

CALIFORNIA COASTAL COMMISSION

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Hearing Date: 1/11/07

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 2-06-011

APPLICANT: Andrew Kampe

PROJECT DESCRIPTION: Temporary authorization for the placement of two gabion walls to replace two failed sections of an historic seawall to protect a single family residence, until such time that the residence is relocated to a safe distance from the bluff edge.

PROJECT LOCATION: 12901 Cabrillo Highway, Pescadero, San Mateo County.
APN 086-141-010

SUBSTANTIVE FILE DOCUMENTS: Geologic & Geotechnical Engineering Investigation for 12901 Cabrillo Highway, Pescadero, CA (Bay Area Geotechnical Group [BAGG], Palo Alto, CA, 4/28/06); Review of the Gabion Wall Design for 12901 Cabrillo Highway (BAGG, 10/22/06).

EXECUTIVE SUMMARY

The applicant requests after-the-fact authorization for the temporary placement of two gabion walls on the base of a bluff to replace two failed sections of a historic seawall to protect an existing single-family residence from erosion until such time that the residence is relocated to a safe distance from the bluff edge.

The project site is situated at 12901 Cabrillo Highway, approximately one mile south of Pescadero Road in rural Pescadero, San Mateo County. Neighboring properties on either side of the site contain single family residences, but no shoreline armoring exists on the bluffs below the neighboring properties. A state beach is located just south of the southerly neighboring property, extending south toward and beyond Pescadero Point, and this beach provides opportunities for the public to laterally traverse the sandy beach below the subject development.

There is approximately 24,200 square-feet of unimproved area on the blufftop portion of the property, all located east and southeast of the home, on the landward side of the lot (exhibit 2). This area provides adequate space to relocate or rebuild the home a safe distance from the bluff edge, without requiring a permanent shoreline protection device. Investigations submitted by the applicant's geotechnical engineer have concluded that the residence would need to be setback approximately 68-feet from the bluff edge. Adequate space exists on the front side of the lot to maintain this setback distance and relocate the home. The applicant is proposing the gabion walls to temporarily protect the home while he obtains all necessary approvals from San Mateo County to rebuild or relocate the home.

The Commission's staff coastal engineer conducted a site visit and concurred with the applicant that the existing home was at risk. Based on evidence provided by the applicant's geotechnical engineers regarding the necessity of the gabion walls to protect the existing single family residence from erosion, staff recommends that the Commission approve the temporary gabion walls with special conditions (2 & 7) that provide a 3-year time limitation on development authorization with subsequent removal of the gabion walls once the residence is relocated. While the gabion walls are approvable pursuant to 30235 of the Coastal Act, as the least environmentally damaging feasible alternative to temporarily protect the existing SFR until it can be relocated, retention of the gabion walls beyond 3-years would not be approvable because they are not the least environmentally damaging feasible alternative to protect the existing SFR for the long term. The applicant is already preparing plans for the relocation (or demolition and rebuild) of the home at a safe location from the bluff edge to protect the home for the long term, and he has indicated that he will be submitting a coastal development permit (CDP) application for home relocation to San Mateo County in December 2006. County planning staff members have visited the site, and are expecting this CDP application. County staff has indicated that they do not foresee any major coastal resource issues associated with relocating or demolishing and building a new residence in an easterly location closer to Highway One, as long as the structure provides adequate visual screening through landscaping. The applicant maintains that given the fact that the local permitting process can take time, and that preparing and implementing plans to relocate or demolish a home also takes time, the existing home in its current location needs temporary protection from bluff erosion.

Staff is also recommending other special conditions designed to mitigate for the gabion walls temporary impacts to visual resources, public access, and sand supply to the beach. Of particular note is a recommended special condition to require the applicant to remove concrete rubble and woody debris that have fallen off the existing dilapidated seawalls at the base of the bluff below the applicant's property. Removal of this debris and rubble would serve to minimize the temporary visual, public access, and sand supply impacts of the temporary gabion walls. Other recommended special conditions include requirements to augment the effectiveness of the gabion walls through the submittal and implementation of a drainage plan and invasive plant removal and revegetation plan. Only as conditioned can the Commission find that the hazards, visual impacts, and public access impacts associated with the project are reduced to the maximum extent feasible, consistent with Section 30235 of the Coastal Act.

1.0 STAFF RECOMMENDATION

The staff recommends that the Commission approve Coastal Development Permit No. 2-06-011 subject to the conditions in Sections 2.1 and 2.2 below.

Motion:

I move that the Commission approve Coastal Development Permit No. 2-06-011 pursuant to the staff recommendation.

Staff Recommendation of Approval:

Staff recommends a YES vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve the Permit:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

1.1 Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
3. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
4. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

1.2 Special Conditions

1. Permit Issuance

Because some of the proposed development has already commenced, this coastal development permit shall be deemed issued upon the Commission's approval. Failure to comply with the special conditions of this permit may result in the institution of an action to enforce those conditions under the provisions of Chapter 9 of the Coastal Act.

2. Length of Development Authorization

This permit is for the temporary installation of two gabion walls in the manner and form as described in the application materials and the findings contained herein. This development authorization is valid from January 11, 2007 through January 11, 2010. The development authorization shall expire, and permittee shall remove all gabion walls and associated debris, as well as all loose concrete rubble and debris associated with the historic concrete seawall and log wall, and return it to pre-construction conditions, by January 11, 2010. Continued use of the gabion walls beyond January 11, 2010 is prohibited.

3. Permit Amendment to Authorize Continued Use of Gabion Walls

Any application to amend any term or provision of this CDP shall include the following: 1) an alternatives analysis. The alternatives analysis shall include all feasible measures to protect the residence while avoiding a shoreline protective device or minimizing encroachment onto beach and tidal areas. Alternatives shall include, but not be limited to: a description of the progress of relocating the residence, maintaining the gabion walls, removing the gabion walls, use of other shoreline protection methods; an avoidance alternative must be considered. 2) Coastal process information (wave uprush study) for the project site prepared by a certified professional engineer with expertise in coastal processes (e.g. civil engineer or engineering geologist).

4. Future Development Restriction

This permit is only for the development described in coastal development permit No. 2-06-011 Pursuant to Title 14 California Code of Regulations section 13253(b)(6), the exemptions otherwise provided in Public Resources Code section 30610 (b) shall not apply to the development governed by the coastal development permit No. 2-06-011. Accordingly, any future improvements to the structure authorized by this permit, including but not limited to repair and maintenance identified as requiring a permit in Public Resources section 30610(d) and Title 14 California Code of Regulations sections 13252(a)-(b), and grading an accessway to the beach for heavy equipment to facilitate the removal of the gabion walls, shall require an amendment to Permit No. 2-06-011 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

5. Generic Deed Restriction

WITHIN 60 DAYS OF COMMISSION APPROVAL, or within such additional time as the Executive Director may grant for good cause, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

6. Shoreline Protection Monitoring Report

- a. By no later than December 31 of every year for the life of the structure, the permittee shall submit to the Executive Director a monitoring report that has been prepared by a licensed civil or geotechnical engineer or similar licensed professional, with expertise in coastal processes. Each monitoring report shall contain the following:
 1. Evidence that all existing shoreline protection structures are inspected weekly and that any debris associated with the deterioration of the structures has been cleaned up in accordance with Special Condition No. 7
 2. An evaluation of the condition and performance of the gabion walls, including an assessment of whether any weathering or damage has occurred that could adversely impact future performance of the structure,
 3. Plans and/or photographs showing any weak or potential failure areas,
 4. An analysis of erosion trends, including identification of exactly where repeatable measurements had been taken, e.g. by reference to benchmarks, survey positions, or points shown on engineering plans,
 5. A description and documentation of any migration or movement of rock that has occurred on the site, and
 6. Recommendations for repair, maintenance, modifications, or other work to the gabion wall needed to correct any rock migration or structural damage, failures or weaknesses, including methods and materials to be used.

