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STAFF REPORT: MATERIAL AMENDMENT

Amendment Application No.: 1-12-013-A1

Applicant: Robert & Patricia Wilson

Location: 396 Roundhouse Creek Road, approximately 4.5 miles north of the City of Trinidad in the Big Lagoon area Humboldt County (APN 517-251-006).

Description of Previously Approved Project: (1) Develop a new 1,456-square-foot, 3-bedroom, one-story single-family residence, attached 528-square-foot 2-car garage, 168-square-foot covered patio, paved driveway with two off-street parking spaces, on-site sewage disposal system, and 2,500-gallon water storage tank for fire abatement; and (2) remove approximately nine conifer trees.

Proposed Amendment: Construct (1) a 336-square-foot single-story detached garage with a maximum height of 13 feet; and (2) a fenced patio area with a hot tub covered by a gently sloping roof not to exceed 8 feet in height.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Commission staff recommends approval of Coastal Development Permit (CDP) Permit Amendment Request 1-12-013-A1 with conditions. The primary Coastal Act issue raised by the application is geologic hazards. The subject property is a 0.3-acre bluff-top lot located in the Big Lagoon Estates subdivision, which is an area that is subject to periodic extraordinary bluff retreat episodes.

On November 14, 2012, the Commission approved with conditions CDP 1-12-013 authorizing the development of a new single-family residence, garage, patio, driveway, on-site sewage disposal system, and water storage tank. In approving the permit, the Commission found the minimum setback distance from the bluff edge needed for the residential development to assure structural stability and minimize geologic hazards was 186 feet. Under this permit amendment request, the Applicants are proposing to construct a new detached garage/shop and hot-tub patio on the subject lot at a minimum distance of 280 feet from the bluff edge, inland of the previously authorized residence and garage. The applicants have provided a letter from a consulting geologist presenting the results of an engineering geologic evaluation of the appropriateness of applying the previously determined bluff setback for the property to the currently proposed development. The consulting geologist performed an updated assessment of the site and found no evidence of recent erosion, slope instability, or changes in the factors used in the 2012 bluff setback evaluation. The Commission's geologist, Dr. Mark Johnsson, reviewed and concurs with the updated assessment results and with the use of the minimum 186-foot bluff edge setback standard.

Staff recommends five new special conditions related to minimizing geologic hazards and ensuring the amended development will not require the construction of shoreline protective works. **Special Condition 11** would require that prior to issuance of the CDP amendment, a geotechnical engineer shall approve all final site preparation, foundation design, and drainage plans and the minimum bluff edge setback (at least 186 feet) plot plan. **Special Condition 12** would prohibit the construction of shoreline protective devices on the parcel, requires that the landowners provide a geotechnical investigation and remove the authorized structure and its foundation if bluff retreat reaches the point where the structure is threatened, and requires that the landowners accept sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion of the site. **Special Condition 13** would require the landowners to assume the risks of extraordinary erosion and geologic hazards of the property and waive any claim of liability on the part of the Commission. **Special Condition 14** would require the applicants to record a deed restriction to impose the special conditions of the permit as covenants, conditions and restrictions on the use and enjoyment of the property. **Special Condition 15** would require that all future development on the subject parcel that might otherwise be exempt from coastal permit requirements requires an amendment or coastal development permit.

The motion to adopt the staff recommendation of approval of CDP amendment request 1-12-013 with special conditions is found on page 4.

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APPENDICES

[Appendix A](#) – Substantive File Documents

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EXHIBITS

[Exhibit 1](#) – Regional Location Map

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[Exhibit 3](#) – Site Plan

[Exhibit 4](#) – Elevations & Floor Plans

[Exhibit 5](#) – Site Drainage Plan

[Exhibit 6](#) – Erosion Control Plan

[Exhibit 7](#) – Updated Bluff Setback Letter

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** the proposed amendment to Coastal Development Permit No. 1-12-013 subject to the conditions set forth in the staff recommendation.*

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

Resolution:

The Commission hereby approves the coastal development permit amendment on the grounds that the development as amended and subject to conditions, will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit amendment complies with the California Environmental Quality Act because feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the amended development on the environment.

II. STANDARD AND SPECIAL CONDITIONS

The Standard Conditions 1-5 and Special Conditions Nos. 1-10 of CDP 1-12-013 remain in full force and effect. **Special Conditions 11 through 17** are new conditions added to CDP Amendment 1-12-013-A1. The modified and new conditions are listed below. New and deleted language appears as **bold double-underlined** and ~~**bold double-underlined**~~ text respectively. See **Appendix B** for the text of all the original permit conditions.

11. Submittal of Final Plans

a. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT

AMENDMENT NO. 1-12-013-A1, the applicant shall submit, for the review and written approval of the Executive Director, final design and construction plans, including site preparation, foundation design, and drainage plans, consistent with the recommendations contained in the geologic report titled, "R2 Soils Engineering Report for APN 517-251-006..." dated June 26, 2012, prepared by Oswald Geologic. All authorized development shall be located at least 186 back from the bluff edge.

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

12. No Future Bluff or Shoreline Protective Device.

- a. By acceptance of this permit, the applicants agree, on behalf of themselves and all successors and assigns, that no bluff or shoreline protective device(s) shall ever be constructed to protect the development approved pursuant to coastal development permit (CDP) Amendment No. 1-12-013, including, but not limited to, the detached garage, patio, or other development authorized under this CDP amendment, including in the event that the authorized development is threatened with damage or destruction from waves, erosion, storm conditions, bluff retreat, landslides, ground subsidence or other natural hazards in the future, and as may be exacerbated by sea level rise. By acceptance of this permit, the applicants hereby waive, on behalf of themselves and all successors and assigns, any rights to construct such devices that may exist under applicable law.**
- b. By acceptance of this Permit, the applicants further agree, on behalf of themselves and all successors and assigns, that the landowner(s) shall remove the development authorized by this Permit, including, but not limited to, the detached garage, patio, or other development authorized under this CDP amendment, if any government agency has ordered that the structures are not to be occupied due to any of the hazards identified above, or if any public agency requires the structures to be removed. If any portion of the development at any time encroaches onto public property, the permittee shall either remove the encroaching portion of the development or apply to retain it. Any application to retain it must include proof of permission from the owner of the public property. The permittee shall obtain a coastal development permit for removal of approved development unless the Executive Director determines that no coastal development permit is legally required.**
- c. In the event the edge of the blufftop recedes to within 10 feet of the authorized development but no government agency has ordered that the structures not be occupied, a geotechnical investigation shall be prepared by a licensed coastal geologist and geologist, retained by the landowner(s), that addresses whether any portions of the structures are threatened by coastal hazards. The report shall identify all those immediate or potential future measures that could stabilize the structures without blufftop or shoreline protection device(s), including, but not limited to, removal or relocation of the structures. The report shall be submitted to the Executive Director and the appropriate local government officials. If the geotechnical investigation concludes that any portion of the structures are unsafe for occupancy, the permittee shall, within ninety (90) days of submitting the investigation, apply for a coastal development permit amendment to remedy the hazard.**
- d. Prior to removal/relocation, the permittee shall submit two copies of a Removal/Relocation Plan to the Executive Director for the review and written approval. The Removal/Relocation Plan shall clearly describe the manner in which such development is to be removed/relocated and the affected area restored so as to best protect coastal resources, including the Pacific Ocean. In the event that portions of the development fall to the bluffs or ocean before they are removed/relocated, the landowner shall remove all recoverable debris**

associated with the development from the bluffs and ocean and lawfully dispose of the material in an approved disposal site. Such removal shall require a coastal development permit.

13. Assumption of Risk, Waiver of Liability, and Indemnity Agreement. By acceptance of Coastal Development Permit Amendment No. 1-12-013-A1, the applicants acknowledge and agree (i) that the site may be subject to hazards, including but not limited to, earthquakes, erosion, landslides, bluff failure, and other geologic hazards; (ii) to assume the risks to the permittee and the property that is 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.

14. Deed Restriction Recordation of Permit Conditions. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-12-013-A1, the applicants shall submit to the Executive Director for review and approval documentation demonstrating that the applicants have executed and recorded against the parcel(s) governed by this permit amendment a deed restriction, in a form and content acceptable to the Executive Director: (a) 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 (b) 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 amendment shall continue to restrict the use and enjoyment of the subject property so long as either this permit amendment or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

15. Future Development Restriction. This permit amendment is only for the development described in coastal development permit (CDP) Amendment No. 1-12-013-A1. Pursuant to Title 14 California Code of Regulations (CCR) Section 13250(b)(6), the exemptions otherwise provided in Public Resources Code (PRC) Section 30610(a) shall not apply to the development governed by CDP Amendment No. 1-12-013-A1. Accordingly, any future improvements to this structure authorized by CDP Amendment No. 1-12-013-A1 shall require a further amendment to CDP 1-12-013 from the Commission or shall require an additional permit from the Commission or from the applicable certified local government. In addition thereto, a amendment to CDP 1-12-013 from the Commission or an additional CDP from the Commission or

from the applicable certified local government shall be required for any repair or maintenance identified as requiring a permit in PRC Section 30610(d) and Title 14 CCR Sections 13252(a)-(b).

- 16. Construction Responsibilities. The permittee shall adhere to all the various construction-related best management practices (BMPs) described and listed on project plans dated March 2016 submitted with CDP Amendment Application No. 1-12-013-A1 including, but not limited to, the following:**
- a. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or environmentally sensitive areas;**
 - b. Any and all debris resulting from construction activities shall be removed from the project site and disposed of properly;**
 - c. During the course of the project work, all trash shall be properly contained, removed from the work site on a regular basis, and properly disposed of to avoid contamination of habitat during demolition and construction activities;**
 - d. All on-site stockpiles of construction debris and soil or other earthen materials shall be covered and contained whenever there is a potential for rain to prevent polluted water runoff from the site; and**
 - e. BMPs shall be used to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction, including the use of BMPs to capture and clean up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials. In addition, relevant BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (<http://www.cabmphandbooks.com>) shall be used including, but not limited to, construction BMPs for the use of silt fencing and protection of storm drain inlets and post-construction BMPs for site design and landscape planning, roof runoff controls, alternative building materials, vegetated buffer strips, and bioretention.**
- 17. Protection of Archaeological Resources.**
- a. PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT AMENDMENT NO. 1-12-013-A1, the applicant shall provide to the Executive Director evidence that the applicant has coordinated with the Tribal Historic Preservation Officer (THPO) for the Yurok Tribe to arrange for a cultural resources monitor to be present on the project site during, at a minimum, initial ground disturbing activities.**
 - b. A cultural resources monitor approved by the Yurok Tribe shall be present to oversee all activities in which there will be ground disturbance, unless evidence has been submitted for the review and approval of the Executive Director that the THPO has agreed that a cultural resources monitor need not be present to oversee all ground-disturbing activities.**
 - c. If an area of historic or prehistoric cultural resources or human remains are discovered during the course of the project, all construction shall cease and shall not recommence except as provided in subsection (d) hereof, and a qualified cultural resource specialist shall analyze the significance of the find.**

d. A permittee seeking to recommence construction following discovery of the cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director, prepared in consultation with the THPO of the Yurok Tribe.

i. If the Executive Director approves the Archaeological Plan and determines that the Archaeological Plan's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence after this determination is made by the Executive Director.

ii. If the Executive Director approves the Archaeological Plan but determines that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission.

III. FINDINGS AND DECLARATIONS

A. BACKGROUND AND AMENDMENT DESCRIPTION

On November 14, 2012, the Commission approved with conditions CDP 1-12-013 authorizing the development of a new single-family residence, garage, patio, driveway, on-site sewage disposal system, and water storage tank. The subject property is a 0.3-acre bluff-top lot located at 396 Roundhouse Creek Road (APN517-251-06) in the Big Lagoon Estates subdivision, which is an area that is subject to periodic extraordinary bluff retreat episodes. In approving the permit, the Commission found the minimum setback distance from the bluff edge needed for the residential development to be assuredly safe and stable was 186 feet.

The Commission approved CDP 1-12-013 subject to 10 special conditions related to: (1) conformance of final design and construction plans to geologic reports and recommendations; (2) no future armoring; (3) assumption of risk; (4) execution and recordation of a deed restriction; (5) future development restrictions; (6) exterior lighting limitations; (7) construction responsibilities; (8) tree removal restrictions; (9) revegetation standards and restrictions; and (10) protection of archaeological resources.

Under this permit amendment request, the Applicants are proposing to construct a new detached garage/shop and hot-tub patio on the subject lot at a minimum distance of 280 feet from the bluff edge, inland of the previously authorized residence and garage.

The coastal resource issues affected by the proposed permit amendment are primarily limited to protection of water quality, visual resources, and archaeological resources and minimization of risks in an area of high geologic hazards. As explained in the findings below, the proposed amended development would not lessen or avoid the intent of the approved permit.

B. STANDARD OF REVIEW

Although Humboldt County has a certified local coastal program (LCP), the property is located in a non-certified area that includes all of the lots in the Big Lagoon Estates subdivision that are locally planned and zoned for residential use and located on the west side of Roundhouse Creek

Road and Ocean View Drive. As a consequence, the Commission retains CDP jurisdiction over the site, and the standard of review for issuance of a CDP is whether the development is consistent with the Chapter 3 policies of the Coastal Act.

C. OTHER AGENCY APPROVALS

The only other agency approval required for the proposed development is a modification to the previously granted special permit from Humboldt County. The County approved SP-12-007M on August 15, 2016.

D. GEOLOGIC HAZARDS

Section 30253 of the Coastal Act states, in applicable part, as follows:

New development shall do all of the following:

- (a) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (b) *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...*

The ~0.3-acre property is located in the Big Lagoon Estates subdivision on the west side of Roundhouse Creek Road on an uplifted marine terrace about 125 feet above mean sea level. Although the subject site is located on the west side of Roundhouse Creek Road, it is not the westernmost lot. There are several developed properties with existing single-family residences located between this property and the bluff edge.

LACO Associates completed a geologic investigation for the site to confirm the stability of the bluff west of the proposed building site for the development authorized by the original permit and to determine the minimum setback distance from the bluff edge needed to ensure the safety of development from bluff retreat hazards for the development's presumed economic life (i.e., at least 75 years).

The LACO geotechnical report notes in part the following with respect to geologic hazards in the area:

“Slope failure events over the last 75 years provide evidence that coastal bluffs within the project area are highly susceptible to both mass wasting and erosion...”

...

“...This section of coastal bluff has a higher potential for slope failure, in general, than many areas of Humboldt County due to (among other factors) the over-steepened sea cliff, easily erodible soils, high annual precipitation, and direct exposure to northwest winter swells coupled with a steep beach face. An additional contributing factor is the

lack of an offshore bar, which would reduce wave energy prior to reaching the shoreline...”

At the north end of the subdivision, near the end of Oceanview Drive, repeated episodes of catastrophic bluff failure have occurred in the past. For example, in the winter of 1997-1998, lots within the subdivision about 1,000 feet north of the subject site experienced catastrophic bluff failure where more than 60 feet of steep bluff retreated during the singular stormy winter. As a result, in 1999, the owners of a nearby home located at 176 Roundhouse Creek Road, which had originally been constructed approximately 50 feet from the bluff edge, as approved by the Commission under CDP 1-87-230 in 1989, applied for a CDP to move the approved house from the original building footprint to a separate inland parcel due to the imminent threat of bluff failure. The Executive Director issued a CDP waiver (1-99-066-W) to authorize the house relocation in September of 1999. In addition, in the spring of 2003, the Executive Director approved emergency permit 1-03-027-G to relocate an existing residence (constructed in 1974 under CDP NCR-74-CC-344) located approximately 600 feet north of the subject site and 50 feet from the bluff edge inland to a new foundation approximately 160 feet from the bluff edge (at 294 Roundhouse Creek Rd.). The Commission approved the follow-up CDP for the relocation of this nearby house in December of 2003 under CDP 1-03-024.

