

Staff Report to the Zoning Administrator

Application Number: 09-0139

Applicant: Robert Goldspink Owner: Brian Arthur APN: 038-151-89

Agenda Date: January 15, 2009 Agenda Item #: **4** Time: After 10:00 a.m.

Project Description: Proposal to construct an approximately 2,544 square foot, two story single family dwelling including a 450 square foot attached garage, elevator, a three foot six inch high retaining wall within the required 20 foot front yard setback and approximately 160 cubic yards of grading.

Location: Project located on the south side of Oakhill Road approximately 380 feet west of the intersection with Seacliff Drive (between 735 and 749 Oakhill Road).

Supervisoral District: 2nd District (District Supervisor: Ellen Pirie)

Permits Required: Coastal Development Permit, Residential Development Permit **Technical Reviews**: Preliminary Grading Approval, Design Review

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 09-0139, based on the attached findings and conditions.

Exhibits

- A. Project plans
- B. Findings
- C. Conditions
- D. Categorical Exemption (CEQA determination)
- E. Assessor's, Location, Zoning and General Plan Maps
- F. Comments & Correspondence
- G. Geotechnical Engineering Report review letter, dated 12/20/05
- H. Excerpts of Conclusions and Recommendations from Geologic Investigation prepared by Rogers E.

Johnson & Associates, dated 10/24/05 (report on file)

- I. Excerpts of Discussion, Conclusion and Recommendation from Geotechnical Investigation prepared by Haro, Kasunich & Associates, Inc., dated 11/2005 (report on file)
- J. Evaluation of Culvert Analysis and Brick Retaining Wall by Mike Van Horn, dated 8/15/08 and 8/22/08
- K. Plan Review letters from Engineering Geologist and Geotechnical Engineer

L. Arborist Report by Nature First, dated 11/8/07

Parcel Information

Parcel Size:	5,100 square feet (net site area)
Existing Land Use - Parcel:	Vacant
Existing Land Use - Surrounding:	Single-Family Residential
Project Access:	Oakhill Drive
Planning Area:	Aptos
Land Use Designation:	R-UL (Urban Low Density Residential)
Zone District:	R-1-10 (Single family residential - 10,000 square feet
	minimum)
Coastal Zone:	X Inside Outside
Appealable to Calif. Coastal Comm.	X Yes No

Environmental Information

Geologic Hazards:	Coastal bluff instability – proposed development outside of 100-year
	setback
Soils:	Soil 179 (Watsonville Loam)
Fire Hazard:	Not a mapped constraint
Slopes:	> 70% slope associated with coastal bluff to the rear of the lot
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	160 cubic yards
Tree Removal:	No trees proposed to be removed
Scenic:	Mapped Resource
Drainage:	Existing drainage adequate
Archeology:	Not mapped/no physical evidence on site

Services Information

Urban/Rural Services Line:	X Inside _ Outside
Water Supply:	Soquel Creek Water District
Sewage Disposal:	Santa Cruz County Sanitation District
Fire District:	Aptos/La Selva
Drainage District:	Zone 6

History

The subject parcel was granted an Unconditional Certificate of Compliance under Permit #01-0068 on June 10, 2003. In March 2005, Coastal Development Permit 04-0531 was approved to allow the demolition of an existing deck and elevator shaft located on the adjacent property to the east, which had been constructed over the shared property line. According to surveyed plans, a portion of the adjacent dwelling continues to encroach approximately four feet onto the subject site. On December 12, 2005, the County Geologist accepted Engineering Geology and Geotechnical Reports, which established the appropriate 100-year coastal bluff setback and building envelope for a single-family dwelling.

On September 17, 2007 the current property owner applied for a Coastal Development Permit, a Residential Development Permit, Preliminary Grading Approval and an Exception to the County Geologic Hazard Ordinance (#07-0548) to allow the construction of a new single-family home and to allow site grading to encroach into the 100-year geologic setback. Application 07-0548 was denied without prejudice by the Zoning Administrator on January 16, 2009 primarily due to the proposed grading encroachment. The design of the proposed dwelling was also determined to be incompatible with the homes in the neighborhood with respect to the roof forms, the selection of building materials and the overall architectural style.

