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## V. MITIGATION MONITORING PROGRAM

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Section 21081.6 of the Public Resources Code requires a Lead Agency to adopt a “reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment” (Mitigation Monitoring Program [MMP], §15097 of the *CEQA Guidelines* provides additional direction on mitigation monitoring or reporting). The City of Pacifica is the Lead Agency for the Prospects Residential Project.

The Draft EIR was prepared to address the potential environmental impacts of the proposed project. Where appropriate, this document identified project design features or recommended mitigation measures to avoid or to mitigate identified potential impacts to a level where no significant impact on the environment would occur. This MMP is designed to monitor implementation of the mitigation measures identified for the project. The required mitigation measures are listed and categorized by impact area, with an accompanying identification of the following:

- Monitoring/Implementing Phase, the phase of the project during which the mitigation measure shall be implemented and monitored:
  - Pre-Construction, including the design phase
  - Construction
  - Occupancy (post-construction)
- Implementing Party, the party responsible for implementing the mitigation measure.
- The Enforcement Agency, the agency with the power to enforce the mitigation measure.
- The Monitoring Agency, the agency to which reports involving feasibility, compliance, implementation and development are made.

The MMP for the Prospects Residential project will be in place throughout all phases of the project. The project applicant shall be responsible for implementing all mitigation measures unless otherwise noted. The applicant shall also be obligated to provide certification, as identified below, to the appropriate monitoring agency and the appropriate enforcement agency that compliance with the required mitigation measure has been implemented. The City’s existing planning, engineering, review and inspection processes will be used as the basic foundation for the MMP procedures and will also serve to provide the documentation for the reporting program.

Generally, each certification report will be submitted to the City of Pacifica in a timely manner following completion/implementation of the applicable mitigation measure and shall include sufficient information to reasonably determine whether the intent of the measure has been satisfied. The City of Pacifica shall ensure that project construction occurs in accordance with the MMP. Departments listed below are all departments of the City of Pacifica unless otherwise noted.

**AESTHETICS**

**Required Mitigation Measures**

**MM IV.A-1: Landscaping Plan and Design Review**

- The proposed landscape plan shall include landscape screening throughout the project site to further screen the proposed project from off-site views. The plan shall include additional landscaping along the northern and western boundaries of the project site to ensure as much screening as possible.
- The use of screen plantings shall borrow from naturally established form, line, color and texture so that the visual characteristics are compatible with their surroundings.
- The landscape plan shall be subject to review and approval by City staff prior to issuance of grading or building permits.
- Colors used for exterior building surfaces shall match the hue, lightness, and saturation of colors of the immediately surrounding trees and vegetation. Several colors matching those of the surrounding trees and vegetation shall be used in order to minimize uniformity.
- Prior to building permit issuance, the grading plan, development plan, landscaping plan, sign plan, elevations, and colors and materials shall receive review and approval of the City of Pacifica staff through the design review procedures with the Planning Commission during approval of the Specific Plan.

**Monitoring/Implementing Phase**

Measures must be included in landscape plan and project specifications and submitted to City prior to issuance of Building Permit

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.A-2: Lighting Plan**

Prior to issuance of the building permit, an exterior lighting plan shall be submitted for review and approval by City staff. The lighting plan shall include but not necessarily be limited to the following:

- The exterior lighting plan shall show all potential light sources with the types of lighting and their locations.
- Exterior lighting shall include low mounted, downward casting and shielded lights that do not cause spillover onto adjacent properties and the utilization of motion detection systems where applicable.
- No flood lights shall be utilized.

- Lighting shall not "wash out" structures or any portions of the site.
- Low intensity, indirect light sources shall be required.
- On-demand lighting systems shall be required.
- Mercury, sodium vapor, and similar intense and bright lights shall not be permitted except where their need is specifically approved and their source of light is restricted.
- All light sources shall be fully shielded from off-site view.
- All buildings and structures shall consist of non-reflecting material or be painted with non-reflective paint.
- Generally, light fixtures shall not be located at the periphery of the property and should shut off automatically when the use is not operating. Security lighting visible from Fassler Avenue shall be motion-sensor activated.
- All lighting shall be installed in accordance with building codes and the approved lighting plan during construction.

**Monitoring/Implementing Phase**

Measures must be included in Lighting Plan and submitted to City prior to issuance of Building Permit

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**Mitigation Measure IV.A-3: Relocation of Units # 1-4**

To reduce impacts related to Aesthetics, Unit # 1 (the unit nearest Fassler Avenue) shall be moved to the southeast of the parking garage; Units # 2-4 shall be moved northwards towards the amphitheatre; and the height of Unit # 2 shall be limited to one story.