- b. If a monitoring report contains recommendations for repair, maintenance, or other work, the permittee shall apply to the Commission for an amendment to this permit.

7. Removal of Gabion Walls and Debris

a. WITHIN 60 DAYS OF COMMISSION APPROVAL, or within such additional time as the Executive Director may grant for good cause, the applicant shall submit a plan, prepared by a certified civil engineer, for removal of the gabion walls and any associated debris resulting from the deterioration of the gabion walls, and all concrete rubble and woody debris littering the beach associated with historic shoreline protective devices on the bluff below 12901 Cabrillo Highway. This plan shall provide for the following:

1. A schedule for removal of the gabion walls that occurs WITHIN 30 DAYS OF JANUARY 11, 2010 OR REMOVAL OR DEMOLITION OF THE SINGLE FAMILY RESIDENCE, whichever comes first, except that removal shall not occur during winter months
2. A schedule for removal of all existing concrete rubble and woody debris littering the beach associated with the historic shoreline protective devices that occurs WITHIN 90 DAYS OF PERMIT APPROVAL
3. A schedule for the on-going removal and clean up of any gabions that fail during the life of this permit, as well as a schedule for removal of any additional concrete rubble and woody debris that fall off of the historic shoreline protective devices and litter the beach, that occurs WITHIN 10 DAYS OF DETECTION OF THE DEBRIS, based on the monitoring stipulated in Special Condition No. 6(a)(1) .
4. Detailed methods for removal of the gabion walls and debris that minimize physical disturbance of the beach or the bluff. If mechanical removal by crane is proposed, work shall be conducted from the top of the bluff to the maximum extent practicable. If grading an accessway to the beach from the bluff is proposed, an amendment to this permit or a local CDP shall be required in accordance with Special Condition No. 4.
5. Any and all debris and/or construction materials resulting from removal activities shall be removed from the beach immediately.
6. No construction materials or debris shall be placed where they may be subject to wave erosion or dispersion.
7. Operation of construction vehicles on the beach or in intertidal areas shall be avoided wherever possible and is permissible only to the extent that construction vehicles cannot otherwise physically reach areas of the gabion and debris removal work.

b. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

8. Drainage Plan

a. WITHIN 60 DAYS OF COMMISSION APPROVAL, or within such additional time as the Executive Director may grant for good cause, the applicant shall submit to the Executive Director for review and approval a drainage plan, prepared by a licensed civil or geotechnical engineer or similar licensed professional with expertise in coastal processes, detailing drainage controls to be implemented to augment the effectiveness of the temporary gabion wall and minimize erosion of the coastal bluff. The drainage plan shall detail measures designed to intercept groundwater and surface water at the furthest point away from the bluff edge to help prevent subaerial erosion resulting from groundwater from agricultural irrigation and road runoff east of the property. Additional drainage controls shall be provided and integrated into the drainage control system that shall prevent sheet flow over the bluff face. The drainage plan shall include a schedule for implementation and installation of the drainage measures and a maintenance and monitoring plan designed to ensure the effectiveness of the measures over the life of the project.

b. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

9. Bluff Revegetation Plan

a. WITHIN 60 DAYS OF COMMISSION APPROVAL, or within such additional time as the Executive Director may grant for good cause, the applicant shall submit for the review and approval of the Executive Director, a detailed bluff revegetation plan prepared by a qualified Landscape Architect, resource specialist or biologist. The plan shall be prepared by a licensed Landscape Architect with expertise in bluff stabilization, and reviewed and approved by a certified civil or geotechnical engineer. The plans shall include, but not be limited to, the following criteria:

1. Provisions and specifications for removal of non-native ice plant, including provisions for phasing of removal, if necessary, to minimize the extent of area devoid of vegetation.
2. Bluff revegetation program which utilizes only native drought resistant plants, endemic to coastal bluffs and of local genetic stock. The revegetation program shall use a mixture of seeds and container plants to increase the potential for successful revegetation. All areas of the bluff face not developed with the gabion wall approved in Permit 2-06-011 shall be planted for erosion control and visual enhancement purposes. No hydroseeding shall occur in areas of the bluff where native plant material is already established. A temporary irrigation system may be used until the plants are established, as determined by the consulting landscape architect or resource specialist, but in no case shall the irrigation system be in place longer than three (3) years.

3. An interim erosion control plan for the interim stabilization of disturbed areas on the coastal bluff. The interim erosion control measures shall include, but not limited to: sand bag barriers or silt fencing, installation of geotextiles or mats for disturbed areas on the bluff and measures to ensure stockpiled materials are stabilized. These interim erosion control measures shall be maintained until the permanent drainage system is installed and the disturbed areas are revegetated.
 4. Monitoring and maintenance program to ensure the successful revegetation of the bluff.
 5. The bluff revegetation plan shall be implemented within 30 days of completion of the drainage measures as required in Special Condition No. 8 or within such additional time as the Executive Director may grant for good cause. The removal of exotic vegetation and revegetation with native species may be carried out in several phases to minimize bluff disturbance. The plan shall specify the areas for phased removal and the timing necessary for each phase. Revegetation shall provide 90 percent coverage within five (5) years and shall be repeated, if necessary, to provide such coverage.
 6. Five years from the date of the Commission action on this coastal development permit, the applicant shall submit, for the review and approval of the Executive Director, a revegetation monitoring report, prepared by a licensed Landscape Architect or qualified Resource Specialist that certifies the bluff revegetation is in conformance with the revegetation plan approved pursuant to this Special Condition. The monitoring report shall include photographic documentation of plant species and plant coverage.
 7. If the landscape monitoring report indicates the revegetation is not in conformance with or has failed to meet the performance standards specified in the revegetation plan approved pursuant to this permit, the applicant, or successors in interest, shall submit a revised or supplemental revegetation plan for the review and approval of the Executive Director. The revised revegetation plan must be prepared by a licensed Landscape Architect or a qualified Resource Specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan.
- b. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

10. Assumption of Risk, Waiver of Liability and Indemnity Agreement

By acceptance of this permit, the applicants acknowledge and agree (i) that the site may be subject to hazards from waves, storm waves, bluff retreat, erosion, and earth movement; (ii) to assume the risks to the applicants and the properties that are the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to

unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

11. Public Rights

The Coastal Commission's approval of this permit shall not constitute a waiver of any public rights that may exist on the property. The permittee shall not use this permit as evidence of a waiver of any public rights that may exist on the property.

2.0 FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

2.1 Project and Site Description

The applicant requests after-the-fact authorization for the temporary placement of two gabion walls located west ("location 1") and northwest ("location 2") of an existing single-family residence, to protect the residence from erosion until such time that the residence is relocated to a safe distance from the bluff edge. The gabion wall at "location 1" is 24-feet-long, 15-feet-high, and 6-feet-deep. The gabion wall at "location 2" is 33-feet-long, 6-feet-high and 6-feet-deep (exhibits 3 - 5).