In its approval of CDP 1-12-013 in November of 2012, the Commission found that a minimum setback distance of 186 feet from the bluff edge, based on the Commission’s geologists’ (Dr. Mark Johnson) recommendations after his evaluation of the comprehensive slope setback evaluation completed by LACO Associates in 2012, was sufficient to protect the new development from bluff retreat hazards over its expected economic life. In support of the development request submitted under this permit amendment application, the applicant provided a letter from its consulting geologist (also from LACO Associates) presenting the results of an updated evaluation of the appropriateness of applying the previously determined bluff setback for the property (186 feet) to the currently proposed development. The consulting engineering geologist visited the site on April 18, 2016 to examine the bluff face to observe evidence of recent erosion, slope instability, or any changes in the factors used in the 2012 bluff setback evaluation. The geologist’s letter states in part as follows:

Based on our review, no additional slope failures or bluff retreat has occurred below the Site since the report was issued. Several surficial landslides were observed, but these failures were all present at the time the 2012 investigation was conducted, and none of them impact the bluff edge. Consequently, with no additional bluff retreat events, no additional data is available which might modify the estimate of the long term retreat rate.

The 2012 report performed a quantitative slope stability analysis using the Rocscience program Slide 5.0. Factors used in the analysis include: topographic slope configuration generated from LiDAR data, groundwater conditions based on well data, slope stratigraphy based on mapping, and estimates of strength and weight of soils based on literature review and professional judgement. As indicated above, the slope configuration and groundwater conditions appear

unchanged since the 2012 report was issued. Subsequently, the slope stability setback presented in the 2012 report still appears valid at this time.

The Commission's geologist reviewed the geotechnical letter and agreed with its conclusions and recommendations. As stated above, all new development proposed under this permit amendment request will be located a minimum distance of approximately 280 feet from the bluff edge, inland of the previously authorized residence and garage, and inland of the minimum recommended setback distance. Therefore, the Commission finds proposed siting of the new garage and hot tub patio approximately 280 feet back from the bluff will be sufficient to protect the new development from bluff retreat hazards over its expected economic life. Adherence to this setback requirement, as well as the foundation design and other recommendations determined to be necessary for the property by the R2 Soils Engineering Report completed by Oswald Geologic, is required by added new **Special Condition 11**. This condition requires that prior to issuance of the CDP amendment, a geotechnical engineer shall approve all final site preparation, foundation design, and drainage plans and the minimum bluff edge setback (at least 186 feet) plot plan. The Commission finds that only as conditioned to ensure that the mitigation measures are properly incorporated into the development can the project be found consistent with Section 30253 of the Coastal Act.

Although a comprehensive geotechnical evaluation is a necessary and useful tool that the Commission relies on to determine if proposed development is permissible at all on any given bluff top site, the Commission finds that a geotechnical evaluation alone is not a guarantee that a development will be safe from bluff retreat. It has been the experience of the Commission that in some instances, even when a thorough professional geotechnical analysis of a site has concluded that a proposed development will be safe from bluff retreat hazards, episodes of unexpected bluff retreat prompting the relocations of residences back from bluff failure areas sometimes still do occur. Examples include, but are not limited to, the following:

- The Kavich Home at 176 Roundhouse Creek Road in the Big Lagoon Area north of Trinidad (Humboldt County). As discussed above (in Finding IV-B), in 1989, the Commission approved the construction of a new house on a vacant bluff top parcel (Permit 1-87-230). Based on the geotechnical report prepared for the project it was estimated that bluff retreat would jeopardize the approved structure in about 40 to 50 years. In 1999 the owners applied for a coastal development permit to move the approved house from the bluff top parcel to a landward parcel because the house was threatened by 40 to 60 feet of unexpected bluff retreat that occurred during a 1998 El Niño storm event. The Executive Director issued a waiver of coastal development permit (1-99-066-W) to authorize moving the house in September of 1999.
- The Denver/Canter home at 164/172 Neptune Avenue in Encinitas (San Diego County). In 1984, the Commission approved construction of a new house on a vacant bluff top lot (Permit 6-84-461) based on a positive geotechnical report. In 1993, the owners applied for a seawall to protect the home (Permit Application 6-93-135). The Commission denied the request. In 1996 (Permit Application 6-96-138), and again in 1997 (Permit Application 6-97-90) the owners again applied for a seawall to protect the home. The Commission denied the requests. In 1998, the owners again requested a seawall (Permit Application 6-98-39) and

submitted a geotechnical report that documented the extent of the threat to the home. The Commission approved the request on November 5, 1998.

- The Arnold project at 3820 Vista Blanca in San Clemente (Orange County). Coastal development permit (Permit 5-88-177) for a bluff top project required protection from bluff top erosion, despite geotechnical information submitted with the permit application that suggested no such protection would be required if the project conformed to 25-foot bluff top setback. An emergency coastal development permit (Permit 5-93-254-G) was later issued to authorize bluff top protective works.

The Commission notes that the examples above are not intended to be absolute indicators of bluff erosion on the subject parcel, as coastal geology can vary significantly from location to location. However, these examples do illustrate that site-specific geotechnical evaluations cannot always accurately account for the spatial and temporal variability associated with coastal processes and therefore cannot always absolutely predict bluff erosion rates. Collectively, these examples have helped the Commission form its opinion on the vagaries of geotechnical evaluations with regard to predicting bluff erosion rates. Geologic hazards are episodic, and bluffs that may seem stable now may not be so in the future. Although the project has been evaluated and designed in a manner to minimize the risk of geologic hazards, and although the Commission is requiring with Special Condition 11 that the applicant adhere to all recommended specifications (including recommended setbacks) to minimize potential geologic hazards, some risk of geologic hazard still remains. This risk is reflected in the R2 soils engineering report, which references certain “limitations” of the analysis, such as: “...*I recognize that the site is in a dynamically active area and conditions can and will change...*” This language in the report itself is indicative of the underlying uncertainties of this and any geotechnical evaluation and supports the notion that no guarantees can be made regarding the safety of the proposed development with respect to bluff retreat. Geologic hazards are episodic, and bluffs that may seem stable now may not be so in the future.

The Commission finds that the subject lot is an inherently hazardous piece of property, that the coastal bluff near the property is highly unstable and erosive, and that the proposed amended development could be subject to geologic hazards and potentially someday require a bluff protective device, inconsistent with Section 30253 of the Coastal Act.

The proposed amended development could not be approved as being consistent with Section 30253 of the Coastal Act if projected bluff retreat would affect the proposed development and necessitate construction of a seawall to protect it. The Commission finds that the risks of geologic hazard will be minimized if development is sited and designed according to the setback and construction recommendations and conditions of this permit. However, given that the risks cannot be completely eliminated and the geologic report cannot assure that shoreline protection will never be needed to protect the proposed new home, the Commission finds that the proposed amended development is consistent with the Coastal Act only if it is conditioned to provide that shoreline protection will not be constructed.

Therefore, the Commission further finds that due to the inherently hazardous nature of this property, the fact that no geology report can conclude with certainty that a geologic hazard does

not exist, the fact that the approved development and its maintenance may cause future problems that were not anticipated, and because new development shall not engender the need for shoreline protective devices, it is necessary to attach **Special Condition 12**. This condition prohibits the construction of shoreline protective devices on the parcel, requires that the landowners provide a geotechnical investigation and remove the authorized structures and their foundations if bluff retreat reaches the point where the structures are threatened, and requires that the landowners accept sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion of the site. These requirements are necessary for consistency with Section 30253 of the Coastal Act, which states in part that new development shall minimize risk to life and property in areas of high geologic hazard, assure structural integrity and stability, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas, nor in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The Commission also attaches **Special Condition 13**, which requires the landowners to assume the risks of extraordinary erosion and geologic hazards of the property and waive any claim of liability on the part of the Commission. Given that the applicants have chosen to implement the project despite these risks, the applicants must assume the risks. In this way, the applicants are notified that the Commission is not liable for damage as a result of approving the permit amendment for development. The condition also requires the applicants to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand hazards.

Furthermore, **Special Condition 14** requires the applicants to record a deed restriction to impose the special conditions of the permit as covenants, conditions and restrictions on the use and enjoyment of the property. This special condition is required, in part, to ensure that the amended development is consistent with the Coastal Act and to provide notice of potential hazards of the property and help eliminate false expectations on the part of potential buyers of the property, lending institutions, and insurance agencies that the property is safe for an indefinite period of time and for further development indefinitely into the future, or that a protective device could be constructed to protect the approved amended development and will ensure that future owners of the property will be informed of the Commission's immunity from liability and the indemnity afforded the Commission.

As noted above, some risks of an unforeseen natural disaster, such as an unexpected landslide, catastrophic bluff failure, significant erosion, etc., could result in destruction or partial destruction of the new garage, patio, and hot tub or other development approved by the Commission in the permit amendment. In addition, the amended development itself and its maintenance may cause future problems that were not anticipated. When such an event takes place, public funds are often sought for the clean-up of structural debris that winds up on the beach or on an adjacent property. As a precaution, in case such an unexpected event occurs on the subject property, **Special Condition 12**, described above, also requires the landowners to accept sole responsibility for the removal of any structural debris resulting from landslides, bluff failures, or erosion on the site and agree to remove the authorized development should the bluff retreat reach the point where a government agency has ordered that these facilities not be used.

Thus, the Commission finds that as conditioned, the proposed amended development will not contribute significantly to the creation of any geologic hazards and will not have adverse impacts on slope stability or cause erosion. The Commission also notes that Section 30610(a) of the Coastal Act exempts certain additions to existing single-family residential structures from coastal development permit requirements. Pursuant to this exemption, once a house has been constructed, certain additions and accessory buildings that the applicant might propose in the future are normally exempt from the need for a permit or permit amendment. Depending on its nature, extent, and location, such an addition or accessory structure could contribute to geologic hazards at the site. For example, installing a landscape irrigation system on the property in a manner that leads to saturation of the bluff could increase the potential for landslides or catastrophic bluff failure. Another example would be installing a sizable accessory structure for additional parking, storage, or other uses normally associated with a single family home in a manner that does not provide for the recommended setback from the bluff edge.

Accordingly, Section 30610(a) requires the Commission to specify by regulation those classes of development which involve a risk of adverse environmental effects and require that a permit be obtained for such improvements. Pursuant to Section 30610(a) of the Coastal Act, the Commission adopted Section 13250 of Title 14 of the California Code of Regulations (CCR). Section 13250(b)(6) specifically authorizes the Commission to require a permit for additions to existing single-family residences that could involve a risk of adverse environmental effect by indicating in the development permit issued for the original structure that any future improvements would require a development permit. As noted above, certain additions or improvements to the approved structure could involve a risk of creating geologic hazards at the site. Therefore, pursuant to Section 13250 (b)(6) of Title 14 of the CCR, the Commission attaches **Special Condition 15**, which requires that all future development on the subject parcel that might otherwise be exempt from coastal permit requirements requires a further amendment or a new coastal development permit. This condition will allow future development to be reviewed by the Commission to ensure that future improvements will not be sited or designed in a manner that would result in a geologic hazard. As previously discussed, **Special Condition 14** also requires that the applicants record and execute a deed restriction approved by the Executive Director against the property that imposes the special conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property. Special Condition 14 will also help assure that future owners are aware of these CDP requirements applicable to all future development.

The Commission thus finds that the proposed amended development, as conditioned to include Special Conditions 11 through 15, is consistent Section 30253 of the Coastal Act, because the amended development as conditioned (1) will not contribute significantly to the creation of any geologic hazards, (2) will not have adverse impacts on the stability of the coastal bluff or on erosion, and (3) will not require the construction of shoreline protective works. Only as conditioned is the proposed amended development consistent with the Coastal Act.

E. PROTECTION OF ADJACENT ESHA AND PARK & RECREATION AREAS

Section 30240 of the Coastal Act states in part that:

...

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30240(b) requires that development in areas adjacent to environmentally sensitive habitat areas (ESHA) and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas. There are no wetlands or other known ESHA located on or immediately adjacent to the property. However, the beach at the base of the subject bluff, Agate Beach, is within Patricks Point State Park, a popular park and recreation area.

Under the original permit, the Commission imposed **Special Condition 9** to require that only native and/or non-invasive plant species be planted and used in erosion-control seeding on the subject property. The Commission found that the adjacent park and recreation area, which contains wetlands and other environmentally sensitive habitats, could be adversely affected if nonnative, invasive plant species were introduced in landscaping or erosion control seeding at the subject site. If any of the proposed landscaping or seeding were to include introduced invasive exotic plant species, the weedy plants could colonize (e.g., via wind or wildlife dispersal) the nearby park and recreation area over time, displace native vegetation, and significantly degrade the recreation area and the functions and values of its natural habitats. While no landscaping is proposed under the current permit amendment request, the Commission modifies and reimposes without changes Special Condition 9 as a condition on the subject CDP amendment application. Special Condition 9 also includes a provision prohibiting the use of certain anticoagulant-based rodenticides that are known to pose significant primary and secondary risks to non-target wildlife present in urban and urban/wildland interface areas. As property owners sometimes use such pesticides to prevent wild critters from grazing on landscaping and other vegetation, and as these target species commonly are preyed upon by raptors or other environmentally sensitive predators and scavengers, the pest control compounds can bio-accumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species. Thus, Special Condition 9-b is intended to avoid this potential cumulative impact to environmentally sensitive wildlife species.

Therefore, the Commission thus finds that the proposed amended development, as conditioned, is consistent Section 30240 of the Coastal Act.

F. WATER QUALITY

Section 30230 of the Coastal Act states as follows:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states as follows:

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

Coastal Act Sections 30230 and 30231 require in part that marine resources and coastal wetlands and waters be maintained, enhanced, and where feasible restored. These policies specifically call for the maintenance of the biological productivity and quality of marine resources, coastal waters, streams, wetlands, and estuaries necessary to maintain optimum populations of all species of marine organisms and for the protection of human health.

As described in notes on the project plans dated March 2016 (Exhibit 4, page 4, Exhibit 5, and Exhibit 6), the applicants have proposed to require that the contractor for the proposed development implement various water quality protection measures and best management practices (BMPs) during construction. These include instituting an on-site spill prevention and control response program consisting of BMPs to capture and clean up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials. The applicants also have proposed the use of BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (<http://www.cabmphandbooks.com>), including, but not limited to, BMPs for site design and landscape planning, roof runoff controls, alternative building materials, vegetated buffer strips, and bioretention. Furthermore, various BMPs will be used for construction work that occurs during the rainy season, including the use of silt fencing, protecting storm drain inlets, applying mulch and/or temporary seeding to bare soil areas, and various other measures.

To ensure that the project implements the measures proposed and minimizes potential impacts to water quality associated with stormwater runoff and construction practices, the Commission attaches new **Special Condition 16**. This condition requires that various construction-related responsibilities are adhered to during the course of the proposed construction work, including those described above and on the March 2016 plans submitted by with CDP application 1-12-013-A1. Thus, as conditioned, the Commission finds that the proposed amended development will maintain and enhance the functional capacity of the habitat, maintain and restore optimum populations of marine organisms, and protect human health as mandated by the requirements of Sections 30230 and 30231 of the Coastal Act.

G. ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states as follows:

Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The project site is located within the ancestral lands of the Yurok Tribe. In its processing of the required special permit for the original project, Humboldt County referred the project to the Yurok Tribe. A representative from the Yurok Tribe visited the property, completed an initial ground survey, and recommended that a tribal cultural monitor be present during initial ground disturbance. Thus, the County's special permit included Condition of Approval #9, which requires that the applicant retain the services of a Yurok tribal monitor to be present during initial ground disturbing activities to review the soils and determine whether or not there is the potential for artifacts to be present. The condition further states that *"If concealed or previously unknown archaeological remains are discovered during project implementation, all necessary steps will be taken to protect them in accordance with the Yurok Tribe's Standard Operating Procedures for Inadvertent Discoveries of Archaeological Remains."* The County included this same condition in its approval of the modification to the Special Permit in August of 2016.

Accordingly, to ensure protection of any archaeological resources that may be discovered at the site during excavation for the proposed new garage, patio, and hot tub consistent with Section 30244, the Commission is also requiring in **Special Condition 17** that the applicant coordinate with the Yurok Tribe to arrange for a cultural resources monitor to be present on the project site during initial ground-disturbing activities. If an area of archaeological deposits is discovered during the course of the authorized development, all construction must cease, and a qualified archaeologist must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director, prepared in consultation with the Yurok Tribe, to determine whether the changes are de minimis in nature and scope, or whether an amendment to this permit is required.