<b>Monitoring/Implementing Phase</b>	Measure must be included as part of Tentative Map
<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**BIOLOGICAL RESOURCES**

**Required Mitigation Measures**

***MM IV.B-1 Special-Status Amphibian and Reptile Species***

A qualified biologist shall be retained by the applicant to oversee construction and ensure that no inadvertent take of the San Francisco garter snake or California red-legged frog occurs as a result of

development of the site. The following procedures, based on the recommendations in the *Revised Biological Assessment*, shall apply:

- Prior to any grading or grubbing of the site, a biologist shall conduct a preconstruction survey to confirm absence of any California red-legged frogs or San Francisco garter snakes on the site. During the construction phase of the project, 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 of construction activities for the presence of California red-legged frogs and San Francisco garter snakes. This includes checking holes, under vehicles and under boards left on the ground. If any California red-legged frogs or San Francisco garter snakes 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 and the on-site monitor shall be aware of all terms and conditions set by USFWS and CDFG on the project. The biologist in charge shall train the on-site monitor in how to identify California red-legged frogs and San Francisco garter snakes. 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 frogs and San Francisco garter snakes, 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. Harassment of these species is a violation of federal law.
- During construction, all holes shall be covered at night to prevent California red-legged frogs and San Francisco garter snakes from becoming trapped in holes on the construction site.

#### **Monitoring/Implementing Phase**

Measures must be incorporated in building permit plans prior to issuance of grading/building permit and implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

#### ***MM IV.B-2 Special-Status Mammal Species***

A qualified biologist shall be retained by the applicant to conduct a trapping and relocation program for any San Francisco dusky-footed woodrats located within the limits of proposed grading and development. The trapping and relocation effort shall be conducted outside the breeding season (March through August) to ensure any young are not inadvertently lost due to the destruction of the protective nest. Any nests within the construction zone shall be relocated to locations proposed as permanent open space on the site,

and individual woodrats released into their relocated nests. The trapping and relocation effort shall preferably be conducted within a few days prior to grubbing and vegetation removal to prevent individual woodrats from moving back into the construction zone. It should be noted that trapping and relocating special-status species is a technique that wildlife agencies have established as acceptable mitigation. No additional impacts to special-status species would result through this practice.

**Monitoring/Implementing Phase**

Measure must be incorporated in building permit plans prior to issuance of grading/building permit and Implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.B-3 Special-Status Bird Species**

Any active raptor or loggerhead shrike nests in the vicinity of proposed grading shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling grading and vegetation removal during the non-nesting period (September through February), or if this is not feasible, by conducting a pre-construction survey for active nests. The survey report shall be submitted to the City of Pacifica for review and approval prior to initiation of grading. Provisions of the pre-construction survey and nest avoidance, if necessary, shall include the following:

- If grading is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall be retained by the applicant to conduct a pre-construction nesting survey no more than 30 days prior to initiation of grading to provide confirmation on presence or absence of active nests in the vicinity.
- If active nests are encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the CDFG and implemented to prevent nest abandonment. At a minimum, grading in the vicinity of the nest shall be deferred until the young birds have fledged. A nest-setback zone of at least 300 feet shall be established for raptors and 100 feet for loggerhead shrike and passerine birds within which all construction-related disturbances shall be prohibited. The perimeter of the nest-setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.
- If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest-setback zone until a qualified biologist verifies that the birds have either a) not begun egg-laying and incubation, or b) that the juveniles from the nest are foraging independently and capable of independent survival at an earlier date. A survey report by the qualified biologist verifying that the young have fledged shall be submitted for review and approval by the City of Pacifica Planning Department prior to initiation of grading in the nest-setback zone.

**Monitoring/Implementing Phase**

Survey must be submitted to City prior to issuance of grading/building permit; measures must be included in building permit plans and implemented during construction

**Implementing Party**

Applicant

**Enforcement Agency**

Building Division of the Planning Department

**Monitoring Agency**

Building Division of the Planning Department

***MM IV.B-4 Riparian Habitat or Other Sensitive Natural Community***

The proposed Site Plan and Grading Plan shall be revised to avoid the stands of native willow scrub on the site. The revised plans shall be submitted to the City of Pacifica for review and approval prior to issuance of the tentative map. As necessary, this shall include adjustments to the proposed Community Gardens, Upper Playfield, and man-made creek. The stands of willow shall be enhanced as part of the proposed restoration efforts outlined in the *Natural Habitat Restoration Proposal* and non-native landscape species shall be restricted from the perimeter of these stands, with a minimum 15-foot setback from existing willow scrub. In addition, the following measures as outlined in the *Natural Habitat Restoration Proposal* shall be implemented with regard to restoration of native habitat.