Application 07-0548 was denied without prejudice. County Code Section 18.10.135 allows for immediate re-application and therefore the current application was made on April 16, 2009. The proposed design has been modified to conform to County policies and codes and the grading has been significantly reduced from what was previously proposed.

Project Setting

The property is located at the top of a coastal bluff on the south side of Oakhill Road. The bluff is located at the southern end of the parcel, immediately above Las Olas Drive. Three retaining walls of approximately four feet in height are located on the subject property, one of which goes under the neighboring structure to the east at the point at which the structure encroaches onto the subject lot. A letter submitted from a structural engineer under the previous application (#07-0548) verified that the retaining wall is not attached to the neighboring structure (Exhibit J). A 48" redwood tree on the property shall be retained. The surrounding neighborhood is developed with one and two-story single family dwellings, both along Oakhill Road and at the base of the bluff across Las Olas Drive.

Zoning & General Plan Consistency

The subject property is a parcel of approximately 8,276 square feet in gross site area and 5,100 square feet in net site area after the deduction of the coastal bluff. The site is located in the R-1-10 (Single family residential - 10,000 square feet minimum) zone district, a designation which allows residential uses. The proposed single-family dwelling is a principal permitted use within the zone district and the project is consistent with the site's (R-UL) Urban Low Density Residential General Plan designation.

	R-1-10 Site Standards	Proposed Residence
Front Yard Setback	20 feet	20 feet
Rear Yard Setback	15 feet	100 +/- **
Side Yard Setback	5 and 5 feet*	5 and 5 feet
Building Height	28 feet	28 feet
Number of Stories	2	2
Lot Coverage	40%***	33%
Floor Area Ratio	50%	49.8%
Parking	3 spaces	3 spaces (two covered; one
		tandem in driveway)

County Code Section 13.10.323 allows for 5 and 5 foot side yard setbacks for parcels less than 60 feet wide.

** 100-year Geologic Setback established by approved Geologic and Geotechnical reports is located approximately 33 feet from the top of the break in slope

*** Per Ordinance 5042, effective 6/10/09, lot coverage increased from 30% to 40% in the Coastal Zone.

The proposed single-family dwelling is two stories with an attached garage. The house is stepped up the slope from Oakhill Road. The garage counts as a story (County Code 13.10.700-B) as it does not meet the definition of a basement. The elevator, elevator lobby and basement storage areas located on the garage level meet the definition of a basement area and do not qualify as a story. Additionally, the storage area located above the garage does not meet the definition of a story as it is not connected to the floor above. Therefore the proposed dwelling conforms to the two-story limit applied within the Urban Services Line.

Local Coastal Program Consistency

The proposed new single-family dwelling conforms to the County's certified Local Coastal Program, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. Developed parcels in the area contain primarily two-story single-family dwellings. The architectural styles vary in the area. Exterior materials in the vicinity include the use of wood shingles, horizontal wood siding and stucco exteriors. Similarly, roof styles and fenestration vary throughout the neighborhood as well. The design submitted fits within the range of styles exhibited in the area, with uniform roof planes, a modest degree of articulation providing visual interest, and the use of colors and materials that soften the overall appearance of the new dwelling. The design proposed as a part of the original Coastal Development application (#07-0548) was found to be incompatible with the neighborhood due in part to the inclusion of a south-facing large round window, a lack of cohesive roof geometry and a lack of north-facing fenestration. The current design includes major revisions, which address the previous shortcomings and results in a compatible overall appearance. Specifically, the large window has been eliminated, a more interesting fenestration scheme has been incorporated along the north façade and the rooflines have been modified to reflect a more unified presentation. Another modification to the original design includes the use of different exterior colors for the first and second stories, which will differentiate and break up an the otherwise monolithic appearance of stucco.

The project site is not identified as a priority acquisition site in the County's Local Coastal Program. While the site is located between the shoreline and the first public road, there is no public access from Oakhill Drive. Therefore the proposed project will not interfere with public access to the beach, ocean, or other nearby body of water.