The project site is situated at 12901 Cabrillo Highway, approximately one mile south of Pescadero Road and Pescadero State Beach in rural Pescadero, San Mateo County. Neighboring properties on either side of the site contain single family residences, but no shoreline armoring exists on the bluffs below the neighboring properties. A state beach is located just south of the southerly neighboring property, extending south toward and beyond Pescadero Point, and this beach provides opportunities for the public to laterally traverse the sandy beach below the subject development.

The applicant's property is approximately 1-acre in size, and contains a 1,800-square-foot, two-story single-family residence, located on the northwest corner of the lot. The home's northwest corner is located approximately five feet from the bluff edge above the gabion wall at "location 2", and a portion of the home's west facing side is located approximately seven feet from the bluff edge above the gabion wall at "location 1". On the bluff top there are approximately 20,000 square feet of landscaped area and 24,200 square-feet of unimproved area on the property, all located east and southeast of the home, on the front side of the lot (exhibit 2).

The bluff is approximately 25-feet-high. A remnant pre-1972 approximately 120-foot-long concrete retaining wall is located along the base of the bluff in front of the majority of the subject property, as well as remnants of an old timber wall behind the concrete wall. According to the California Coastal Records projects photos, these walls have been in existence since before 1972. Photos also show that the wall was intact in 1997, and has failed since that time. Large concrete blocks, and woody debris, originally part of the retaining walls, are scattered throughout the

beach area below the applicant's property. There are no other shoreline protective devices in the vicinity of the subject property.

In 2005 the applicant installed a 33-foot-long 6-foot-high gabion wall without benefit of a coastal development permit at "location 2" to protect the residence at its northwest corner. The applicant states this gabion wall was constructed to replace and protect a portion of the bluff where the old seawall had been completely destroyed. Commission enforcement and planning staff, and the Commission's coastal engineer subsequently visited the site, and determined that winter storms had caused bluff failure and caused the residence to be in immediate danger from bluff erosion, and issued an emergency permit for the gabion wall at "location 2," NW of the residence where the bluff edge was 5-feet from the house, and a second gabion wall at "location 1" immediately west of the residence where the bluff had eroded to within 7 feet of the residence. The emergency permit specifically authorized the construction of these two temporary gabion walls to remain in place on a temporary basis, for a time-period that would be stipulated in the follow-up coastal development permit, until such time that the home is relocated to a safe distance from the bluff edge. The subject application presents a regular follow-up coastal development permit application for these temporary walls authorized under the 2-06-013-G emergency permit.

2.2 Shoreline Armoring

Coastal Act Section 30235 addresses the use of shoreline protective devices:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures in the future. Section 30253 provides, in applicable part:

Section 30253. New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" methods, such as gabion walls, designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, Section 30235 only mandates the construction of shoreline protective works if they are required to serve coastal-dependant uses, or to protect existing structures or public beaches in danger from erosion, provided they are designed to eliminate or mitigate adverse impacts on shoreline sand supply. The Coastal Act provides these limitations because shoreline structures can have a variety of negative impacts on coastal resources including adverse affects on sand supply, public access,

coastal views, alteration of natural landforms and overall shoreline beach dynamics on and off site which may ultimately result in the loss of public beach. The Commission must always consider the specifics of each individual project, but under the standards established by Section 30235, prioritizes alternatives that avoid the necessity for shoreline structures that armor the shoreline and alter the natural dynamics.

The applicant is requesting authorization for the temporary placement of two gabion walls to replace two destroyed sections of a historic dilapidated seawall, to protect a single family residence, to remain in place until such time that the residence is relocated or rebuilt a safe distance from the bluff edge. The project, therefore, must be evaluated to analyze if it meets the first of the standards set forth in Section 30235: to protect an existing structure. Pursuant to Section 30235, the temporary gabion baskets must further be evaluated to ensure they are designed to eliminate or mitigate adverse impacts to shoreline sand supply.

Imminent Danger from Erosion

If designed to eliminate or mitigate adverse impacts on shoreline sand supply, the Coastal Act allows shoreline armoring to protect existing structures in danger from erosion. There is a certain amount of risk in maintaining development along a coastline that is actively eroding and subject to violent storms, large waves, flooding, earthquakes, and other hazards. Within the San Mateo coastal environment, seacliff retreat is usually episodic and random, and sections of the cliffs are periodically cut back in relatively large increments during episodes of large storms or occasional severe winter seasons. Significant erosion events occurred in the Pescadero area in the El Niño storm seasons of 1982-1983 and 1997-1998. Earthquakes also trigger seacliff failures in this area. The coastside area of San Mateo County is within a seismically active, broad zone of faulting. The San Andreas fault passes through the northern Santa Cruz mountains about 14 miles northeast of the Kampe property and the San Gregorio fault, an active fault in the San Andreas system, is located about 2.5 miles east of the site.

The applicant has submitted a geologic and geotechnical engineering investigation conducted by Bay Area Geotechnical Group (BAGG) in April 2006. According to the report, the site is characterized by “poorly consolidated and poorly indurated sandy and gravelly marine terrace sediments that are essentially horizontally bedded and are exposed along nearly the entire face of the bluff.” In addition, the report found that eroded terrace deposits resulted in an irregular bluff face in an area of soft, sandy materials and along a local inlet or reentrant that exists on the northern side of the site property.

The geotechnical evidence contained in the BAGG April 2006 report, summarized below, supports the allegation that the home is in imminent danger and is an existing structure that qualifies for temporary shoreline protection to remain in place while the structure is relocated or rebuilt a safe distance from the bluff.

Attack from large waves causes erosion at the base of the cliff. In addition, groundwater from precipitation and agricultural irrigation across highway 1 percolates downward through permeable terrace sediments and flows laterally on less permeable layers within the sediments, emerging as springs at the exposed terrace face. This causes cavitation of the unconsolidated terrace materials along spring lines on the face of the bluff. The subaerial erosion resulting from

groundwater seeping on the face of the bluff causes portions of the unconsolidated terrace materials to collapse, even in summer. These processes have contributed to erosion of the soft terrace deposits and collapse and failure around 1997 of the historic (pre-1972) dilapidated concrete sea wall and an old log retention wall that were previously armoring the bluff below the site.

The BAGG April 2006 report also evaluated the rate of bluff retreat and the site's subsurface conditions by conducting an aerial photograph analysis and drilling borings at various locations on the applicant's property. As stated in the report: "from 1960 to date the subject bluff top has retreated about 15 to 20 feet for an average annual retreat of 4 to 5 inches per year. Much of this is reported to have occurred subsequent to the collapse of a concrete seawall and log repairs on the bluff below the residence (around 1997). The face of the low bluff is now scarred with numerous active indentations in the form of gullies, small ravines and collapse features that appear to be resulting from subaerial erosion and groundwater seepage."

