

### Staff Report to the **Zoning Administrator**

Application Number: 121187

Applicant: Jeff Martin

Agenda Date: March 20, 2015

Owner: Rio Del Mar Homeowners Assn Inc.

Agenda Item #: 2

APN: 043-251-01; 043-281-01

Time: After 9:00 a.m.

**Project Description:** Proposal to recognize the construction of 5,200 square feet of shotcrete retaining wall and long-term erosion control along a 175 foot stretch of coastal bluff, which was approved under an Emergency Coastal and Grading Permit. Additionally, proposal to begin a second phase, which would extend the retaining wall and erosion control system to an additional 1,800 square foot area adjacent to the existing bluff protection.

Location: Property located at 100 Rio Del Mar Blvd.

Supervisoral District: 2nd District (District Supervisor: Zack Friend)

Permits Required: Coastal Development Permit

Technical Reviews Required: Soils Report Reviews

### **Staff Recommendation:**

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 121187, based on the attached findings and conditions.

### **Exhibits**

A.	Categorical Exemption (CEQA	E.	Assessor's, Location, Zoning and
	determination)		General Plan Maps
B.	Findings	<b>F.</b>	Geotechnical Report (excerpt)
C.	Conditions	G.	Emergency Grading/Coastal Permits
D.	Project plans	Н.	Correspondence

### **Parcel Information**

1.92 acres (both parcels) Parcel Size:

Existing Land Use - Parcel: Residential Existing Land Use - Surrounding: Residential

> County of Santa Cruz Planning Department 701 Ocean Street, 4th Floor, Santa Cruz CA 95060

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Owner: Rio del Mar Homeowners Association, Inc.

Project Access:

Rio Del Mar Blvd.

Planning Area:

Aptos

Zone District

RM-2.5 (Multi-Family Residential: 2,500 sq. ft.

minimum parcel size)

General Plan Designation:

R-UH (Residential Urban High Density)

Coastal Zone:

X Inside Outside

Appealable to Calif. Coastal Comm.

X Yes No

### **Environmental Information**

Geologic Hazards:

Coastal bluff, instability addressed by proposed improvements

Soils:

N/A

Fire Hazard:

Not a mapped constraint

Slopes:

Steep slopes to be retained by proposed replacement retaining wall

Env. Sen. Habitat:

N/A

Grading:

Minimal grading proposed

Tree Removal:

No trees proposed to be removed

Scenic:

Visible from beach/coastline; use of natural colors and textures to

minimize visual impact

Drainage:

Inadequate drainage; 70 lineal feet of storm drain proposed along the

top of the bluff to protect against sheet flow over bluff

Archeology:

Not mapped

### **Services Information**

Urban/Rural Services Line:

X Inside \_\_ Outside

Water Supply:

Soquel Creek Water District

Sewage Disposal:

**County Sanitation** 

Fire District:

Aptos-La Selva Fire Protection District

Drainage District:

Zone 6

### **History and Project Description**

The subject parcel is located atop a coastal bluff between Rio del Mar Blvd. and Beach Drive in Aptos. The parcel is developed with a condominium, associated concrete patio and paved parking areas. There is an existing retaining wall at the bluff, however uncontrolled stormwater runoff from the road, two residences, and concrete driveway, has historically flowed over the bluff top. Uncontrolled drainage has undermined a concrete patio, eroded the bluff top and destroyed the existing wood retaining wall system. An existing shotcrete wall covers the bluff immediately to the northwest of the project area.

According to the Consulting Geotechnical and Coastal Engineer (Exhibit F), during the winter of 2010 – 2011, two debris flow slides occurred on the slope below the condominium complex and an additional slump was identified directly below the parking lot between Shore Del Mar Buildings 1 and 2. On July 24, 2012 an application was submitted for Emergency Coastal and

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Owner: Rio del Mar Homeowners Association, Inc.

Grading Permits to construct a combination of replacement shotcrete retaining wall and long-term erosion control at the bluff associated with the subject parcels. The Emergency Permits were approved by the Planning Department Senior Civil Engineer and County Geologist. Building Permit #B-122785 was subsequently issued on 8/12/12, to authorize the placement of a shotcrete compression plate with tiebacks to stabilize the bluff. The area of work was generally limited to APN 043-251-01 (Phase I). Two change orders to the building permit were approved and the application received a final inspection on July 11, 2013.

A separate building permit is required to extend the retaining wall system and erosion control protection to APN 043-281-01 (Phase II).

The project site is located within the appeals jurisdiction of the Coastal Zone. Section 13.20.090 of the County Code states that Emergency Coastal Zone approvals may be granted at the discretion of the Planning Director for projects normally requiring a Coastal Zone Approval, which must be undertaken as emergency measures to prevent loss of or damage to life, health, or property. The work authorized under this approval has been limited to the activities required to construct the necessary bluff stabilization improvements.

The work associated with the existing and proposed extension of the shotcrete retaining wall and erosion control protection is therefore included in this Coastal Permit as a necessary component of the bluff stabilization at this site. The entire shotcrete wall is proposed to extend approximately 175 feet across the width of the subject lots, and will be approximately 20-35 feet in height. The shotcrete wall system is anchored by tiebacks for support. Below the shotcrete wall, a long term erosion protect system will be constructed across the bluff. The proposed long-term erosion protection consists of installing 30-40 tiebacks, spaced at 8-feet on center, and 6 piers. Maccaferri Macmat, (erosion control netting) is then placed vertically in 6'-6" wide rolls connected to the tiebacks. The rolls are connected to one another with steel "C" rings.

The project includes a new storm drain system to re-direct the drainage captured at the top of the bluff, to the base of the bluff via 6-inch storm drains. The drainage terminates in an existing 12-inch dissipator at the beach. Additionally, backdrains will be placed at the base of the Macmat erosion control blankets.

The shotcrete wall is proposed to be tinted to match the existing wall, and is given a textured treatment and irregular shape to avoid a monolithic appearance.

A Maintenance Plan for the drainage system has been reviewed and accepted by the Stormwater Management Section of the Department of Public Works, with a requirement for annual inspections prior to the rainy season to ensure proper performance.

The County Geologist has reviewed and accepted the Geotechnical and Engineering Geology Reports prepared for the site and all recommendations contained in the reports have been incorporated as conditions of project approval. A condition of approval requires a preconstruction meeting with the consulting engineers, Public Works Stormwater Management staff and the County Geologist.