Thus, the Commission finds that the proposed amended development, as conditioned, is consistent with Coastal Act Section 30244, as the development as amended will include mitigation measures to ensure that the development will not adversely impact archaeological resources.

H. VISUAL RESOURCES

Section 30251 of the Coastal Act states, in applicable part, as follows:

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...

The property is developed with an existing single family residence and attached garage permitted under the original permit approved by the Commission in 2012. Views of the ocean from the public roadway through the subject property and adjoining properties to the west are very limited. The proposed development, to be located inland of the existing house, will not affect public views. In addition, as the property is more or less flat and the project proposes minimal grading, the development as proposed minimizes the alteration of natural land forms. Moreover, the proposed development was reviewed and approved as proposed by the Big Lagoon Design Review Committee, which found the proposed new garage and hot tub enclosure to be visually compatible with the character of the surrounding area. The surrounding area is characterized by developed residential lots with homes similar in scale, materials, and building design to the proposed contemporary-style home.

Although the surrounding neighborhood is mostly developed with existing rural residential development, the overall nighttime character of the area has relatively minimal exterior lighting evident. Accordingly, to prevent the cumulative impacts of glare to the visual resources of the area, the Commission reimposes without changes **Special Condition 6**. This condition requires that all exterior lighting associated with the proposed development be low-wattage and downcast shielded such that no glare is directed beyond the bounds of the property.

Therefore, the Commission finds that the proposed amended development, as conditioned, will protect public views to the ocean, minimize the alteration of natural land forms, and be visually compatible with the character of surrounding area, consistent with Section 30251 of the Coastal Act.

I. PUBLIC ACCESS

Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions. Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety. In applying Sections 30210, 30211, and 30212, the Commission is limited by the need to show that any denial of a permit application based on these sections or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential public access.

The potential for public access to nearby beach and shoreline areas include an informal trail to Agate Beach, in Patricks Point State Park, located about 1,000 feet south off of the end of Roundhouse Creek Road and informal access to the State Park beach approximately a half mile to the north, near the bluff failure area at the north end of Ocean View Drive. In addition, Big Lagoon County Park, which includes beach access, boating access to the lagoon, and a campground, is located less than a mile north of the property.

There is no evidence of public use of the property for public access, no evidence of trails on the property, and no indication from the public that the site has been used for public access purposes in the past. As previously described, the subject lot is situated on a bluff-top parcel with existing single family residences located between the property and the steep, over 100-ft-high bluff face. The proposed development will not significantly and adversely increase the demand for public access to the shoreline, as it involves developing an existing single family residential lot. For all of these reasons, the Commission finds that the proposed amended development, which does not include provision of public access, is consistent with the public access policies of the Coastal Act.

J. LOCAL COASTAL PROGRAM

Section 30604(a) of the Coastal Act states as follows:

(a) Prior to certification of the Local Coastal Program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200). A denial of a coastal development permit on grounds it would prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200) shall be accompanied by a specific finding which sets forth the basis for such conclusion.

This section of the Act provides that the Commission shall issue a CDP only if the project will not prejudice the ability of the local government having jurisdiction to prepare an LCP that conforms with the Chapter 3 policies of the Coastal Act.

The area that includes the subject site and all of the lots in the Big Lagoon subdivision that are locally planned and zoned for residential use and located on the west side of Roundhouse Creek Road and Ocean View Drive lacks a certified LCP. As conditioned, the proposed development will be consistent with Chapter 3 of the Coastal Act, and approval of the project will not prejudice the ability of Humboldt County to prepare a LCP for this area that is in conformity with the provisions of Chapter 3 of the Coastal Act.

K. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Humboldt County served as the lead agency for the project for CEQA purposes. The County determined that the project qualified for a CEQA categorical exemption under Class 3, Section 15303(a) of CEQA Guidelines.

Section 13096 of the Commission's administrative regulations requires Coastal Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirement 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 any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on conformity with Coastal Act policies at this point as if set forth in full. As discussed above, the project as proposed to be amended has been conditioned to be consistent with the policies of the Coastal Act. No public comments regarding potential significant adverse environmental effects of the project amendment were received prior to preparation of the staff report. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed amended development, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

**APPENDIX A
SUBSTANTIVE FILE DOCUMENTS**

File for Coastal Development Permit No. 1-12-013-A1

File for Coastal Development Permit No. 1-12-013

File for Coastal Development Permit No. 1-12-023

File for Coastal Development Permit No. 1-99-066-W

File for Coastal Development Permit No. 1-03-027-G

File for Coastal Development Permit No. NCR-74-CC-344

File for Coastal Development Permit No. 1-03-024

File for Coastal Development Permit No. 6-84-461

File for Coastal Development Permit No. 6-93-135

File for Coastal Development Permit No. 6-96-138

File for Coastal Development Permit No. 6-98-39

File for Coastal Development Permit No. 5-88-177

File for Coastal Development Permit No. 5-93-254-G

Humboldt County certified Local Coastal Program

APPENDIX B

STAFF REPORT FOR CDP 1-12-013 (APPROVED 11/14/12)

W10a

Filed: 10/12/12
180th day: 4/10/13
Staff: M. Kraemer-E
Staff Report: 10/26/12
Hearing Date: 11/14/12

STAFF REPORT: REGULAR CALENDAR

Application No.: 1-12-013

Applicant: Rob and Patti Wilson

Agent: Royer Design/Build

Location: 396 Roundhouse Creek Road, approximately 4.5 miles north of the City of Trinidad in the Big Lagoon area Humboldt County (APN 517-251-006).

Project Description: (1) Develop a new 1,456-sq-ft., 3-bedroom, one-story single-family residence, attached 528-sq-ft. 2-car garage, 168-sq-ft. covered patio, paved driveway with two off-street parking spaces, on-site sewage disposal system, and 2,500-gallon water storage tank for fire abatement; and (2) remove approximately nine conifer trees.

Staff Recommendation: Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Commission staff recommends **approval** of CDP application 1-12-013, as conditioned.

The applicants propose to (1) develop a new 1,456-sq-ft., 3-bedroom, one-story (maximum 16-ft-high) single-family residence, attached 528-sq-ft. 2-car garage, 168-sq-ft. covered patio, paved

driveway with two off-street parking spaces, on-site sewage disposal system, and 2,500-gallon water storage tank for fire abatement; and (2) remove approximately nine conifer (mostly nonnative Monterey pine) trees.

The new development proposed under this CDP application would be located a minimum of 186 feet back from the existing bluff edge. Although the subject site is located on the west side of Roundhouse Creek Road, it is not the westernmost lot. There are several developed properties with existing single-family residences located between this property and the bluff edge.

The primary Coastal Act issues associated with this project include the minimization of geologic hazards, protection of environmentally sensitive habitat areas, and protection of archaeological resources.

The Big Lagoon subdivision, where the proposed single-family residence would be constructed, has been subject to extraordinary rates of bluff retreat in the past. In the winter of 1997-1998, lots within the subdivision about 1,000 feet north of the subject site experienced catastrophic bluff failure where more than 60 feet of steep bluff retreated during the singular stormy winter.

The proposed new development would be setback a minimum of 186 feet from the existing bluff edge. The Commission's geologist reviewed the slope stability and bluff setback recommendations prepared by the applicant's geotechnical consultant, and believes that the development as proposed will be setback an adequate distance from the bluff edge to ensure safety from bluff retreat and erosion for the development's presumed economic life. Staff is recommending various special conditions to mitigate geologic hazard risks, including conditions prohibiting the future construction of bluff or shoreline protective devices to protect the development and restrictions on future improvements to the authorized development (see **Special Conditions 1-5**).

Staff also recommends **Special Conditions 6-10** requiring restrictions on exterior lighting, measures to protect water quality, protection of sensitive bird nesting habitat by limiting tree removal to non-nesting seasons, and protection of archaeological resources by requiring that a cultural resources monitor be present during ground-disturbing activities.

The [Motion](#) to adopt the staff recommendation of approval with special conditions is found below on page 4.

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APPENDICES

[Appendix A – Substantive File Documents](#)

EXHIBITS

- Exhibit 1 – Regional location map
- Exhibit 2 – Project vicinity map
- Exhibit 3 – Site photos
- Exhibit 4 – Proposed project plans
- Exhibit 5 – R2 soils engineering report
- Exhibit 6 – Slope setback recommendation report

I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve coastal development permit 1-12-013 pursuant to the staff recommendation.

Staff recommends a **YES** vote on the foregoing motion. 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:

The Commission hereby approves coastal development permit 1-12-013 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.

II. STANDARD CONDITIONS

This permit is granted subject to the following 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. **Expiration:** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation:** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **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.
5. **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.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Conformance of Final Design and Construction Plans to the Geologic Reports.**
 - a. All final design and construction plans, including site preparation, foundation design, and drainage plans, shall be consistent with the recommendations contained in the geologic report titled, "R2 Soils Engineering Report for APN 517-251-006..." dated June 26, 2012, prepared by Oswald Geologic. All authorized development shall be located at least 186 back from the bluff edge as recommended by LACO Associates in the geologic report titled "Slope Setback Recommendation Report" dated July 30, 2012 and as further supplemented by the proposed plot plan prepared by Royer Design/Build dated October 22, 2012.
 - b. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the Executive Director's review and approval, evidence that a licensed professional (Certified Engineering Geologist or Geotechnical Engineer) has reviewed and approved all final site preparation, foundation design, and drainage plans and the minimum bluff edge setback (at least 186 feet) plot plan, and has certified that each of those plans is consistent with all of the recommendations specified in the above-referenced geologic reports and plot plans approved by the California Coastal Commission for the project site.
 - c. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
2. **No Future Bluff or Shoreline Protective Device.**
 - a. By acceptance of this permit, the applicants agree, on behalf of themselves and all successors and assigns, that no bluff or shoreline protective device(s) shall ever be constructed to protect the development approved pursuant to coastal development permit (CDP) 1-12-013, including, but not limited to, the single-family residence or other development under this CDP, in the event that the authorized development is threatened with damage or destruction from waves, erosion, storm conditions, bluff retreat, landslides, ground subsidence or other natural hazards in the future. By acceptance of this permit, the applicants hereby waive, on behalf of themselves and all successors and assigns, any rights to construct such devices that may exist under Public Resources Code Section 30235.

- b. By acceptance of this permit, the applicants further agree, on behalf of themselves and all successors and assigns, that the landowner(s) shall remove the development authorized by this permit, including, but not limited to, the single-family residence or other development authorized under this CDP, if any government agency has ordered that the structures are not to be occupied due to any of the hazards identified above. In the event that portions of the development fall to the beach before they are removed, the landowner shall remove all recoverable debris associated with the development from the beach and ocean and lawfully dispose of the material in an approved disposal site. Such removal shall require a CDP.
- c. In the event the edge of the bluff recedes to within 10 feet of the authorized development but no government agency has ordered that the structures not be occupied, a geotechnical investigation shall be prepared by a licensed geologist or civil engineer with coastal experience retained by the landowner(s), that addresses whether any portions of the structures are threatened by waves, erosion, storm conditions, bluff failure, or other natural hazards. The report shall identify all those immediate or potential future measures that could stabilize the structures without shore or bluff protection, including, but not limited to, removal or relocation of the structures. The report shall be submitted to the Executive Director and the appropriate local government officials. If the geotechnical report concludes that the structures are unsafe for occupancy, the permittee shall, within ninety (90) days of submitting the report, apply for a CDP amendment to remedy the hazard, which shall include removal of the threatened portion of the structure.
3. **Assumption of Risk, Waiver of Liability, and Indemnity Agreement.** By acceptance of this permit, the applicants acknowledge and agree (a) that the site may be subject to hazards from earthquakes, erosion, landslides, bluff failure, and other geologic hazards; (b) to assume the risks to the applicants and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (c) 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 (d) 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.
4. **Deed Restriction Recordation of Permit Conditions.** PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and approval documentation demonstrating that the applicants have executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (a) 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 (b) 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.

5. **Future Development Restriction.** This permit is only for the development described in coastal development permit (CDP) 1-12-013. Pursuant to Title 14 California Code of Regulations (CCR) Section 13250(b)(6), the exemptions otherwise provided in Public Resources Code (PRC) Section 30610(a) shall not apply to the development governed by the CDP 1-12-013. Accordingly, any future improvements to this structure authorized by this permit shall require an amendment to CDP 1-12-013 from the Commission or shall require an additional CDP from the Commission or from the applicable certified local government. In addition thereto, an amendment to CDP 1-12-013 from the Commission or an additional CDP from the Commission or from the applicable certified local government shall be required for any repair or maintenance identified as requiring a permit in PRC Section 30610(d) and Title 14 CCR Sections 13252(a)-(b).
6. **Lighting Limitations.** All exterior lighting attached to the authorized structures shall be low-wattage and downcast shielded such that no glare will be directed beyond the bounds of the property.
7. **Construction Responsibilities.** The permittee shall adhere to all the various construction-related best management practices (BMPs) described and listed on project plans dated October 22, 2012 submitted with CDP application 1-12-013 including, but not limited to, the following:
 - a. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or environmentally sensitive areas;
 - b. Any and all debris resulting from construction activities shall be removed from the project site and disposed of properly;
 - c. During the course of the project work, all trash shall be properly contained, removed from the work site on a regular basis, and properly disposed of to avoid contamination of habitat during demolition and construction activities;
 - d. All on-site stockpiles of construction debris and soil or other earthen materials shall be covered and contained whenever there is a potential for rain to prevent polluted water runoff from the site; and
 - e. BMPs shall be used to prevent the entry of polluted stormwater runoff into coastal waters and wetlands during construction and post-construction, including the use of BMPs to capture and clean up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials. In addition, relevant BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (<http://www.cabmphandbooks.com>) shall be used including, but not limited to, construction BMPs for the use of silt fencing and protection of storm drain inlets and post-construction BMPs for site design and landscape planning, roof runoff controls, alternative building materials, vegetated buffer strips, and bioretention.

8. **Tree Removal Restrictions.** Authorized tree removal is prohibited during the bird breeding/nesting season period of April 1 through August 31.
9. **Revegetation Standards and Restrictions.**
 - a. Only native plant species shall be planted on the property. All proposed plantings and erosion-control seeding shall be obtained from local genetic stocks within Humboldt County. If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside of the local area may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California, shall be employed or allowed to naturalize or persist on the site. No plant species listed as a “noxious weed” by the State of California or the federal government shall be utilized within the property; and
 - b. Rodenticides containing any anticoagulant compounds, including but not limited to, Bromadiolone, Brodifacoum, or Diphacinone, shall not be used on the property.
10. **Protection of Archaeological Resources.**
 - a. PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall provide to the Executive Director evidence that the applicant has coordinated with the Tribal Historic Preservation Officer (THPO) for the Yurok Tribe to arrange for a cultural resources monitor to be present on the project site during, at a minimum, initial ground disturbing activities.
 - b. A cultural resources monitor approved by the Yurok Tribe shall be present to oversee all activities in which there will be ground disturbance, unless evidence has been submitted for the review and approval of the Executive Director that the THPO has agreed that a cultural resources monitor need not be present to oversee all ground-disturbing activities.
 - c. If an area of historic or prehistoric cultural resources or human remains are discovered during the course of the project, all construction shall cease and shall not recommence except as provided in subsection (d) hereof, and a qualified cultural resource specialist shall analyze the significance of the find.
 - d. A permittee seeking to recommence construction following discovery of the cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director, prepared in consultation with the THPO of the Yurok Tribe.
 - i. If the Executive Director approves the Archaeological Plan and determines that the Archaeological Plan’s recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, construction may recommence after this determination is made by the Executive Director.
 - ii. If the Executive Director approves the Archaeological Plan but determines that the changes therein are not *de minimis*, construction may not recommence until after an amendment to this permit is approved by the Commission.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. PROJECT DESCRIPTION

The applicants propose to (1) develop a new 1,456-sq-ft., 3-bedroom, one-story (maximum 16-ft-high) single-family residence, attached 528-sq-ft. 2-car garage, 168-sq-ft. covered patio, paved driveway with two off-street parking spaces, on-site sewage disposal system, and 2,500-gallon water storage tank for fire abatement; and (2) remove approximately nine conifer (mostly nonnative Monterey pine) trees. Project plans are attached as **Exhibit 4**.