Based on the results of the investigation described above, BAGG determined that the existing residence is in imminent danger from erosion, and recommended engineering measures, such as a seawall/retaining wall that could be designed as a gabion wall, undertaken to prevent the bluff from retreating at a normal rate. The Commission's staff coastal engineer visited the site with planning and enforcement staff and determined that the existing residence is in danger from erosion. Staff observed that the bluff had eroded within five feet from the northwest corner and seven feet from the western side of the existing residence, and the residence therefore needed temporary protection, while local permits were obtained for relocation of the house (see "Alternatives" below). An emergency permit was issued for the temporary gabion walls on September 14, 2006.

Need for Shoreline Structure - Feasible Alternatives

The preceding discussion concludes that the applicant's home is in immediate danger from erosion and slope failure. The next Section 30235 "test" that must be met before a shoreline protective device shall be approved by the Commission is that the proposed armoring is "required" to serve coastal-dependent uses or to protect existing threatened structures. In other words, shoreline armoring shall be permitted if it is the only feasible alternative capable of protecting the existing structure. Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

The applicant is already preparing plans for the relocation (or demolition and rebuild) of the home at a safe location from the bluff edge, as an alternative to pursuing a permanent seawall to protect the structure in its current location. The applicant has indicated that he will be submitting a coastal development permit application for home relocation to San Mateo County in December 2006. County planning staff members have visited the site, and are expecting this CDP application. County staff has indicated that they do not foresee any major coastal resource issues associated with relocating or demolishing and building a new residence in an easterly location closer to Highway One, as long as the structure provides adequate visual screening through landscaping.

The applicant maintains that given the fact that the local permitting process can take time, and that preparing and implementing plans to relocate or demolish a home also takes time, the existing home in its current location needs temporary protection from bluff erosion. As discussed above, the existing single family residence in its current location is in danger from erosion. The BAGG geotechnical engineering investigation concluded that the gabion walls will protect the bluff and the residence on a temporary basis (see BAGG letter, exhibit 6). Neither the applicant's geotechnical engineering investigation, nor the Commission's staff coastal engineer have considered the adequacy of maintaining the gabion walls for other than temporary site protection.

Relocating the house as opposed to constructing a permanent shoreline protective device, such as a soldier pile wall, is the least environmentally damaging alternative. While relocating or rebuilding the home at a safe distance from the bluff edge as proposed is feasible and the preferred alternative to erecting a permanent shoreline protective device to protect the home in its current location, there is no feasible alternative to temporarily protecting the existing structure with gabion walls, while the necessary local approvals are received and appropriate steps are taken to relocate/rebuild the home inland of the bluff edge. The San Mateo County local permitting process takes approximately one year, taking into account the time needed to complete an application with all the necessary studies, reports, and engineered plans, and taking into account permit processing time once the application is deemed complete. In addition, the applicant needs to re-build the structure at its landward location before the walls can be removed. Therefore, with respect to the proposed project, the temporary placement of gabion walls are the least environmentally damaging [feasible alternative required to temporarily protect the existing structure until it can be relocated](#).

Given that the applicant is not proposing a permanent shoreline protective device, but only two temporary gabion walls that are necessary to protect the existing structure from erosion while the home is relocated, the long term impacts of the gabion walls were not evaluated. [Because the temporary gabion walls are the least environmentally damaging feasible alternative required to temporarily protect an existing structure until it can be relocated, section 30235 requires its approval as a temporary protection measure, .](#) However, retention of the gabion walls beyond three years would not be consistent with Section 30235 because the gabion walls are not the least environmentally damaging feasible alternative to protect the existing single family residence for the long term. Special Condition No. 2 limits the duration of this approval to three years, and requires that the gabion walls be removed before development authorization ceases or at such time that the existing home is demolished or relocated, whichever comes first. The Commission finds that a three year length of development authorization is adequate and necessary because it is not expected that the gabion walls would last as a permanent solution due to deterioration from wave run-up, and deterioration from sheet flow over the bluff and groundwater seeps on the bluff face, all of which are exacerbated by winter storms. Further, as explained above, three years provides adequate time for obtaining the necessary local approvals for the relocated/rebuilt residence. Only as conditioned can the Commission find that the proposed temporary placement of the gabion walls is consistent with Section 30235 of the Coastal Act.

Mitigation for Adverse Impacts on Local Shoreline Sand Supply

The preceding discussion concludes that the applicant's home is in immediate danger from erosion and slope failure, and that there are no feasible alternatives to temporarily protecting the existing structure with the proposed gabion walls. The next Section 30235 "test" that must be met before a shoreline protective device shall be approved by the Commission is that the project provides mitigation for its impacts on local shoreline sand supply. Shoreline protection devices, including gabion walls, alter natural shoreline processes and impact sand supply by hardening the bluff face and inhibiting a natural source of sediment to the beach. As discussed below, the bluff at the subject site is eroding from surface water and groundwater flowing over and through the bluff face from the landward side, and from wave action at the base of the bluff. The proposed temporary gabion walls would prevent this sediment source from being deposited on the beach, and therefore mitigation for impacts to the local sand supply is required by Section 30235.

As discussed below, a remnant historic pre-1972 concrete seawall is located along the base of the bluff in front of the majority of the applicant's property. There are also remnants of an old timber log wall that was once located behind the concrete seawall. Debris, including large concrete blocks from both of these historic walls is scattered around the beach.

The Commission notes that at the time San Mateo County considers the applicant's proposal to relocate the existing home to a safe distance from the bluff edge, it will need to consider the necessity of retaining the remnant historic seawalls in place or whether they should be removed, consistent with the geologic hazards and shoreline protection policies of the certified local coastal program.

In regards to the current proposal to temporarily retain the two gabion walls to protect the residence in areas where the historic seawall has been destroyed, the Commission finds that removal and clean-up of the broken off debris from the historic seawalls would have a positive impact on natural shoreline processes and help to replenish local sand supply, thereby mitigating the impacts of the temporary gabion walls, as well as improve views along the ocean, and improve the beach access experience. Therefore, the Commission imposes Special Condition 7, which requires the applicant to remove and dispose of all existing concrete blocks, rubble, and woody debris that have broken off from the historic seawalls that were previously located on the base of the bluff below the applicant's property, and that the applicant to continue to clean up the beach as these historic seawalls continue to deteriorate over time, thereby cleaning up the beach and restoring a visually degraded area. As conditioned to mitigate for impacts to local sand supply, the Commission finds that the proposed temporary gabion walls are consistent with Section 30235 of the Coastal Act.

Conclusion

In conclusion, substantial evidence has been provided to document that the existing single family residence is in danger from erosion. In addition, an analysis of alternatives indicates that there is no feasible less environmentally damaging alternative to temporarily protect this existing single family residence until it can be relocated. Further, because the project involves the select

placement of two walls in locations of critical erosion, the proposed temporary gabion walls are designed to minimize significant adverse impacts on shoreline sand supply. Therefore, the proposed temporary gabion walls are approvable pursuant to Section 30235 of the Coastal Act. As discussed in the findings below, even where the Commission finds the proposed temporary gabion walls inconsistent with other applicable Coastal Act policies, the proposed temporary gabion walls are approvable pursuant to Section 30235 of the Coastal Act.

2.3 Geologic Hazards

Section 30253 of the Coastal Act states in applicable part:

New Development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...