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### Zoning & General Plan Consistency

The subject property is approximately 1.9 acres in area, is located in the RM 2.5 (Multi-Family Residential – 2,500 square foot minimum parcel size) zone district and R-UH (Urban High Residential) General Plan designation. The proposed bluff stabilization measures are allowed uses in the zone districts and governing General Plan designations, in that the measures are necessary to preserve the safety of the existing residences on the site.

### **Local Coastal Program Consistency**

The proposed bluff stabilization is in conformance with the certified Local Coastal Program, in that the preservation of the bluff will protect the residences on the subject and surrounding properties from catastrophic failure. The proposed work will conform to Geotechnical and Engineering Geological Reports that have been reviewed and accepted by the County Geologist.

### Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

### **Staff Recommendation**

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- APPROVAL of Application Number 121187, based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: <a href="https://www.co.santa-cruz.ca.us">www.co.santa-cruz.ca.us</a>

Report Prepared By: Robin Bolster-Grant

Santa Cruz County Planning Department

701 Ocean Street, 4th Floor Santa Cruz CA 95060

Phone Number: (831) 454-5357

E-mail: robin.bolster@co.santa-cruz.ca.u

# CALIFORNIA ENVIRONMENTAL QUALITY ACT NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 121187

Assessor Parcel Number: 043-251-01: 043-281-01

Project Location: Shore Del Mar 1

Project Description: Recognize the construction of a 5,200 square feet of replacement

shotcrete retaining wall and Macmat erosion protection system, and authorize the additional 1,800 square feet of shotcrete retaining wall

and Macmat erosion protection.

Person or Agency Proposing Project: Jeff Martin

Contact Pho	one Number: (408) 910-4404
Å	The proposed activity is not a project under CEQA Guidelines Section 15378.
В	The proposed activity is not subject to CEQA as specified under CEQA
	Guidelines Section 15060 (c).
C	Ministerial Project involving only the use of fixed standards or objective measurements without personal judgment.
D. X_	Statutory Exemption other than a Ministerial Project (CEQA Guidelines Section
	15260 to 15285).
Specify type	: 15269 Emergency Projects

E. Categorical Exemption

Specify type:

### F. Reasons why the project is exempt:

This project involves the construction of a new shotcrete retaining wall and long-term erosion protection along a 175 foot stretch of coastal bluff. The wall and erosion control system is necessary to prevent the additional failure of the coastal bluff. Therefore, the construction of the percolation system and the replacement wall constitutes an emergency project.

In addition, none o	f the conditions described in Sec	ction 15300.2 apply to this	s project.
144 Day	al a second	Date: Phr/WU	24,2015
Robin Bolster-Gra	nt, Project Planner		

**EXHIBIT A** 

### **Coastal Development Permit Findings**

1. That the project is a use allowed in one of the basic zone districts, other than the Special Use (SU) district, listed in section 13.10.170(d) as consistent with the General Plan and Local Coastal Program LUP designation.

This finding can be made, in that the property is zoned RM-2.5 (Multi-family residential, 2,500 square foot minimum net parcel size). The proposed bluff stabilization and drainage improvements are allowed uses in conjunction with the existing residential uses on the site.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements as the proposed development is limited to installation of drainage improvements and the replacement of an existing retaining wall. No easements are known to encumber the property in the area of the existing and proposed bluff protection.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to section 13.20.130 et seq.

This finding can be made, in that, while the replacement retaining wall may be visible from the beach, the concrete is tinted to match the surrounding sand and will be textured to mimic the bluff. The use of proper tinting and texturing will ensure that the wall does not negatively impact the viewshed from the beach in the long term.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the General Plan and Local Coastal Program land use plan, specifically Chapter 2: figure 2.5 and Chapter 7, and, as to any development between and nearest public road and the sea or the shoreline of any body of water located within the coastal zone, such development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act commencing with section 30200.

This finding can be made, in that while the project site is located between the shoreline and the first public road, the replacement retaining wall will have no impact on access or recreational opportunities as no pedestrian or other access points are located on the bluff face and public access exists within 200 feet of the proposed work.

5. That the proposed development is in conformity with the certified local coastal program.

This finding can be made, in that the structure is sited and designed to be visually compatible, to

EXHIBIT B

APN: 043-251-01 & 043-281-01

Owner: Rio del Mar Homeowners Association

the greatest extent practicable, in scale with, and integrated with the character of the surrounding neighborhood. The wall may be temporarily visible from surrounding properties and the beach; however the concrete is required to be tinted to match the color of the sand.

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### **Conditions of Approval**

Exhibit A. Project Plans (6 sheets) prepared by Steelhead Engineering., dated 11/06/11.

- I. This permit authorizes construction of the 5200 square foot bluff shotcrete retaining wall and MacMat erosion control blanket system approved under an Emergency Coastal Permit as well as the extension of and additional 1,800 square foot section of retaining wall and erosion control to match the existing stabilization systems. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/ owner shall:
  - A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
  - B. Any outstanding balance due to the Planning Department must be paid prior to receiving a final inspection for any active Building or Grading Permits.
- II. Prior to issuance of a Building Permit the applicant/owner shall:
  - A. Submit four copies of the approved Discretionary Permit with the Conditions of Approval attached. The Conditions of Approval shall be recorded prior to submittal.
  - B. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. Any changes from the approved Exhibit "A" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:
    - 1. One elevation shall indicate materials and colors as they were approved by this Discretionary Application.
    - 2. Grading, drainage, and erosion control plans. Plans must show all bluff wall and drainage improvements. If engineering elements from different engineers are shown on different plan sheets, care must be taken to ensure that there are not conflicts between the elements.
    - 3. Provide a recorded Maintenance Agreement for the proposed percolation pits. Agreement shall be reviewed and approved by the Department of

**EXHIBIT C** 

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Public Works Stormwater Management Section.

