 90 percent relative compaction with benches cut into competent material as fill placed on slope. A keyway should be installed at the base of the new fill slope, and a subdrain is recommended in fills over five feet high in the report. Fill and cut slopes should have a maximum inclination of 2:1 (horizontal to vertical) except cut slopes in colluvium should be no

steeper than 3:1. Steeper slopes may require supplemental stabilization techniques such as geogrid reinforcement.

The geotechnical report prepared by EIC for the planned subdivision concludes that the primary geologic hazard on the property is uncontrolled runoff. This issue is addressed below under Slope Stability and Erosion Impacts.

6.2.3 Seismic Shaking Impact

The project site is located in San Mateo County within a seismically active area. The San Andreas Fault is located roughly three miles northeast of the project site, resulting in a high probability that the project site would be subject to very strong seismic shaking during the next major earthquake on the San Andreas Fault. The effects of amplified seismic ground motions are not anticipated on the site because of the rounded ridgelines and the relatively thin mantle of unconsolidated deposits overlying consolidated bedrock (EIC). Standard construction practices such as meeting Uniform Building Codes would be adequate to reduce seismic safety risks associated with residential construction in a seismically active area.

It is important that recommendations regarding seismic shaking be used in the design for any proposed development. Even with adequate design and construction, some damage to structures may occur during a great earthquake. However, the damage due to high intensity shaking may be reduced by careful placement and construction of the structure. Past experience has shown that the quality of design and construction is far more important than the precise evaluation of ground motion parameters.

The effects of ground shaking on future planned structures and other improvements can be reduced by earthquake-resistant design in accordance with the latest editions of the Uniform Building Code and the California Building Code as specified in Mitigation Measure GEO-1. With this mitigation, the potential impact to structures is reduced to a less than significant level.

6.2.4 Surface Rupture Due to Seismic Activity Impact

Rupture along faults can cause offset of the ground surface along the surface trace of the fault. The offset will damage roads and buildings and can break pipes and/or other underground utilities. The subject property lies approximately 2 ¾ miles south of a designated Special Studies Zone boundary associated with a branch of the San Andreas Fault. No mapped fault traces cross the subject property. There was no evidence for active surface faulting at the site during aerial photo review and site reconnaissance. Therefore, the potential for ground surface rupture due to faulting is considered low and is not a significant impact.

6.2.5 Seismically Induced Ground Failure Impact

Seismically induced ground failures are secondary seismic effects related to soil, bedrock and groundwater conditions. Liquefaction, lateral spreading, landsliding, and settlement resulting from earthquakes are examples of such failures. Where these failures occur near buildings or other facilities, there is a potential for injury to persons and significant economic loss due to structural damage.

6.2.5.1 Liquefaction

Liquefaction is a phenomenon in which saturated, loose, sandy and silty soils lose strength during strong seismic shaking. Liquefaction can result in significant lateral and vertical movement of structures founded on these soils. The preliminary investigation by EIC indicates that the site is generally underlain by firm sandy clay to medium dense clayey sand and medium dense to dense sandstone and greenstone bedrock, as investigated to depths of up to 20 feet. Perched ground water was encountered within one boring over the bedrock surface.

Since the soils overlying bedrock were found to have a high relative density and a high percentage of clayey fines, the likelihood of soil liquefaction during ground shaking at the site is considered low. Because of the soils' inherent resistance to liquefaction and the generally shallow depth to Franciscan bedrock in the areas proposed for development, mitigation measures to prevent liquefaction or other ground shaking induced types of failures are not required.

The geotechnical investigation (EIC, 2006) concluded that loose, saturated, granular soils susceptible to liquefaction during a seismic event are absent in the project area. The potential of seismically induced liquefaction occurring at the project site is less than significant.

6.2.5.2 Lateral Spreading

Lateral spreading is a form of landsliding where total detachment or disaggregation does not occur, but rather a surface soil mass, lacking adequate lateral support, experiences plastic deformation and dilation. Such a mass is left in an unstable condition and is susceptible to future catastrophic movement. The incised gorge terrain on the southern part of the project site has potential for lateral spreading during a seismic event. However, there has been no reported or observed evidence of this occurring on the site from historic earthquakes. There are no structures proposed for development near the erosional gorges (Figure 20). The impact is not significant.

6.2.5.3 Settlement

Earthquake induced settlement of the ground surface can occur when grains of soil are redistributed in an unconsolidated mass during strong ground shaking. Settlement can occur in dry and saturated soil. Undocumented fills in the northeast corner and northwest corner of the project property along Fassler Avenue (Figure 20) are susceptible to earthquake-induced settlement. No homes are proposed in these areas. Fill soils may occur at the project access road near Fassler Avenue. Grading and compaction requirements for road construction would eliminate the unconsolidated fill soil. The potential of seismically induced soil settlement occurring at the project site is less than significant.

6.2.5.4 Seismically Induced Landsliding

Earthquake-induced landslides are not known to have occurred on the site. It is possible that some soil was shaken from the steep cut slopes bordering the site and from the incised slopes of the erosional gorges on the southern slopes during the 1989 Loma Prieta earthquake. While earthquake induced activation of potentially large segments of currently intact slope is highly unlikely, there is a slight potential for reactivation of existing onsite landslide deposits

and failure of the locally oversteepened colluvium in the erosional gorges during a major earthquake event centered nearby on the San Andreas Fault, particularly if such an event were to occur during or soon after prolonged rainfall.

The erosional gorges and landslide deposits are not located near proposed building envelopes (Figure 21). In the unlikely event that landslide deposits are reactivated or landsliding occurs on the slopes of the erosional gorges during a seismic event, the proposed homes would not be impacted. Therefore, the potential impact associated with seismically induced landsliding is not significant.

6.2.6 Slope Stability and Erosion Impacts

The surficial landslides affecting the Roberts Road cut slope are well outside the proposed development areas. However, they will continue to degrade the cut slope surface and produce sediment onto the traveled roadway. The landslides appear to be directly related to oversteepened surficial soils impacted by uncontrolled runoff, a condition that has been present on the site since before 1946. This erosion can be mitigated by minimal remedial grading, comprehensive drainage improvements and judicious application of deep-rooted vegetation. The EIC report (June 2006) states that this remedial grading can be part of the driveway retaining wall system for Lot 11. Mitigation Measure GEO-2 would correct this existing condition. The future impact from surficial landsliding along Roberts Road would be less than significant with implementation of this measure. The GeoForensics Inc. Geotechnical Investigation (March 2000) recommends construction of a retaining wall barrier along the southwestern margins of the 2-acre parcel to stabilize the upper portion of the slope below the proposed home.

The potential for erosion of the clayey and surface soils on the project site is moderate to high. Erodible soils at the project site present potentially significant impact. Mitigation Measure GEO-3 has been recommended to reduce the potential for erosion impacts to less than significant.

The two, 50-foot deep erosional gorges in the open space area on the southern part of the project site extend approximately 120 feet from the proposed house site on Lot 9. This erosion is the result of uncontrolled seepage and surface runoff directed across swales. Deep erosion and landsliding on the southern slopes appear to be sufficiently far from the proposed house sites on Lots 9 and 10 so as to not cause any impacts. Additionally, subsurface data collected by EIC indicates the house sites are on shallow bedrock. However, the EIC report recommends the detailed design-level geotechnical investigation that would be done as part of the house design to investigate the need for surface or subsurface drainage improvements to prevent acceleration of erosion and mitigate encroachment of the gullies into the building sites. Mitigation Measure GEO-4 has been recommended to ensure these drainage issues are considered in the design-level geotechnical investigation. Implementation of this measure would reduce the potential impact to less than significant.

6.2.7 Expansive Soils

The near surface clay soils and bedrock have a moderate plasticity as discussed in the EIC report. Expansive soils can detrimentally affect building foundations, slabs, pavements, retaining walls and other site improvements. The potential impacts due to soil expansion are

potentially significant and Mitigation Measure GEO-5 is recommended to reduce these impacts to less than significant.

6.2.8 Cumulative Impacts

The geologic impacts of the project include seismic shaking, expansive soils, and erosion. All geologic project impacts have been reduced to less than significant with mitigation. The geologic impacts of the project are confined to the project site and there are no other projects which increase the significance of these impacts. Therefore, there are no cumulative geologic impacts associated with the Harmony @ 1 project.

6.3 MITIGATION MEASURES

The following measures are recommended to reduce the project's impact upon landsliding and slope stability, expansive soils, soil erosion, and seismic shaking. These measures would reduce the impacts to a less than significant level.

IMPACT: Strong groundshaking associated with a major earthquake in the region could impact the project development by causing damage or collapse of buildings or endanger the health and welfare of persons.

Measure GEO-1: The new residential construction and any other site improvements shall comply with the provisions of Title 24 of the California Administrative Code, and the most recent edition of the Uniform Building Code, Seismic Zone 4 standards, or local seismic requirements, whichever is most stringent. All recommendations included in the June 19, 2006 EIC preliminary soil investigation report shall be met, including: 1) City review of all plans and specifications and observation by the project geotechnical engineer of foundation excavations to ensure compliance with the recommendations in the project geotechnical report; and 2) Observation and testing of engineered fill, finish subgrade and aggregate base for new pavements by the project geotechnical engineer.

IMPACT: Surficial landslides affecting the Roberts Road cut slope will continue to degrade the cut slope and produce sediment onto the traveled roadway.

Measure GEO-2: A detailed remediation plan that addresses the surficial landsliding affecting the Roberts Road cut slope shall be prepared by a qualified engineering geologist. The remediation plan shall identify any grading and drainage improvements necessary to, prevent future landsliding. The remedial grading improvements shall be implemented by the applicant.

IMPACT: The potential for erosion of the clayey sand surface soils on the project site is moderate to high. Erodible soils at the site present potentially significant impacts.