As discussed in Section 2.2, the proposed temporary gabion walls are the least environmentally damaging feasible alternative required to temporarily protect the existing structure until it can be relocated, and Section 30235 requires their approval as a temporary protection measure. Retention of the gabion walls beyond three years would not be consistent with 30235 because the gabion walls are not the least environmentally damaging feasible alternative to protect the existing SFR for the long term. While Section 30235 requires the gabion walls' three-year approval as the least environmentally damaging feasible alternative to temporarily protect the existing single family residence until it can be relocated, conformance with other applicable Coastal Act policies is required to the maximum extent feasible. A discussion of the project's consistency with Section 30253 is detailed below.

Section 30253 of the Coastal Act mandates that new development provide for geologic stability and integrity and minimize risks to life and property in areas of high geologic, flood, and fire hazard. The existing and continuing deposition of debris from the historic seawalls on the beach, as well as debris resulting from the potential future degradation of the gabion walls and historic seawalls represents a hazard and potential risk to life and property inconsistent with Coastal Act Section 30253, as well as interfering with present and future public access to the beach as described below (Section 2.4). Therefore, the Commission imposes Special Condition 7, which requires the applicant to remove and dispose of all existing concrete blocks, rubble, and woody debris that have broken off from the historic seawalls that were previously located on the base of the bluff below the applicant's property, and that the applicant to continue to clean up the beach as these historic seawalls continue to deteriorate over time. As conditioned, the Commission finds that these hazards associated with the proposed development have been reduced to the maximum extent feasible, consistent with Section 30253 of the Coastal Act.

Additional hazardous conditions also exist on the applicant's property, which serve to exacerbate erosion on the site, and cannot be fully alleviated by the proposed temporary gabion walls. The bluff at the subject site is retreating from 1) surface water flowing over the steep bluff face at a relatively high velocity, 2) seepage or irrigation water percolating out of the slope face, 3)

seepage/ground water percolating out of the slope face along the bedrock/marine terrace deposit interface, and 4) wave action.

The effects of all of these erosion mechanisms are evident on the subject site. A large drainage gully was also observed along the bluff in the southern portion of the property. This gully appears to have been formed by the surface runoff from the road flowing across the subject property over the bluff face. Seepage water, and associated minor slope failures were observed all along the bluff face. The water from the road and agricultural irrigation also seeps into the ground east of the site and flows laterally on the top of lower permeability layers prior to emerging as springs at the exposed terrace face. This causes cavitation of the unconsolidated terrace materials along the spring lines on the face of the bluff. The subaerial erosion resulting from groundwater seeping on the face of these cliffs and bluffs causes portions of the unconsolidated terrace materials to collapse, even in summer.

In addition, the loss of native vegetation and the spread of non-native invasive succulent plants, such as ice plant further exacerbate erosion. Iceplant is a succulent vine with thick, waxy leaves that hold moisture. It can form a mat across the bluff top and over the bluff face that crowds out other native plants that have deeper root systems. Ice plant gives the appearance of bluff protection, but does very little to stabilize bluff areas since it has a shallow root system and forms a heavy interconnected covering. When the root system is undermined by burrowing animals, runoff, erosion or other forces, large masses of the iceplant will collapse, bringing with it the root layer soils. Collapse often occurs following a rain since the iceplant leaves will take up large amounts of rain. The weight of the iceplant, combined with the saturated soils can result in surficial slumps and landslides. Also, large voids and depressions can form under the iceplant mat, temporarily camouflaging bluff loss and erosion problems that are only apparent when the large mass of iceplant will collapse due to lack of support. In most areas, better bluff protection can be obtained by planting native dune and coastal bluff plants that have a deeper root system and that do not cause the bluff destabilization that can occur for iceplant. Ice plant currently dominates the vegetation on the top of the bluffs on the applicant's property. This erosion process is occurring on site and will continue to occur as long as the ice plant vegetation remains on the site.

While helping to protect the existing structure from erosion until such time that the structure is relocated, the temporary placement of the two gabion walls alone will not fully minimize erosion from inland sources, such as surface runoff from sheetflow and subaerial erosion from groundwater. In addition, walls at the base of the bluff will not minimize bluff face erosion caused by the impacts of ice plant on the top of the bluff face. Section 30253 requires in part that new development assure stability and neither create nor contribute significantly to erosion, geologic instability or destruction of the site, or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. Without adequately addressing the other causes of erosion and site instability, the use of the gabion walls alone could require construction of more protective devices in the future, or risks to life and property would not be minimized inconsistent with Section 30253. Therefore, the Commission imposes Special Condition Nos. 8 and 9. Special Condition No. 8 requires the submittal and implementation of a drainage plan with measures designed to intercept groundwater and surface water at the furthest point away from the bluff edge, and prevent erosion from sheet flow over the bluff face and subaerial erosion resulting from groundwater from agricultural irrigation and

road runoff east of the property. In addition, Special Condition No. 9 requires the submittal of an invasive plant removal and native plant revegetation plan. Implementation of this plan would serve to minimize impacts to visual resources as well as to reduce soil erosion on the bluff. By removing exotic invasive vegetation and revegetating all disturbed areas with native, local genetic stock, drought resistant species endemic to bluffs as well as monitoring its success, soil erosion on the bluff will be reduced to the maximum extent feasible. As conditioned, the Commission finds that potential hazards associated with the proposed development have been reduced to the maximum extent feasible, consistent with Sections 30253 and 30235 of the Coastal Act.

Section 30253 of the Coastal Act mandates that new development neither create nor contribute significantly to erosion, or contribute to destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs or cliffs. In past permit actions, the Commission has required that new shoreline protection devices be located as landward as possible to reduce adverse impacts to sand supply and public access resulting from the development. In the case of this project, the proposed temporary gabion walls are located at the base of the bluff, as landward as is feasible, given the need to protect the existing residence from catastrophic failure. Special Condition No. 4 states that this permit is only for the development described herein, and that any future development, including grading of an accessway to the beach for heavy equipment, requires an amendment to this permit.

Also, due to the inherent risk of shoreline development, Special Condition No. 10 requires the applicant to assume the risks of development, waive any claim of liability against the Commission and indemnify the Commission against any damages that might result from the proposed temporary gabion walls. The risks of the proposed development include that the proposed walls will not protect against damage from bluff failure and erosion. Although the Commission has sought to minimize these risks, such risks can never be eliminated entirely. Given that the applicants have chosen to construct the proposed shoreline devices despite these risks, the applicants must assume the risks. Special Condition No. 5 requires the applicant shall record a deed restriction imposing the conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property in the event that the property is conveyed to another party.

As conditioned above to augment the effectiveness of the gabion walls, thereby minimizing risks to life and property, assuring stability and structural integrity of the site and surrounding area, the Commission finds that the potential hazards associated with the proposed development have been reduced to the maximum extent feasible, consistent with Sections 30253 and 30235 of the Coastal Act.

2.4 Public Access and Visual Resources

Section 30210 of the Coastal Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Coastal Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30251 of the Coastal Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas...

As discussed in Section 2.2, the proposed temporary gabion walls are the least environmentally damaging feasible alternative required to temporarily protect the existing structure until it can be relocated, and Section 30235 of the Coastal Act requires their approval as a temporary protection measure. Retention of the gabion walls beyond three years would not be consistent with 30235 because the gabion walls are not the least environmentally damaging feasible alternative to protect the existing single family residence for the long term. While Section 30235 requires the gabion walls' three-year approval as the least environmentally damaging feasible alternative to temporarily protect the existing single family residence until it can be relocated, conformance with other applicable Coastal Act policies is required to the maximum extent feasible. A discussion of the project's consistency with public access and visual resource protection policies of the Coastal Act is detailed below.