- A qualified native plant specialist shall conduct surveys to delineate the different plant communities and determine the percentages of the different species within the communities. This data and the plant list in the Biological Assessment Report shall be used to determine an appropriate mix of rooted nursery stock plants to install and supplementary seed mix to be prepared. The re-graded slope of the quarry face shall be restored as coastal scrub.
- Seed collection shall be accomplished the summer before the work starts. Seed shall be site specific: collected onsite or within a five-mile radius of the project site.
- Plants used at the site shall be site specific: grown from material collected onsite or within a five mile radius from the project site.
- All remaining debris and trash shall be removed from the site.
- Appropriate irrigation (drip or sprinkler) shall be supplied for a period of time encompassing the first two rainy seasons after the restoration or however longer needed to establish the new growth.
- All areas will be monitored and maintained for five years after initial planting. Maintenance shall include weeding of non-native species, replacement of failed plantings, further seed collection as needed, and continued irrigation as needed.

The following procedures detail the restoration procedure for each of the communities.

***Coastal Scrub:***

- Cleared and prepared areas shall be lightly tilled and seeded with the appropriate seed mix.

- Planting shall be of one gallon specimens or equivalent, or at ratio of species as prescribed by the required surveys. Planting density shall be no less than one plant every one foot for the accumulative planting of shrubs, woody species, grasses, forbs, and annuals.
- All planted and seeded areas shall be mulched with rice straw to a loft thickness of no less than four inches.
- Appropriate irrigation (drip or sprinkler) shall be supplied for a period of time encompassing the first two rainy seasons after the restoration or however long needed to establish the new growth.

*Perennial Grassland (Coastal Prairie):*

- Cleared and prepared areas shall be lightly tilled and seeded with the appropriate seed mix.
- In the fall of the work season, all other areas designated grassland shall be lightly raked and supplemented with an appropriate mix of native seeds.
- Planting shall be of one gallon specimens or equivalent, at a ratio of species as prescribed by the required surveys. Planting density shall be no less than one plant every one foot for the accumulative planting of shrubs, woody species, grasses, forbs, and annuals.
- All planted and seeded areas shall be mulched with rice straw to a loft thickness of no less than four inches.
- Appropriate irrigation (drip or sprinkler) shall be supplied for a period of time encompassing the first two rainy seasons after the restoration or however long needed to establish the new growth.

**Monitoring/Implementing Phase**

Revised site and grading plans must be submitted to City prior to issuance of grading/building permit; measures must be implemented during construction and after occupancy

<b>Implementing Party</b>	Applicant/HOA
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.B-5      *Authorization for Loss of Jurisdictional Waters***

A Wetland Mitigation Program shall be prepared by a qualified wetland specialist to provide for the protection, replacement, and management of any jurisdictional waters on the site affected by proposed development and submitted to the City for approval prior to issuance of building permits. The Mitigation Program shall include the following components and meet the following standards:

- Before project implementation, a delineation of waters of the United States, including wetlands that could be affected by development, shall be made by a qualified wetland specialist through the formal CWA Section 404 process.

- If jurisdictional wetlands are determined to be present on the site, proposed grading and development shall be redesigned to avoid removal or adverse impacts on areas verified as jurisdictional wetlands.
- Provide adequate mitigation for any direct or indirect impacts on jurisdictional waters as coordinated with the Corps, RWQCB, and the City of Pacifica where complete avoidance is infeasible. Replacement wetlands shall be replaced at a minimum 2:1 replacement ratio and shall be established in suitable locations within proposed open space areas. The wetlands replacement component of the Mitigation Program shall emphasize establishment of native riparian and uplands species to enhance existing habitat values. The Mitigation Program shall be submitted for review and approval by the City of Pacifica prior to issuance of building or grading permits.
- The wetland replacement component of the Mitigation Program shall specify performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be conducted by the qualified wetland specialist for a minimum of five years and continue until the success criteria are met.

In addition, the applicant shall obtain all necessary permits from the Corps, USFWS, and the RWQCB as required by federal and State law to avoid, minimize or offset impacts to any species listed under either the State or federal Endangered Species Acts or protected under any other State or federal law as follows:

- If based on the verified delineation, it is determined that fill of waters of the United States would result from project implementation, authorization for such fill shall be secured from the Corps through the Section 404 permitting process and from the RWQCB as part of the Section 401 water quality certification process.
- Consultation or incidental take permitting may be required under the ESA. The applicant shall obtain all legally-required permits from the USFWS for the “take” of protected species under the ESA.
- Evidence that the applicant has secured any required authorization from these agencies shall be submitted to the City of Pacifica Planning Department prior to issuance of any grading or building permits for the project.