- 4. Plans shall reference the technical reports and include a statement that the project shall conform to the reports' recommendations.
- C. A landscape and erosion control plan shall be submitted to Environmental Planning staff for review and approval. The landscape plan must demonstrate the establishment or re-establishments to vegetation on all surfaces that are disturbed as well as vegetation designed to provide screening of the shotcrete wall, as far as practicable. Only drought-tolerant native and adaptable plants shall be included in the vegetation plan.
- D. Meet all requirements of and pay Zone 6 drainage fees to the County Department of Public Works, Stormwater Management, if required.
- E. Meet all requirements and pay any applicable plan check fee of the Aptos La Selva Fire Protection District, if required.
- F. Submit 3 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer.
- G. Complete and record a Declaration of Geologic Hazards for the work on the coastal bluff. You may not alter the wording of this declaration. Follow the instructions to record and return the form to the Planning Department.
- III. All construction shall be performed according to the approved plans for the building permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
  - A. The property owner, applicant or other responsible party shall contact Environmental Planning at (831) 454-3168 four working days prior to final site inspection.
  - B. Erosion control measures must be in place at all times during construction. All disturbed soils shall be stabilized to prevent siltation in the watercourse.
  - C. Construction shall conform to all recommendations made in the Geotechnical and Engineering Geology Reports prepared for this site.
  - D. The Project Civil Engineer shall inspect the drainage improvements and provide the Department of Public Works Stormwater Management staff with a letter confirming that the work was completed per plans. Letter shall specify the elements inspected, whether invert elevations, pipe sizing, and all relevant design features. As-built plans, stamped by the Civil Engineer, may be submitted in lieu of the letter. The as-built stamp shall be placed on each sheet of the plans where

**EXHIBIT C** 

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stormwater management improvements were shown.

E. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.

### IV. Operational Conditions

- A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.
- V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.
  - A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.
  - B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
    - 1. COUNTY bears its own attorney's fees and costs; and
    - 2. COUNTY defends the action in good faith.
  - C. <u>Settlement</u>. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved

### **EXHIBIT C**

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the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. <u>Successors Bound</u>. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

In accordance with Chapter 18.10 of the County Code, minor variations to this permit which do not affect the overall concept, intensity, or density may be approved by the Planning Director at the request of the applicant or staff.

Approval Date:

March 20, 2015

Effective Date:

April 3, 2015

Expiration date:

April 3, 2018

Wanda Williams

Deputy Zoning Administrator

Robin Bolster-Grant

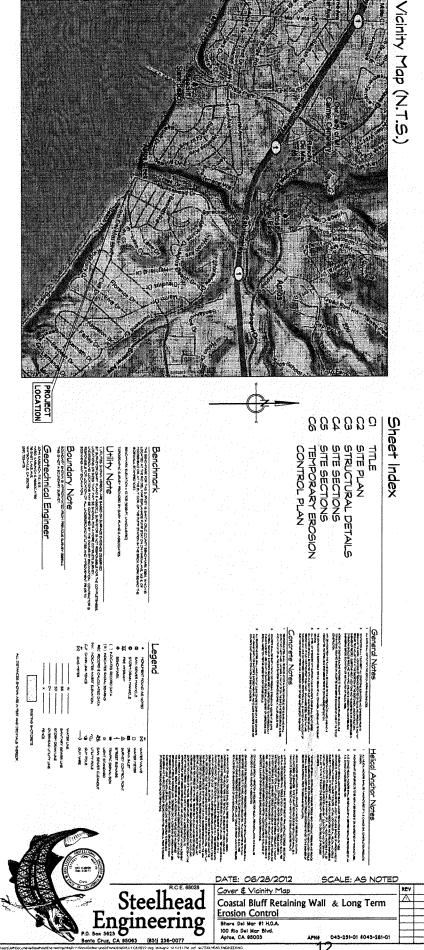
Project Planner

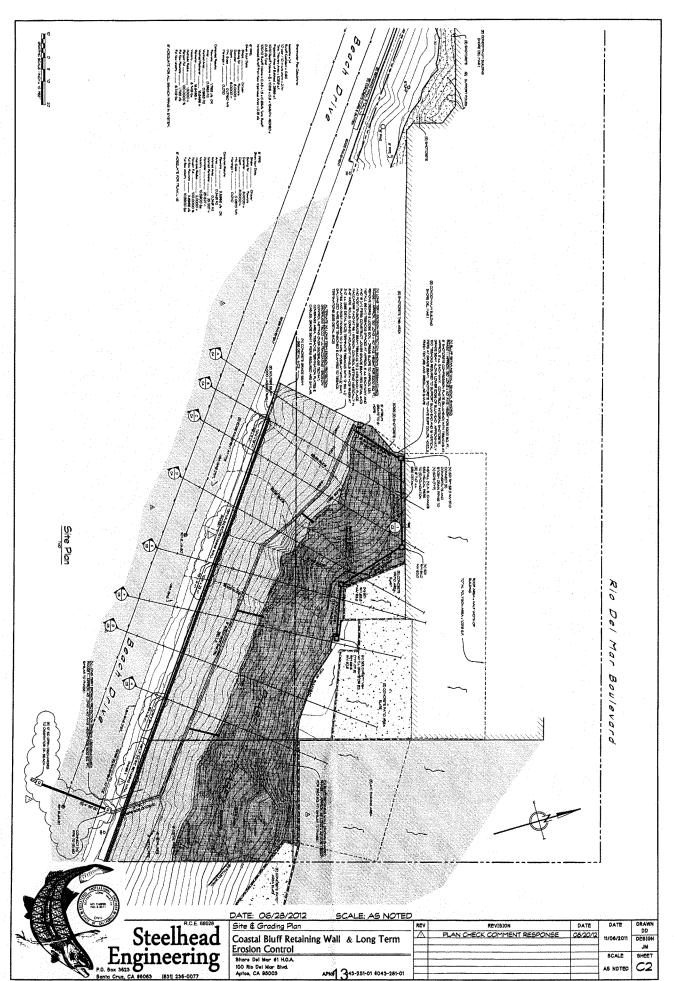
Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code