Measure GEO-3: The impacts from erosion can be mitigated by incorporating appropriate grading and drainage measures into the project design. A final grading plan and drainage plan shall be prepared for the project. These plans shall provide for positive drainage on building pads and removal of water from foundation areas into area drains and closed pipe systems which carries runoff to a suitable drainage facility located below the erodible colluvial deposits which

exist downhill of the ridgeline. Slopes shall be graded so that water is directed away from the slope face. Permanent slopes shall be protected from erosion through the use of erosion-resistant vegetation and jute netting. Erosion control seed mixes used on site shall utilize native grasses and forbes appropriate for the site to replace and improve existing habitat values of grasslands disturbed on the site. Temporary erosion control measures such as positive gradients away from slopes, straw bales, silt fences and swales shall be used during construction.

IMPACT: Although considered unlikely by the EIC report (June 2006), deep erosion and landsliding on the southern slopes could impact Lots 9 and 10.

Measure GEO-4: Although the house sites appear to be sufficiently far from the deep erosion gullies and landsliding on the southern slopes and existing data indicates that the house sites are on shallow bedrock, design-level geotechnical investigations for Lots 9 and 10 shall be conducted to determine whether surface or subsurface drainage improvements are necessary to prevent accelerating erosion trends in these gully areas and to mitigate encroachment into the building sites. Any necessary improvements shall be implemented by applicant or future owners of Lots 9 and 10.

IMPACT: The near surface clay soils and bedrock have a moderate plasticity as discussed in the EIC report. Expansive soils can detrimentally affect building foundations, slabs, pavements, retaining walls and other site improvements.

Measure GEO-5: The EIC report provides recommended measures for mitigating the effects of expansive soils on the project improvements. These protective measures include: 1) mixing on-site soils to a plasticity index of 15 or less; 2) moisture conditioning of fill materials to three percent over optimum; and 3) overexcavation of slab subgrade areas. The following additional measures shall also be taken to minimize the effects of expansive soils: a) providing a layer of non-expansive granular materials beneath slabs-on-grade as a cushion against building slab movement; b) the use of aggregate base under exterior flatwork; and c) control of irrigation adjacent to the new buildings.

7.0 HYDROLOGY

Project development would increase impervious surfaces on the site resulting in increased storm runoff. Water quality of the storm runoff would be impacted by increased sediment loads and oil or grease from the project road and driveways. To mitigate the impact, the applicant shall comply with all conditions of the State General Construction Activity National Pollutant Discharge Elimination System (NPDES) permit and the San Mateo County-wide NPDES permit to reduce sediment in storm water. In addition, storm water will be directed to detention basins fitted with grease traps to remove oil and grease prior to discharge into the city storm drain lines. The detention basins will also allow sediment loads to settle out of the storm water prior to discharge. The basins will be maintained in accordance with an operation agreement with the City of Pacifica. With these measures, the water quality impact to storm runoff is reduced to less than significant levels.

7.1 ENVIRONMENTAL SETTING

7.1.1 Topography and Drainage

The project site is located on the northwesterly end of a ridgeline. Elevations range from 388 feet above sea level on the ridge crest in the central part to approximately 50 feet in the southern part, near the intersection between Crespi Drive and Roberts Road. The steeper areas are on the southern slopes.

Most of the property drains by way of ephemeral swales tributary to San Pedro Creek to the south. The northern part of the site drains to Fassler Avenue which carries runoff westerly to the mouth of Calera Creek (Figure 2). There are no perennial creeks on the site. There is a small roadside cement drainage ditch near the corner of Fassler Avenue and Roberts Road. The drainage ditch is cement lined, does not support wetland vegetation and only holds water temporarily. There are no stock ponds or other surface water impoundments on the site. No springs have been observed on the property, however, seepage from the Roberts Road cut slope from the seasonally perched ground water has been detected (EIC, 2005). There are no wetlands, waters, or potential sensitive aquatic habitats located within the project site. The project property is not located within any flood zone.

The project site is undeveloped. There are no impervious surfaces on the project site.

7.1.2 Water Quality

Water quality is regulated by the state Regional Water Quality Control Board (RWQCB). The RWQCB is responsible for implementing the federal Clean Water Act at the state level. The Clean Water Act requires a National Pollutant Discharge Elimination System (NPDES) general permit for storm water discharges associated with construction and industrial activities. A NPDES general permit for industrial discharges has been issued by the state. Individual dischargers may apply to the RWQCB to be covered by the general permit. The general permit

requires that dischargers develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which identifies pollution sources and management practices to reduce pollutants. Construction projects adding 10,000 square feet or more of new impervious surface are subject to the performance standards of the San Mateo County-wide municipal stormwater NPDES permit. Under the San Mateo County-wide NPDES permit, subject projects must reduce the stormwater pollution discharges from the project to the maximum extent practicable through the incorporation of stormwater treatment, source control, and site design measures.

7.2 PROJECT IMPACTS

7.2.1 Thresholds of Significance

The following Standards of Significance, based on Appendix G of the CEQA Guidelines, indicate that an impact would be significant if the project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place within a 100-year flood hazard areas structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

7.2.2 Stormwater and Water Quality

7.2.2.1 Project Construction Impacts

Grading for the project access road, lot driveways, and building envelopes will disturb roughly 6 acres. Stormwater runoff from the graded project areas could enter the city storm drain system containing higher than normal amounts of suspended sediments and indirectly add to the siltation of Calera Creek.

All projects disturbing more than one acre of soil must develop and implement a Storm Water Pollution Prevention Plan (SWPPP) under State General NPDES Permit. RWQCB requirements for construction storm water control are discussed in Land Use (Section 3.0). Implementation of Best Management Practices (BMPs) specified in the SWPPP would mitigate the project's potential impact on water quality during construction to a less than significant level. The BMPs will include standard erosion control measures, such as the use of silt fences, straw bales and other methods of controlling erosion and preventing sedimentation of the city's storm drain lines and Calera Creek. The BMPs would ensure that water quality of surface runoff is maintained and no siltation of downstream waterways would occur. Implementation of BMPs is identified in Measure HYD-1 below.

Two large erosional gullies may contain wetlands under USACE and CDFG jurisdiction. The project as it is proposed does not impact either drainage and would not disturb the potential wetland areas. These gullies would be located in the permanent open space areas. Runoff patterns to these drainages are not expected to change and storm water runoff would be directed to storm drains located in the streets. The water quality in these drainages would not be degraded by the proposed project. A Storm Water Pollution Prevention Plan would be implemented during project construction to prevent erosion and sedimentation impacts from occurring. No impacts to wetlands or riparian areas are expected.

7.2.2.2 Operational Impacts

Roughly 6 acres of the 67-acre project site would be developed with the project access road and building envelopes. The project road, driveways, retaining wall, and houses add impervious surfaces to the project site which will increase the amount of storm water runoff generated on the property. A Stormwater Control Plan has been prepared for the project and is presented in Appendix B. This Plan includes site design, source control, and stormwater treatment measures to be incorporated into the Project. As explained in the Stormwater Control Plan, these measures comply with the performance criteria set forth in the County-wide NPDES permit. For example, the project proposes construction of two detention basins to handle the increased surface flows – one at the southeast corner of Roberts Road and Fassler Avenue and one at the southwest corner of Fassler Avenue and the new project access road. The ponds would have a shallow design (3 to 5 feet deep) and completely drain within 48 hours. Due to the shallow design and short duration of water retention, there are no public safety impacts associated with the ponds.

The Homeowners' Association would maintain the drainage system. Overflow from the basins would enter the municipal storm drain system under Fassler Avenue. Maintenance of the detention basins would be guaranteed through a maintenance agreement with the City of Pacifica as required in Mitigation Measure HYD-2. With the exception of Lot 11, all storm drainage generated by the project development would be directed to the two project detention basins. Drainage from Lot 11 would be directed to the existing storm drain line along Roberts Road. This line has adequate capacity to handle increased runoff from Lot 11.

Water quality of storm water runoff has the potential to be impacted by oil and grease from the project road and driveway parking areas. An increase in silt load of the stormwater can also be expected due to site grading and development. Proper drainage controls shall be in place during site construction. Measures to prevent soil erosion are discussed in Geology (Section

6.0). The ponds would be designed as biologically active filtration basins which use a combination of soils and vegetation to filter out pollutants from the draining storm water. With proper maintenance of the basins as provided in Measure BIO-2, the impact of the project on water quality would be less than significant.

7.2.3 Cumulative Impact

Other development projects identified by the City of Pacifica are listed in Section 11.4 Cumulative Impacts. Of the listed projects, the Prospects project and mixed use development on Old County Road are located closest to the Harmony@1 project site and share the same watershed of Calera Creek. Storm runoff from the Harmony@1 project would be controlled by construction of two detention basins and would not significantly impact the city's drainage system or the water quality of the city's discharge to Calera Creek. Drainage from other projects in the watershed such as Prospects and Old County Road are also subject to stormwater discharge requirements. The Prospects project is larger than 10,000 square feet and must comply with NPDES General Construction and Municipal Stormwater Discharge permit requirements and City Municipal Code requirements to ensure that the developments do not result in significant water quality impacts. The cumulative impact of the project on hydrology and water quality would be less than significant.

7.3 MITIGATION MEASURES

The following measures are recommended to reduce the project's impact upon water quality. These measures would reduce the impacts to a less than significant level.

IMPACT: *The proposed project could result in water quality impacts to the city's storm drain line and Calera Creek as a result of increased siltation of surface water runoff from construction grading activities.*

Measure HYD-1: The applicant shall apply to the RWQCB to obtain coverage under the State General Construction Activity NPDES Permit. The applicant shall comply with all provisions and conditions of the general permit and prepare a Storm Water Pollution Prevention Plan (SWPPP). Project construction shall conform to the requirements of the general permit and the SWPPP. Construction BMPs that will be used to reduce or avoid impacts shall include:

- Keeping materials out of the rain by covering exposed piles of soil or construction materials with plastic sheeting; sweeping paved surfaces that drain to creeks or wetlands; using dry cleanup methods whenever possible, and if water must be used, use just enough to keep the dust down;
- Use of hay bales or other mechanical barriers to trap sediment on the project site and prevent discharge into storm water drainage;
- Scheduling construction activities for periods of dry weather; and
- Restricting fueling of construction vehicles to approved staging areas.