**Monitoring/Implementing Phase**

Required Plan and evidence must be submitted to City along with building permit plans prior to issuance of grading/building permit; measures must be implemented during construction and after occupancy

<b>Implementing Party</b>	Applicant/HOA
<b>Enforcement Agency</b>	ACOE, USFWS, RWQCB
<b>Monitoring Agency</b>	ACOE, USFWS, RWQCB

**MM IV.B-6 Wildlife Habitat Protection and Enhancement**

A qualified landscape architect or restoration ecologist who specializes in native habitat restoration shall be retained by the applicant to incorporate the following provisions into the Landscape Plans for the project:

- Prohibit the use of highly undesirable species in landscape improvements on the site which could spread into the adjacent open space areas. Unsuitable species include: blue gum eucalyptus (*Eucalyptus globulus*), acacia (*Acacia* spp.), pampas grass (*Cortaderi* spp.), broom (*Cytisus* spp. and *Genista* spp.), gorse (*Ulex europaeus*), bamboo (*Bambusa* spp.), giant reed (*Arundo donax*), English ivy (*Hedera helix*), German ivy (*Senecio milanioides*), Himalayan blackberry (*Rubus discolor*), cotoneaster (*Cotoneaster pannosus*), fennel (*Foeniculum vulgare*), and periwinkle (*Vinca* spp.), among others identified in the list of “Invasive Non-Native Species” maintained by the Golden Gate National Recreation Area<sup>1</sup> and in the CalEPPC List.<sup>2</sup> This restriction on use of highly undesirable species in landscaping shall be included as a requirement in the CC&Rs for the project.
- Implement the *Natural Habitat Restoration Proposal*, including the eradication program to effectively eliminate highly aggressive non-native species such as French broom, Scotch broom, pampas grass, fennel, wild teasel, and poison hemlock from the site, and replace them with appropriate native shrub and groundcover species.
- Define maintenance and monitoring provisions to ensure the successful establishment and long-term viability of native plantings and the control and eradication of highly aggressive non-native French broom, Scotch broom, pampas grass, Himalayan blackberry, periwinkle, and other noxious weeds from the site. The maintenance and monitoring program shall be implemented during a minimum five year monitoring as part of *Natural Habitat Restoration Proposal*, and shall continue as part of long-term maintenance of open space areas.
- Provide for the immediate reseeding of all graded slopes not proposed for roadways, residences, and ornamental landscape plantings with a mix of native grasses and forbs appropriate for the site rather than a conventional seed mix typically used for erosion control purposes to replace and improve existing habitat values of grasslands disturbed on the site.
- The revised landscape plans shall be submitted to the City for review and approval.

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<sup>1</sup> Golden Gate National Recreation Area, 2006, *List of Invasive Non-Native Species for Which Removal within Golden Gate National Recreation Area is a Priority*, March.

<sup>2</sup> California Exotic Pest Plant Council, 2006, *Ibid.*

**Monitoring/Implementing Phase**

Measures must be incorporated into Landscape Plan prior to issuance of grading/building permit and implemented during construction and after occupancy

**Implementing Party**

Applicant/HOA

**Enforcement Agency**

Building Division of the Planning Department

**Monitoring Agency**

Building Division of the Planning Department

***MM IV.B-7 Wildlife Habitat Avoidance***

Measures recommended in Mitigation Measures IV.B-1 through IV.B-3; IV.B-4; and IV.B-5 would serve to protect important natural habitat on the site for wildlife, avoid the potential loss of nests in active use, and minimize disturbance to potential wetlands and provide for replacement of affected jurisdictional waters. The following additional provisions shall be implemented to further protect wildlife habitat resources, and shall be included in CC&Rs for the development:

- Prohibition on use of invasive plant species for landscaping.
- Fencing that obstructs wildlife movement shall be restricted to the vicinity of building envelopes and community gardens, and shall not be allowed elsewhere on the site. Wildlife exclusionary fencing is designed to exclude wildlife and contains one or more of the following conditions: lowest horizontal is within 1.5 feet of ground, or highest horizontal is over 6 feet, or top or bottom wire is barbed, or distance between top wires is less than 10 inches, or it combines with existing structures or fences, even on neighboring parcels, to create an obstacle to wildlife movement.
- Lighting shall be carefully designed and controlled to prevent unnecessary illumination of natural habitat on the site. Lighting shall be restricted to the vicinity of building envelopes and the minimum level necessary to illuminate roadways and other outdoor areas. Lighting shall generally be kept low to the ground, directed downward, and shielded to prevent illumination into adjacent natural areas.
- Dogs and cats shall be confined to individual residences and the fenced portion of the building envelopes to minimize harassment and loss of wildlife, except dogs on leash and cats with bells on collars.
- All garbage, recycling, and composting shall be kept in closed containers and latched or locked to prevent wildlife from using the waste as a food source.