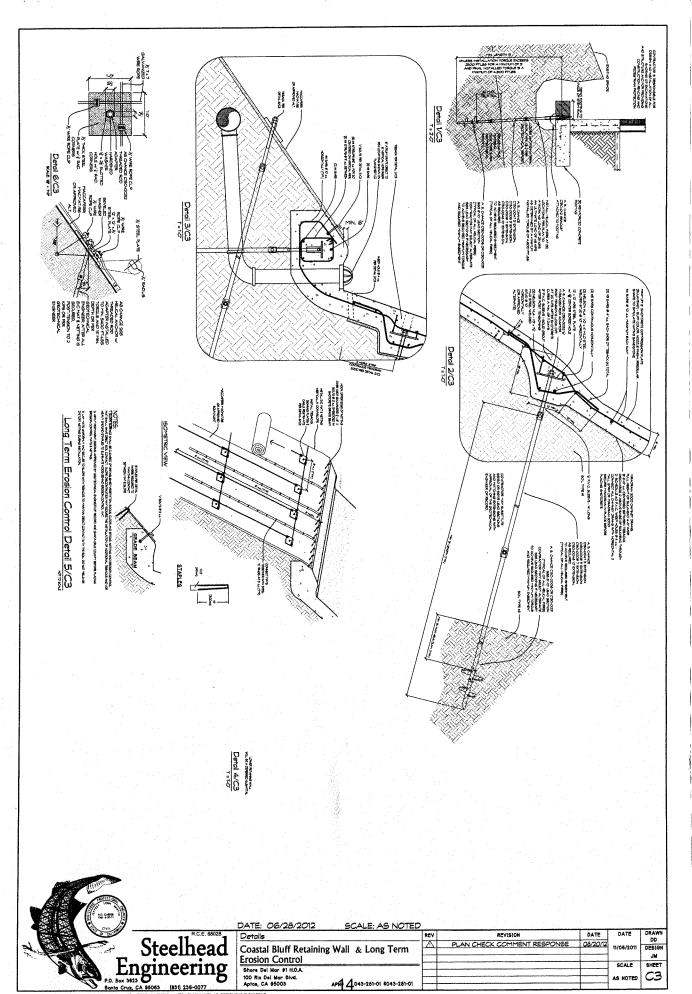
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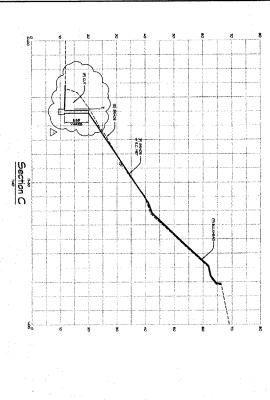
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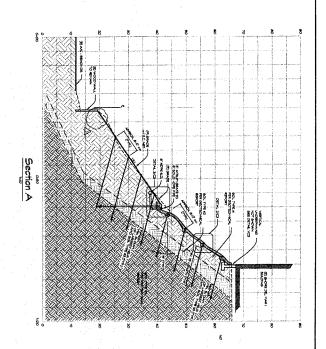
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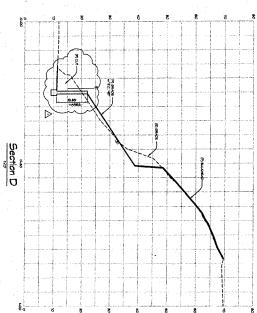


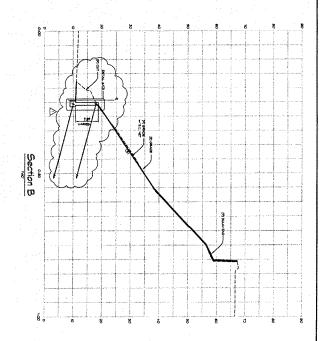










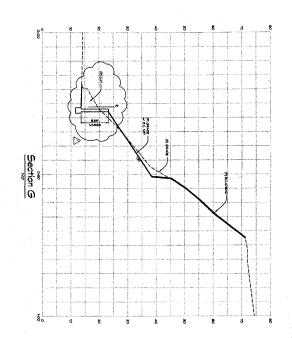


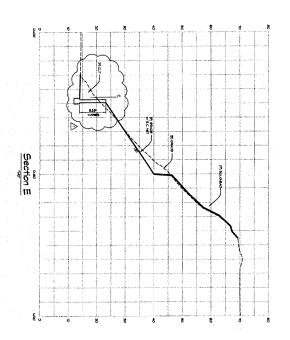


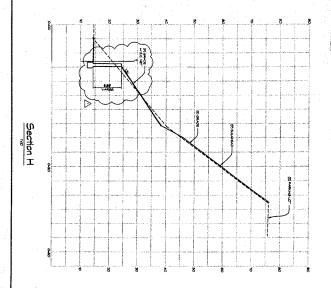
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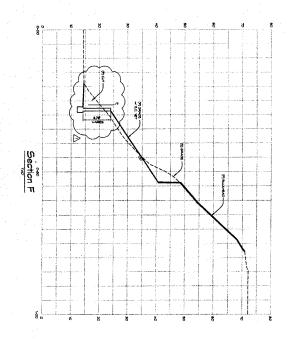
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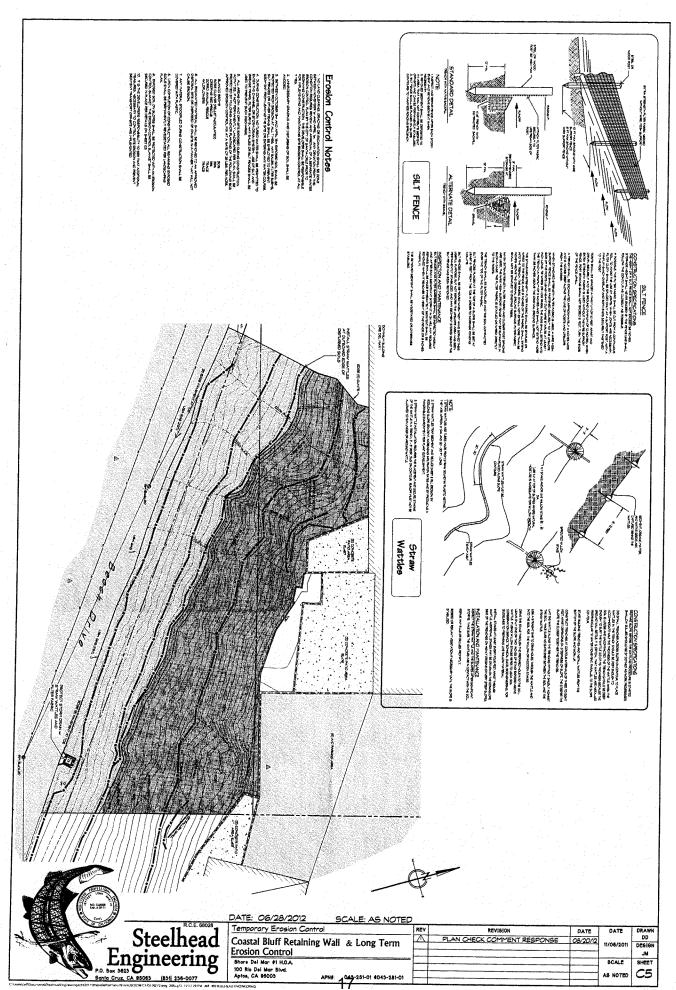