IMPACT: *Up to six acres of the project site would be developed with building envelopes and roads. Site development will introduce impervious surfaces to the property and increase the amount of stormwater runoff generated on site. Detention basins constructed for the project have adequate capacity to handle the increased runoff and would require routine maintenance.*

Measure HYD-2: The Project shall implement the site design, source control, and stormwater treatment measures detailed in the Stormwater Control Plan, included as Appendix B. The project applicant shall also enter an Operations and Maintenance (O&M) agreement with the City, as required by the County-wide NPDES permit. This O&M agreement shall run with the land.

8.0 PUBLIC SERVICES

This chapter lists the providers of services that serve the site and include Fire, Police Protection, Schools, and Parks. The proposed development of 14 homes would add 38 residents to the city population resulting in increased demand for public services. The project site is located within the Linda Mar neighborhood and would receive adequate response times from fire and police protection services. The incremental increase in demand for fire and police services is not a significant impact. The local schools have the capacity to receive the projected number of new students from the project development. The impact upon schools is not significant. The project development includes 28 acres of hillside set aside as natural open space and passive recreation for its residents. The incremental increase in demand for developed parks is not significant.

8.1 FIRE PROTECTION

8.1.1 Setting

The North County Fire Authority serves the cities of Pacifica, Brisbane and Daly City. Pacifica is served by two North County Fire Authority stations. The closest is located less than two miles south at 1100 Linda Mar Boulevard and the other is located less than four miles north at 616 Edgemark Avenue. In most cases, response time is within the acceptable range of six minutes, fifty-nine seconds. The water supply and storage capacity are adequate for firefighting (City of Pacifica, 2006).

The Insurance Services Office, Inc. (ISO) does evaluations and ratings of the fire protection provided in communities. This system is called the ISO Public Protection Classification program, or PPC. The PPC process grades a community's fire protection on a scale of 1-10, based on ISO's Fire Suppression Rating Schedule. The ISO rating also provides a reflection of standards that have been developed over many years from the study of "pertinent fire protection conditions and performance standards." The North County Fire Authority's ISO rating is 4 (Pacifica Annex, 2006).

8.1.2 Impacts

According to the CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if it would "result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services."

The project site is located roughly two miles from the Linda Mar fire station and can be served with an adequate response time of less than six minutes. The proposed development of 14 homes would not significantly increase the number of service calls or impact the ability of fire protection services to maintain existing service levels to the Pacifica community. Each home

proposed for construction would be required to meet all applicable building and fire codes in order to receive a building permit from the City. The addition of 14 homes would not result in substantial impacts to fire protection services provided by the North County Fire Authority or on water supply and storage capacity for firefighting purposes (S. Brandvold, pers. comm.).

Other development projects in the Linda Mar area identified in the Cumulative Impact analysis (Section 11.4) would be served by the Linda Mar fire station. The increase in demand for fire protection services from these projects would not necessitate the construction of a new fire station or increased staffing. The cumulative effect of the Harmony@1 project incremental increase in demand for fire fighting services is less than significant.

8.1.3 Mitigation

The project would not result in significant impacts caused by the inability to provide fire protection services. No mitigation is required.

8.2 POLICE PROTECTION

8.2.1 Setting

The City of Pacifica is served by the Pacifica Police Department, located at 2075 Coast Highway. The Pacifica Police Department is a full-service department that presently consists of 41 sworn officers and 15.5 non-sworn positions. There are police reserves and explorer units that supplement these full-time employees with their duties throughout the year (City of Pacifica, 2006).

8.2.2 Impacts

According to the CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if it would “result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.”

The proposed development of 14 homes would not significantly increase the number of service calls handled by the Police Department or impact the ability of police protection services to maintain existing service levels to the Pacifica community. The project would not result in the need to construct new police facilities. Project plans would be reviewed by the police department during the building permit process to confirm this determination (J. Saunders, pers. comm.).

The Harmony@1 project is one of several reasonably foreseeable future projects identified by the City (Section 11.4). The City of Pacifica Police Department has adequate staffing and facilities to address the service needs of these developments. Therefore, the cumulative effect of the Harmony@1 project is less than significant.

8.2.3 Mitigation

The project would not result in significant impacts caused by the inability to provide police protection services. No mitigation is required.

8.3 SCHOOLS

8.3.1 Setting

Elementary and Middle School services are provided by the Pacifica School District (PSD). Cabrillo School (K-8) and Vallemar School (K-8) are both located less than 1 mile away from the project site. High school grade levels are provided by the Jefferson Union High School District (JUHSD) and the Laguna Salada Union High School District. The nearest high school is Terra Nova High School, located less than 2 miles east of the project site.

8.3.2 Impacts

According to the CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if it would “result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.”

The statewide average student yield factor per dwelling unit is 0.43 elementary school students, 0.14 middle school students, and 0.13 high school students (Christopher A. Joseph and Associates, 2006). The addition of 14 new homes would add an estimated 10 new students to the school districts served in the area. The Harmony@1 project would not result in the need for additional schools. The PSD and JUHSD schools are able to accommodate students from the proposed project site and the District has indicated that the additional students would not have an impact on its ability to serve students (Pers comm. Rick Boitano, Director of Pupil Services, Jefferson Union High School District, October, 2006 and Pers comm. Susan Vickrey, Assistant Superintendent, Pacifica School District, October 2006).

Other residential projects in the Linda Mar area listed in Cumulative Impacts (Section 11.4) include those on Piedmont Avenue, Fassler Avenue, Higgins Way, and Adobe Drive. Combined with the Harmony@1 project, these developments total 71 units and would generate 40 K-8 students to the neighborhood elementary school. City-wide cumulative development totals 270 units and could generate 35 high school students. The number of new students generated by cumulative development is not substantial. Schools districts serving the new students have adequate capacity. The cumulative effect of the Harmony@1 project is less than significant.

In addition, pursuant to California Education Code Section 17620(a)(1), the governing board at any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. As such, the project applicant would be

required to pay the required developer fees to PSD and the two high school districts to offset any impacts the project could have to schools.

8.3.3 Mitigation

The project would not result in any potentially significant impacts related to schools and no mitigation measures are required.

8.4 PARKS

8.4.1 Setting

The City of Pacifica maintains 232.5 acres of open space in parklands which include city parks, school recreation areas and shared sports fields, providing a ratio of 6.29 acres of parkland per 1,000 residents (based on a population estimate of 37,000). The city also maintains access to beaches through the Access component of the Coastal Land Use Plan and participates in regional trail systems. The Conservation Element of the City's General Plan concludes that the capacity of park and recreational facilities in the project's neighborhoods is adequate to meet the needs of the residents.

The Conservation Element specifies that open space within neighborhoods should be dedicated as development occurs and that open space retention should be encouraged within developments, with each neighborhood served by a local park or an elementary school playground. Where adequate open space cannot be maintained as a secondary component of a development project, the plan specifies that State mandated in-lieu fees should be earmarked for purchase and improvement of open space where needed "within a reasonable relationship to the neighborhood."

8.4.2 Impacts

According to the CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if it would "result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services."

The project would dedicate approximately 28 acres of the site's 65 total acres as natural open space. This would provide passive recreation opportunities for project residents. The project site is currently used informally by some local residents for passive recreation of walking and as a scenic viewpoint. The main ridgeline of the property (28 acres) would remain in natural open space and available to project residents. However, the project would eliminate the informal use of the property for passive recreation by non-project residents. The broader community of Pacifica would not be impacted and the loss of recreational use of this property is less than significant.

The project development would generate a population of 38 persons based on the City's standard occupancy rate of 2.74 residents per unit. This is not a significant increase in city population. The increased use demand on existing neighborhood and regional park space from the 38 project residents would not result in substantial physical deterioration of the park facilities or create a need for increased park space. The project impact upon parks is not significant.

A list of other development projects occurring throughout the city is presented in Cumulative Impacts (Section 11.4). A total of 270 residential units are identified as future foreseeable projects. The population increase would result in an incremental increase in the use of neighborhood and regional parks or other recreational facilities. The increase in population is not anticipated to cause substantial physical deterioration of existing facilities and therefore, the cumulative effect of the Harmony@1 project upon parks is less than significant.

8.4.3 Mitigation

Mitigation is not proposed as the development would have a less than significant impact to existing parks and would not create impacts as a result of construction of new park facilities as none are proposed.

9.0 TRAFFIC

The Harmony @ 1 project would add daily traffic trips to intersections near Fassler Avenue. The project would add 11 trips during the A.M. peak hour and 14 trips during the P.M. peak hour to two signalized intersections along Highway 1 which operate at unacceptable levels. The Highway 1 and Fassler Avenue/Rockaway Beach Avenue intersection operates at LOS F during the AM peak hour and Highway 1 and Reina Del Mar Avenue intersection operates at LOS F during both the AM and PM peak hour. Based on the increased traffic delay and volume to capacity ratios at these intersections, the project impact on these intersections is not considered significant. The unsignalized intersection at Roberts Road and Fassler Avenue currently operates at LOS F during the AM peak hour. Project traffic would increase the delay on Roberts Road at this intersection by 5.9 seconds. The project traffic does not cause the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant adopted by Caltrans and therefore, the impact is not considered significant. The proposed project access road does not meet minimum safety requirements for sight line distances at its intersection with Roberts Road and with Fassler Avenue. Measures would be implemented to mitigate the project access road's impact on sight line distances.

RKH Civil and Transportation Engineering prepared a Traffic Impact Analysis (September 2006) for the Harmony @ 1 Development. This report was peer reviewed by Hexagon Transportation (October 2006) and subsequently revised by RKH (May 2007). The updated traffic study is presented in Appendix G.