The gabion walls would be placed on the base of a bluff in unincorporated Pescadero, San Mateo County, an area characterized by its rural, agricultural setting, and limited physical development. While a handful of residences exist in the immediate vicinity of the project, no other shoreline armoring exists on the bluffs on either side of the site. A State beach is located just south of the southerly neighboring property, extending south to Pescadero Point. This beach is used extensively by the public and is characterized by pristine, undeveloped bluff tops and a wide beach. This state beach also provides lateral access to the sandy beach below the subject site where the temporary gabion walls would be authorized.

The subject bluff is approximately 25-feet-high. A remnant historic concrete seawall is located along the base of the bluff in front of the majority of the applicant's property. There are also remnants of an old timber log wall that was once located behind the concrete seawall. Debris, including large concrete blocks from both of these historic walls is scattered around the beach. The sandy beach area at the base of the bluff appears to be approximately 50-80 feet wide during a summer profile.

The presence of the proposed gabion walls as well as the continuing deposition of rubble and debris from the historic seawalls on the bluff and beach impacts views along the ocean and are not visually compatible with the surrounding area, inconsistent with Section 30251. Further, debris resulting from potential future degradation of the gabion walls and historic seawalls as well as the existing presence of concrete and woody debris from the historic seawalls protecting the property interferes with present and future public access to the beach, inconsistent with Sections 30210 and 30211 of the Coastal Act. Additionally, the continuing deposition of concrete and wooden debris represents a hazard and potential risk to life and property.

As proposed, the two gabion walls would be in place temporarily to protect an existing single family residence in danger from erosion until such time it is relocated to a safe distance from the bluff edge. Consistent with Section 30235 of the Coastal Act, Special Condition Nos. 2 and 3 provide development authorization for a period of three years,, and require that the gabion walls and any other debris associated with the historic walls be removed by January 11, 2010. However, the Commission finds that the temporary gabion walls are inconsistent with the public access and visual resources policies of the Coastal Act, and the visual and public access impacts must be mitigated to the maximum extent feasible. Further, Section 30251 requires that where feasible, permitted development restore and enhance visual quality in visually degraded areas. By removing large pieces of concrete and debris from the sandy beach, the area in front of the bluff would be subject to more natural shoreline processes. As such, the removal and clean-up of the broken off debris from the historic seawalls would have a positive impact on natural shoreline processes relating to local sand supply. Therefore, the Commission imposes Special Condition 7, which requires the applicant to remove and dispose of all existing concrete blocks, rubble, and woody debris that have broken off from the historic seawalls that were previously located on the base of the bluff below the applicant's property, and that the applicant continue to clean up the beach as these historic seawalls continue to deteriorate over time, thereby cleaning up the beach and restoring a visually degraded area. Special Condition No. 7 will minimize the impacts of the temporary gabion walls, as well as improve views along the ocean, and improve the beach access experience.

Given that this development has been generally determined to be in the Commission's original permit jurisdiction area, staff contacted the State Lands Commission to ascertain is the Land's Commission would require the applicant to obtain a permit for the development. According to the Lands Commission staff, such a permit would not be required. Nonetheless, the Commission is requiring Special Condition No. 11, to affirm that the issuance of this permit does not constitute a waiver of rights that may exist on the property.

As conditioned above, the Commission finds that the visual and public access impacts associated with the proposed temporary placement of the gabion walls have been reduced to the maximum extent feasible, consistent with Sections 30235, 30251, 30210, and 30211 of the Coastal Act.

2.5 Alleged Violation

In November 2005, without benefit of a coastal permit, the applicant undertook development consisting of the placement of a gabion wall on the bluff below the northwest corner of the applicant's residence ("location 2") at 12901 Cabrillo Highway. In September 2006, the applicant applied for an after-the-fact emergency permit for the afore-mentioned development as well as for the construction of an additional gabion wall at "location 1." The applicant subsequently applied for this follow-up regular coastal development permit to temporarily authorize the proposed development.

Although development has taken place prior to submission of this permit application, consideration of the application by the Commission has been based solely upon the policies of Chapter 3 of the Coastal Act. Approval of the permit does not constitute a waiver of any legal

action with regard to the alleged violation, nor does it constitute an admission as to the legality of any development undertaken on the site without a coastal permit.

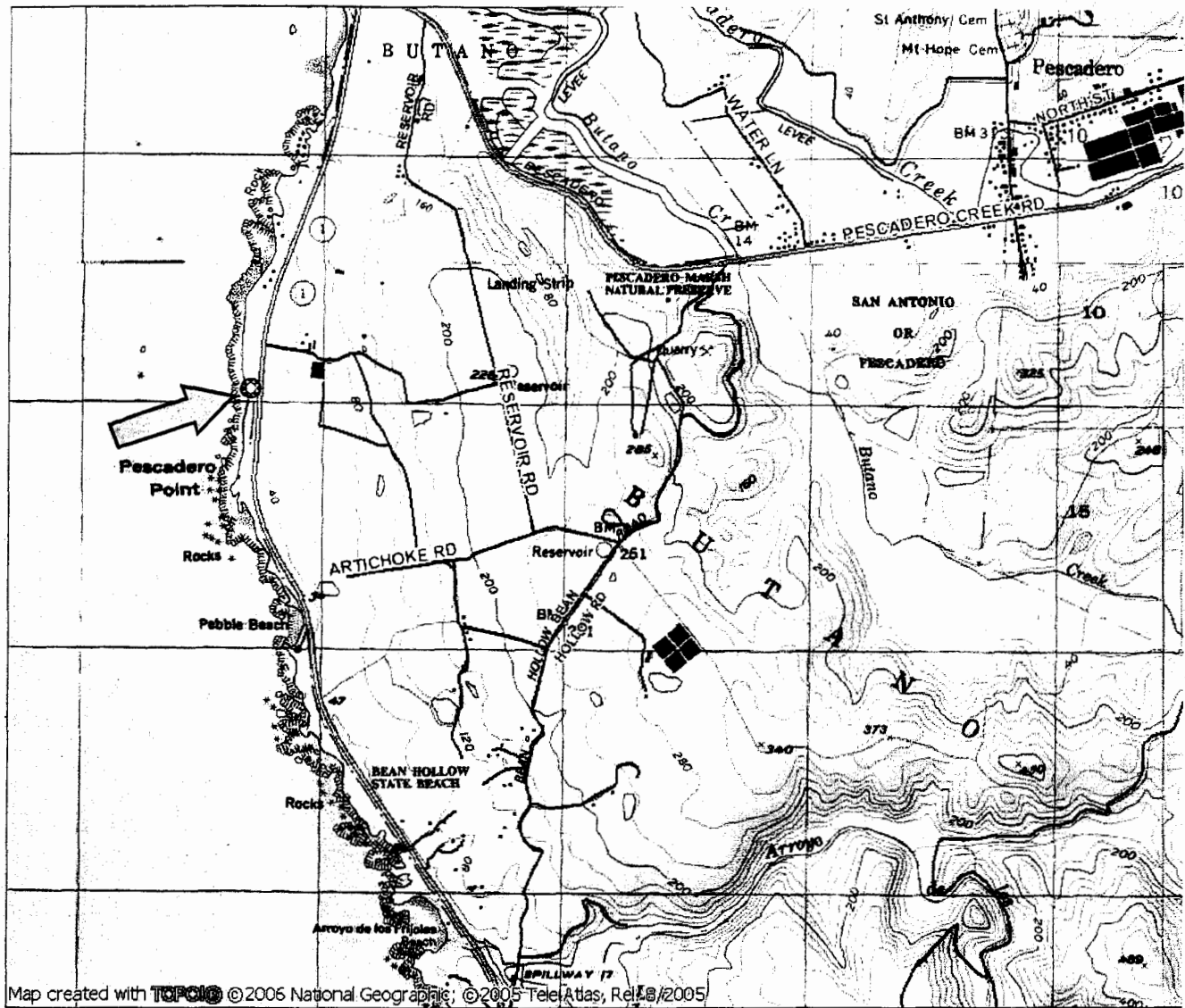
3.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing that the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effects which the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. The proposed project has been conditioned to mitigate or eliminate any significant impacts to public access, the marine environment, geologic hazards and visual resources. As discussed above, as conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impacts which the development may have on the environment. Therefore, the Commission finds that the proposed project has been conditioned to mitigate the identified impacts and can be found consistent with Coastal Act requirements to conform to CEQA.