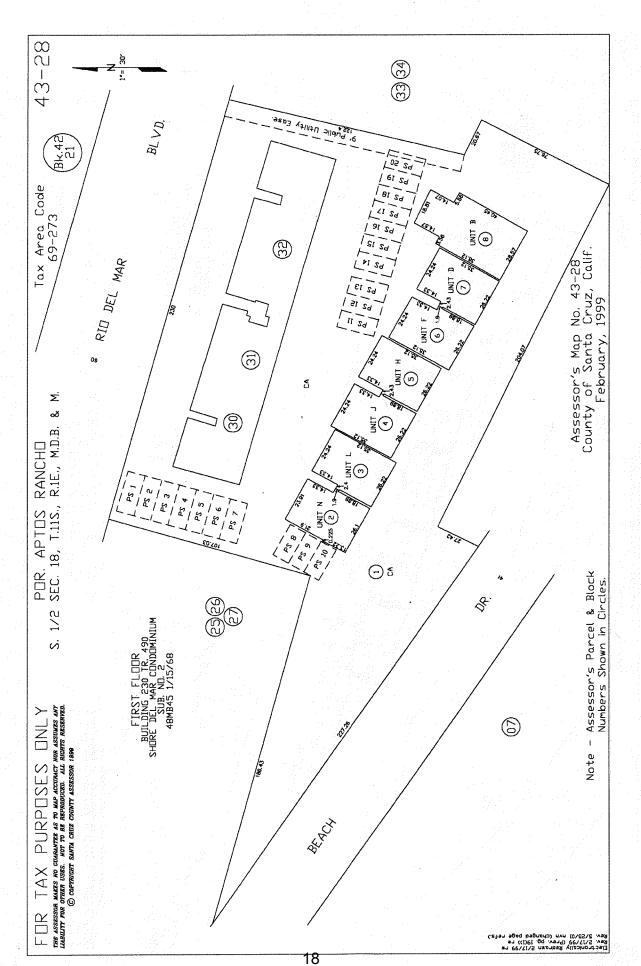


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# **Location Map**



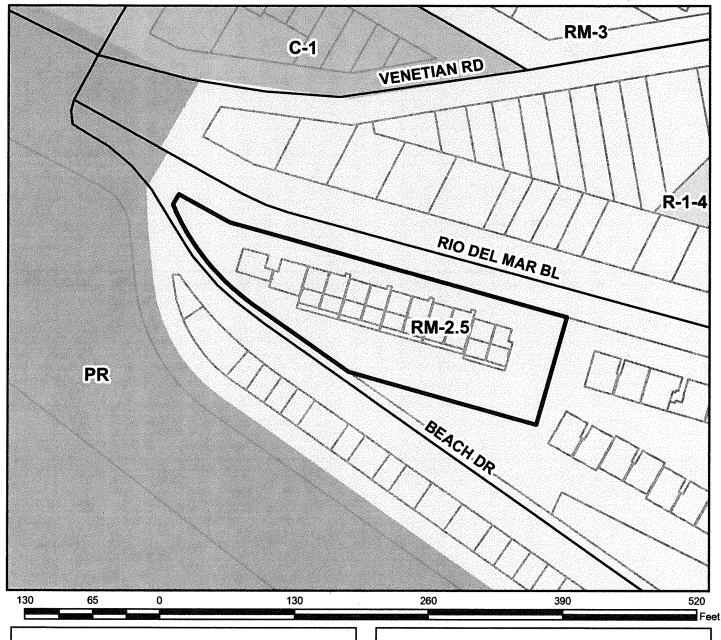
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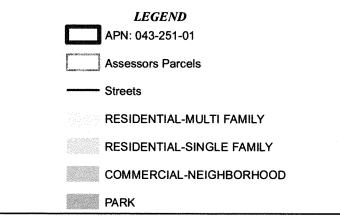


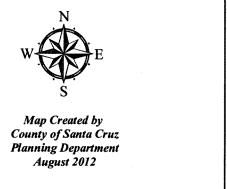
Map Created by County of Santa Cruz Planning Department August 2012



# **Zoning Map**



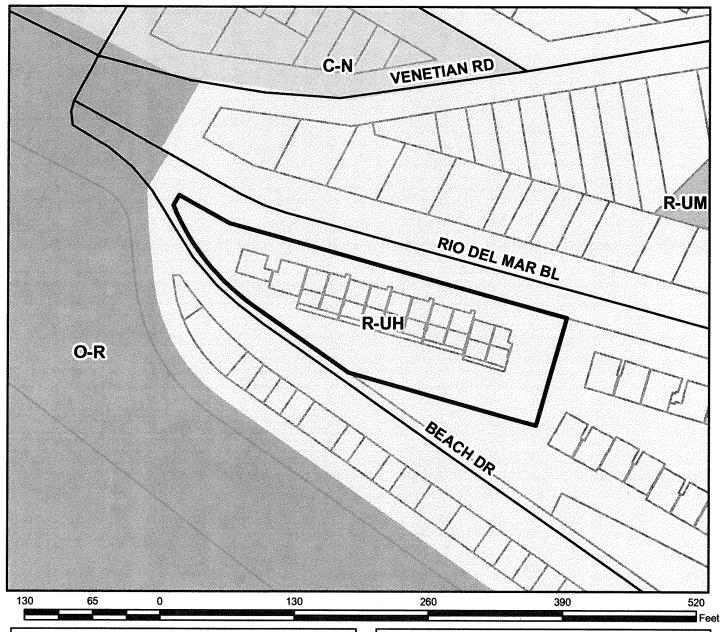




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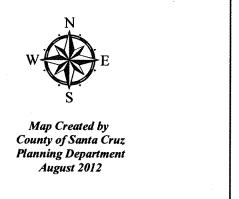


## General Plan Designation Map





Parks and Recreation



Project No. SC10163 22 July 2011

SHORE DEL MAR 1 HOA c/o Mary Andrews Aptos Property Management 256 A Center Avenue Aptos, California 95003

Subject:

Supplemental Geotechnical Report

Reference:

Bluff Stabilization Shore Del Mar 1

Santa Cruz County, California

Dear Mr. McCrea:

At your request, Haro, Kasunich & Associates (HKA) is providing a Supplemental Geotechnical Report to the 10 November 1995 Geotechnical Investigation Report prepared by HKA. During the winter of 1994-1995 a large slump slide occurred on the over steepened slope below Units B-D. The original geotechnical report provided geotechnical related parameters for design and construction of an earth retention system that stabilized the portion of the over steepened slope impacted by the slump slide. The report also provided criteria for underpinning of a portion of the condominiums that were undermined during the landslide.