9.1 ENVIRONMENTAL SETTING

9.1.1 Existing Roadway Network

Existing roadways near the project site include State Route 1, Fassler Avenue, Roberts Road, and Crespi Drive. State Route 1 (Route 1) is a four-lane divided highway through Pacifica and serves as a popular scenic route. Fassler Avenue is a four-lane arterial street through the project study area. Roberts Road is a two-lane street connecting Fassler Avenue on the north with Crespi Drive to the south. Crespi Drive between State Route 1 and Roberts Road is a four-lane street, but east of Roberts Road Crespi Drive narrows to one-lane each way.

The project site to be developed is located at the corner of Fassler Avenue and Roberts Road. Local access from the project area to Route 1 is provided at Crespi Drive, Fassler Avenue/Rockaway Beach Avenue, and Reina del Mar Avenue; with traffic at each controlled by a signalized intersection. Stop controlled intersections affected by the project include; Fassler Avenue and Roberts Road, Fassler Avenue and Coast Lane, Route 1 and Coast Lane, Crespi Drive and Roberts Road, and Roberts Road and the newly proposed site access street.

9.1.2 Intersection Operating Conditions

The operating conditions of the key affected intersections were evaluated using LOS calculations. LOS is a qualitative description of an intersection's operation ranging from LOS A

(free-flow conditions with little or no delay), to LOS F (oversaturated conditions with excessive delay). Tables 9-1 and 9-2 describe the LOS referred to throughout this analysis.

Table 9-1	
Levels of Service Definitions for Two-Way and All-Way Stop Controlled Intersections	
Level of Service	Traffic Conditions
A	Very low delay, less than or equal to 10 seconds of average control delay per vehicle
B	Average control delay in the range of 10.1 to 15.0 seconds per vehicle
C	Average control delay in the range of 15.1 to 25.0 seconds per vehicle
D	Average control delay in the range of 25.1 to 35.0 seconds per vehicle
E	Average control delay in the range of 35.1 to 50.0 seconds per vehicle
F	Average control delay in excess of 50 seconds per vehicle
Source: Highway Capacity Manual, 2000.	

Table 9-2		
Signalized Intersection Level of Service Definitions		
Level of Service (LOS)	Description	Control Delay per Vehicle (in seconds per vehicle)
A	Conditions of free flow; speed is controlled by driver's desires, stipulated by speed limits, or physical roadway conditions	<= 10
B	Conditions of stable flow, operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles	10 to 20
C	Conditions of stable flow; speeds and maneuverability more closely restricted, occasional backups behind left-turning vehicles at intersections	20 to 35
D	Conditions approach unstable flow; tolerable speeds can be maintained by temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; at intersections, some motorists, especially those making left turns, may wait through one or more signal changes.	35 to 55
E	Conditions approach capacity, unstable flow with stoppages of momentary duration, maneuverability severely limited	55 to 80
F	Forced flow conditions, stoppages for long periods, low operating speeds, delays at intersections average 60 seconds or more.	>80
Source: Highway Capacity Manual, 2000.		

9.1.3 Existing and Background Conditions

The LOS conditions were analyzed for the seven intersections in the project study area listed in Table 9-3. The operations of the subject intersections were evaluated by RKH using the TRAFFIX network modeling program to analyze the streets and intersections in the project study area. Peak hour conditions are reported as average vehicle delay with corresponding levels of service (LOS) ranked from A (best) to F (worst). Worse levels of service involve longer delays at the intersection for each vehicle. Table 9-3 shows the Intersection Levels of Service for Existing and Background Conditions.

Table 9-3								
Intersection Level of Service Existing and Background Conditions								
Stop or Yield Controlled Intersections	Controlled Approach	Peak Hour	Existing Conditions			Background Conditions		
			V/C	Delay	LOS	V/C	Delay	LOS
Fassler Avenue and Roberts Rd	Roberts Road	AM		51.2	F		52.0	F
		PM		17.2	C		17.3	C
Fassler Avenue and Coast Lane	Coast Lane	AM		16.8	C		16.8	C
		PM		12.3	B		12.3	B
Route 1 and Coast Lane	Coast Lane	AM		30.1	D		30.7	D
		PM		12.3	B		12.3	B
Crespi Drive and Roberts Road	All-Way	AM	0.753	15.4	C	0.758	15.6	C
		PM	0.399	10.2	B	0.402	10.2	B
Roberts Road and Site Access Street	Site Access Street	AM						
		PM						
Signal Controlled Intersections		Peak Hour	Existing Conditions			Background Conditions		
			V/C	Delay	LOS	V/C	Delay	LOS
Route 1 and Crespi Drive		AM	0.842	12.9	B	0.845	13.1	B
		PM	0.665	8.2	A	0.666	8.2	A
Route 1 and Fassler Ave/Rockaway Beach		AM	1.216	120.6	F	1.223	123.0	F
		PM	0.860	35.6	D	0.877	38.3	D
Route 1 and Reina Del Mar Avenue		AM	1.244	110.4	F	1.246	110.7	F
		PM	1.131	82.9	F	1.135	83.8	F

Delay is average control delay in seconds per vehicle
V/C is the critical movement volume-to-capacity ratio.
LOS is Level of Service.

9.1.3.1 Existing Conditions

Under existing peak hour conditions, four of seven intersections operate at acceptable conditions (LOS D or better). These intersections include Fassler Avenue/Coast Lane, Route 1/Coast Lane, Crespi Drive/Roberts Road, and Route 1/Crespi Drive. The remaining three intersections operate at LOS F during one or both peak hours. The Route 1/Fassler Avenue/Rockaway Beach Avenue operates at LOS F during the AM peak hour. The Route 1/Reina Del Mar Avenue intersection currently operates at LOS F during both the AM and PM peak hours. With forced flow conditions, stoppages for long periods, and low operating speeds, the delays at these two intersections average 80 seconds or more. The Fassler Avenue/Roberts Road intersection operates at LOS F during the AM peak hour with an average delay of 51.2 seconds. Peak hour traffic volumes for Existing Conditions are shown in Figure 3 of the RKH Traffic Impact Analysis in Appendix G.

9.1.3.2 Background Conditions

Background Conditions are those traffic conditions that are expected to be present at the time the project is completed and occupied. Background traffic consists of existing traffic plus traffic from developments that are expected to be completed and occupied between the time that the existing traffic data was collected and the time that the project would be completed and occupied. Based on data provided by the City of Pacific Planning Department, there are two projects approved:

- Old County Road, a 23,800 sq. ft. retail commercial project
- Pedro Point, a mixed use project of 1,000 sq. ft. retail commercial and 6 unit residential condominium project CITY states these projects have not been approved

These projects will result in a slight increase in delay or V/C ratio at the seven study area intersections; however, the level of service operating conditions will not be changed (Table 9-3). Under Background Conditions, four intersections will continue to operate at LOS D or better. Fassler Avenue/Roberts Road and Route 1/Fassler Avenue/Rockaway Beach Avenue intersections will continue to operate at LOS F during the AM peak hour. Route 1/Reina Del Mar Avenue intersection will operate at LOS F during both the AM and PM peak hours. Peak hour traffic volumes for Background Conditions are shown in Figure 4 of the RKH Traffic Impact Analysis in Appendix G.

9.2 PROJECT IMPACTS

9.2.1 Thresholds of Significance

According to the CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity;
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks);

The City of Pacifica has established quantitative standards to determine if a project causes (either individually or cumulatively) an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. For all unsignalized intersections in the City, projects are considered to have a significant impact when:

- The worst stop-controlled approach at an intersection is projected to operate at an unacceptable LOS E or F under project conditions and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant adopted by Caltrans.

For signalized intersections, the project is said to create a significant adverse impact on traffic conditions at the intersection if for any peak hour:

- The level of service at the intersection degrades for an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions, or
- If the intersection is already operating at an unacceptable LOS E and the addition of project traffic causes both the critical-movement delay at the intersection to increase by two (2) or more seconds and the demand-to-capacity ratio (V/C) to increase by more than 0.010, or
- If the intersection is already operating at an unacceptable LOS F and the addition of project traffic causes both the critical-movement delay at the intersection to increase by one (1) or more seconds and the demand-to-capacity ratio (V/C) to increase by more than 0.010.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value of more than 0.010.

9.2.2 Project Trip Generation and Distribution

The estimate of vehicle trips to be generated by the project is shown in Table 9-4 below. The estimate is based on data contained in the Institute of Transportation Engineers' Trip Generation Manual that documents trips for different types of land uses. The AM peak hour is generally between 7 a.m. and 9 a.m. and the PM peak hour is generally between 4 p.m. and 6 p.m.

Project vehicle trips have been distributed on the basis of current and anticipated travel patterns and traffic volumes. The assumed vehicle trip distribution is shown in Figure 5 of the RKH Traffic Impact Analysis in Appendix G.

Table 9-4							
Project Vehicle Trip Generation							
Land Use	Size	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Single family residential	14	3	8	11	9	5	14

9.2.3 Intersection Levels of Service

Project generated traffic adds minimally to the delay at some intersections. The increase in delay does not change the level of service conditions over background conditions (see Table 9-5). Four intersections would continue to operate at LOS D or better. Project traffic would increase the delay on Roberts Road at Fassler Avenue by 5.9 seconds. This unsignalized intersection already functions at LOS F during the AM peak hour. Due to the low volume of traffic on Roberts Road, the project increase in traffic does not trigger a warrant for signalization. Based on the City's standard of significance (Section 9.2.1) the project impact at the Roberts Road intersection is not significant. The Project Conditions traffic volumes are shown in Figure 6 of the RKH Traffic Impact Analysis in Appendix G.

The project contribution of 11 AM peak trips to the LOS F Route 1 intersections would not noticeably worsen the operating level of these two intersections. At the Route

1/Fassler/Rockaway Beach intersection, the demand-to-capacity ratio would be increased by 0.003 and the intersection delay would be increased by 1.1 seconds during the AM peak hour. At the Route 1/Reina Del Mar intersection, the demand-to-capacity ratio would be increased by 0.003 and the intersection delay would be increased by 0.8 seconds during the PM peak hour. The City's significance standard is an increase in demand-to-capacity ratio of 0.010 and a 1 second increase in delay for LOS F intersections (Section 9.2.1). While the delay component is met at one intersection, the demand-to-capacity ratio component is not met. Therefore, the project's traffic contribution to the Route 1 intersections operating at LOS F is not significant.