Coastal Bluff

The proposed single-family dwelling is located at the top of a coastal bluff. Geologic and geotechnical reports (Exhibits H, I) established a 100-year geologic setback line 33 feet landward of the edge of the bluff and set the building envelope as required by General Plan Policy 6.2.12. The technical reports demonstrate that the building envelope would provide a stable site for 100-year span. The current proposal includes approximately 16 cubic yards of grading within the 33-foot bluff setback. While grading is generally not allowed within the 100-year setback to the coastal bluff, Section 16.10.070(h)2(i) of the County Code defines grading as any earthwork "...other than minor leveling, of the scale typically accomplished by hand, necessary to create beneficial drainage patters...that does not excavate into the face or base of the bluff." The proposed earthwork will facilitate the establishment of positive drainage away from the bluff and a condition of approval is included to require the grading within the 100-year setback to be performed by hand. Therefore an exemption to the Geologic Hazards Ordinance is not required.

Additionally, portions of the existing retaining wall and walkways will be removed. An evaluation of the impact of the removal of portions of the wall was performed by a civil engineer (Exhibit J), who concluded that the alterations to the brick retaining wall and small amount of earthwork do not threaten the structural integrity of the wall. The evaluation also found that the adjacent residence does not depend upon the presence of the brick retaining wall for any structural support; therefore removal of portions of the wall are not expected to have a negative impact on the adjacent residence.

No additional structures or hardscape are proposed for the bluff side of the dwelling. Drainage calculations have been provided to demonstrate that the post-development runoff rates do not exceed pre-development rates.

All work performed within the bluff setback will conform to the recommendations of the project geotechnical engineer and engineering geologist. The County Geologist has reviewed and approved the technical reports for this site (Exhibit H). Additionally, the plans have been reviewed and approved by the Drainage Section of the Department of Public Works.

Design Review

The proposed new single-family dwelling complies with the requirements of the County Design Review Ordinance, in that the proposed project will incorporate site and architectural design features as uniform roof forms and fenestration that complement the architectural styles of the surrounding homes. The north elevation presents a nicely articulated street presence, largely screened by the presence of a 48-inch redwood tree at the eastern portion of the lot. The cross gable design and gently arched windows and roof elements soften the overall appearance from the north, while the fenestration and tube and glass railing at the beach-facing south elevation are entirely consistent with surrounding designs along the bluff. Application #: 09-0139 APN: 038-151-89 Owner: Brian Arthur

Scenic Resources

The proposed dwelling will be visible from the public beach and from Las Olas Drive to the south. General Plan Policy 5.10.7 allows the placement of new permanent structures on when the structures constitute infill on existing lots of record *where compatible with the pattern of existing development.* The proposed dwelling presents a façade to the beach that is of similar bulk and mass as the existing adjacent structures. The photo simulation depicts a southern elevation that is broken up by vertical elements and balanced fenestration. The proposed color scheme consists of muted earth tones and is similar to the color of the vegetated coastal bluff in the foreground. The color allows the structure to blend in with the natural environment to a large degree, particularly when compared to the relatively stark white color of the existing dwelling immediately to the east. A condition of approval has been included which will require the glazing to be non-reflective. The overall impact of the proposed dwelling on the view from the beach will be less than significant based on the size, design and color of the structure.

Residential Development Permit

The proposal includes the construction of a retaining wall that will exceed the three-foot maximum height limit within the front yard setback and requires a Residential Development Permit. The proposed retaining wall is located uphill from the traveled roadway and will not affect sight distance for entering and exiting the property. There is no pedestrian area on this side of Oakhill with which the wall would interfere. The three foot, six inch retailing wall will be made of concrete and finished with stucco and painted to match the color of the house.

In conjunction with the proposal made under application # 07-0548, the project was reviewed by a certified arborist in order to assess possible impacts of the proposed retaining wall and other improvements to the 48-inch redwood tree on the property (Exhibit L). All tree protection measures recommended by the project arborist are included as required conditions of approval and include a pre-construction meeting with contractors and written verification by the arborist that all pre-construction measures have been implemented.

Conclusion

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

Staff Recommendation

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number **09-0139**, based on the attached findings and conditions.

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

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

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Coastal Development Permit Findings

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

This finding can be made, in that the property is zoned R-1-10 (Single family residential - 10,000 square feet minimum), a designation which allows residential uses. The proposed new single-family dwelling is a principal permitted use within the zone district, consistent with the site's (R-UL) Urban Low Density Residential General Plan designation.

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

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements in that no such easements or restrictions are known to encumber the project site.