B. BACKGROUND AND ENVIRONMENTAL SETTING

The subject property is located at 396 Roundhouse Creek Road (APN 517-251-06) in the Big Lagoon area of northern Humboldt County (**Exhibits 1-2**). The approximately 0.3-acre lot slopes gently to the north with an average gradient of less than 4 percent. The property is part of the Big Lagoon subdivision, which is located on an uplifted marine terrace at an elevation of approximately 125 feet above mean sea level (**Exhibit 3**).

The proposed new development would be located a minimum of 186 feet back from the existing bluff edge (**Exhibit 4**). Although the subject site is located on the west side of Roundhouse Creek Road, it is not the westernmost lot. There are several developed properties with existing single-family residences located between this property and the bluff edge.

The Big Lagoon subdivision has been subject to extraordinary rates of bluff retreat in the past. In the winter of 1997-1998, lots within the subdivision about 1,000 feet north of the subject site experienced catastrophic bluff failure where more than 60 feet of steep bluff retreated during the singular stormy winter. As a result, in 1999, the owners of a nearby home located at 176 Roundhouse Creek Road, which had originally been constructed approximately 50 feet from the bluff edge, as approved by the Commission under CDP 1-87-230 in 1989, applied for a CDP to move the approved house from the original building footprint to a separate inland parcel due to the imminent threat of bluff failure. The Executive Director issued a CDP waiver (1-99-066-W) to authorize the house relocation in September of 1999. In addition, in the spring of 2003, the Executive Director approved emergency permit 1-03-027-G to relocate an existing residence (constructed in 1974 under CDP NCR-74-CC-344) located approximately 600 feet north of the subject site and 50 feet from the bluff edge inland to a new foundation approximately 160 feet from the bluff edge (at 294 Roundhouse Creek Rd.) (**Exhibit 3**). The Commission approved the follow-up CDP for the relocation of this nearby house in December of 2003 under CDP 1-03-024.

The subject undeveloped lot is vegetated with several large conifer trees (mostly nonnative Monterey pine trees, with some smaller Sitka spruce trees). As a result, virtually no views to the ocean currently are available from the Roundhouse Creek Road or other public vantage points in this particular area.

Based on a query of the California Natural Diversity Database and an investigation of the property by Commission staff, there are no wetlands or other known environmentally sensitive

habitat areas located on or immediately adjacent to the property. However, it is possible that the existing mature conifer trees on the property support seasonal breeding and nesting habitat for birds protected under the state Fish and Game Code and federal Migratory Bird Treaty Act.

There is no evidence of public use of the property for public access, no evidence of trails on the property, and no indication from the public that the site has been used for public access purposes in the past. The potential for public access to nearby beach and shoreline areas include an informal trail to Patricks Point State Park located about 1,000 feet south at the end of Roundhouse Creek Road and informal access to the State Park beach approximately a half mile to the north, near the bluff failure area at the north end of Ocean View Drive. In addition, Big Lagoon County Park is located less than a mile north of the property.

Although Humboldt County has a certified local coastal program (LCP), the property is located in a non-certified area that includes all of the lots in the Big Lagoon subdivision that are locally planned and zoned for residential use and located on the west side of Roundhouse Creek Road and Ocean View Drive. As a consequence, the Commission retains CDP jurisdiction over the site, and the standard of review for issuance of a CDP is whether the development is consistent with the Chapter 3 policies of the Coastal Act.

C. OTHER AGENCY APPROVALS

Humboldt County

The proposed project requires a special permit from Humboldt County for the design review and major vegetation removal aspects of the proposed project. The County approved SP-12-007 on October 11, 2012.

D. LOCATING AND PLANNING NEW DEVELOPMENT

Section 30250(a) of the Coastal Act states that new development shall be located within or near existing developed areas able to accommodate it or in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. The intent of this policy is to channel development toward more urbanized areas where services are provided and potential impacts to resources are minimized.

The subject property, which is undeveloped, is surrounded on all sides by developed rural residential lots. The property is locally planned and zoned as “Residential Single-Family with No Further Subdivision Allowed” and a “Design Review” combining zone. The CDP application does not include a subdivision proposal, and the proposed new single-family residence is a principally permitted use consistent with the parcel’s local zoning designation.

The County Division of Environmental Health (DEH) has indicated that the proposed on-site sewage disposal system (prepared by Pacific Watershed Associates, dated May 25, 2012) is acceptable as proposed to serve the proposed three-bedroom dwelling, and the DEH will oversee construction/installation of the new system under permits issued through the County Building Division. In addition, the proposed new residence will be connected to the public water system managed by the Big Lagoon Community Services District. Thus, there are adequate sewage and water systems to serve the proposed development.

Although the subject site is located in a geologically hazardous area, as discussed in Finding IV.E below, the development has been conditioned to minimize geologic hazards, assure stability, and avoid erosion and landform alteration consistent with the requirements of Section 30253 of the Coastal Act. Furthermore, as discussed in Findings IV.F, G, and H below, the project has been conditioned to protect visual resources, water quality, environmentally sensitive nesting bird habitat, and archaeological resources.

Therefore, the Commission finds that as conditioned, the proposed development is consistent with Coastal Act Section 30250(a), in that it is located in a developed area, has adequate water and sewer capability to accommodate it, and will not cause significant adverse effects, either individually or cumulatively, to coastal resources.

E. GEOLOGIC HAZARDS

Section 30253 of the Coastal Act states, in applicable part, as follows:

New development shall do all of the following:

- (a) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (b) *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 above in Finding IV-B, the ~0.3-acre property is located in the Big Lagoon subdivision on the west side of Roundhouse Creek Road on an uplifted marine terrace about 125 feet above mean sea level. The marine terrace is at least a half-mile long, as measured from its bifurcation with a gulch approximately 500 feet south of the subject site to its north end near the end of Oceanview Drive, where episodes of catastrophic bluff failure have occurred in the past (as discussed above).

The geologic report describes the terrace and surrounding beach area as follows:

“The beach profile from Agate Beach to Big Lagoon is characterized by a steep beach face and relatively shallow sloping berm that comprises the backshore environment. The steeply sloping beach face is a reflection of the coarse particle size being transported and deposited within the swash zone and along the beach face. A longshore bar does not appear to be present as a result of the coarse particle size. The entire beach system can be morphologically classified as a “reflective” beach due to its steep, linear beach faces, and well-developed beach cusps and berm. As is typical of reflective beaches, the entire beach system from Agate Beach to Big Lagoon experiences surging breakers and high wave run-up. The lack of a longshore bar allows wave energy to be delivered directly to the beach face unimpeded, resulting in an erosive coastline that has experienced significant coastal retreat.”

The subject property is generally flat, with a slight northward gradient. Although the site is located on the west side of the road, there are several developed lots with existing single-family residences located between the subject property and the bluff edge. The new development proposed would be located at least 186 feet back from the existing bluff edge.

The applicant submitted two geotechnical reports for the project. An R2 soils engineering report prepared by Oswald Geologic (dated June 26, 2012) investigated subsurface soil conditions to determine minimum foundation design specifications in general accordance with County grading ordinance and California Building Code requirements (**Exhibit 5**). The report provides various recommendations for the proposed project related to site preparation, foundation design, and drainage. In addition, LACO Associates completed a geologic investigation for the site (**Exhibit 6**, dated July 30, 2012) to confirm the stability of the bluff west of the proposed building site and to determine the minimum setback distance from the bluff edge needed to ensure the safety of the proposed development from bluff retreat hazards for the development's presumed economic life (i.e., at least 75 years).

The LACO geotechnical report notes in part the following with respect to geologic hazards in the area:

“Slope failure events over the last 75 years provide evidence that coastal bluffs within the project area are highly susceptible to both mass wasting and erosion...”

...

“...This section of coastal bluff has a higher potential for slope failure, in general, than many areas of Humboldt County due to (among other factors) the over-steepened sea cliff, easily erodible soils, high annual precipitation, and direct exposure to northwest winter swells coupled with a steep beach face. An additional contributing factor is the lack of an offshore bar, which would reduce wave energy prior to reaching the shoreline...”

Based on the results of the slope stability analysis and bluff retreat rate analysis, the report recommends a minimum bluff edge setback distance of 177 feet. This includes a setback of 73 feet from the most distant slope failure surface measured to ensure the minimum factor of safety (FOS) recommended by the Commission's geologist¹ and a setback of 94 feet to account for the estimated historic bluff retreat rate of 1.25 feet per year (multiplied by the new development's presumed economic life of 75 years), plus an additional buffer of 10 feet to account for uncertainty in the analyses and to ensure a sufficiently safe distance from less stable geologic areas.

The Commission's geologist (Mark Johnsson) reviewed the geotechnical report and agreed with some, but not all, of its conclusions and recommendations. Dr. Johnsson believes that a FOS setback distance of 73 feet without the proposed additional buffer of 10 feet for a total of 83 feet is adequate, because a 73-ft setback distance is large enough to achieve a FOS of 1.5, as recommended¹, accounts for uncertainty in the analysis, and provides a sufficiently safe distance

¹ Based on <http://www.coastal.ca.gov/W-11.5-2mm3.pdf>.

from less stable geologic areas. Dr. Johnsson believes the report’s proposed bluff retreat setback is deficient, because it does not adequately account for the effects of future sea level rise and climate change on bluff stability. Dr. Johnsson notes that the amount of bluff retreat predicted by the LACO report for the next 75 years (94 feet) is a simple extrapolation of the measured historic rate (1.25 feet per year) at the site spanning the past 64 years. This analysis assumes that the bluff will retreat at the same rate over the next 75 years as it has retreated over the past 64 years, which is an unlikely scenario considering rising relative sea level² and the fact that the toe of the bluff is especially well exposed to storm waves (as the report notes, as cited above), which may increase in frequency and/or intensity due to future climate change. In the absence of more rigorous forecasting, Dr. Johnsson recommends that the highest historic bluff retreat rate measured along the bluff at or near the site be used as an estimate for future bluff retreat rates. The geotechnical report cites three other sources of historic bluff retreat measured along the bluff near the site, as shown in the following table (from page 8 of the report):

Table 4: Comparison of Bluff Retreat Rate Estimations for Big Lagoon Area

<i>Source</i>	<i>Distance from site</i>	<i>Time Span (years)</i>	<i>Estimated Retreat Rate (feet per year)</i>
<i>Tuttle, 1981</i>	<i>200 feet North and South</i>	<i>34</i>	<i>1.5 to 2.7</i>
<i>Busch, 2003</i>	<i>300 feet North</i>	<i>61</i>	<i>1.0</i>
<i>LACO, 2006</i>	<i>900 feet North</i>	<i>58</i>	<i>1.5</i>
<i>This Study</i>	<i>---</i>	<i>64</i>	<i>1.25</i>

The very high rate of 2.7 feet per year reported by Tuttle (1981) for a site 200 feet south of the subject site may be an anomaly associated with the gully that exists near that location. But Tuttle (1981) and LACO (2006) report a rate of 1.5 feet per year for nearby sites (as shown above) on the same uplifted marine terrace. These sites are located within 900 feet of the project site and are similarly situated as bluff top lots above a uniformly eroded linear bluff face. In the opinion of Dr. Johnsson, 1.5 feet per year is a more appropriate rate to use in estimating future bluff retreat than the 1.25 feet used in the applicant’s geotechnical report. Using the rate of 1.5 feet per year increases the bluff retreat setback by 18.75 feet over the bluff retreat setback derived using the 1.25 feet per year rate recommended in the geotechnical report. Overall, applying the 1.5 ft. per year rate (1.5 ft/year x 75 years) combined with the 73-ft FOS setback as discussed above results in a total recommended setback of 186 feet from the bluff edge.

As shown in the project plans (**Exhibit 4**), the applicant has revised the project description and plans to site all development a minimum of 186 feet from the bluff edge, as recommended by the geotechnical report and Dr. Johnsson’s increased setback recommendation.

The Commission finds that the minimum 186-foot setback from the bluff proposed by the applicant is sufficient to protect the new development from bluff retreat hazards over its expected economic life. Adherence to this requirement, as well as the foundation design and other recommendations determined to be necessary by the Oswald Geologic site investigation, is required by [Special Condition 1](#), which requires that prior to permit issuance, a geotechnical engineer shall approve all final site preparation, foundation design, and drainage plans and the

² See https://download.nap.edu/catalog.php?record_id=13389.

minimum bluff edge setback (at least 186 feet) plot plan. The Commission finds that only as conditioned to ensure that the mitigation measures are properly incorporated into the development can the project be found consistent with Section 30253 of the Coastal Act.

Although a comprehensive geotechnical evaluation is a necessary and useful tool that the Commission relies on to determine if proposed development is permissible at all on any given bluff top site, the Commission finds that a geotechnical evaluation alone is not a guarantee that a development will be safe from bluff retreat. It has been the experience of the Commission that in some instances, even when a thorough professional geotechnical analysis of a site has concluded that a proposed development will be safe from bluff retreat hazards, episodes of unexpected bluff retreat prompting the relocations of residences back from bluff failure areas sometimes still do occur. Examples include, but are not limited to, the following:

- The Kavich Home at 176 Roundhouse Creek Road in the Big Lagoon Area north of Trinidad (Humboldt County). As discussed above (in Finding IV-B), in 1989, the Commission approved the construction of a new house on a vacant bluff top parcel (Permit 1-87-230). Based on the geotechnical report prepared for the project it was estimated that bluff retreat would jeopardize the approved structure in about 40 to 50 years. In 1999 the owners applied for a coastal development permit to move the approved house from the bluff top parcel to a landward parcel because the house was threatened by 40 to 60 feet of unexpected bluff retreat that occurred during a 1998 El Niño storm event. The Executive Director issued a waiver of coastal development permit (1-99-066-W) to authorize moving the house in September of 1999.
- The Denver/Canter home at 164/172 Neptune Avenue in Encinitas (San Diego County). In 1984, the Commission approved construction of a new house on a vacant bluff top lot (Permit 6-84-461) based on a positive geotechnical report. In 1993, the owners applied for a seawall to protect the home (Permit Application 6-93-135). The Commission denied the request. In 1996 (Permit Application 6-96-138), and again in 1997 (Permit Application 6-97-90) the owners again applied for a seawall to protect the home. The Commission denied the requests. In 1998, the owners again requested a seawall (Permit Application 6-98-39) and submitted a geotechnical report that documented the extent of the threat to the home. The Commission approved the request on November 5, 1998.
- The Arnold project at 3820 Vista Blanca in San Clemente (Orange County). Coastal development permit (Permit 5-88-177) for a bluff top project required protection from bluff top erosion, despite geotechnical information submitted with the permit application that suggested no such protection would be required if the project conformed to 25-foot bluff top setback. An emergency coastal development permit (Permit 5-93-254-G) was later issued to authorize bluff top protective works.

The Commission notes that the examples above are not intended to be absolute indicators of bluff erosion on the subject parcel, as coastal geology can vary significantly from location to location. However, these examples do illustrate that site-specific geotechnical evaluations cannot always accurately account for the spatial and temporal variability associated with coastal processes and therefore cannot always absolutely predict bluff erosion rates. Collectively, these

examples have helped the Commission form its opinion on the vagaries of geotechnical evaluations with regard to predicting bluff erosion rates. Geologic hazards are episodic, and bluffs that may seem stable now may not be so in the future. Although the project has been evaluated and designed in a manner to minimize the risk of geologic hazards, and although the Commission is requiring with [Special Condition 1](#) that the applicant adhere to all recommended specifications (including recommended setbacks) to minimize potential geologic hazards, some risk of geologic hazard still remains. This risk is reflected in the R2 soils engineering report, which references certain “limitations” of the analysis, such as: “...*I recognize that the site is in a dynamically active area and conditions can and will change...*” This language in the report itself is indicative of the underlying uncertainties of this and any geotechnical evaluation and supports the notion that no guarantees can be made regarding the safety of the proposed development with respect to bluff retreat. Geologic hazards are episodic, and bluffs that may seem stable now may not be so in the future.