Table 9-5 Intersection Levels of Service Project Conditions								
Stop or Yield Controlled Intersections	Controlled Approach	Peak Hour	Background Conditions			Project Conditions		
			V/C	Delay	LOS	V/C	Delay	LOS
Fassler Avenue and Roberts Road	Roberts Road	AM		52.0	F		57.9	F
		PM		17.3	C		18.1	C
Fassler Avenue and Coast Lane	Coast Lane	AM		16.8	C		17.0	C
		PM		12.3	B		12.4	B
Route 1 and Coast Lane	Coast Lane	AM		30.7	D		30.4	D
		PM		12.3	B		12.3	B
Crespi Drive and Roberts Road	All-Way	AM	0.758	15.6	C	0.759	15.7	C
		PM	0.402	10.2	B	0.404	10.2	B
Roberts Road and Site Access Street	Site Access Street	AM					9.6	A
		PM					8.8	A
Signal Controlled Intersections		Peak Hour	Background Conditions			Project Conditions		
			V/C	Delay	LOS	V/C	Delay	LOS
Route 1 and Crespi Drive		AM	0.845	13.1	B	0.845	13.1	B
		PM	0.666	8.2	A	0.666	8.2	A
Route 1 and Fassler Ave/Rockaway Beach		AM	1.223	123.0	F	1.226	124.1	F
		PM	0.877	38.3	D	0.877	38.5	D
Route 1 and Reina Del Mar Avenue		AM	1.246	110.7	F	1.248	111.4	F
		PM	1.135	83.8	F	1.138	84.6	F

Delay is average control delay in seconds per vehicle
V/C is the critical movement volume-to-capacity ratio.
LOS is Level of Service.

9.2.4 Site Access

The proposed project would create a new access road from Roberts Road southeasterly through the subdivision to an intersection on Fassler Avenue. The easterly intersection on Fassler Avenue would be limited to right-turn movements only.

The safe sight line distance for a standard intersection is a minimum of 200 feet, with 330 feet desirable. The new project access road intersects Roberts Road on the inside of a curve where there are inadequate sight line distances for vehicles exiting the project street onto Roberts Road. The hillside topography impairing corner site distances is shown in Figure 10 of Appendix F. The area between the sight line and the street would need to be brought level with Roberts Road so that a driver on the new subdivision street approaching Roberts Road would be able to see vehicles approaching from either direction on Roberts Road. Any landscaping

proposed in this area should be restricted in order to protect the sight distances at this location. This mitigation is identified in Measure TRF-1 and would reduce potential traffic safety impacts to a less than significant level.

9.2.5 Cumulative Impacts

The Cumulative Conditions scenario is expected to occur in the next 3 to 5 years. The City has identified four developments in the area that could occur subsequent to the development of this project within this near term cumulative scenario. They are:

- Five single-family residential units on Piedmont Avenue, and
- A 34-unit condominium development on Fassler Avenue, and
- A 63-unit condominium development on Fassler Avenue at Route 1, and
- 11 single-family residential units on Higgins Way.

Levels of Service have been calculated for the Cumulative Conditions Without Project and Cumulative Conditions With Project using the analysis methods contained in the 2000 Highway Capacity Manual. In addition, Cumulative Condition assumed a 1 percent annual growth rate in traffic to account for additional development out of the City limits that would use the study intersections. The results of the LOS calculations are summarized below in Table 9-6. The near-term cumulative traffic volumes for cumulative conditions with the project are shown on Figure 7 of the RKH Traffic Impact Analysis in Appendix G.

For the unsignalized intersections, project traffic would add 10 seconds of delay to the Fassler Avenue/Roberts Road intersection during the AM peak hour. Delays at the other unsignalized intersections would be less than one second. The need for a signal warrant analysis at the Fassler Avenue/Roberts Road intersection was evaluated for this intersection as presented in Appendix G. Under normal signal warrant criteria, Warrant #1 - Minimum Vehicular Volume, Fassler Avenue would have to have 600 or more vehicles, total in both directions, for each of eight hours of a day and during those same eight hours, the Roberts Road approach would have to have 150 vehicles or more per hour. Based on this analysis, the traffic volumes on Roberts Road under the Background and Project Conditions barely meet the volume criteria during the AM peak hour. These volumes are not sustained throughout the day during non-peak hours as required by the signal warrant criteria; the approach volume is too low. Since the project does not meet the signal warrant criteria, the project impact at this intersection is less than significant according to City thresholds of significance (Section 9.2.1).

For signalized intersections, the project would add one second of delay to the Route 1/Fassler Avenue/Rockaway Beach intersection during the AM peak hour under Cumulative Conditions With Project scenario. The increase in demand-to-capacity ratio at this intersection from project traffic is 0.002 which is less than the City's significant threshold of 0.010. The project traffic would add less than one second of delay and less than 0.010 to the demand-to-capacity ratio of the other signalized intersections under Cumulative Conditions With Project Scenario. Therefore, the project's contribution to the cumulative traffic impacts is less than significant.

Table 9-6								
Intersection Levels of Service Near-Term Cumulative Conditions								
Stop or Yield Controlled Intersections	Controlled Approach	Peak Hour	Cumulative Conditions Without Project			Cumulative Conditions With Project		
			V/C	Delay	LOS	V/C	Delay	LOS
Fassler Avenue and Roberts Road	Roberts Road	AM		73.4	F		83.4	F
		PM		18.9	C		19.8	C
Fassler Avenue and Coast Lane	Coast Lane	AM		18.1	C		18.2	C
		PM		12.7	B		12.8	B
Route 1 and Coast Lane	Coast Lane	AM		36.3	D		36.5	E
		PM		12.6	B		12.6	B
Crespi Drive and Roberts Road	All-Way	AM	0.805	17.6	C	0.807	17.7	C
		PM	0.429	10.5	B	0.431	10.6	B
Roberts Road and Site Access Street	Site Access Street	AM			A		9.7	A
		PM			A		8.9	A
Signal Controlled Intersections		Peak Hour	Cumulative Conditions Without Project			Cumulative Conditions With Project		
			V/C	Delay	LOS	V/C	Delay	LOS
Route 1 and Crespi Drive		AM	0.890	15.1	B	0.890	15.1	B
		PM	0.702	8.7	A	0.703	8.7	A
Route 1 and Fassler Ave/Rockaway Beach		AM	1.301	150.0	F	1.303	151.0	F
		PM	0.940	44.4	D	0.943	44.5	D
Route 1 and Reina Del Mar Avenue		AM	1.322	134.1	F	1.324	134.8	F
		PM	1.206	104.9	F	1.209	105.6	F

The San Mateo County Congestion Management Plan (CMP) has a standard of LOS E for Route 1 between San Francisco and Linda Mar Boulevard. The CMP does not have any designated intersections on Route 1 in Pacifica. The CMP requires analysis of project impacts for projects that contribute 100 or more peak-hour trips to CMP designated roadway segments and intersections. The Harmony@1 project does not generate more than 100 peak hour trips and, therefore, does not fall under the land use component of the CMP. Thus the project would not exceed, either individually or cumulatively, a LOS standard established by the County congestion management agency for designated road or highways.

9.3 MITIGATION

The following measure would reduce the traffic impact of the project to a less than significant level.

IMPACT: *The project access road intersects Roberts Road on the inside of a curve where there are inadequate sight line distances for vehicles exiting the project street onto Roberts Road. The limited visibility creates unsafe an unsafe traffic condition.*

Measure TRF-1: Project slopes at the intersection of the new access road and Roberts Road shall be trimmed back to establish the minimum safe sight line distance of 200 feet. The site distance at the driveway shall be increased as much as feasible beyond the minimum requirement

to provide additional safety at the intersection. Landscaping placed in these areas shall be restricted in height to prevent reduction of the sight line distances.

10.0 PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6 states that and EIR shall describe a range of reasonable alternatives to a project or 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. The discussion of alternatives is to focus on alternatives which are capable of avoiding or substantially reducing any significant effects of the project even if these alternatives would impede to some degree the attainment of the project objectives. Factors that may be taken into account when considering feasibility are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

10.1 CONSIDERED AND REJECTED ALTERNATIVES

Offsite project locations were not considered as a project alternative. A primary project objective is the development of this specific property by the landowners for their private residences. The Applicants do not have ownership, control or access to alternate project properties.

The project property is designated for residential land use by the City General Plan. Alternate land uses for the property would not conform to the General Plan land use designation of the site and were therefore not considered.

10.2 NO PROJECT ALTERNATIVE

The No Project Alternative would mean denial of the project development application to construct 13 single family homes in a Planned Development on 65 acres and the single family home with a secondary unit on an adjoining 2-acre lot. The project properties would be left in the current undeveloped natural state.

Land Use. Under the No Project Alternative, the site would remain undeveloped in the near term. Existing General Plan and Zoning designations allow for low density residential use of the site. Denial of the proposed development application would not preclude future development applications; thus the No Project Alternative would not necessarily mean the site would remain in an undeveloped condition in the long term. The proposed project is consistent with General Plan land use and development densities for the site and does not conflict with existing adjacent land uses. Therefore, the No Project Alternative would not reduce or eliminate land use impacts.

Aesthetics. The project site contains prominent ridgelines visible from Pedro Point and Linda Mar neighborhoods. Under the No Project Alternative, the project site would remain undeveloped in natural open space for the short term. Houses would not be constructed on the hillside and the ridgelines. The EIR determined that the visual impact of home construction on

or near the property ridgelines could be reduced to less than significance by careful site planning and architectural design to reduce the height of the project structures which is visible from the south. The No Project Alternative would eliminate the project's less than significant visual impacts.