### <u>Background</u>

During the winter of 2010 – 2011 two debris flow slides occurred on the over steepened slope below Units E-G. A large slump slide also occurred directly below the parking lot between Shore Del Mar 1 and 2. The purpose of this report is to update the previously mentioned geotechnical investigation and provide supplemental recommendations for earth retention systems and heavy duty erosion control that will stabilize the remaining portions of the over steepened slopes below the condominiums and parking lot.

Scope of Work

Our recommendations are based upon a field reconnaissance of the project area by John E. Kasunich (Geotechnical Engineer); three exploratory test holes in the vicinity of the recent debris flows, stability analysis of a typical cross section from the topographic map prepared by Ifland Engineers, laboratory testing of soil samples obtained during field drilling, and review of the following documents:

- 1. Haro, Kasunich and Associates, Geotechnical Investigation for Shore Del Mar Pool Retaining Wall Underpinning, Rio Del Mar, California, Project No. SC10048, dated 1 February 2011.
- 2. Haro, Kasunich and Associates, Geotechnical Investigation Shore Del Mar Condominiums, Rio Del Mar, California, Project No. SC456, dated 10 November 1995.

Included in our review of this project are prior borings, laboratory tests, mapping, and the findings and conclusions in those reports. Figure No. 8 of the Appendix presents a soil profile comparison of the 1995 subsurface information to the recent 2011 subsurface information. This comparison indicates that the soil profiles are very similar and that densities and strength parameters from both investigations as applied to our recent analysis are similar and coincident and justifies our use of the 1995 geotechnical investigation. In addition we reviewed other analyses and reports prepared by our firm in the immediate area of this project.

### **Design Considerations**

We considered a number of different retaining systems to stabilize the coastal bluff below the condominium units. These systems consist of:

- (1) A tiedback, reinforced shotcrete wall often referred to as a compression plate.
- (2) A vertical cantilevered wall (with or without tiedbacks) below the mutual parking lot shared with Shore Del Mar 2 that would consist of steel beam and concrete soldier piles with concrete or wood horizontal lagging.
- (3) Vertical, cantilevered soldier pile walls can also work along Beach Drive at the base of the slope; although Shore Del Mar 1 does not own the lower half of the slope where the wall would be located.
- (4) A PVC coated, galvanized wire net supported by tieback anchors with beveled steel plates and galvanized wire rope.

It is important that surcharge loads associated with the conventional, shallow spread footings that support the condominium units be included in the retaining wall design. The surcharge load could be eliminated by underpinning the existing building foundations. The building foundations have not been undermined due to the recent landsliding. We believe it is more efficient and cost effective to include a surcharge load with the retaining wall design and not use

underpinning piers. In our opinion, a tiedback shotecrete solution is necessary at the top of the bluff below the building and auxiliary deck foundation lines. A combination of reinforced, tiedback shotcrete walls along the top of the slope and a reinforced wire net with tieback anchors at the lower reaches of the slope may be the most efficient and cost effective solution. A conventional soldier pile retaining wall is also applicable at the deep slump slide directly below the mutual parking lot. We have included design criteria for the aforementioned retaining wall systems.

### **Field Exploration**

On 24 May 2011 an exploratory test hole was advanced at the seawall side of the parking lot between Shore Del Mar 1 and 2 to a depth of 60 ½ feet. The test hole was advanced using a solid flight auger drill rig mounted to a truck. Samples were obtained by driving a California Sampler (3 inch outside diameter) or split spoon sampler (2 inch outside diameter) up to 18 inches in depth at select elevations using a standard 140 pound hammer. The amount of blows to drive the sampler were recorded and presented on our logs of borings attached to this letter.

On 26 May 2011 two (2) exploratory test holes were advanced, one (1) at the slide mass (approximately mid slope) of the most up coast debris flow which occurred this winter, and one (1) just downslope from the steep scarp below the parking lot between Shore Del Mar 1 and 2. The test holes were advanced using a limited access solid flight auger drill rig lowered onto the slope. Samples were obtained by driving a California Sampler (3 inch outside diameter) or split spoon sampler (2 inch outside diameter) up to 18 inches in depth at select elevations using a 70 pound portable hammer. The amount of blows to drive the sampler were recorded and are presented on our logs of borings attached to this letter.

### **Laboratory Testing**

Laboratory testing for this project consisted of direct shear testing to determine a strength envelope for the subsurface soil. Moisture and density tests were also performed to aid in the assignment of soil properties to each soil type.

### **Soil Properties**

Based on our logs of borings and results of laboratory tests the soils encountered were simplified into three types. Soil Type 1: near surface sandy silts prone to debris flow, Soil Type 2 medium dense to dense well graded sands and gravels sandwiched between Soil Type 1 and Soil Type 3, and Soil Type 3: dense to very dense lightly cemented fine sands. Soil Type 2 and Soil Type 3 do not appear susceptible to debris flows based on strength determined through lab tests. Seismically induced slump sliding affecting all three soil profiles is possible. The design values for each soil type are attached to the Appendix of this letter.

### **Stability Analysis**

A stability analysis was performed on the typical section (Figures 17 & 18) developed for this project. The analysis was completed using GSTABL7 software with input parameters consisting of geometry of slope, soil properties from field and lab tests, and seismic surcharge derived from mapped ground accelerations within the 2010 CBC. The failure surfaces were selected using surficial observations of the oversteepen slope below units (E-G) and engineering judgment. The factors of safety against sliding along the selected failure surfaces are (1.1 and 1.4) for long term loading condition and (0.7 and 1.0) for short term loading condition. Both the short and long term loading conditions were modeled using effective stress parameters with pore pressure. The results are presented graphically in Figure 19 and 26, attached.