The Commission finds that the subject lot is an inherently hazardous piece of property, that the coastal bluff near the property is highly unstable and erosive, and that the proposed new development could be subject to geologic hazards and potentially someday require a bluff protective device, inconsistent with Section 30253 of the Coastal Act.

The proposed development could not be approved as being consistent with Section 30253 of the Coastal Act if projected bluff retreat would affect the proposed development and necessitate construction of a seawall to protect it. The Commission finds that the risks of geologic hazard will be minimized if development is sited and designed according to the setback and construction recommendations and conditions of this permit. However, given that the risks cannot be completely eliminated and the geologic report cannot assure that shoreline protection will never be needed to protect the proposed new home, the Commission finds that the proposed development is consistent with the Coastal Act only if it is conditioned to provide that shoreline protection will not be constructed.

Therefore, the Commission further finds that due to the inherently hazardous nature of this property, the fact that no geology report can conclude with certainty that a geologic hazard does not exist, the fact that the approved development and its maintenance may cause future problems that were not anticipated, and because new development shall not engender the need for shoreline protective devices, it is necessary to attach [Special Condition 2](#). This condition prohibits the construction of shoreline protective devices on the parcel, requires that the landowners provide a geotechnical investigation and remove the authorized structure and its foundation if bluff retreat reaches the point where the structure is threatened, and requires that the landowners accept sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion of the site. These requirements are necessary for consistency with Section 30253 of the Coastal Act, which states in part that new development shall minimize risk to life and property in areas of high geologic hazard, assure structural integrity and stability, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas, nor in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The Commission also attaches [Special Condition 3](#), which requires the landowners to assume the risks of extraordinary erosion and geologic hazards of the property and waive any claim of liability on the part of the Commission. Given that the applicants have chosen to implement the project despite these risks, the applicants must assume the risks. In this way, the applicants are notified that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the applicants to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand hazards.

Furthermore, [Special Condition 4](#) requires the applicants to record a deed restriction to impose the special conditions of the permit as covenants, conditions and restrictions on the use and enjoyment of the property. This special condition is required, in part, to ensure that the development is consistent with the Coastal Act and to provide notice of potential hazards of the property and help eliminate false expectations on the part of potential buyers of the property, lending institutions, and insurance agencies that the property is safe for an indefinite period of time and for further development indefinitely into the future, or that a protective device could be constructed to protect the approved development and will ensure that future owners of the property will be informed of the Commission's immunity from liability and the indemnity afforded the Commission.

As noted above, some risks of an unforeseen natural disaster, such as an unexpected landslide, catastrophic bluff failure, significant erosion, etc., could result in destruction or partial destruction of the new single-family residence or other development approved by the Commission. In addition, the development itself and its maintenance may cause future problems that were not anticipated. When such an event takes place, public funds are often sought for the clean-up of structural debris that winds up on the beach or on an adjacent property. As a precaution, in case such an unexpected event occurs on the subject property, [Special Condition 2](#), described above, also requires the landowners to accept sole responsibility for the removal of any structural debris resulting from landslides, bluff failures, or erosion on the site and agree to remove the authorized development should the bluff retreat reach the point where a government agency has ordered that these facilities not be used.

Thus, the Commission finds that as conditioned, the proposed development will not contribute significantly to the creation of any geologic hazards and will not have adverse impacts on slope stability or cause erosion. The Commission also notes that Section 30610(a) of the Coastal Act exempts certain additions to existing single-family residential structures from coastal development permit requirements. Pursuant to this exemption, once a house has been constructed, certain additions and accessory buildings that the applicant might propose in the future are normally exempt from the need for a permit or permit amendment. Depending on its nature, extent, and location, such an addition or accessory structure could contribute to geologic hazards at the site. For example, installing a landscape irrigation system on the property in a manner that leads to saturation of the bluff could increase the potential for landslides or catastrophic bluff failure. Another example would be installing a sizable accessory structure for additional parking, storage, or other uses normally associated with a single family home in a manner that does not provide for the recommended setback from the bluff edge.

Accordingly, Section 30610(a) requires the Commission to specify by regulation those classes of development which involve a risk of adverse environmental effects and require that a permit be obtained for such improvements. Pursuant to Section 30610(a) of the Coastal Act, the Commission adopted Section 13250 of Title 14 of the California Code of Regulations (CCR). Section 13250(b)(6) specifically authorizes the Commission to require a permit for additions to existing single-family residences that could involve a risk of adverse environmental effect by indicating in the development permit issued for the original structure that any future improvements would require a development permit. As noted above, certain additions or improvements to the approved structure could involve a risk of creating geologic hazards at the site. Therefore, pursuant to Section 13250 (b)(6) of Title 14 of the CCR, the Commission attaches [Special Condition 5](#), which requires that all future development on the subject parcel that might otherwise be exempt from coastal permit requirements requires an amendment or coastal development permit. This condition will allow future development to be reviewed by the Commission to ensure that future improvements will not be sited or designed in a manner that would result in a geologic hazard. As previously discussed, [Special Condition 4](#) also requires that the applicants record and execute a deed restriction approved by the Executive Director against the property that imposes the special conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property. Special Condition 4 will also help assure that future owners are aware of these CDP requirements applicable to all future development.

The Commission thus finds that the proposed development, as conditioned to include Special Conditions 1 through 5, is consistent Section 30253 of the Coastal Act, because the development as conditioned (1) will not contribute significantly to the creation of any geologic hazards, (2) will not have adverse impacts on the stability of the coastal bluff or on erosion, and (3) will not require the construction of shoreline protective works. Only as conditioned is the proposed development consistent with the Coastal Act.

F. VISUAL RESOURCES

Section 30251 of the Coastal Act states, in applicable part, as follows:

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 previously mentioned, the property is undeveloped and currently vegetated with approximately 15 large conifer trees and herbaceous ground cover. A narrow blue-water view of the ocean is afforded through the subject property and properties to the west from Roundhouse Creek Road to the northwest. Otherwise, views of the ocean are blocked by vegetation and houses to the west of the subject site. The existing view to the ocean afforded through the site may be slightly enhanced by the proposed project, which includes the removal of approximately nine mature conifer trees (and the retention of at least seven mature conifer trees on site). Thus,

the proposed new development will be sited and designed to protect views to and along the ocean and scenic coastal areas.

In addition, the property is more or less flat, and the project proposes no grading. Therefore, the development as proposed minimizes the alteration of natural land forms.

Moreover, the proposed development was reviewed and approved as proposed by the Big Lagoon Design Review Committee in a public hearing held on June 30, 2012. The Committee found the proposed single-story, maximum 16-ft-high development, as proposed, to be visually compatible with the character of the surrounding area. The surrounding area is characterized by developed residential lots with homes similar in scale, materials, and building design to the proposed contemporary-style home, which proposes to use architectural stone and hardi-plank shingle siding.

Although the surrounding neighborhood is mostly developed with existing homes, the overall nighttime character of the area has relatively minimal exterior lighting evident. Accordingly, to prevent the cumulative impacts of glare to the visual resources of the area, the Commission attaches [Special Condition 6](#), which requires that all exterior lighting associated with the proposed development be low-wattage and downcast shielded such that no glare is directed beyond the bounds of the property.

Therefore, the Commission finds that the proposed project, as conditioned, will protect public views to the ocean, minimize the alteration of natural land forms, and be visually compatible with the character of surrounding area, consistent with Section 30251 of the Coastal Act.

G. PROTECTION OF WATER QUALITY

Section 30230 of the Coastal Act states as follows:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states as follows:

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

As cited above, Coastal Act Sections 30230 and 30231 require, in part, that marine resources and coastal wetlands and waters be maintained, enhanced, and where feasible restored. These policies specifically call for the maintenance of the biological productivity and quality of marine resources, coastal waters, streams, wetlands, and estuaries necessary to maintain optimum populations of all species of marine organisms and for the protection of human health.

As described in notes on the project plans dated October 22, 2012 (**Exhibit 4**), the applicants have proposed to require that the contractor for the proposed development implement various water quality protection measures and best management practices (BMPs) during construction. These include instituting an on-site spill prevention and control response program consisting of BMPs to capture and clean up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials. The applicants also have proposed the use of BMPs as detailed in the current California Storm Water Quality Best Management Handbooks (<http://www.cabmphandbooks.com>), including, but not limited to, BMPs for site design and landscape planning, roof runoff controls, alternative building materials, vegetated buffer strips, and bioretention. Furthermore, various BMPs will be used for construction work that occurs during the rainy season, including the use of silt fencing, protecting storm drain inlets, applying mulch and/or temporary seeding to bare soil areas, and various other measures.

To ensure that the project implements the measures proposed and minimizes potential impacts to water quality associated with stormwater runoff and construction practices, the Commission attaches **Special Condition 7**. This condition requires that various construction-related responsibilities are adhered to during the course of the proposed construction work, including those described above and on the October 22, 2012 plans submitted by with CDP application 1-12-013. Thus, as conditioned, the Commission finds that the proposed project will maintain and enhance the functional capacity of the habitat, maintain and restore optimum populations of marine organisms, and protect human health as mandated by the requirements of Sections 30230 and 30231 of the Coastal Act.

H. PROTECTION OF ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Section 30240 of the Coastal Act states as follows:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Section 30107.5 of the Coastal Act defines “environmentally sensitive area” as:

“...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.”

As discussed above in Finding IV-B, there are no wetlands or other known environmentally sensitive habitat areas located on or immediately adjacent to the property. However, it is possible that the existing mature conifer trees on the property support seasonal breeding and nesting habitat for birds protected under the state Fish and Game Code and federal Migratory Bird Treaty Act. According to the *Atlas of the Breeding Birds of Humboldt County, California*,³ up to 60 species of birds breed in the terrestrial habitats of the Big Lagoon area.

The project proposes to remove a total of nine trees (mostly nonnative Monterey pines). Tree removal during the bird nesting season (typically April 1 through August 31) could adversely affect sensitive nesting birds such as raptors and various species of migratory birds protected under state and/or federal regulations. To ensure that the proposed tree removal work does not result in significant disruption or degradation of occupied nesting habitat consistent with the requirements of Section 30240 of the Coastal Act, the Commission attaches [Special Condition 8](#). This condition restricts the timing of tree removal work to ensure avoidance of any sensitive nesting habitat that may be present during bird breeding and nesting seasons.

In addition, [Special Condition 9](#) requires that only native and/or non-invasive plant species be planted and used in erosion-control seeding on the subject property. The Commission finds that the adjacent park and recreation area, which contains wetlands and other environmentally sensitive habitats, could be adversely affected if nonnative, invasive plant species were introduced in landscaping or erosion control seeding at the subject site. If any of the proposed landscaping or seeding were to include introduced invasive exotic plant species, the weedy plants could colonize (e.g., via wind or wildlife dispersal) the nearby park and recreation area over time, displace native vegetation, and significantly degrade the recreation area and the functions and values of its natural habitats. Special Condition 9 also includes a provision prohibiting the use of certain anticoagulant-based rodenticides that are known to pose significant primary and secondary risks to non-target wildlife present in urban and urban/wildland interface areas. As property owners sometimes use such pesticides to prevent wild critters from grazing on landscaping and other vegetation, and as these target species commonly are preyed upon by raptors or other environmentally sensitive predators and scavengers, the pest control compounds can bio-accumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species. Thus, Special Condition 9-b is intended to avoid this potential cumulative impact to environmentally sensitive wildlife species.

The Commission thus finds that as conditioned, the project will not result in significant disruption or degradation of ESHA consistent with Section 30240 of the Coastal Act.

I. PROTECTION OF ARCHAEOLOGICAL RESOURCES

Section 30244 of the Coastal Act states as follows:

Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

³ Hunter, J.E. et al. 2005. *Atlas of the Breeding Birds of Humboldt County, California*. Redwood Region Audubon Society. Eureka, CA.

The project site is located within the ancestral lands of the Yurok Tribe. In its processing of the required special permit for the proposed project, Humboldt County referred the project to the Yurok Tribe. A representative from the Yurok Tribe visited the property, completed an initial ground survey, and recommended that a tribal cultural monitor be present during initial ground disturbance. Thus, the County's special permit includes Condition of Approval #9, which requires that the applicant retain the services of a Yurok tribal monitor to be present during initial ground disturbing activities to review the soils and determine whether or not there is the potential for artifacts to be present. The condition further states that *"If concealed or previously unknown archaeological remains are discovered during project implementation, all necessary steps will be taken to protect them in accordance with the Yurok Tribe's Standard Operating Procedures for Inadvertent Discoveries of Archaeological Remains."*

Accordingly, to ensure protection of any archaeological resources that may be discovered at the site during excavation for the proposed new residence consistent with Section 30244, the Commission is also requiring in [Special Condition 10](#) that the applicant coordinate with the Yurok Tribe to arrange for a cultural resources monitor to be present on the project site during initial ground-disturbing activities. If an area of archaeological deposits is discovered during the course of the authorized development, all construction must cease, and a qualified archaeologist must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director, prepared in consultation with the Yurok Tribe, to determine whether the changes are *de minimis* in nature and scope, or whether an amendment to this permit is required.

Thus, the Commission finds that the proposed development, as conditioned, is consistent with Coastal Act Section 30244, as the development will include mitigation measures to ensure that the development will not adversely impact archaeological resources.

J. PUBLIC ACCESS

Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions. Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety. In applying Sections 30211 and 30212, the Commission is limited by the need to show that any denial of a permit application based on these sections or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential public access.

The potential for public access to nearby beach and shoreline areas include an informal trail to Agate Beach, in Patricks Point State Park, located about 1,000 feet south off of the end of

Roundhouse Creek Road and informal access to the State Park beach approximately a half mile to the north, near the bluff failure area at the north end of Ocean View Drive. In addition, Big Lagoon County Park, which includes beach access, boating access to the lagoon, and a campground, is located less than a mile north of the property.

There is no evidence of public use of the property for public access, no evidence of trails on the property, and no indication from the public that the site has been used for public access purposes in the past. As previously described, the subject lot is situated on a bluff-top parcel with existing single family residences located between the property and the steep, over 100-ft-high bluff face. The proposed development will not significantly and adversely increase the demand for public access to the shoreline, as it involves developing an existing single family residential lot. For all of these reasons, the Commission finds that the proposed project, which does not include provision of public access, is consistent with the public access policies of the Coastal Act.

K. LOCAL COASTAL PROGRAM

Section 30604(a) of the Coastal Act states as follows:

(a) Prior to certification of the Local Coastal Program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200). A denial of a coastal development permit on grounds it would prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200) shall be accompanied by a specific finding which sets forth the basis for such conclusion.

This section of the Act provides that the Commission shall issue a CDP only if the project will not prejudice the ability of the local government having jurisdiction to prepare an LCP that conforms with the Chapter 3 policies of the Coastal Act.

The area that includes the subject site and all of the lots in the Big Lagoon subdivision that are locally planned and zoned for residential use and located on the west side of Roundhouse Creek Road and Ocean View Drive lacks a certified LCP. As conditioned, the proposed development will be consistent with Chapter 3 of the Coastal Act, and approval of the project will not prejudice the ability of Humboldt County to prepare a LCP for this area that is in conformity with the provisions of Chapter 3 of the Coastal Act.

L. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Humboldt County served as the lead agency for the project for CEQA purposes. The County determined that the project qualified for a CEQA categorical exemption under Class 3, Section 15303(a) of CEQA Guidelines.