Biology. Under the No Project Alternative, 5.3 acres of grassland, coastal scrub, and Monterey pine forest vegetation would not be removed by residential development and road construction. Heritage Trees (Monterey pine and Monterey cypress) within the development footprint would not be removed. There would be no potential disruption of nesting special status bird species or potential disruption of dispersing California red-legged frog (CRLF) and San Francisco garter snake (SFGS). There would be no potential impact to the Mission blue butterfly or San Francisco dusky-footed woodrat. The EIR has determined that the project's impact to dispersing CRLF and SFGS can be avoided by placement of construction fencing to prevent CRLF and/or SFGS from entering the construction zone. Project impacts to nesting special status birds can be avoided through pre-construction surveys and restrictions on vegetation clearance. Project impacts to woodrat can be reduced through implementation of a management plan and project impacts to Mission blue butterfly can be avoided through redesigning the site plan for Lot 11. A heritage tree survey on the project site revealed that the trees to be removed by the project are diseased and that their removal is not a significant biological impact. Thus, the No Project Alternative would eliminate biological impacts of the project which the EIR has determined to be less than significant.

Geology. Under the No Project Alternative, residential construction would not occur on the project site. The project site is located in a seismically active region and has the potential to expose project occupants to ground shaking and related hazards. However, because the project buildings would be constructed in accordance with current seismic safety codes and would comply with the Uniform Building Code requirements, the project's seismic safety impacts are reduced to less than significant. The EIR determined that drainage controls would reduce the soil erosion impacts to a less than significant level. Under the No Project Alternative, there would be no ground disturbance. Soil erosion impacts due to project grading and drainage would not occur. Therefore, the No Project Alternative would eliminate the project's less than significant seismic impacts.

Hydrology. Under the No Project Alternative, the project site would not be developed with residential construction and a project access road. Impervious surfaces would not be added to the project site increasing stormwater runoff volumes. There would be no construction of project stormwater detention basins. The EIR determined that the project would not substantially alter drainage patterns on the site. With construction of the detention basins to city standards, the project would not result in flooding or siltation of city storm drain facilities. Therefore, the No Project Alternative would eliminate the project's less than significant impact of increased storm runoff.

Public Services. Under the No Project Alternative, homes would not be constructed on the project site and there would be no new demand created for police and fire protection services, public schools, or parks. The EIR determined that the project's impact on public services is not significant. Therefore, the No Project Alternative would eliminate the project's less than significant impact on public services.

Transportation. Under the No Project Alternative, the project site would not be developed with 15 residential units. No new traffic trips would be generated. The EIR determined that the project addition of 11 AM Peak Hour trips and 14 PM Peak Hour trips would not significantly impact local traffic patterns or operating levels of intersections. Under the No Project Alternative, no new vehicle trips would be added to the intersections operating at poor service levels under existing and background conditions (Highway 1/Fassler Avenue/Rockaway Beach, Highway 1/Reina del Mar Avenue, and Roberts Road/Fassler Avenue). The EIR has determined that the project's contribution to the two signalized intersections at Highway 1 would increase the intersection delay by a maximum of 1.1 seconds and the volume-to-capacity ratio by 0.003 (Table 9-5). This increase is not significant by city standards. Project traffic added to the unsignalized Roberts Road/Fassler Avenue intersection would increase the delay at that intersection by 5.9 seconds. However, the addition of project traffic would not cause the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant adopted by Caltrans. Therefore, the impact to this intersection is not significant by city standards. The EIR also determined that the project's traffic contribution to cumulative impacts is also less than significant. Therefore, the No Project Alternative would eliminate the project's less than significant increase in traffic.

10.3 REDUCED LOTS ALTERNATIVE

A Reduced Lots Alternative would reduce the number of lots proposed on the 65-acre Planned Development. The same basic site plan configuration would be developed with several of the lots on the south side of the project access road eliminated. Lot sizes and building envelopes within the lots would remain the same as for the proposed project. The purpose of the alternative would be to reduce the number of homes visible along the ridgeline.

Land Use. Under the Reduced Lots Alternative, fewer homes would be constructed on the project site. The net density of development would be reduced from 1 unit per 5 acres to 1 unit per greater than 5 acres. The density would be consistent with the Open Space Residential density designated by the General Plan. Since the proposed project is consistent with General Plan land use and development densities for the site and does not conflict with existing adjacent land uses, the Reduced Lots Alternative would not reduce or eliminate land use impacts.

Aesthetics. Reducing the number of lots on the south side of the project access road would reduce the number of homes constructed along a property ridgeline. Lots 3 through 6 and Lot 8 are the most visually prominent from areas south of the project site (see Figure 14). Eliminating any of these lots would reduce the visibility of project development from the Linda Mar and Pedro Point areas. The EIR determined that the visual impact of home construction on or near the property ridgelines could be reduced to less than significant by careful site planning and architectural design to reduce the height of the project structures which is visible from the south. The Reduced Lots Alternative would moderately reduce the project's less than significant visual impacts by eliminating one or more homes which would be partially visible along the ridgeline.

Biology. The Reduced Lots Alternative would slightly reduce the size of the development footprint in proportion to the number of building lots that are eliminated. Each building envelop is roughly 7,000 feet so the reduction in loss of grassland and coastal scurb

vegetation through lot reduction is relatively small. Two heritage trees occur on Lot 2 and one heritage tree occurs on Lot 7. Thus, the Reduced Lots Alternative could eliminate removal of up to three heritage trees. The other 4 heritage trees removed by the project would still be removed under the Reduced Lots Alternative. The impacts of the Reduced Lots Alternative to nesting birds, California thrasher, white-tailed kite, loggerhead shrike would be slightly reduced by less habitat loss. However pre-construction surveys and avoidance protocols would still be required with this alternative the same as for the project. Potential impacts to California red-legged frog, San Francisco garter snake, and Mission blue butterfly would be the same as for the project. Potential impacts to San Francisco dusky-footed woodrat would remain the same as for the proposed project since the woodrat impact occurs from construction of the access road and detention basins in woodrat habitat. This impact cannot be avoided as long as project access to Fassler Avenue is needed for site development. The impacts to biological resources have been reduced to less than significant by project mitigation. Since the Reduced Lots Alternative would still rely on the same access road configuration, the impacts to these species would remain the same under the Reduced Lots Alternative.

Geology. The Reduced Lots Alternative would slightly reduce the size of the development footprint in proportion to the number of building lots that are eliminated. Thus the amount of site grading and erosion potential would be slightly reduced. The Reduced Lots Alternative would have the same potential for seismic impacts as the proposed project. The project's geologic impacts are reduced to less than significant. Under the Reduced Lots Alternative, the geologic impacts would also be less than significant.

Hydrology. The Reduced Lots Alternative would slightly reduce the size of the development footprint in proportion to the number of building lots that are eliminated. With fewer buildings constructed, there would be fewer impervious surfaces covering the project site and less storm runoff volume. With a reduction in ground disturbance, the amount of sediment in storm runoff would be reduced. The EIR determined that proper drainage controls would reduce the project's impact on storm water quality and quantity to less than significant. The Reduced Lots Alternative would slightly reduce the project's less than significant impact on hydrology.

Public Services. The Reduced Lots Alternative would reduce the demand for public services in proportion to the number of building lots that are eliminated from the project. The EIR determined that the project's impact on public services is not significant. Therefore, the Reduced Lots Alternative would slightly reduce the project's less than significant impact on public services.

Transportation. The Reduced Lots Alternative would reduce the daily vehicle trips and peak hour trips generated by the project development. Based on project traffic generation rates, the elimination of one lot would reduce AM peak hour traffic by 0.75 trips and PM peak hour traffic by 1.01 trips. The amount of traffic reduced by the Reduced Lots Alternative would be proportional to the number of lots eliminated from the project. The EIR has determined that the project's traffic contribution to the intersections with poor operating levels (Highway 1/Fassler Avenue/Rockaway Beach Avenue, Highway 1/Reina Del Mar Avenue, and Roberts Road/Fassler Avenue) is less than significant. Thus, the Reduced Lots Alternative would slightly reduce the project's less than significant traffic impacts.

10.4 ELIMINATION OF LOT 11 ALTERNATIVE

The Elimination of Lot 11 Alternative would remove development of this lot from the project tentative map. All other development of the project would remain as proposed. The purpose of this alternative would be to avoid development near Mission blue butterfly habitat.

Land Use. The Elimination of Lot 11 would slightly reduce the net density of site development from 1 unit per 5 acres to 1 unit per greater than 5 acres. The density would be consistent with the Open Space Residential density designated by the General Plan. Since the proposed project is consistent with General Plan land use and development densities for the site and does not conflict with existing adjacent land uses, the Elimination of Lot 11 Alternative would not reduce or eliminate land use impacts.

Aesthetics. Eliminating Lot 11 would slightly reduce the visibility of project development from the Linda Mar and Pedro Point areas. However, it would not change the number of homes visible along the upper ridgelines. The EIR determined that the visual impact of home construction on or near the property ridgelines could be reduced to less than significant by careful site planning and architectural design to reduce the height of the project structures which is visible from the south. The Elimination of Lot 11 would only slightly reduce the project's less than significant visual impacts.

Biology. The Elimination of Lot 11 Alternative would slightly reduce the loss of grassland and coastal scrub. The impact to Monterey pine forest and to Heritage Trees would remain the same as the project. The potential impact to special status nesting birds and the need for pre-construction surveys and avoidance protocols would still be required with this alternative the same as for the project. Potential impacts to dispersing California red-legged frog and San Francisco garter snake would remain the same as for the project. Impacts to San Francisco dusky-footed woodrat would also remain the same. The Elimination of Lot 11 Alternative would eliminate project development in an area that contains a moderate number of *Lupinus formosus* which is the preferred host plant for Mission blue butterfly. The building footprint and driveway have been modified to avoid the host plants but mitigation is required to ensure that the host plants remain protected. Elimination of development in this area eliminates the potential for impact. Thus, this alternative eliminates the project's less than significant impact to Mission blue butterfly.

Geology. The Elimination of Lot 11 Alternative would slightly reduce the size of the development footprint in proportion to the number of building lots that are eliminated. Thus the amount of site grading and erosion potential would be slightly reduced. The Elimination of Lot 11 Alternative would have the same potential for seismic impacts as the proposed project. The project's geologic impacts are reduced to less than significant. Under the Elimination of Lot 11 Alternative, the geologic impacts would also be less than significant.