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

This finding can be made, in that the development is consistent with the surrounding neighborhood in terms of architectural style; the site is surrounded by lots developed to an urban density; the colors are similar to that of the vegetated coastal bluff below and are thus complementary to the site. The new dwelling will incorporate a cross gable design with the front gable hipped and the second story stepped back from the street so as to avoid a monolithic and imposing appearance. Additionally, two complementary but different exterior paint colors will be used at the street side in order to provide differentiation in the use of a stucco exterior. The street view is further mitigated by the presence of a 48-inch redwood tree and planting area at the eastern side of the lot.

Varied roof planes, deck and fenestration provide visual interest at the street front, while the window design and tube and glass railing at the beach-facing south elevation are generally consistent with surrounding designs along the bluff. The portion of the dwelling that is visible from the beach is consistent in shape and height with the silhouettes of the houses on either side. Additionally, the proposed color blends in well with the color and appearance of the bluff below. The overall effect is en entirely compatible presentation from both the Oakhill street front and from the beach below. The glazing for the windows facing the beach and Las Olas Drive are conditioned to be of non-reflective material only to further prevent any visual impact to the viewshed.

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

This finding can be made, in that while the project site is located between the shoreline and the first public road, there is no available beach access from the subject parcel. Consequently, the new single-family dwelling will not interfere with public access to the beach, ocean, or any nearby body of water. Further, the project site is not identified as a priority acquisition site in the County Local Coastal Program.

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

This finding can be made, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. The proposed two-story dwelling is consistent with the size and design of the adjacent dwellings as well as the dwellings located along Las Olas Drive at the base of the coastal bluff. Additionally, residential uses are allowed uses in the R-1-10 (Single family residential - 10,000 square feet minimum) zone district of the area, as well as the General Plan and Local Coastal Program land use designation. Developed parcels in the area contain single-family dwellings of primarily two-story construction. Size and architectural styles vary widely in the area, and the design submitted is not inconsistent with the existing range, utilizing a blend of traditional elements such as hipped, cross gabled roof design, eave overhangs and arched window elements.

The south-facing elevation presents a modest façade, which is in scale with the adjacent dwellings and incorporates vertical elements and balanced fenestration to further soften the apparent bulk and mass of the structure from the beach and from Las Olas Drive. The proposed color scheme complements and blends in with the natural hues of the vegetated coastal bluff below so that the overall appearance will harmonize with the existing structures in the vicinity and will not represent a negative impact to the view from the beach.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for residential uses. Though the structure is located approximately 33 feet from the coastal bluff, the dwelling will not encroach into the 100-year geologic setback line established by the engineering geologist for the project. All recommendations made by the engineering geologist and geotechnical engineer (Exhibits H, I) have been incorporated into the required conditions of approval of this permit.

Proposed drainage improvements will ensure that all drainage be directed away from the bluff face, potentially lengthening the life and preserving the stability of the bluff in order to protect the health, safety and welfare of the residents of the subject dwelling and surrounding properties. No structures are proposed to be built within the required 100-year bluff setback and the minimal amount of grading done to improve the drainage will be done by hand. Per the recommendations made by the project geotechnical engineer, the house will be constructed on a pier and grade beam foundation. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. The proposed single-family dwelling will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure will conform to all required site standards for the zone district.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the new single-family dwelling and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the R-1-10 (Single family residential - 10,000 square feet minimum) zone district in that the primary use of the property will be one new single-family dwelling that meets all current site standards for the zone district.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed residential use is consistent with the use and density requirements specified for the Urban Low Density Residential (R-UL) land use designation in the County General Plan.

The proposed new single-family dwelling will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and meets all current site and development standards for the zone district as specified in Policy 8.1.3 (Residential Site and Development Standards Ordinance), in that the new single-family dwelling will not adversely

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shade adjacent properties, and will meet current setbacks for the zone district that ensure access to light, air, and open space in the neighborhood.

The project consists of infill development, which is compatible with the surrounding structures in terms of height, mass and bulk and design and therefore complies with General Plan Policy 5.10.7 (Visual Resources- Open Beaches and Blufftops). The proposed dwelling will be painted a sage green, which blends in with the vegetation located on the bluff below. The ocean-facing windows shall be restricted to the use of non-reflective glazing material further reducing the visual impact of the new house.