Exhibits

1. Vicinity Map
2. Site Survey
3. Project plan overview
4. Location 2 temporary gabion wall detail
5. Location 1 temporary gabion wall detail
6. Letter from BAGG



Map created with **TOPIC** © 2006 National Geographic; © 2005 TeleAtlas, Release/2005

122°25'00" W

122°24'00" W

WGS84 122°23'00" W

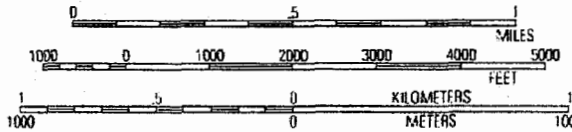


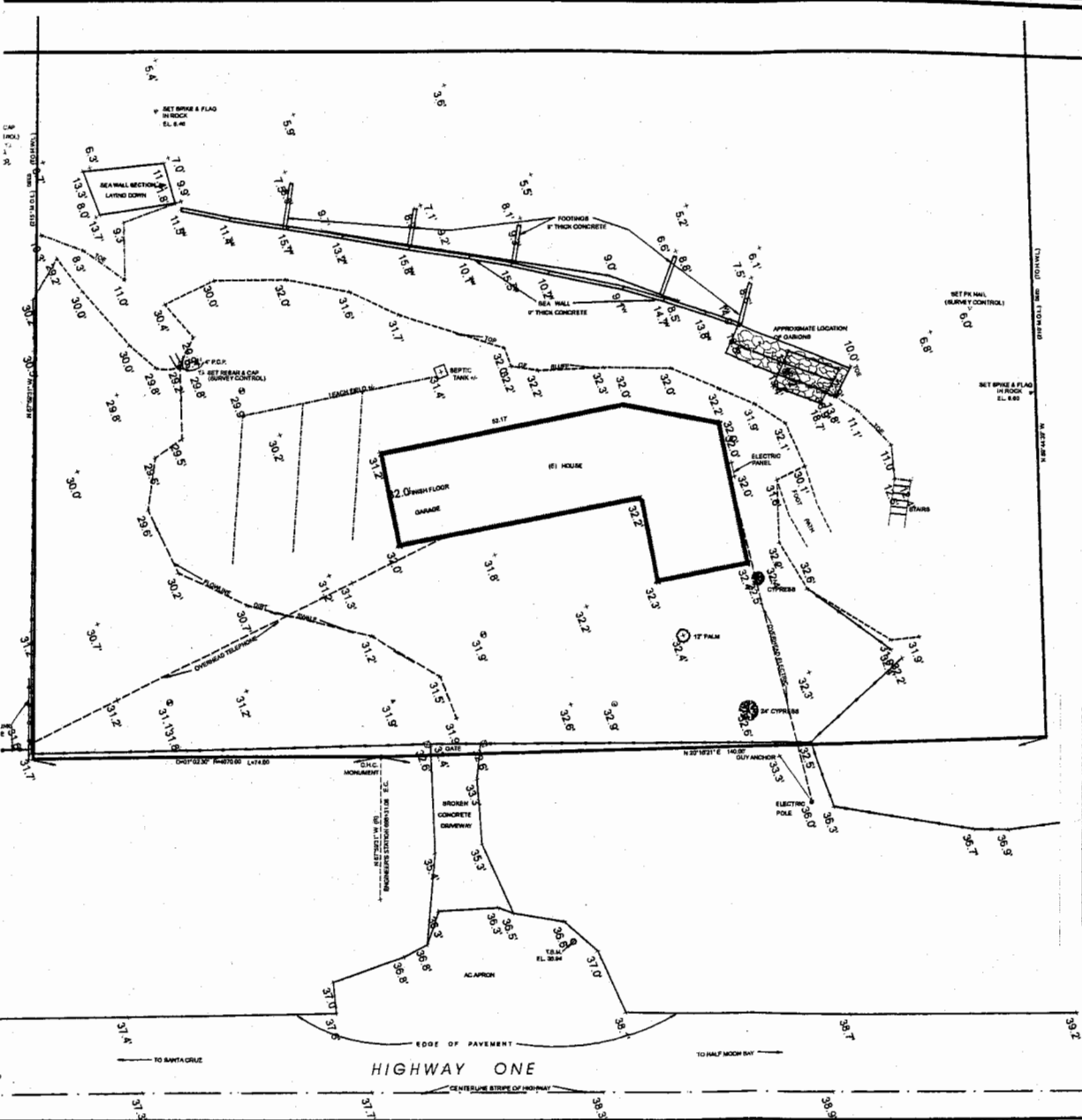
EXHIBIT NO. 1
APPLICATION NO.
2-06-011 Kampe
Vicinity Map

KAMPE RESIDENCE
12901 CABRILLO HIGHWAY
PESCADERO, SAN MATEO COUNTY
CALIFORNIA

VICINITY MAP

JOB NO. KAMPE-01-00	DATE April 2006	PLATE 1
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SITE SURVEY

OF SAN MATEO COUNTY ABREXOR'S PARCEL 060-141-010
12901 CABRILLO HIGHWAY

FOR:
KAMPE ENGINEERING
2148 PURBANA CREEK RD.
HALF MOON BAY, CALIFORNIA

EXHIBIT NO. 2
APPLICATION NO.
2-06-011 Kampe
Site Survey

REVISED 04/18/02 TO ADD
EASEMENT NOTE.