The results of our slope stability analysis (Appendix C) indicate that potential seismically induced slump slides 8 feet deep could occur on the slopes below the condominiums. Utilizing the slope stability analysis, as well as Rankine analysis, we have determined that 18,500 pounds per linear foot of force could be generated from seismically induced slope failures with a factor of safety of 1. We have used the 18,500 pounds per linear foot for the active earth pressure and seismic surcharge against the proposed retaining wall systems but have included a factor of safety of 2 in our evaluation. We also recommended a surcharge for the existing three story spread footings along the top of the bluff. The active and It is difficult to seismic forces presented for design reflect this analysis. generalize the force field without knowing specifically the actual heights of the retaining wall systems. It is important that Haro, Kasunich and Associates evaluate with the structural engineer the geometric layout of the proposed retaining walls and assist in applying the geotechnical force field presented in this report.

### Conclusion

Based on the results of our recent geotechnical work, the general recommendations and findings presented in the November 1995 Geotechnical Investigation prepared by Haro, Kasunich and Associates still apply, but are incomplete and must be used in concert with the updated recommendations presented in this supplemental report. If conflict arises between the updated recommendations in this report and past reports, recommendations in this report govern. If further clarification is needed, please contact our office.

The results of our recent study indicate that geotechnical concerns at the project areas can still be mitigated with standard geotechnical engineering practices. Primary geotechnical concerns include strong seismic shaking, stabilization of over steepened slopes adjacent to and within areas impacted by the recent landslides, including removal of the deeper slump

slide mass still perched on the slope below the mutual parking lot, highly erodible residual soils within the upper 3 feet of the slope face, and erosion from uncontrolled surface runoff.

### Recommendations

It is our opinion that the proposed project is geotechnically feasible, provided the recommendations in this report and the prior report are complied with during design, development, construction, and occupancy of the property. It is recommended that a structural/civil engineer with experience working on coastal bluffs be retained to develop a lateral earth support system similar in concept to those discussed in this report. The earth support system should be designed and constructed with the recommendations in Appendix A of this update report as well as the recommendations in the November 1995 Geotechnical Investigation as appropriate. Haro, Kasunich and Associates should also be retained to work closely with the design engineer to ensure our geotechnical recommendations are properly interpreted and implemented into the design/build process.

If you have any questions concerning this report, please contact our office.

Very truly yours,

HARO, KASUNICH AND ASSOCIATES, INC.

Moses E. Cuprill Staff Engineer

John E. Kasunich

3.E. 455

MC/JEK/dk

Copies: 2 to Addressee

1 to Mary Andrews, Aptos Property Management

1 to Ifland Engineers, Attention Jon Ifland

1 to Soil Engineering Construction, Attention George Drew

### **EMERGENCY GRADING PERMIT**

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County of Santa Cruz Planning Department Telephone: (402) 454-2260 701 Ocean Street Santa Cruz, CA 95060 Fax: (408) 454-2131 043-251-01+043-291-01 Shore Del Man Assessor's Parcel Number Owner's Name 100 Rio 851-236-007 Telephone Number Address Location of Emergency Work: Between Beach Prive + Rio Del Mar Blvd. (See Plans Steel head Engineer 8/20/2012) Emergency Caused By: Emergency Status Verified By: Work Authorized: Work as societed IN CONFORMANCE WITH SECTION 16.20.116 OF THE COUNTY CODE, AN EMERGENCY GRADING PERMIT MAY BE ISSUED WHEN A SUDDEN, UNEXPECTED OCCURRENCE INVOLVING A CLEAR AND PRESENT DANGER DEMANDS IMMEDIATE ACTION TO PREVENT LOSS OF, OR DAMAGE, TO LIFE, HEALTH, PROPERTY OR ESSENTIAL PUBLIC SERVICES. THE PLANNING DIRECTOR MAY REQUEST, AT THE APPLICANT'S EXPENSE, VERIFICATION BY A QUALIFIED PROFESSIONAL OF THE NATURE OF, AND SOLUTIONS TO, THE EMERGENCY SITUATION. THIS PERMIT IS ISSUED SUBJECT TO THE ATTACHED REQUIRED FINDINGS. **CONDITIONS OF ISSUANCE:** Only the work specifically described above is authorized. Any additional work requires separate authorization. If the scope of work authorized by this permit is exceeded, a notice of violation resulting in civil penalties may be issued. At the time of issuance of this permit, or within 60 days of issuance, the applicant shall submit a completed application, including the appropriate fees, for a regular permit. Within 90 days of the issuance of this permit, all required technical reports and project plans must be submitted unless the Planning Director grants a time extension. Failure to submit the required information will void this The work authorized by this permit must begin within 15 days of issuance or the permit will be voided. This permit shall expire 30 days after commencement of work unless an extension is granted by the Planning Director. O Provide written agreeme 1....

Rever & fift & p plant concert appears

Other Conditions: Landscopy and well appearance within

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roastructor, w, tot B Planning Director. O Provide written agreened petween cont Plan. + before constructe & Date: 8/22/12 plan Issued by: SE, GIVIL ENE 1-BOR I have read the above permit conditions and limitations and agree to conform to the conditions described above. Owner 9-22-12

### **EMERGENCY** COASTAL PERMIT

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Telephone: (408) 454-2260 County of Santa Cruz Planning Department Fax: (408) 454-2131 701 Ocean Street Santa Cruz, CA 95060 Del Mar #1 H.O.A, 043-251-01+ 045-281-DI Shore Assessor's Parcel Number Owner's Name 831-20-2017 100 Rio Del Mar Blud. Telephone Number Location of Emergency Work: Between Beach Drue + Mar Buci (See Plans Steel head Engineering 8/20/2012 Emergency Caused By: lands I de one Hanna Emergency Status Verified By: Work Authorized: work associated IN ACCORDANCE WITH SECTION 13.20.090 OF THE COUNTY CODE, AN EMERGENCY COASTAL ZONE PERMIT MAY BE ISSUED FOR PROJECTS UNDERTAKEN TO PREVENT LOSS OF, OR DAMAGE TO LIFE, HEALTH, OR PROPERTY; OR TO RESTORE, REPAIR, OR MAINTAIN PUBLIC WORKS, UTILITIES, AND SERVICES DURING AND IMMEDIATELY FOLLOWING A NATURAL DISASTER OR SERIOUS ACCIDENT. THE PLANNING DIRECTOR MAY REQUEST, AT THE APPLICANT'S EXPENSE, VERIFICATION BY A QUALIFIED PROFESSIONAL OF THE NATURE OF, AND SOLUTIONS TO, THE EMERGENCY SITUATION. CONDITIONS OF ISSUANCE: Only the work specifically described above is authorized. Any additional work requires separate authorization. If the scope of work authorized by this permit is exceeded, a notice of violation resulting in civil penalties may be issued. At the time of issuance of this permit, the applicant shall submit a completed application, including the appropriate fees, for a regular permit. Within 96 days of this permit issuance, all required technical reports and project plans must be submitted unless the Planning Director grants a time extension. Failure to submit the required information will void this permit. The work authorized by this permit must begin within 15 days of issuance or the permit will be voided. This permit shall expire 60 days after issuance. Other Conditions: 1 Provide wither sp pears i of before I have read the above permit conditions and limitations and agree to conform to the conditions described above.