Section 13906 of the Commission's administrative regulation requires Coastal Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is 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 any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

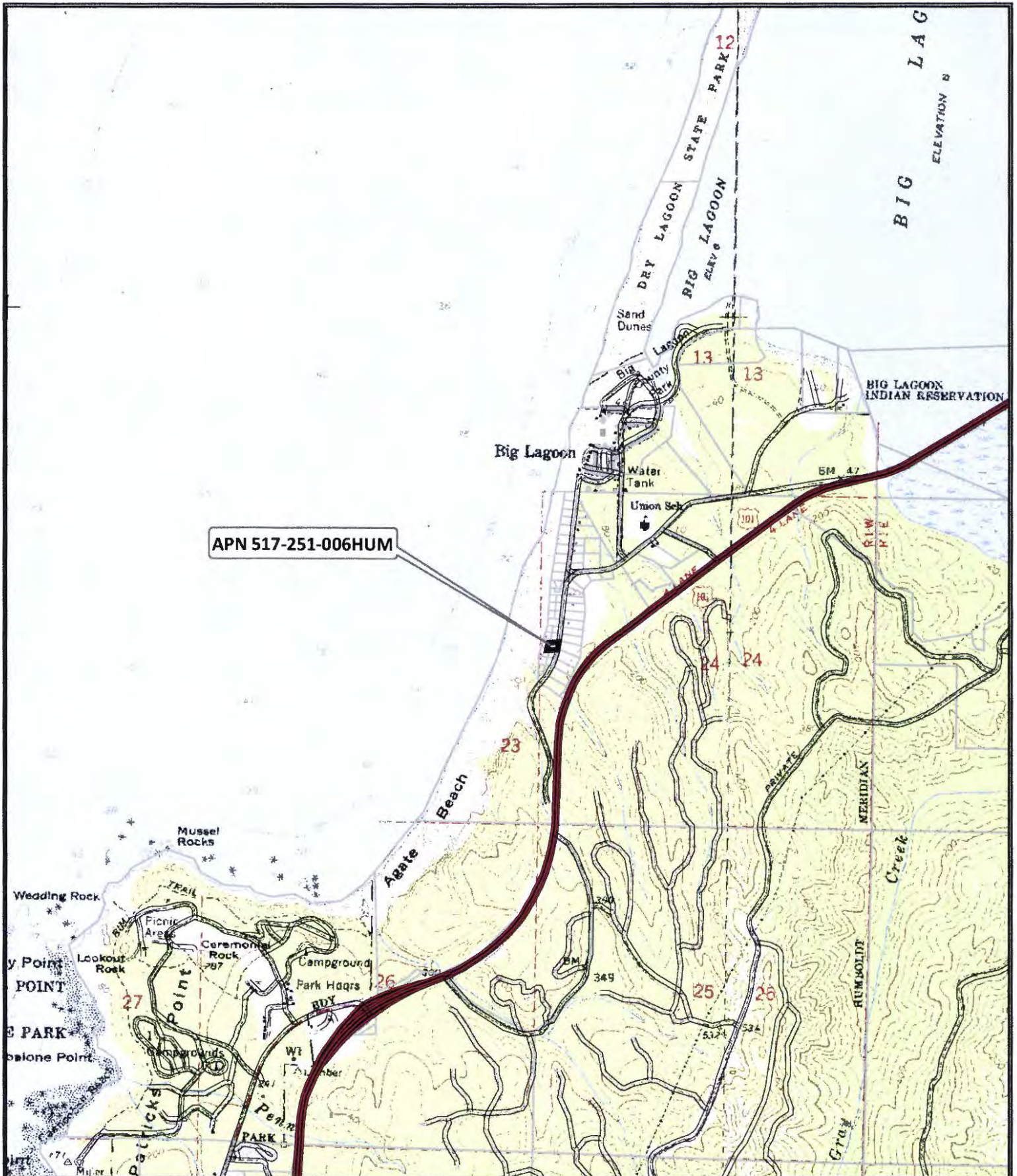
The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. The findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A: SUBSTANTIVE FILE DOCUMENTS

- Application File for CDP 1-12-013, received 4/3/12
- Slope Setback Recommendation Report, LACO Associates, dated 7/30/12
- R2 Soils Engineering Report, Oswald Geologic, dated 6/26/12
- Onsite Wastewater Treatment Evaluation Report, Pacific Watershed Assoc., dated 5/25/12
- CDP File 1-87-230
- CDP File NCR-74-CC-344
- CDP File 1-03-024
- CDP File 1-99-066-W
- CDP File 6-84-461
- CDP File 6-93-138
- CDP File 6-97-090
- CDP File 6-98-039
- CDP File 5-88-177
- CDP File 5-93-254-G
- Humboldt County Special Permit 12-007 approved on 10/11/12
- County of Humboldt Local Coastal Program

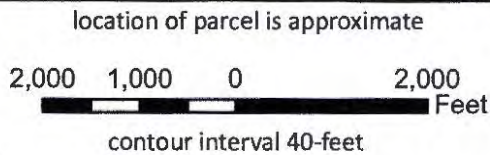


EXHIBIT NO. 1
CDP Amendment Application No.
1-12-013-A1 (Wilson)
REGIONAL LOCATION MAP



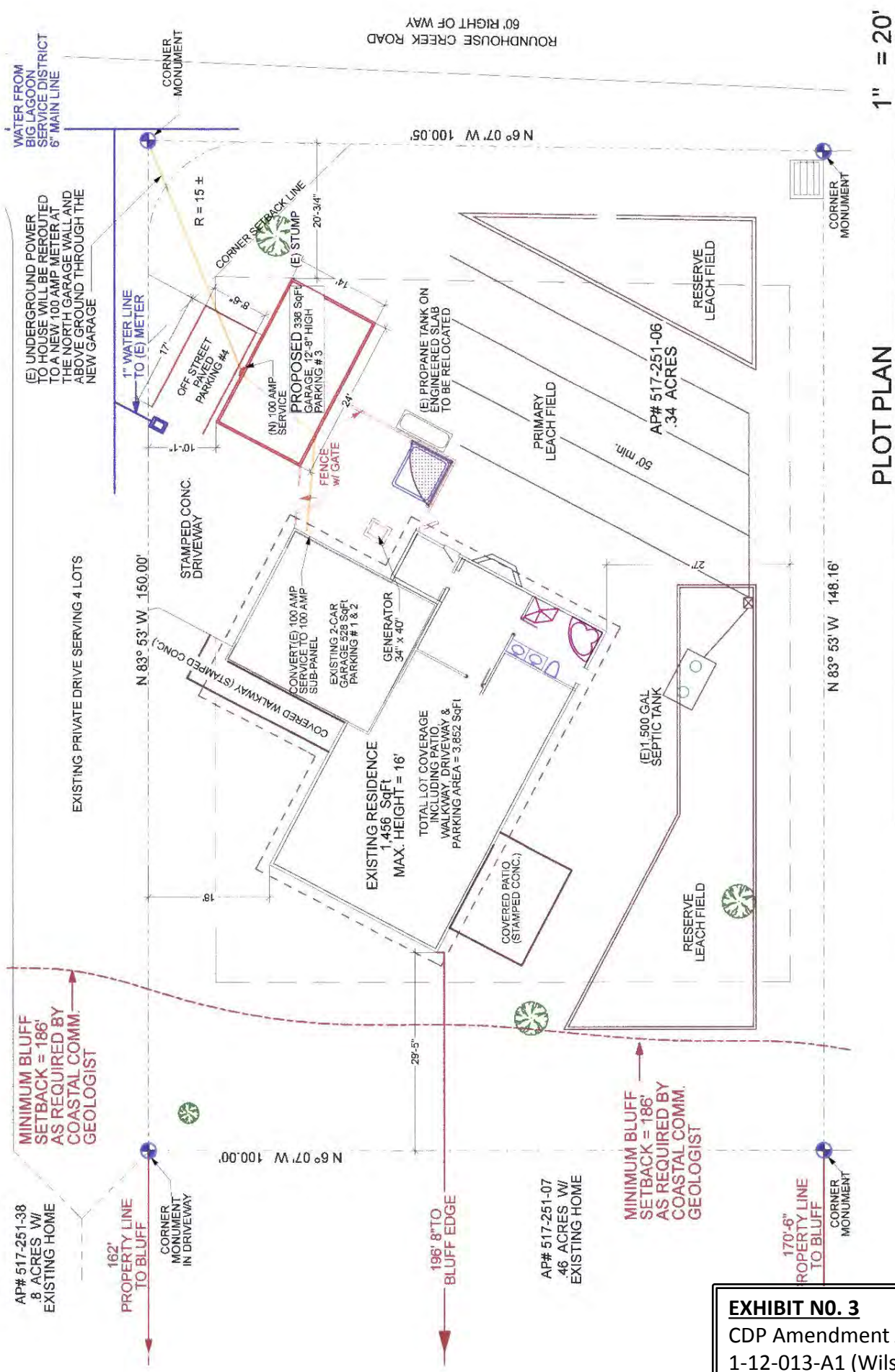
road and hydrology from CA GIS, APN data from Humboldt Co. USGS Trinidad and Rodgers Peak 7.5' Quadrangles

OSWALD GEOLOGIC
OG PO Box 126
 Loleta CA
 95551
 06/19/12-jao 04-12-02



project: 517
 Figure

EXHIBIT NO. 2
 CDP Amendment Application No. 1-12-013-A1 (Wilson)
VICINITY MAP



1" = 20'

PLOT PLAN

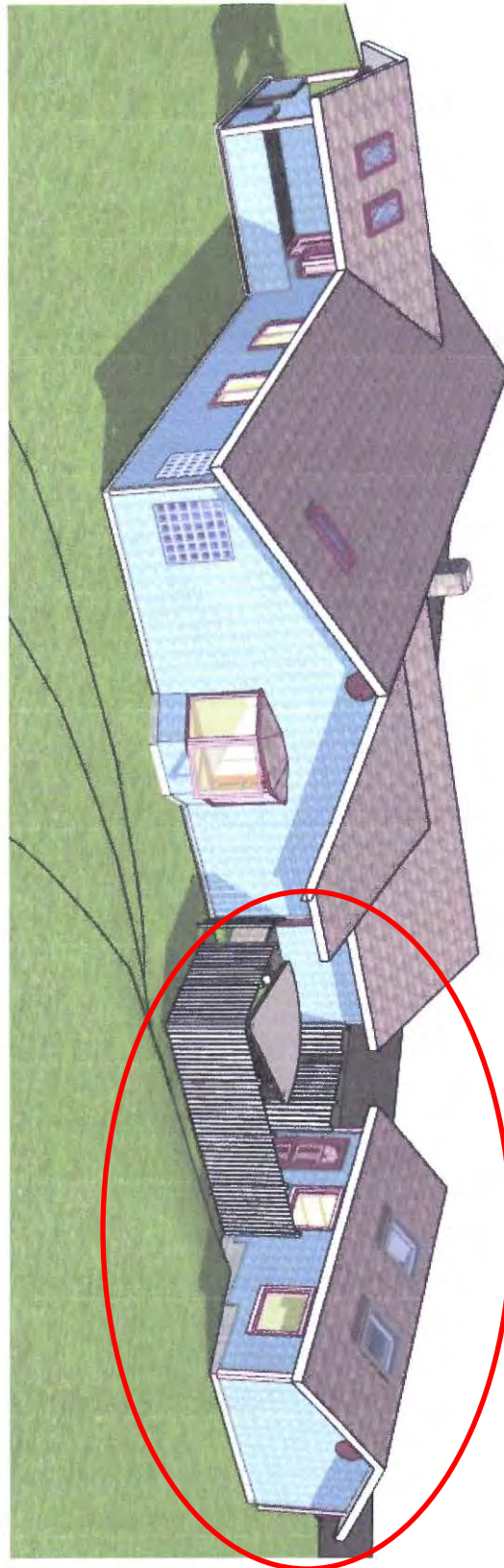
ROYER
DESIGN / BUILD
 ARCATA, CALIFORNIA, 95521
 8263 WEST END ROAD1
 PHONE: 707-826-1965
 LICENSE # 716487

NEW GARAGE :
ROB & PATTI WILSON
 APN 517-251-06
PROJECT LOCATION :
 396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA 95570
 PHONE: 530-444-4444
604-3250

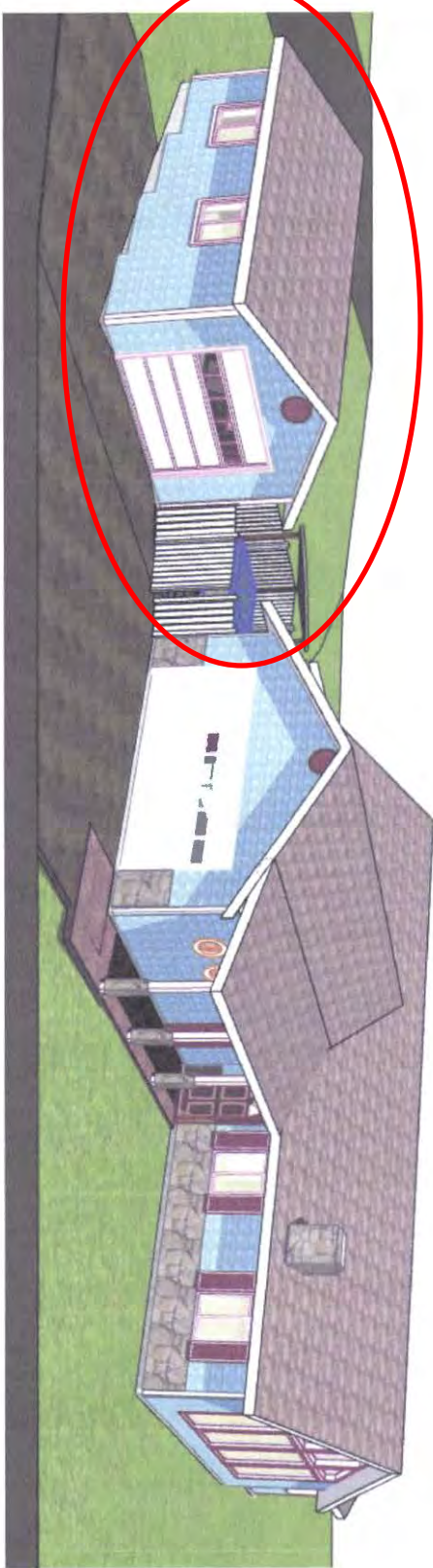
Drawn by Date 3-23-16
 Timothy Royer
 Signature:
 SCALE AS SHOWN

SHEET:
PLOT

EXHIBIT NO. 3
 CDP Amendment Application No.
 1-12-013-A1 (Wilson)
SITE PLAN



NORTH EAST PERSPECTIVE



NORTH WEST PERSPECTIVE

ROYER

EXHIBIT NO. 4
 CDP Amendment Application No.
 1-12-013-A1 (Wilson)
ELEVATIONS & FLOOR PLANS
 Page 1 of 4

**NEW GARAGE :
 ROB & PATTI WILSON**

396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA 95570
 PHONE: 530-~~211-1836~~

604-3250

APN 517-251-06

PROJECT LOCATION :

396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA 95570

Drawn by Date 3-23-16

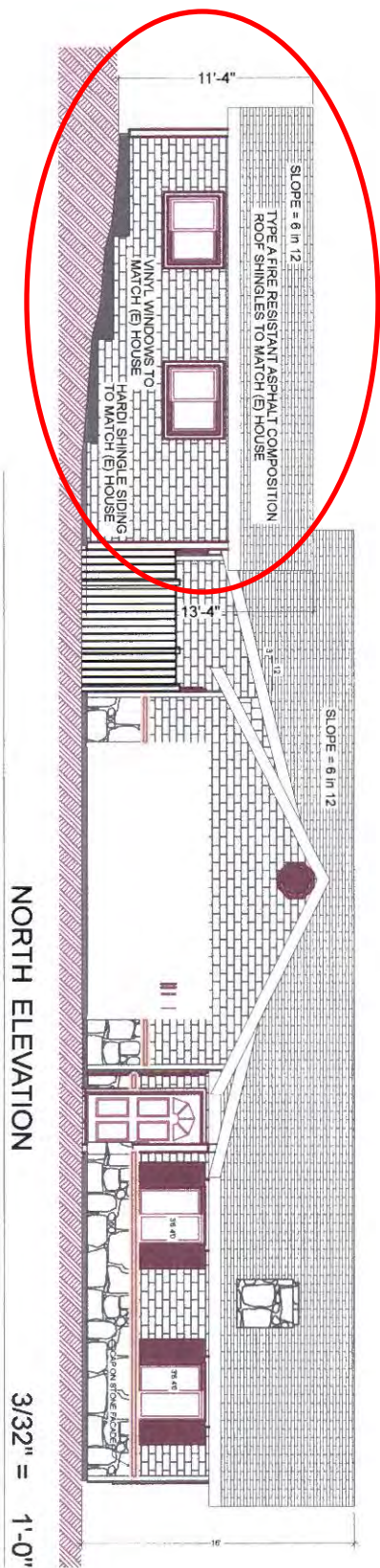
Signature: Timothy Royer

Signature: *Timothy Royer*

Drawing Scale AS SHOWN

SHEET:

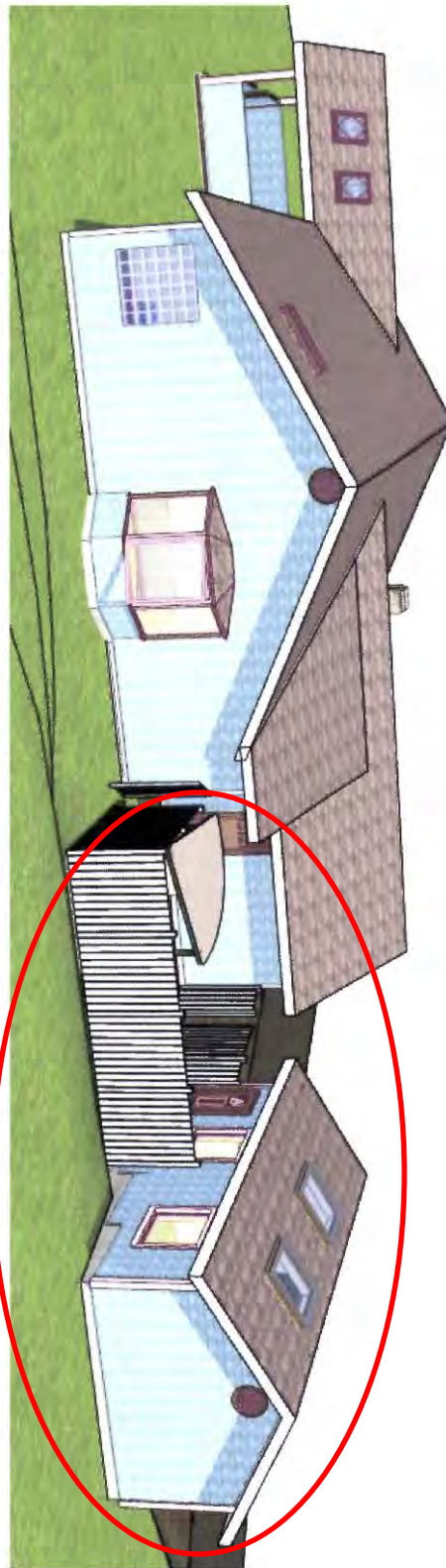
2 of 5



NORTH ELEVATION

3/32" = 1'-0"

SOUTH EAST PERSPECTIVE

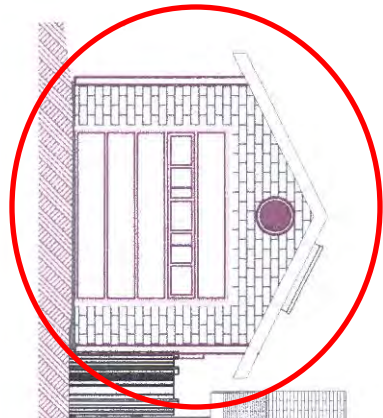


Drawing Scale
 AS SHOWN
 Signature: *Timothy Royer*
 Timothy Royer
 Date: 3-23-16

NEW GARAGE :
ROB & PATTI WILSON
 396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA 95570
 PHONE: 530-~~211-1896~~
 604-3250

APN 517-251-06
 PROJECT LOCATION :
 396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA 95570

ROYER
 DESIGN / BUILD
 ARCATA, CALIFORNIA, 95521
EXHIBIT NO. 4
ELEVATIONS & FLOOR PLANS
 Page 2 of 4



WEST ELEVATION

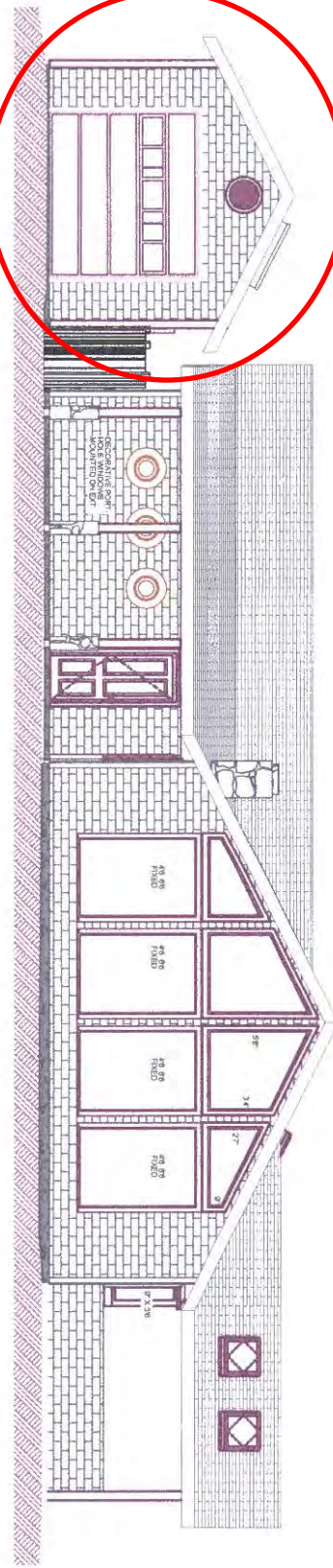
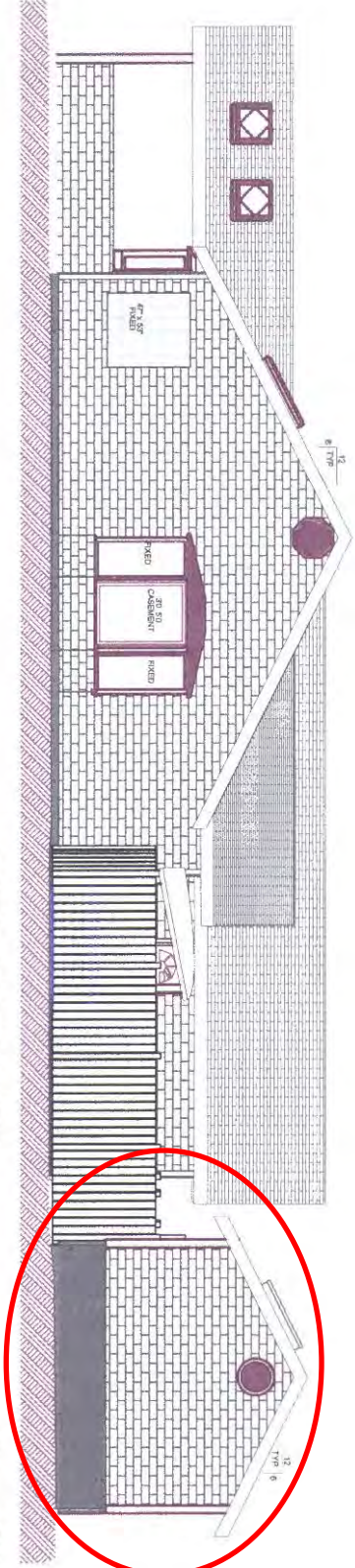
1" = 10'

SOUTH ELEVATION

1" = 10'

EAST ELEVATION

1" = 10'



NEW GARAGE :
ROB & PATTI WILSON

396 ROUNDHOUSE CR. RD.
BIG LAGOON, CA 95570
PHONE: 530-~~411-1111~~

604-3250

APN 517-251-06
PROJECT LOCATION :
396 ROUNDHOUSE CR. RD.
BIG LAGOON, CA 95570

ROYER
DESIGN / BUILD
ARCATA, CALIFORNIA, 95521

EXHIBIT NO. 4
ELEVATIONS & FLOOR PLANS
Page 3 of 4

Drawn by: Timothy Royer
Date: 3-23-16
Signature: *Timothy Royer*
Drawing Scale: AS SHOWN

SHEET:
4 of 5

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES ARE REQUIRED AFTER OCT. 15 AND THROUGHOUT THE RAINY SEASON

SILT FENCING:

- INSPECT AND MAINTAIN SILT FENCES AFTER EACH RAINSTORM.
- MAKE SURE THE BOTTOM OF THE SILT FENCE IS BURIED IN THE GROUND.
- SECURELY ATTACH THE MATERIAL TO THE STAKES.
- DON'T PLACE SILT FENCES IN THE MIDDLE OF A WATERWAY OR USE THEM AS A CHECK DAM.
- MAKE SURE STORMWATER IS NOT FLOWING AROUND THE SILT FENCE

SITE STABILIZATION:

- VEGETATE, MULCH, OR OTHERWISE STABILIZE ALL EXPOSED AREAS AS SOON AS LAND ALTERATIONS HAVE BEEN COMPLETED.

STORM DRAIN INLET PROTECTION:

- USE ROCK PAVEMENT OR OTHER APPROPRIATE MATERIAL TO COVER THE ROCK PAVEMENT AND STORM DRAIN INLET.
- MAKE SURE THE ROCK SIZE IS APPROPRIATE (USUALLY 1 TO 2 INCHES IN DIAMETER)
- IF YOU USE INLET FILTERS, MAINTAIN THEM REGULARLY

DIRT STOCKPILES:

- COVER OR SEED ALL DIRT STOCKPILES.

- SLOPES:
 - ROUGH GRADE OR TERRACE SLOPES
 - BREAK UP LONG SLOPES WITH SEDIMENT BARRIERS, OR UNDER DRAIN, OR DIVERT STORMWATER AWAY FROM SLOPES

CONSTRUCTION ENTRANCES:

- ROCK ENTRANCES TO REMOVE MUD AND DIRT FROM TIRES OF CONSTRUCTION VEHICLES BEFORE THEY ENTER A PAVED ROADWAY
- PROPERLY SIZE ENTRANCE BMPs FOR ALL ANTICIPATED VEHICLES.
- MAKE SURE THAT THE CONSTRUCTION ENTRANCE DOES NOT BECOME BURIED IN SOIL.

VEGETATIVE BUFFERS:

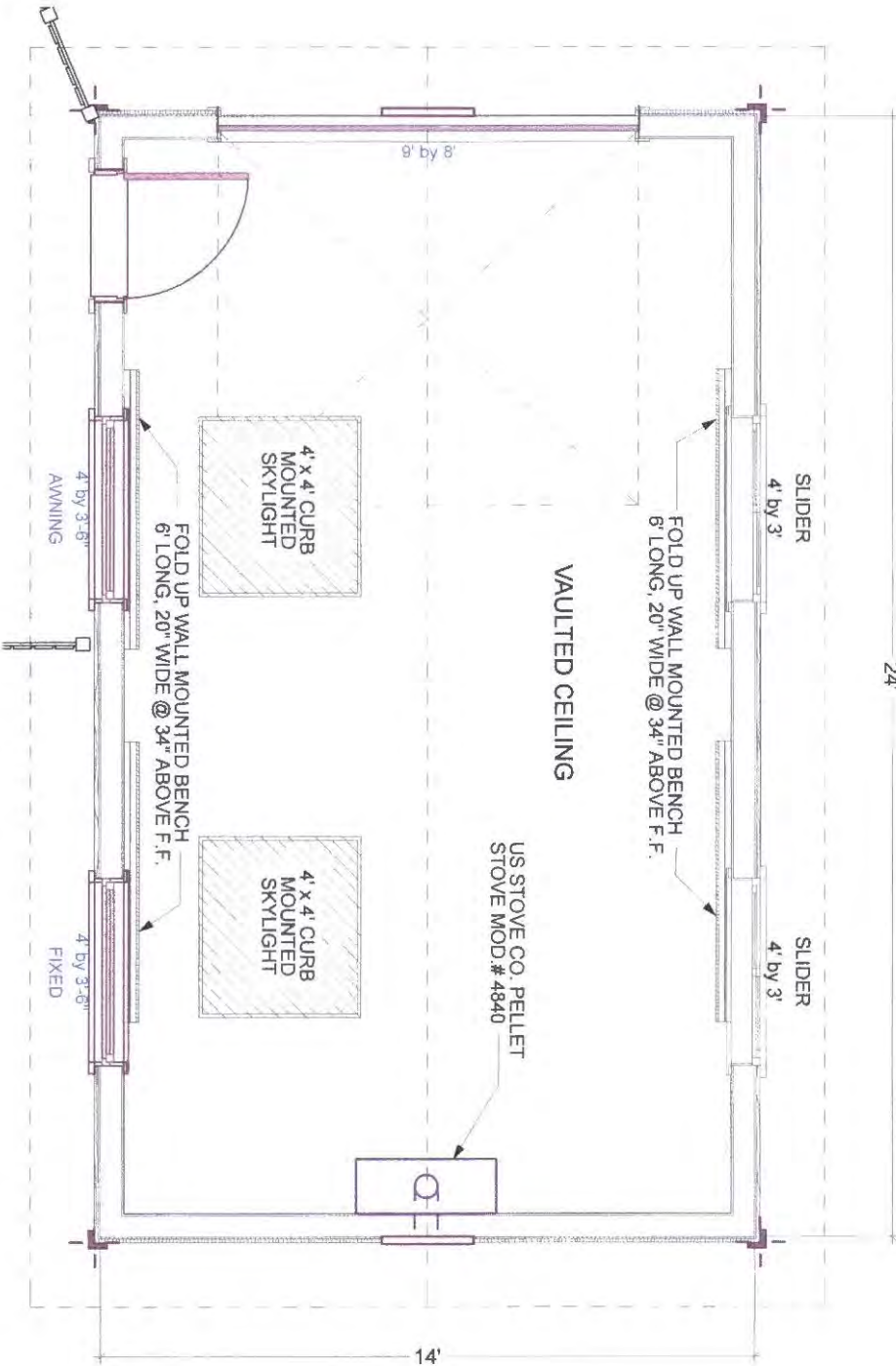
- INSTALL AND PROTECT VEGETATIVE BUFFERS ALONG WATER BODIES TO SLOW DOWN AND FILTER RUNOFF
- MAINTAIN BUFFERS BY MOWING OR REPLANTING PERIODICALLY TO ENSURE THEIR EFFECTIVENESS.

PROTECT NATURAL FEATURES:

- MINIMIZE CLEARING AND AMOUNT OF EXPOSED SOIL.
- IDENTIFY AND PROTECT AREAS WHERE EXISTING VEGETATION WILL NOT BE DISTURBED BY CONSTRUCTION ACTIVITY.
- PROTECT STREAMS, STREAM BUFFERS, WILD WOODLANDS, WETLANDS OR OTHER SENSITIVE AREAS FROM ANY DISTURBANCE OR CONSTRUCTION ACTIVITY BY FENCING OR OTHERWISE CLEARLY MARKING THESE AREAS.

CONSTRUCTION PHASING:

- SEQUENCE CONSTRUCTION ACTIVITIES SO THAT THE SOIL IS NOT EXPOSED FOR LONG PERIODS OF TIME.
- INSTALL KEY SEDIMENT CONTROL PRACTICES BEFORE SITE GRADING BEGINS.
- SCHEDULE SITE STABILIZATION ACTIVITIES SUCH AS LANDSCAPING TO BE COMPLETED IMMEDIATELY AFTER THE LAND HAS BEEN GRADED TO ITS FINAL CONTOUR.