CONTRAST LAND SURVEYING
770 MAIN STREET #2
HALF MOON BAY, CA 94019
408 726-1715
MARCH 2006
W0 800-08 02-08 TOPO.P03

KAMPE RESIDENCE
12901 CABRILLO HIGHWAY
PESCADERO, SAN MATEO COUNTY,
CALIFORNIA



SITE TO

JOB NO.
KAMPE-01-00

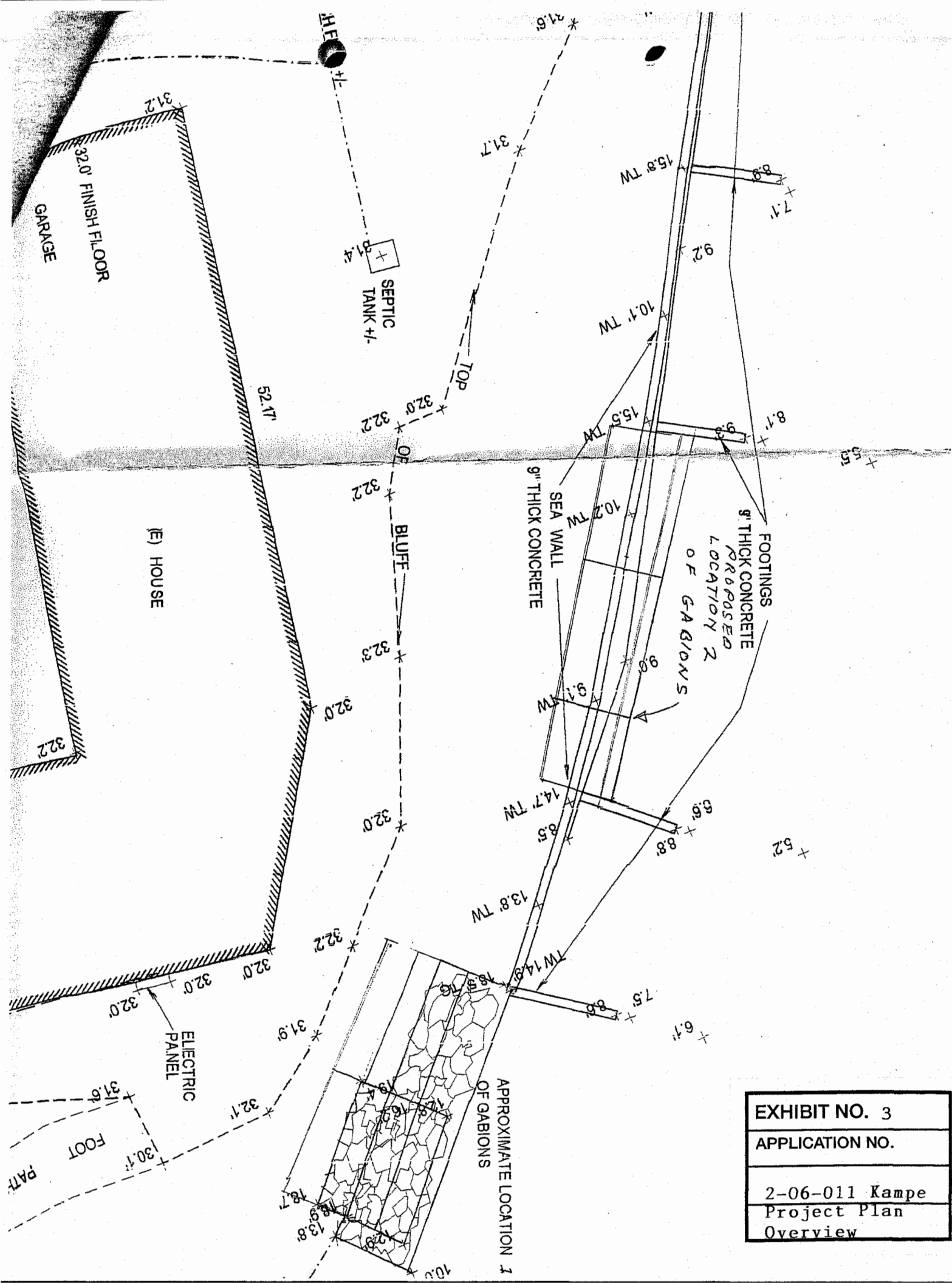


EXHIBIT NO. 3
APPLICATION NO.
2-06-011 Kampe Project Plan Overview

GABION REPAIR TO SEA WALL @ 12961 HWY 1

HOUSE

LOCATION 2

BLUFF TOP

SEE PLOT PLAN

PROPOSED ADDITIONAL
GABIONS (9)

GABION BASKETS ARE
3'X3'X12' PVC COATED
GALV. WIRE MADE BY
MACCA FERRI

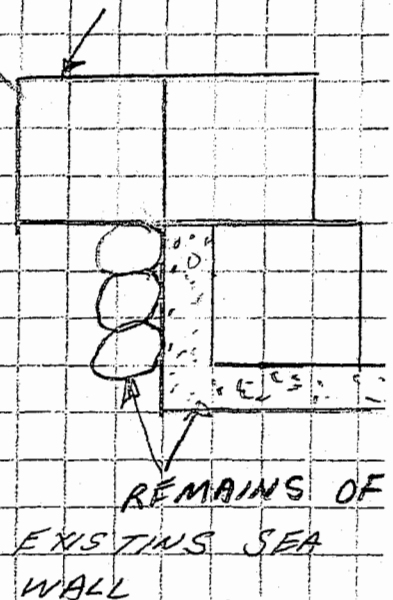


EXHIBIT NO. 4

APPLICATION NO.

2-06-011 Kampe
Location 2 temporary
gabion wall detail

SCALE 1/4" = 1'

GABION REPAIR TO SEA WALL @ 1290 HWY 1

LOCATION 1

← HOUSE

SEE PLOT PLAN

BLUFF TOP

PROPOSED ADDITIONAL
GABIONS (8)

GABIONS PLACED
IN NOV 2005

REMAINS OF
EXISTING SEA WALL

GABION BASKETS ARE
3' X 3' X 12' PVC COATED
GALVANIZED WIRE
MADE BY MACCAFERRI

EXHIBIT NO. 5
APPLICATION NO.
2-06-011 Kampe
Location 1 temporary gabion wall detail

SCALE 1/4" = 1'



BAY AREA GEOTECHNICAL GROUP

950 Industrial Avenue • Palo Alto California 94303-4911
(650)852-9133 • fax (650)852-9138 • bagg@bayareageotechnical.com

October 22, 2006

BAGG Job No. KAMPE-01-00

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105

Attention: Ms. Ruby Pap

REVIEW OF THE GABION WALL DESIGN

12901 Cabrillo Highway
Pescadero, San Mateo County, California

Dear Ms. Pap:

As you requested to Mr. Andy Kampe, Bay Area Geotechnical Group (BAGG) has reviewed the design of the gabion walls proposed to be constructed at two locations (See attached plan for the proposed locations) along the toe of the bluff at the subject property in Pescadero, California. As approved by you, Mr. Kampe is only planning to add two gabion baskets, totaling a height of approximately 6 feet at Location 1 (where a gabion wall currently exists), and another 6 foot high wall at Location 2. The gabion baskets are 3 feet by 3 feet and are 12 feet long. The wire cages are made out of PVC coated Galvanized wire manufactured by Maccaferri. The gabion baskets will be placed to protect the bluff on a temporary basis.

Based on the review of the abion wall design by Mr. Kampe, it is our opinion that the proposed baskets will provide the desired protection to the bluff on temporary basis. Should you have any questions regarding the contents of this letter, please contact us.

Very truly yours,

BAY AREA GEOTECHNICAL GROUP

Ajay Singh
Civil Engineer 53647

AS/EH

Distribution: 2 to the addressee
1 to Mr. Andrew Kampe
1 to Ms. Ruby Pap



EXHIBIT NO. 6
APPLICATION NO.
2-06-011 Kampe
Letter from BAGG