Date 8-22-12

Owner

From: Janice LaVelle [chateau2@sbcglobal.net]

**Sent:** Monday, March 09, 2015 9:08 PM

To: Robin Bolster-Grant

Subject: In Support of proposed extension of the retaining wall on Beach Drive

Hello Ms. Bolster-Grant,

I wanted to voice my support of the proposed extension of the retaining wall along Beach Drive as the property owner of 210 Beach Drive. My home sits directly below the cliff that is in jeopardy of sliding and I am very proud that Santa Cruz Co. is concerned about the welfare of those who could loose their homes.

I witness the concern and the helpfulness of the local, state and federal governments do to protect those homes along the seaboards of our country, and sometimes I feel that CA does not care unless you are a movie star in Malibu.

Thank you for protecting us, I am happy to see our taxes are recognized...btw..we are new property owners (4 years old) so we didn't inherit the house so we actually have a HUGE mortgage and pay considerable taxes. We don't want our dream home squished.

Good for you to support this project! Janice & David LaVelle

From:

Buzz Bryan [cyberbuz@sbcglobal.net] Monday, March 09, 2015 5:06 PM Robin Bolster-Grant

Sent: To:

BUZZ BRYAN, ARCHITECT C20561 10070 Pasadena Ave "Cupertino, CA 95014 P+F 408 257 7500 Email: cyberbuz@sbcglobal.net

From: Sent:

jimbofx Melehan [jimbofx@msn.com] Monday, March 09, 2015 4:50 PM

To:

Robin Bolster-Grant

Subject:

Retaining Wall (Beach Dr. area)

Dear Ms. Bolster-Grant,

I am the owner of the property at 222 Beach Dr. in Aptos. I am writing to express my support for the proposal to recognize the 5200 sq ft retaining wall, as well as the proposal to complete the extension of the wall (phase 2).

This project would be of benefit not only to local owners, but also county residents and all visitors to the area.

Thank you.

James Melehan

From:

Susan Vaudagna [casaowner@comcast.net]

Sent:

Monday, March 09, 2015 4:34 PM

To: Cc: Robin Bolster-Grant billweseloh@att.net

Subject:

RE: Public Hearing 3/20/15 Item #2 121187

Thank you!

From: Robin Bolster-Grant [mailto:Robin.Bolster-Grant@santacruzcounty.us]

Sent: Monday, March 09, 2015 4:22 PM

To: 'Sue Vaudagna'

Subject: RE: Public Hearing 3/20/15 Item #2 121187

Thank you so much, I will include your message in the packet for the zoning administrator and it will be made a part of the public record.

Best wishes,

### Robin

Robin Bolster-Grant Code Compliance Administrator Santa Cruz County Planning Department 701 Ocean Street, 4th Floor Santa Cruz, CA 95060 (831) 454-5357

From: Sue Vaudagna [mailto:casaowner@comcast.net]

Sent: Monday, March 09, 2015 2:28 PM

To: Robin Bolster-Grant

Subject: Public Hearing 3/20/15 Item #2 121187

Dear Robin,

We own 274, 276 and 278 Beach Drive and want to voice our support for the construction of the proposed retaining wall referenced in the Notice of Public Hearing we just received. We may not be able to attend the hearing but hope this email underlining our support for the project will be helpful in getting it passed.

Thank you for your time,

The Vaudagna Family 408-998-1488

Dudley G. Andersen [dudley@onemail.com] Monday, March 09, 2015 3:23 PM Robin Bolster-Grant From:

Sent:

To:

proposed extension of the retaining wall on Beach Drive Notice of Public Hearing[3].pdf Subject: Attachments:

From: Sue Vaudagna [casaowner@comcast.net]

**Sent:** Monday, March 09, 2015 2:28 PM

To: Robin Bolster-Grant

Subject: Public Hearing 3/20/15 Item #2 121187

Dear Robin,

We own 274, 276 and 278 Beach Drive and want to voice our support for the construction of the proposed retaining wall referenced in the Notice of Public Hearing we just received. We may not be able to attend the hearing but hope this email underlining our support for the project will be helpful in getting it passed.

Thank you for your time,

The Vaudagna Family 408-998-1488

From:

Vic & Grace Pires [vic.grace@comcast.net]

Sent:

Tuesday, March 10, 2015 2:33 PM

To:

Robin Bolster-Grant

Subject:

extension of retaining wall on Beach Dr, Aptos

### Dear Ms. Bolster

It came to our attention that the county is considering an extension to the retaining wall on the left side of Beach Drive, across from "The Island" houses. We have owned a house on Beach Drive for 25 years and I must tell you that we have been worrying about those banks for 25 years.

I used to drive a convertible and every time I drove by, in the winter, I always wondered when I was going to get hit with mud, debris and, possibly, an actual condominium. Some of those condos do not look safe.

So, I am asking that the county step in and do whatever is necessary to avoid possible problems and that includes additional footage of the retaining wall.

Thank you very much for your assistance and consideration to the condition of the hillside and of the road. Owners at Beach Drive pay a lot of property taxes and hotel taxes and we do not see any improvements on that road other then the repair of a few potholes earlier this year while the actual road is a disaster.

Sincerely,

**Grace Pires** 

From: William J. Connolly [wjcoldzin@gmail.com]

**Sent:** Tuesday, March 10, 2015 12:33 PM

To: Robin Bolster-Grant
Subject: Retaining wall on Beach Dr

Dear Robin Bolster-Grant, I've been the owner of 343 Beach Dr since 1980. We fully support and recommend the improvements suggested by your dept. Please do it! William J. Connolly 510-421-3399

Sent from my iPad