FLOOR PLAN

1/4" = 1'-0"

NEW GARAGE :
ROB & PATTI WILSON

396 ROUNDHOUSE CR. RD.
BIG LAGOON, CA 95570
PHONE: 530-~~211-8830~~

604-3250

APN 517-251-06

PROJECT LOCATION :

396 ROUNDHOUSE CR. RD.
BIG LAGOON, CA 95570

ROYER
DESIGN / BUILD
ARCATA, CALIFORNIA, 95521

EXHIBIT NO. 4
ELEVATIONS & FLOOR PLANS

Page 4 of 4

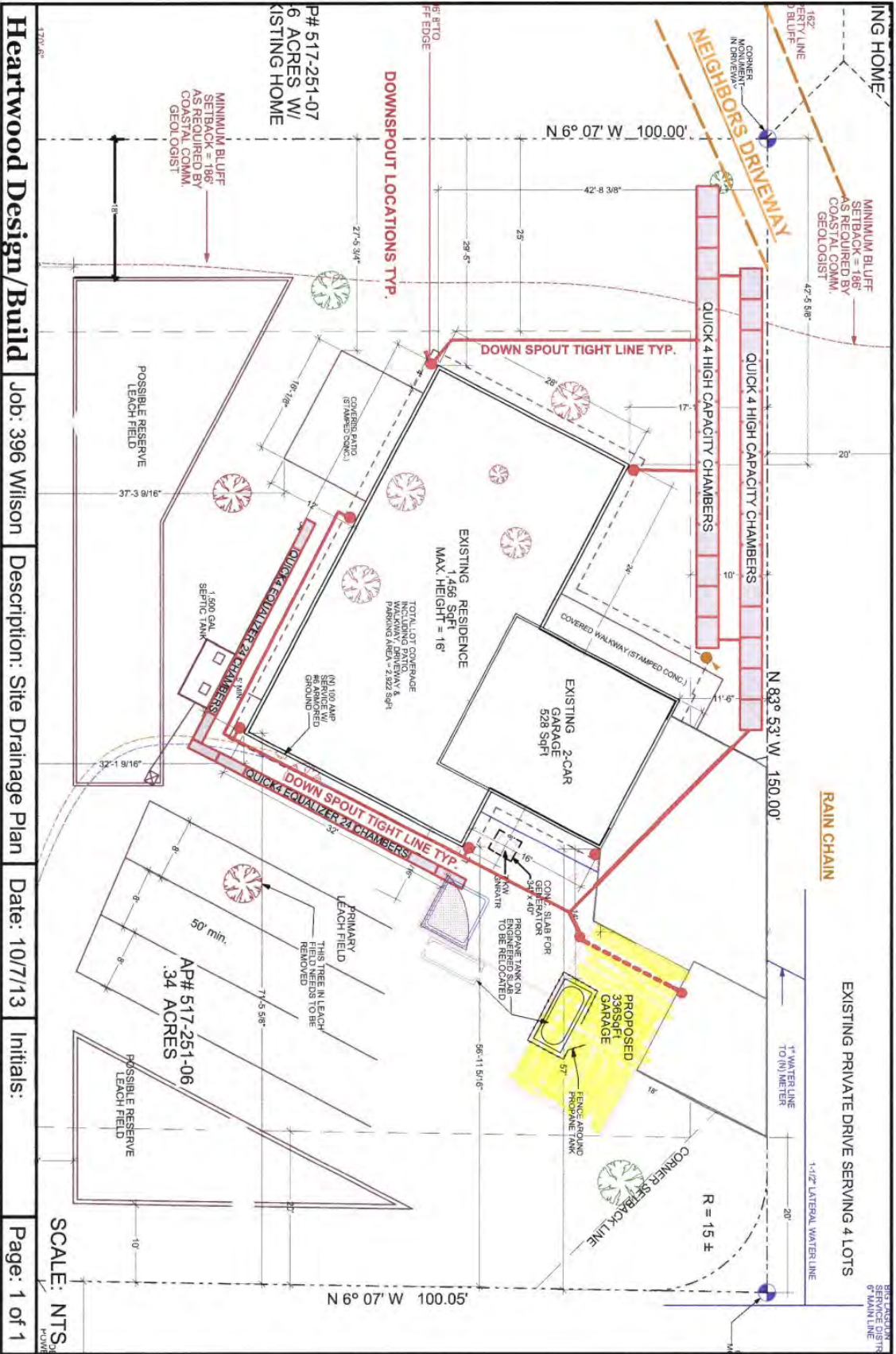
Drawn by: Timothy Royer Date: 3-23-16

Signature: *Timothy Royer*

AS SHOWN

SHEET:

5 of 5



NOTE:
RUN OFF FROM GUTTERS ON (N) GARAGE WILL BE DIRECTED INTO AN EXISTING DRAINAGE SYSTEM WITH UNDERGROUND INFILTRATION CHAMBERS.

Heartwood Design/Build Job: 396 Wilson Description: Site Drainage Plan Date: 10/7/13 Initials: SCALE: NTS Page: 1 of 1

GARAGE ADDITION :
ROB & PATTI WILSON
396 ROUNDHOUSE CR. RD.
BIG LAAGOON, CA, 95570
PHONE: 530-241-1835

PROJECT LOCATION :
396 ROUNDHOUSE CR. RD.
BIG LAAGOON, CA, 95570

ROYER
EXHIBIT NO. 5
CDP Amendment Application No.
1-12-013-A1 (Wilson)
SITE DRAINAGE PLAN

Drawn by: Timothy Royer
Date: 3-20-16
Signature: *[Signature]*
AS SHOWN

SHEET: DRAINAGE

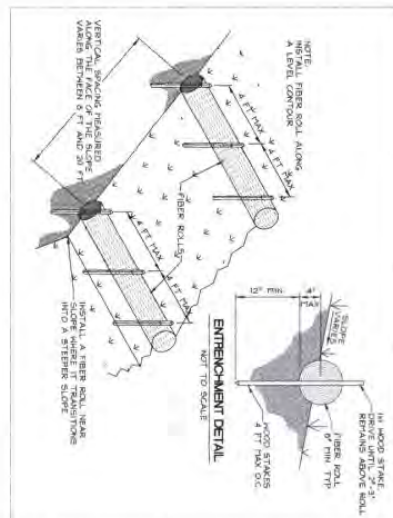
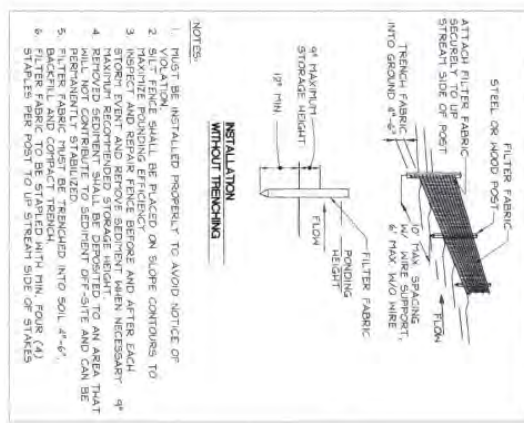
EROSION CONTROL NOTES

1. ALL SURFACE WATER DRAINAGE SHOULD BE CONTROLLED TO REMAIN AWAY FROM THE ADJACENT PROPERTY. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE COUNTY DEPARTMENT OF PUBLIC WORKS REQUIREMENTS.
2. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET ABANDON STAFFING OPERATIONS AND PERIODICALLY SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF DEBRIS ONTO PUBLIC RIGHTS-OF-WAY.
3. AFTER SPREAD AND UTILITY TRENCHES ARE BACKFILLED AND REPAIRED, SLOTTED TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE RESPONSIBLE FOR PREVENTING ALL EROSION AND SEDIMENT FROM OCCURRING AT THE PROJECT SITE. THE CONTRACTOR SHALL REPORT TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT PRIOR TO ANY CONSTRUCTION ACTIVITIES.
5. ANY VEGETATIVE STABILIZATION (T.E. FENCE, ANCHOR, TROPICAL SEEDS) AS APPROVED BY DENIED, WITHIN 7 DAYS OF LAND CLEARING OR EXPOSURE TO ANY PORTION OF THE SITE THAT IS SUBJECT TO EROSION CONTROL MEASURES SHALL BE OPERATIONAL DURING THE RAIN SEASON (OCTOBER 15-APRIL 15).
6. THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE PROJECT.
7. DURING THE RAINY SEASON, ALL PAVED AREAS WILL BE KEPT CLEAR OF PAVEMENT MATERIAL AND DEBRIS. THE SITE WILL BE PROTECTED FROM STORM SEWER OVERFLOW.
8. CONTRACTOR SHALL HAVE TOOLS, EQUIPMENT, AND MATERIALS TO REMOVE EROSION CONTROL MEASURES MADE NECESSARY BY A TYPICAL OPERATION ON THE JOB SITE BEFORE REMOVAL.
9. ADJACENT PROPERTIES SHALL BE PROTECTED FROM STORM WATERS, TUD, SILT, ETC. ON A DAILY BASIS.
10. EXCESSIVE DUST SHALL BE CONTROLLED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL HAVE TOOLS, EQUIPMENT, AND MATERIALS TO REMOVE EXCESSIVE DUST FROM THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT MEASURES THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST FROM HIS OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES FROM HIS OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES FROM HIS OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES FROM HIS OPERATIONS.

NOTE:

CONTRACTOR SHALL INSTITUTE AN ON-SITE SILT PREVENTION AND CONTROL RESPONSE PROGRAM CONSISTING OF BEST MANAGEMENT PRACTICES FOR THE STORAGE OF CLEAN UP MATERIALS, TRAINING PERSONNEL ON RESPONSIBLE METHODS AND PROCEDURES, PROTECTING ADJACENT PROPERTIES FROM EROSION AND SEDIMENTATION, AND OTHER BEST MANAGEMENT PRACTICES. AGENCY IN THE EVENT OF A SPILL, THIS PROGRAM SHALL BE IMPLEMENTED AT THE PROJECT TO CAPTURE AND CLEAN UP ANY ACCIDENTAL RELEASES OF OIL, GREASE, FUELS, LIBERANTS OR OTHER HAZARDOUS MATERIALS FROM ENTERING COASTAL WATERS. THE PROGRAM SHALL INCLUDE A SCHEDULE FOR INSTALLATION AND MAINTENANCE OF APPROPRIATE CONSTRUCTION SOURCE CONTROL BEST MANAGEMENT PRACTICES TO PREVENT ENTRY OF STORMWATER RUNOFF INTO THE CONSTRUCTION SITE AND THE ENTRANCE OF STORMWATER INTO THE COASTAL WATERS. THE PROGRAM SHALL INCLUDE A SCHEDULE FOR INSTALLATION, USE AND MAINTENANCE OF APPROPRIATE CONSTRUCTION MEASURES TO PREVENT THE ENTRY OF POLLUTED STORMWATER RUNOFF FROM THE COMPLETE DEVELOPMENT INTO COASTAL WATERS.

NOTE:
 RUN-OFF FROM THE PROJECT SITE SHALL NOT INCREASE SEDIMENTATION IN THE SURROUNDING COASTAL WATERS.
 RUN-OFF FROM THE PROJECT SITE SHALL NOT RESULT IN POLLUTANTS ENTERING THE SURROUNDING COASTAL WATERS.
 BEST MANAGEMENT PRACTICES AS OUTLINED IN THESE PLANS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 USE BEST MANAGEMENT PRACTICES AS DETAILED IN THE CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK INCLUDING BEST MANAGEMENT PRACTICES (S21 ALTERNATIVE BUILDING BUFFER STRIP, S21 VEGETATED BUFFER STRIP, AND T-32 BUFFER STRIP).



EROSION CONTROL PLAN
 SCALE: N.T.S.

GARAGE ADDITION :
ROB & PATTI WILSON APN 517-251-06

396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA, 95570 PROJECT LOCATION :
 396 ROUNDHOUSE CR. RD.
 BIG LAGOON, CA, 95570

PHONE: 530-241-1835

Drawn By: Date: 3/30/16
 Signature: Timothy Royer

Checked By: AS SHOWN

SHEET:
EROSION CONTROL

ROYER

EXHIBIT NO. 6
 CDP Amendment Application No.
 1-12-013-A1 (Wilson)
EROSION CONTROL PLAN

April 20, 2016

7619.01

Royer Design Build
8263 West End Road
Arcata, California 95521

Attention: Tim Royer

Subject: Coastal Bluff Set-Back – Geologic Review, 396 Roundhouse Creek Road, Big Lagoon

Dear Mr. Royer:

Introduction

This letter presents the results of our engineering geologic evaluation of the appropriateness of applying an existing coastal bluff set-back for the property, presented in a report referenced below, to a proposed project.

It is our understanding that the proposed project consists of the construction of an approximately 336-square-foot, single-story, wood-frame, detached garage. The planned structure is to be located adjacent to Roundhouse Creek Road at the northeastern corner of the residential lot.

In addition to a site visit to observe the condition of the coastal bluff, the following documents were reviewed as part of our evaluation:

- Slope Setback Recommendation Report, New Single-Family Residence, 396 Roundhouse Creek Road, Big Lagoon, California; APN 517-251-06 (dated July 30 2012; LACO Project No. 7619.00; hereafter referred to as the Site).
- Google Earth Aerial Photographic Imagery June 2011, August 2012, and May 2014

Evaluation

Based on our review of preliminary project plans, the western edge of the proposed structure will be located approximately 85 feet further from the coastal bluff than the closest corner of the existing residence, which itself is 10 feet further inland than the setback determined to be appropriate by the 2012 report. As such, our services consisted primarily of reviewing the 2012 report and performing an evaluation of changes in site conditions since the report was issued which might affect the set-back recommendations. To this end, we visited the Site on April 18, 2016 to examine the bluff face to observe evidence of recent erosion, slope instability, or any changes in the factors used in the 2012 bluff setback evaluation.

In accordance with California Coastal Commission Memorandum W11.5 (Johnson, 2003), the 2012 LACO report referenced above calculates an appropriate Coastal Bluff Development Setback of 177 feet by combining an estimated bluff retreat over a 75-year period of 94 feet, and a slope stability setback of 83 feet.

The 2012 report estimated long-term bluff retreat rate of 1.25 feet/year by performing a site specific aerial photographic review covering approximately 64 years between 1948 and 2012. As part of our evaluation for this letter, we reviewed Google Earth Aerial Photographic Imagery from June 2011,

21 W. 4th Street, Eureka, California 95501 707 443-5054 Fax 707 443-0553
311 S. Main Street, Ukiah, California 95482 707 462-0222 Fax 707 462-0223
3450 Regional Parkway, Suite B2, Santa Rosa, California 95403 707 525-1222

August 2012, and May 2014 and compared our observations to present bluff conditions. Based on our review, no additional slope failures or bluff retreat has occurred below the Site since the report was issued. Several surficial landslides were observed, but these failures were all present at the time the 2012 investigation was conducted, and none of them impact the bluff edge. Consequently, with no additional bluff retreat events, no additional data is available which might modify the estimate of the long term retreat rate.

The 2012 report performed a quantitative slope stability analysis using the Rocscience program Slide 5.0. Factors used in the analysis include: topographic slope configuration generated from LiDAR data, groundwater conditions based on well data, slope stratigraphy based on mapping, and estimates of strength and weight of soils based on literature review and professional judgement. As indicated above, the slope configuration and groundwater conditions appear unchanged since the 2012 report was issued. Subsequently, the slope stability setback presented in the 2012 report still appears valid at this time.

Conclusions

Based on our review, in our opinion, the methods used by the 2012 report to determine Coastal Bluff Development Setbacks for the Site were in accordance with California Coastal Commission guidelines and current standard of practice for this time and location. In addition, site conditions and factors used in the original setback calculation are unchanged since the report was issued. Consequently, the setback of 177 feet from the bluff edge is still valid and applicable to the proposed development.

Limitations

Services performed by LACO have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession practicing in the same locality under similar conditions at the time the services were provided. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this letter.

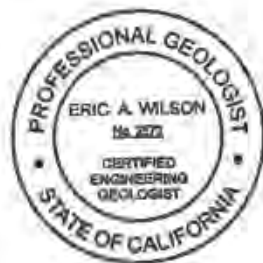
The conclusions contained in this letter are based on literature review and on our field observations at the time and date the services were performed.

We trust this letter meets your needs at this time. If you have any questions or require further services, please feel free to contact our office at (707) 443-5054.

Sincerely,
LACO Associates

SIGNATURE ON FILE

Eric A. Wilson, P.G., CGE
Senior Engineering Geologist
PG 2572, Exp 08/31/17



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