**Monitoring/Implementing Phase**

Measures must be included in CC&Rs for development prior to approval of Final Map and implemented after occupancy

**Implementing Party**

Applicant /HOA

**Enforcement Agency**

Building Division of the Planning Department

**Monitoring Agency**

Building Division of the Planning Department

**MM IV.B-8 Preservation of Heritage Trees**

The applicant shall comply with all provisions in the City’s Municipal Code (Sec. 4-12.04) for preservation of Heritage Trees. The applicant shall submit the required Tree Protection Plan (Sec. 4-12.07).

**Monitoring/Implementing Phase**

Tree protection plan must be submitted to City prior to issuance of grading/building permit

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department/ Department of Public Works
<b>Monitoring Agency</b>	Building Division of the Planning Department

**CULTURAL RESOURCES**

**Required Mitigation Measures**

**MM-IV.C-1: Contractor Notification**

Prior to excavation and construction of the proposed project, the prime contractor and any subcontractor(s) shall be cautioned on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts, human remains, bottles, paleontological resources, and other cultural materials from the project site.

**Monitoring/Implementing Phase**

Measures must be included in building permit plans prior to issuance of grading/building permit and implemented during construction.

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM-IV.C-2: Archaeologist Oversight**

A qualified archaeological monitor (which could include the construction foreman if appropriately trained by an archaeological monitor) shall be present during any and all ground-disturbing activities that occur in association with the project, including any utility and sewer hookups within the public streets.

**Monitoring/Implementing Phase**

Measures must be included in building permit plans prior to issuance of grading/building permit and implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM-IV.C-3: Archaeological Resource Discovery**

In the event that buried archaeological resources are exposed during project construction, work within 30 feet of the find shall stop until a Professional Archaeologist, meeting the standards of the Secretary of the Interior, can identify and evaluate the significance of the discovery and develop recommendations for treatment. Recommendations could include preparation of a Treatment Plan, which could require recordation, collection and analysis of the discovery; preparation of a technical report; and curation of the collection and supporting documentation in an appropriate depository. However, as required by State law and in accordance with Section 15064.5(e) of the *CEQA Guidelines*, if Native American remains are discovered at the project site during construction, work at the specific construction site at which the remains have been uncovered shall be suspended, and the appropriate City and County agencies immediately notified. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains.

**Monitoring/Implementing Phase**

Measures must be included in building permit plans prior to issuance of grading/building permit and implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**GEOLOGY/SOILS**

**Required Mitigation Measures**

**MM IV.D-1: Strong Seismic Ground Shaking**

The proposed project shall be designed to follow seismic design criteria derived from Chapter 16 in the most recent Uniform Building Code to reduce the potential adverse effects of strong seismic ground shaking. The applicant must submit any design/development plans for the Project to the City for review and approval, including peer review as necessary, to verify that the plans conform to the design standards. The Seismic Design parameters are:

- Seismic Zone: 4 (Z=0.40)
- Seismic Source Type A: San Andreas Fault
- Distance to Seismic Source: 2.7 miles to the northeast
- Soil Profile: Sc (Soft Rock)

The BAGG Geotechnical Report specified Pier and Grade Beam Foundations for the proposed residential structures, and Concrete Mat Foundation for the proposed parking structure loads. These recommendations are in accordance with the UBC and are specified in Appendix E.

**Monitoring/Implementing Phase**

Measures must be included in building permit plans prior to issuance of grading/building permit

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.D-2: Geotechnical Consultant Involvement**

All geotechnical aspects of the proposed project, and preliminary development of plans shall continue to be evaluated by the project geotechnical consultant. As determined by the City, a letter from the project geotechnical consultant shall be prepared that approves all geotechnical aspects of the proposed site development layout, verifies project geotechnical feasibility, and verifies conformance with the geotechnical consultant's design recommendations, insuring less-than-significant seismic impacts.

**Monitoring/Implementing Phase**

Letter must be submitted to City prior to issuance of grading/building permit

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.D-3: Grading and Drainage**

The BAGG Geotechnical Report recommended mitigation measures to reduce the potential adverse effect related to grading and drainage. The applicant will be required to comply with the measures identified to ensure that any impact is reduced below the level of significance. In order to reduce the potential adverse effects that could lead to landslides, the proposed project shall be designed with the following grading procedures:

- Remove vegetation, roots and debris to a minimum depth of six inches below existing grade;
- Existing utilities, where known, shall be located on the grading plan. Such measures will allow the project engineer to evaluate the necessity of removing abandoned pipes during site grading;
- Holes/depressions created by the removal of vegetation, roots, existing utilities, or old foundations shall be backfilled with engineered fill. The fill shall be placed in thin lifts not exceeding eight inches in loose thickness compacted to a minimum of 90 percent relative compaction at above optimum moisture content;
- Prior to construction, the loosely placed material in the geotechnical study test pits shall be replaced with compacted fill;