Hydrology. The Elimination of Lot 11 Alternative would slightly reduce the size of the development footprint in proportion to the number of building lots that are eliminated. With fewer buildings constructed, there would be fewer impervious surfaces covering the project site and less storm runoff volume. With a reduction in ground disturbance, the amount of sediment in storm runoff would be reduced. The EIR determined that proper drainage controls would reduce the project's impact on storm water quality and quantity to less than significant. The

Elimination of Lot 11 Alternative would slightly reduce the project's less than significant impact on hydrology.

Public Services. The Elimination of Lot 11 Alternative would slightly reduce the demand for public services. The EIR determined that the project's impact on public services is not significant. Therefore, the Elimination of Lot 11 Alternative would slightly reduce the project's less than significant impact on public services.

Transportation. The Elimination of Lot 11 Alternative would slightly reduce the daily vehicle trips and peak hour trips generated by the project development. Based on project traffic generation rates, the elimination of one lot would reduce AM peak hour traffic by 0.75 trips and PM peak hour traffic by 1.01 trips. The EIR has determined that the project's traffic contribution to the intersections with poor operating levels (Highway 1/Fassler Avenue/Rockaway Beach Avenue, Highway 1/Reina Del Mar Avenue, and Roberts Road/Fassler Avenue) is less than significant. Thus, the Elimination of Lot 11 Alternative would slightly reduce the project's less than significant traffic impacts.

10.5 CLUSTERED DEVELOPMENT ALTERNATIVE

A Clustered Development Alternative would entail the same number of homes as the proposed project but with smaller building envelopes, structures and lot sizes. The intent would be to increase the development density on a smaller footprint to reduce environmental impact. The clustered homes would have to be located at the top of the hill or center of site where the slopes are less steep and most accommodating to development.

Land Use. Under the Clustered Development Alternative, the same number of homes would be constructed on the project site. The net density of development would remain the same (1 unit per 5 acres) and would be consistent with the Open Space Residential density designated by the General Plan. Since the proposed project is consistent with General Plan land use and development densities for the site and does not conflict with existing adjacent land uses, the Clustered Development Alternative would not reduce or eliminate land use impacts.

Aesthetics. Clustering the lots would avoid a linear development pattern along the ridgelines. The proposed homes have been sited along the northside of the east to west trending ridgeline to allow partial screening of the building heights when viewed from the south (Linda Mar area). This alignment also allows the lower elevation of the homes to be excavated into the hillside to lower the profile of the home visible above the ridgeline. Under the Clustered Development Alternative, houses would be built on top of the ridgeline; the full height of the structures would be visible to views from the south rather than just the upper building elevations of the proposed project. Tree screening would be less effective in disguising the full height of the structures (35 feet maximum allowable building height). The EIR determined that the visual impact of the proposed project on property ridgelines could be reduced to less than significant by careful site planning and architectural design which reduce the amount of building which is visible from the south. The Clustered Development Alternative would moderately increase the visibility of the project structures and therefore increase the project's less than significant visual impacts.

Biology. The Clustered Development Alternative would reduce the size of the development footprint through smaller building envelopes and smaller lot sizes. Each proposed building envelope is roughly 7,000 feet. A reduction in building envelope size to roughly 5,000 feet would reduce the loss of grassland and chaparral vegetation by roughly one-half an acre. Some heritage trees proposed in lot areas may be avoided by the Clustered Development Alternative in shifting the development to a different part of the project site. Heritage trees removed by access road construction would remain the same as for the project. The impacts of the Clustered Development Alternative to the special status wildlife species (nesting birds, California red-legged frog, San Francisco garter snake, San Francisco dusky-footed woodrat, and Mission blue butterfly) would remain the same as for the proposed project. Clustered Development Alternative would be located toward the center of the project site in the grassland areas. This area could contain rare plants and surveys would be needed to assess the potential impact of developing this part of the project site. Assuming the absence of impact to rare plants, the biological impacts of the Clustered Development Alternative would be slightly less than the proposed project.

Geology. The Clustered Development Alternative would slightly reduce the size of the development footprint in proportion to the number of building lots that are eliminated. Thus the amount of site grading and erosion potential would be slightly reduced. The Clustered Development Alternative would have the same potential for seismic impacts as the proposed project. The project's geologic impacts are reduced to less than significant. Under the Clustered Development Alternative, the geologic impacts would also be less than significant.

Hydrology. The Clustered Development Alternative would slightly reduce the size of the development footprint in proportion to the reduced building envelopes and lot sizes. With smaller building envelopes, there would be fewer impervious surfaces covering the project site and less storm runoff volume. With a reduction in ground disturbance, the amount of sediment in storm runoff would be reduced. The EIR determined that proper drainage controls would reduce the project's impact on storm water quality and quantity to less than significant. The Clustered Development Alternative would slightly reduce the project's less than significant impact on hydrology.

Public Services. The Clustered Development Alternative would have the same number of homes as the proposed project and generate the same demand for public services. The EIR determined that the project's impact on public services is not significant. The impact of the Clustered Development Alternative would be the same as for the project.

Transportation. The Clustered Development Alternative would have the same number of homes as the proposed project and generate the same traffic impacts. The EIR determined that the project's impact on the operating levels of local intersections is not significant. The impact of the Clustered Development Alternative would be the same as for the project.

10.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that the EIR analysis of project alternatives identify an "environmentally superior" alternative. If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative from among the other

alternatives. Based on the above alternative analysis, the No Project Alternative is the environmentally superior alternative. Of the other alternatives, the Reduced Lots Alternative is the environmentally superior alternative. The Reduced Lot Alternative would moderately reduce the project's visual impact and slightly reduce project impacts on Biology, Geology, Hydrology, Public Services, and Transportation.

11.0 CEQA REQUIRED ASSESSMENTS

11.1 SIGNIFICANT UNAVOIDABLE IMPACTS

There are no significant unavoidable impacts associated with the Harmony @1 project. The EIR identifies five potentially significant impacts of the Harmony @ 1 project which can be reduced through mitigation. These impacts include:

Aesthetics. The project will develop single family homes along a prominent ridgeline highly visible to the Linda Mar area of Pacifica. The homes will be designed with a low profile to minimize the structural mass visible from Linda Mar viewpoints. Night lighting will be restricted.

Biology. The project site contains suitable nesting habitat for several special-status bird species. Clearing vegetation within the construction zone prior to the start of nesting season will avoid impacts. A portion of the project site may also be used as a dispersal corridor for California red-legged frog and San Francisco garter snake. Monitoring by a qualified biologist would prevent inadvertent take of the frog and snake during construction activity. The site contains habitat for San Francisco dusky-foot woodrat. Several woodrat houses would be removed by construction of the access road and detention basins. Preconstruction surveys and dismantling/relocation of houses would minimize impact to the woodrat. Remaining habitat areas would be undisturbed in private open space. Mission blue butterfly habitat occurs on the project site near Lot 11. The house and the access driveway have been relocated to avoid the host plants of the Mission blue. Avoidance measures are specified as project mitigation and would reduce the impact to a less than significant level.

Geology. The project site is located in a seismically active region and may be subject to ground shaking from a seismic event. Portions of the project property may be subject to landsliding, erosion and expansive soils. The project would comply with Uniform Building Codes and implement drainage controls and recommendations of the geotechnical engineer.

Hydrology. Project construction will result in increased sediment in storm runoff. Development of the project site will adversely affect the water quality of storm runoff due to oil and grease from street and driveway parking areas and an increase in silt load due to site grading and development. Adherence to a Storm Water Pollution Prevention Plan (SWPPP) would implement stormwater controls and prevent off site sediment impacts. Detention basins will be equipped with grease traps to improve water quality prior to discharge into the city storm drain system.

Transportation. The project access road intersects Roberts Road on the inside of a curve where there are inadequate sight line distances for vehicles exiting the project street onto Roberts Road. The limited visibility creates unsafe an unsafe traffic condition. Trimming back the project slopes would enable safe sight line distances to be established.

11.2 IRREVERSIBLE ENVIRONMENTAL CHANGES

The project involves construction of single family homes on a hillside highly visible to the Linda Mar and Pedro Point areas of Pacifica which will reduce the amount of visual open space. The project will change the storm drainage patterns and increase the volume of storm runoff generated from the developed portions of the site. With development, there will be a permanent small increase in local traffic.

11.3 GROWTH INDUCING IMPACTS

The Harmony @ 1 planned development of 13 homes plus the single home development with a second residential unit on the adjoining 2-acre parcel would allow minor growth in the city population by 38 persons. The project would not induce city growth or development of other properties. The project would utilize existing water, wastewater, and storm drain service lines adjacent to the site. These lines have adequate capacity to serve the project and do not require extension of the lines into new service areas or expansion of line capacity that would enable new growth to occur in the city.

11.4 CUMULATIVE IMPACTS

CEQA Guidelines Section 15130 requires that an EIR contain an assessment of the cumulative impacts that may be associated with the project. This assessment involves examining project related effects on the environment in the context of similar effects that have been caused by past or existing projects, and the anticipated effects of reasonably foreseeable future projects. Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, may be significant under CEQA and must be addressed.

The City of Pacifica Planning Department has identified several projects within its city limits in various stages of the permitting process. These reasonably foreseeable future projects are considered in the EIR cumulative analysis. Table 11-1 identifies foreseeable future residential projects and Table 11-2 identifies such commercial projects. Of the residential projects, 144 units are in the planning review process and 120 units are approved and are in the building permit process. Of the commercial projects, half are approved and are in the final permit process. Among these projects, the residential projects on Piedmont Avenue, Fassler Avenue, Higgins Way, and Adobe Drive and the mixed-use projects on Old County Road, Rockaway Beach, and San Pedro Avenue are located in or near the Linda Mar area and are closest to the Harmony@1 project site.