- Acceptable structural fill at the site shall be essentially non-expansive (Plasticity Index of less than 15), free from debris, organic and deleterious material, have a maximum rock size of four inches in diameter, and have fines content of between 15 and 65 percent. On-site material free of organics and debris is likely to meet the requirements of acceptable structural fill. A sample of the import fill, if planned, should be delivered to the Geotechnical Engineer for testing and approval prior to importing to the site; and
- The fills placed on sloping ground must be keyed into firm, native materials. Keyway depths and locations will be determined by the Geotechnical Engineer. A typical keyway schematic is Shown on Plate 21. The keyway should be approximately 15 feet wide (1.5 times the width of the equipment). The bottom of the keyway should be inclined towards the slope. Subsurface drainage should be installed in the keyway. The typical construction details of a subdrain are shown on Plate 21 (See Geotechnical Study in Appendix E). Subdrains should be connected at their low points to storm drain system or other approved drainage facilities. Subdrain outlets should be protected from erosion and siltation.

Additionally the following surface water controls shall be implemented:

- The ground surface adjacent to all sides of the proposed buildings shall be sloped away from the foundations;
- Unpaved and landscaped areas shall slope at least five percent for a distance of at least five feet away from the face of the building;
- Surface drainage swales at the site shall slope at least one percent toward suitable discharge point;
- Runoff shall not be allowed to flow over graded or natural slopes, and any area where surface run-off becomes concentrated shall be provided with a catch basin;
- The run-off from building roofs shall be collected in closed, non-perforated pipes and discharged to the local storm drain system, or discharged in a manner that will not allow ponding adjacent to foundations or erosion on native or graded slopes; and
- Surface and subsurface drainage facilities and catchment areas shall be checked frequently and cleaned or maintained throughout the project life, as necessary.

Placement of any fill on steep slopes must be properly engineered with retaining walls designed to withstand lateral loads. The following measures must be implemented:

- Design any cut-and-fill of slopes no steeper than 2:1 without the approval of the project Geotechnical Engineer;
- Comply with specific grading procedures and requirements relating to fill outlined above; and

- Submit design plans for surface water control system to the City for review and approval to ensure that: (a) surface run off will not flow over graded or natural slopes; and (b) surface water drainage is diverted away from a historical landslide area on the site through measures such as the catch basin mentioned under surface water controls.

The applicant shall submit the project grading plans and design plans to the City for review and approval, including peer review as necessary. Peer review shall serve to verify that all recommendations ensure the stability of the slopes at the project site.

**Monitoring/Implementing Phase**

Measures must be incorporated into building permit plans prior to issuance of grading/building permit and implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.D-4: Unstable Soil Resulting in Landslide, Subsidence, or Collapse**

The BAGG Geotechnical Report recommended mitigation measures to reduce the potential adverse effect related to unstable soil. The applicant will be required to comply with the measures identified to ensure that any impact is reduced below the level of significance. These measures include the following:

- Comply with specific minimum criteria and recommendations concerning the quality of engineered fill outlined in mitigation measure MM IV.D-3;
- Comply with specific minimum criteria and recommendations concerning the standard for soil compaction which requires that all on-site soils and bedrock materials shall be compacted to at least 90 percent of maximum dry density, as determined by ASTM Test Method D1557-01, while at a moisture content that is slightly over optimum. In the slab and pavement areas, the top 6-inches of the subgrade, including aggregate base, shall be compacted to at least 95 percent of the maximum dry density;
- Fill holes/depressions created by grading activities with engineered fill;
- Remove and replace loose fill in test pits with engineered fill; and
- Keyway depths and locations for fill placed on sloping ground must be keyed to firm, native materials, as determined by the Geotechnical Engineer.

Additionally the applicant shall submit the project grading plans to the City for review and approval, including peer review as necessary, to ensure adequate soil stability.

**Monitoring/Implementing Phase**

Measures must be incorporated into building permit plans prior to issuance of grading/building permit and implemented during construction

**Implementing Party**  
**Enforcement Agency**  
**Monitoring Agency**

Applicant  
Building Division of the Planning Department  
Building Division of the Planning Department

## HYDROLOGY & WATER QUALITY

### Required Mitigation Measures

#### MM IV.E-1: Storm Water Pollution Prevention Plan

The applicant shall file a Notice of Intent (NOI) to comply with the General Construction Activity permit. This permit requires that the project proponent prepare a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential impacts to surface water quality through the construction-period of the project. It is not required that the SWPPP be submitted to the RWQCB, but must be maintained on-site and made available to RWQCB staff upon request. The SWPPP shall include:

- Specific and detailed Best Management Practices (BMPs) designed to mitigate construction-related pollutants to a level of insignificance. At minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain.

An important component of the storm water quality protection effort is knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of stormwater quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.

- The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, and must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046<sup>3</sup>, monitoring shall be required during the construction period for pollutants that may be present in the runoff that are “not visually detectable in runoff”.<sup>4</sup> The developer shall retain an independent monitor to conduct weekly inspections and provide written monthly reports to the City of Pacifica to ensure compliance with the SWPPP. RWQCB personnel, who may make unannounced site inspections, are empowered to levy considerable fines if determined that the SWPPP has not been properly prepared and implemented.

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<sup>3</sup> State Water Resources Control Board, 2001, Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity.

<sup>4</sup> Construction materials and compounds that are not stored in water-tight containers under a water-tight roof or inside a building are examples of materials for which the discharger may have to implement sampling and analysis procedures.

- BMPs designed to reduce erosion of exposed soil shall include, but are not limited to: soil stabilization controls such as erosion control blankets or tarps, perimeter silt fences, placement of hay, rice, or straw bales, and sediment basins. Watering for dust control shall be performed during the dry season. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on keeping sediment on the site. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. If hydroseeding is selected as the primary soil stabilization method, then these areas shall be seeded by September 1<sup>st</sup> using native grasses only, and irrigated as necessary to ensure that adequate root development has occurred prior to October 1. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be provided and designed to be accessible and functional during both dry and wet conditions.
- To the extent practicable, the detention basins shall be installed at the earliest possible time during grading and that grading shall occur progressively so that disturbed areas drain to the detention basins. By accomplishing this, the detention basins would provide water quality treatment of runoff during project construction and during the operational life of the project. Following the construction-period, the basins shall be inspected to ensure that the design capacity of the basins has not been reduced by sedimentation. If necessary, sediment shall be removed to provide adequate capacity for the post-construction period.

**Monitoring/Implementing Phase**

SWPPP must be prepared prior to issuance of grading/building permit; Design of detention basin must be included with building permit plans prior to issuance of grading/building permit; Measures must be implemented during construction and after occupancy

<b>Implementing Party</b>	Applicant/HOA
<b>Enforcement Agency</b>	RWQCB, Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.E-2: National Pollution Discharge Elimination System**

The project shall include full compliance with the requirements and intent of the current County NPDES permit. The permit requires a comprehensive approach to stormwater management that implements (a) site design measures to minimize impervious area, reduce direct connections between impervious areas and the storm drain system, and mimic natural systems; and employs (b) source control and (c) treatment control measures, that can reduce runoff and the entry of pollutants into stormwater and receiving waters. The project shall incorporate site design measures for reducing water quality impacts of the project in compliance with the County NPDES stormwater permit Provision C.3. requirements. These requirements include, but are not limited to:

- *Numeric Sizing Criteria for Pollutant Removal Treatment Systems.* The project must include source controls, design measures, and treatment controls to minimize stormwater pollutant discharges. Treatment controls must be sized to treat a specific amount--about 85 percent--of average annual runoff. The project proposes the use of a detention basin (treatment control) to mitigate increased flows and water quality degradation associated with the project. The basins shall be designed and operated in compliance with the design recommendation for detention basins (BMP TC-22) included in California Stormwater Quality Association, Stormwater Best Management Practice Handbook for Development and Redevelopment (2003). Specifically, the basins shall be sized to treat the permit-specified water quality volume.
- *Operation and Maintenance of Treatment Measures.* Treatment controls often do not work unless adequately maintained. The permit would require an Operations and Maintenance (O&M) agreement which would include: 1) identifying the properties with treatment controls, 2) developing agreements with private entities to maintain the controls (which would be incorporated into CC&Rs or homeowner’s association duties), 3) periodic inspection, maintenance (as needed), and reporting. The O&M agreements would run with the land.
- *Limitation on Increase of Peak Stormwater Runoff Discharge Rates.* San Mateo County released their Hydromodification Management Plan (HMP) on May 12, 2005. The HMP is a requirement of the new County NPDES Permit to guide participating city agencies and individual development projects toward a unified approach to mitigate potential watershed-wide impacts. The applicant shall work with the City staff to comply with the current requirements of the RWQCB-approved HMP, as available.