Cumulative impact analyses are provided for each environmental discipline in their respective EIR sections (land use, aesthetics, biology, geology, hydrology, public services, and traffic). The EIR has determined that the Harmony@1 project would not result in any incremental effect that is cumulatively considerable when considered with the other projects.

Table 11-1
Residential Development
Planned or Ongoing Construction Projects: 3 Units or More

<u>Project</u>	<u>Units</u>	<u>Type</u>	<u>Unit/Lot Sizes</u>	<u>Location</u>	<u>Developer/Agent</u>
"The Bowl"	19 24	Detached Condos Attached Condos Single Family	4.2 acres	N. End of Palmetto Ave.	North Pacifica LLC Robert Kalmbach
Piedmont Subdivision	5	Detached Single Family		Piedmont Avenue	Periera
Sea Garden Estates	11	Detached	5.6 acres	1570 Higgins Way	G. Richardson
Vistamar Development	8	Townhouses	1 acre 12,806-	503-511 Monterey 500 block of	Javiar Chavarria
Sunset Estates	7	7-lot Subdivision	36,677 s.f. 30,698 s.f.	Palmetto Ave.	Jack Lowe
Beach Boulevard	9	Condos	/18,781 s.f.	1567 Beach Blvd.	Legacy Quest The Olson Co./Joe Bradford
Westview School Site	92	Residential	10.45 acres	367 Glen Court Way	
Adobe	7	Condos	18,750	1335 Adobe Drive	Joe Moore
Lorry Lane	7	Detached Condos	53,418 s.f.	Lorry Lane	Carlos Dominguez
The Prospects	34	Condos 13-lot Subdivision plus 1 additional single-family home	11 acres	Fassler Ave.	Rick Lee
Roberts Rd.	14		65+ acres	Fassler Ave. @ Roberts Rd. Gypsy Hill	Cowan-Newton
Gypsy Hill	8	8-lot Subdivision Single-family detached	13.9 acres	Rd/Clarendon Rd.	JC Engineering
Connemara	25		40+ acres	900 Oceana Blvd.	Jim Pollart

Note: A 63-unit project located on Fassler Avenue was considered in the cumulative traffic impact analysis. The application for this development is no longer being pursued and therefore does not appear on the City's list of potential projects.
Source: City of Pacifica, March 2007

Table 11-2
Commercial + Mixed Use + Misc. Development
Planned or Ongoing Construction Projects

<u>Project</u>	<u>Description</u>	<u>Bldg. Size</u>	<u>Prop. Size</u>	<u>Location</u>	<u>Developer/Agent</u>
Mixed-Use Bldg.	3-units/ Commercial	5,179 s.f	5,801.9 s.f.	2304 Palmetto Ave.	2308 Palmetto LLC
Mixed-Use Bldg.	4 units/ Commercial	7,400 s.f.	8,160 s.f.	1910 Palmetto Ave.	Greg Ward
Mixed-Use Bldg.	3 units/ Commercial	8,609.74 s.f.	9,594 s.f.	Waterford/Monterey	JC Engineering
Mixed-Use Bldg. Connemara	3 units/ Commercial	4,400 s.f.	6,747 s.f.	195 Carmel Ave.	Carlos Dominguez
Lower Milagra Ridge	23 units/ Commercial 6 units/ Residential	10,000 s.f. 2,165 s.f.	40+ acres 6,000 s.f.	900 Oceana Blvd.	Jim Pollart
Mixed-Use Bldg	4 units/Commercial	2,126 s.f.	7,087 s.f.	San Pedro Ave. 270 Old County Road	Neil Sofia JC Engineering
Commercial	Office/retail 8 commercial, 8 residential above, 6 live/work	22,629 sf	14,070 s.f.		
Mixed-Use & Live/Work		9,556 sf	28,950 sf	12 Sharon Way 270 Rockaway Beach	Urban Green, LLC JC Engineering
Rockaway Center	Commercial office	33,594 sf	14,056 sf		John Pschnenica
Walgreens	Retail and Drive-thru	13,870 sf	15,600 sf	520 Palmetto	

Source: City of Pacifica, March 2007

11.5 EFFECTS FOUND TO BE NOT SIGNIFICANT

The EIR analysis concludes that the following impacts of the Harmony @ 1 project will not be significant and do not require mitigation.

Land Use. The 65-acre Planned Development conforms to the Open Space Residential and Very Low Residential designation by the General Plan and the Planned Development designation of the Zoning District. The project conforms to the land use policies of the General Plan and Local Coastal Land Use Plan. The development of a single residence on the 2-acre Agriculture parcel conforms to the Open Space Residential designation by the General Plan and the permitted use of the Agricultural Zoning District. The project would not create land use conflicts with adjacent residential neighbors.

Public Services. The development of 14 single family homes would increase the city population by 38 persons based on a city occupancy rate of 2.74. The corresponding increase in demand for police and fire protection services and public parks is not significant. Local schools have the capacity to accommodate the estimated 21 new students generated by the housing project.

In addition, the Initial Study (Appendix A) prepared for the project determined that the project would not have a significant project specific or cumulative impact upon agriculture, air quality, cultural resources, hazardous materials, mineral resources, noise, population/housing, recreation, and utilities.

12.0 REFERENCES

12.1 BIBLIOGRAPHY

- Beidleman, Linda H. and Eugene N. Kozloff. 2003. Plants of the San Francisco Bay Region: Mendocino to Monterey, 2nd ed. University of California Press, Berkeley, California.
- California Department of Fish and Game. 2002. California's Plants and Animals. Habitat Conservation Planning Branch Web Page. www.dfg.ca.gov/hcpb/species. Sacramento, CA.
- California Department of Fish and Game. California Wildlife Habitat Relationships System, California Interagency Wildlife Task Group. Perennial Grassland by John G. Kie. Updated by: CWHR Staff, April 2005. <http://www.dfg.ca.gov/bdb/cwhr/pdfs/PGS.pdf>. Viewed April 2007.
- [CNDDDB] California Natural Diversity Database. 2007.
- California State Automobile Association. April 2000. *Daly City – South San Francisco Map*.
- Carraway, L.N. and Verts, B.J. 1991. Mammalian Species: *Neotoma fuscipes*. The American Society of Mammalogists. No. 386, pp. 1-10, 4 figs.
- Christopher A. Joseph and Associates. The Prospects Residential Project Draft Environmental Impact Report. December 2006.
- City of Pacifica. General Plan. June 1993.
- City of Pacifica. Zoning Ordinance.
- City of Pacifica. Letter to Stuart Cowan from Brian Martinez, Wastewater Treatment Plant Assistant Superintendent. September 12, 2006.
- Corelli, Toni and Zoe Chandik. 1995. The Rare and Endangered Plants of San Mateo and Santa Clara County. Monocot Press, Half Moon Bay, California.
- [EIC] Earth Investigations Consultants. Engineering Geologic Feasibility Study. Proposed 13-lot Subdivision APN 0222-150-240, Roberts Road, Approximately 55 acre parcel between Crespi Drive and Fassler Avenue, Pacifica, California. Prepared for Cown-Newton, LLC. December 5, 2005.
- [EIC] Earth Investigations Consultants. Geotechnical Investigation. Proposed 13-lot Subdivision APN 0222-150-240, Roberts Road and Adjoining APN 022-150-3-10 Fassler Avenue, Pacifica, California. Prepared for Cown-Newton, LLC. June 19, 2006.
- Federal Register, April 13, 2006. Vol. 71, No. 71. Rules and Regulations. Department of the Interior, Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Red-Legged Frog, and Special Rule

- Exemption Associated With Final Listing for Existing Routine Ranching Activities; Final Rule. 50 CFR Part 17.
- Field Architecture. 2007. Coastal Green Architecture concept design for Harmony @ 1 Project, Pacifica, California.
- Kelly, Patrick Anthony. 1990. Population ecology and social organization of dusky-footed woodrats, *Neotoma fuscipes*. University of California, Berkeley. UMI Ann Arbor, Michigan. Order Number 9103753.
- Linacre, Howard. Heritage Tree Survey & Tree Protection Plan, Roberts Road, California. April 23, 2006.
- National Park Service. 2006. Mission blue butterfly host plant mapping at Sweeney Ridge by May and Associates, 2006. California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California* – sixth edition. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA.
- North Coast County Water District. Letter to Kathryn Farbstein, City of Pacifica from Bert Weiss, Project Manager. April 24, 2006.
- PKM, Inc. APN 022-150-420 and APN 022-150-310 Lot Division. Tentative Subdivision Map. Sheets 1 through 8. June 8, 2006.
- RKH Civil and Transportation Engineering. Traffic Impact Analysis, Roberts Road Residential Pacifica, California. September 6, 2006.
- San Bruno Mountain Habitat Conservation Plan, Annual Activity Reports (1982- 2001) for Endangered Species Permit PRT-2-9818. Submitted to US Fish and Wildlife Service, San Mateo County, Parks and Recreation Division.
- [SCMBC] Santa Cruz Mountains Bioregional Council. 2004. Viewed on August 22, 2006 at <http://www.scmabc.net/sensitivemammals-scmb.htm>
- Sawyer and Keeler-Wolf, 1995. A Manual of California Vegetation. California Native Plant Society: Published in Sacramento, California.
- [TRA] Thomas Reid Associates. Endangered Species Survey San Bruno Mountain, Biological Study 1980 – 1981. Prepared for San Mateo County by Thomas Reid Associates. May 1982.
- [TRA] Thomas Reid Associates. Pacifica Bowl Development Project. Environmental Impact Report. Public Review Draft. March 2002.
- [WRA] WRA Environmental Consultants. Technical Memorandum for Roberts Road Parcel APN 022-150-240 Biological Reconnaissance. January 10, 2005.
- [WRA] WRA Environmental Consultants. Technical Memorandum for Roberts Road Parcel APN 022-150-240 Biological Reconnaissance. February 14, 2006.

[WRA] WRA Environmental Consultants. Addendum to Technical Memorandum for the new Roberts Road Parcel Biological Reconnaissance. April 21, 2006

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