**Monitoring/Implementing Phase**

Design of detention basin must be included with building permit plans prior to issuance of grading/building permit; measures must be implemented during construction and after occupancy

<b>Implementing Party</b>	Applicant/HOA
<b>Enforcement Agency</b>	RWQCB, Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**MM IV.E-3 Grading and Drainage Plans**

Final grading and drainage plans shall be submitted to the City for its review and approval. The final drainage plan for the project shall be prepared by a licensed professional engineer. As a condition of approval of the final grading and drainage plans for the project, it must be demonstrated through detailed hydraulic analysis that implementation of the proposed drainage plans will:

- Not increase total peak runoff rates from the project site (relative to pre-development conditions).
- Ensure that runoff associated with storm events up to and including the 100-year event will not flood residential structures proposed by the project. The project shall be designed so that if the

subsurface piping system capacity is exceeded, that excess flow will be conveyed on the surface in gutters and streets toward Fassler Avenue. If it would be possible to exceed the detention basins capacity from project storm flows, a spillway shall be included in the final detention basins design that would allow flood waters that exceed the basins capacity to drain overland without causing excessive erosion or catastrophic releases from the basins.

- Include drainage components that are designed in compliance with City of Pacifica standards. The grading and drainage plans shall be reviewed for compliance with these requirements by the City of Pacifica Department of Public Works. At the City's discretion, the detailed detention basins hydraulic design could be reviewed for adequacy by City staff or by a consulting engineer retained by the City (any expenses associated with this review shall be paid by the applicant). Any improvements deemed necessary by the City and/or the City's expert consult, will be required components in the final drainage plan.
- Include a self-perpetuating drainage system maintenance program (to be managed by an HOA or similar entity), that includes annual inspections of detention basins, culverts, drainage ditches, and drainage inlets. Any accumulation of sediment or other debris shall be promptly removed on a schedule to be determined by the HOA or similar entity. The detention facility will require regular vegetation control during wet months. Adequate budget for mowing and vegetation control shall be included in operating cost estimates. Mosquito and vector control shall be primarily achieved by ensuring that the water detention features are drained within 72 hours into the catchment basins located under the parking structure. The catchment basins shall be sealed. An annual report documenting the inspection and any remedial action conducted shall be submitted to the City of Pacifica Planning and Economic Development Department for review.
- The detention basins shall be designed and constructed to serve as a water quality treatment feature. Energy dissipation and adequate detention times within the basins are important to allow the solids to settle out prior to discharge. Inflow and outflow structures should be designed to minimize turbulence to allow more rapid settling of sediments.

#### **Monitoring/Implementing Phase**

Grading and drainage plans must be submitted to City prior to issuance of grading/building permit; measures must be implemented during construction and after occupancy

**Implementing Party**

Applicant/HOA

**Enforcement Agency**

Building Division of the Planning Department

**Monitoring Agency**

Building Division of the Planning Department

## OTHER ENVIRONMENTAL IMPACTS

### Required Mitigation Measures

#### Mitigation Measure MM IV.G-1: Control Measures for Construction Emissions of PM10

As recommended by the BAAQMD, the following control measures shall be required during construction activities.<sup>5</sup>

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at the construction sites.
- Sweep public streets adjacent to construction sites daily (with water sweepers) if visible soil material is carried onto the streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.
- Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.

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<sup>5</sup> Bay Area Air Quality Management District, CEQA Air Quality Handbook, December 1999. As indicated by the BAAQMD, enhanced control measures are recommended for sites larger than four acres in size. Although the total project site is greater than four acres, almost all construction would take place on a portion less than four acres. For this reason, the project would integrate the BAAQMD's "Basic Control Measures"

- Limit the area subject to excavation, grading and other construction activity at any one time.

**Monitoring/Implementing Phase**

Measures must be included in building permit plans submitted to City prior to issuance of grading/building permit and implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Bay Area Air Quality Management District/ Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

**Mitigation Measure MM IV.G-2: Construction Noise**

The following measures to reduce construction noise shall be implemented.

- Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday to Friday, and 9:00 a.m. to 5:00 p.m. Saturdays and Sundays. No heavy construction equipment use shall be permitted on Weekends or after 6:00 p.m on weekdays. No construction activities shall be permitted on federal holidays as required by the City of Pacifica Noise Ordinance.
- All construction equipment shall be equipped with improved noise muffling, and have the manufacturers’ recommended noise abatement measures, such as mufflers, engine covers, and engine isolators in good working condition.
- Stationary construction equipment that generates noise levels in excess of 65 dBA  $L_{eq}$  shall be located as far away from existing occupied buildings as possible. If required to minimize potential noise conflicts, the equipment shall be shielded from noise sensitive receptors by using temporary walls, sound curtains, or other similar devices.
- All equipment shall be turned off if not in use for more than five minutes.
- An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive noise levels.

**Monitoring/Implementing Phase**

Measures must be included in building permit plans submitted to City prior to issuance of grading/building permit and implemented during construction

<b>Implementing Party</b>	Applicant
<b>Enforcement Agency</b>	Building Division of the Planning Department
<b>Monitoring Agency</b>	Building Division of the Planning Department

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