The proposed new single-family dwelling will not be improperly proportioned to the parcel size or the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that the proposed new single-family dwelling will comply with the site standards for the R-1-10 zone district (including setbacks, lot coverage, floor area ratio, height, and number of stories) and will result in a structure consistent with a design that could be approved on any similarly sized lot in the vicinity.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the proposed new single-family dwelling is to be constructed on an existing undeveloped lot. The expected level of traffic generated by the proposed project is anticipated to be only 1 peak trip per day, such an increase will not adversely impact existing roads and intersections in the surrounding area.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed structure is located in a mixed neighborhood containing a variety of architectural styles, and the proposed new single-family dwelling is consistent with the land use intensity and density of the neighborhood. Surrounding dwellings are characterized predominately by two-story structures of similar bulk and mass.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed new single-family dwelling will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area. The new dwelling incorporates several design features such as hipped, cross-gabled roof design, articulation at the street front and fenestration that provides visual interest. The proposal has been reviewed and approved by the County Urban Designer.

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Conditions of Approval

- Exhibit A: 12 Sheets, prepared by Robert Goldspink Architect, dated 3-10-09, (Sheets 1-7, 12 & 13 revised 9-18-09), Sheet 11 revised 3-25-09, Topographic Map prepared by Robert L. DeWitt, dated 8-27-07.
- I. This permit authorizes the construction of a new 2,544 square foot single-family dwelling, with 450 square foot attached garage and 3'-6" tall retaining wall within the front yard setback. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:
 - A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
 - B. Obtain a Building Permit from the Santa Cruz County Building Official.
 - 1. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.
 - C. Obtain a Grading Permit from the Santa Cruz County Building Official.
 - D. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder) within 30 days from the effective date of this permit.
- II. Prior to issuance of a Building Permit the applicant/owner shall:
 - A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. Any changes from the approved Exhibit "A" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:
 - 1. One elevation shall indicate materials and colors as depicted on the "Exterior Materials and Colors" sheet submitted by the project architect (dated April 6, 2009). If there is a significant conflict between the color shown on the sheet and the written description on the sheet, the color sample provided shall be considered the approved colors.

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- a. The north-facing exterior shall incorporate two complementary, but distinct colors to differentiate the first and second stories.
- 2. Non-reflective glazing material shall be used for all windows that are visible from the beach.
- 3. Grading, drainage, and erosion control plans that include the following information:
 - a. All grading performed within the 100-year geologic setback shall be done by hand.
 - b. A maximum excavation at the crest of the slope at the blufftop must not exceed 6 inches.
 - c. Grading plans shall include all grading volumes and calculations, a destination for off-hauled material, existing and proposed contours and top-of-wall/bottom-of-wall elevations for all retaining walls.
- 4. Submit a landscape plan showing the planting of drought-resistant landscaping
- 5. No deck, patios, spas, or other surfaced areas or structures shall be allowed within the 100-year geologic setback.
- 6. No portion of the structure may encroach into the 100-year geologic setback, with the exception of eaves and gutters, which may encroach 3 feet into the setback. Any such encroaching eaves must be sloped and may not be used as an extension of a deck or other living space.
- 7. The building plans must include a roof plan and a surveyed contour map of the ground surface, superimposed and extended to allow height measurement of all features. Spot elevations shall be provided at points on the structure that have the greatest difference between ground surface and the highest portion of the structure above. This requirement is in addition to the standard requirement of detailed elevations and cross-sections and the topography of the project site which clearly depict the total height of the proposed structure. Maximum height is 28 feet.
- 8. Details showing compliance with fire department requirements.
- B. Submit four copies of the approved Discretionary Permit with the Conditions of Approval attached. The Conditions of Approval shall be recorded prior to submittal, if applicable.

- C. Meet all requirements of and pay Zone 6 drainage fees to the County Department of Public Works, Stormwater Management. Drainage fees will be assessed on the net increase in impervious area.
- D. Meet all requirements of and pay fees to the County Department of Public Works, Sanitation Section.
- E. Meet all requirements and pay any applicable plan check fee of the Aptos/La Selva Fire Protection District.
- F. Submit 3 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer.
- G. Submit 3 copies of the Engineering Geology Report prepared and stamped by a licensed Engineering Geologist.
- H. Submit a Tree Protection and Tree Preservation plan that incorporates all recommendations made by the project arborist in her letter of November 8, 2007 (Exhibit L).
- I. Submit a plan review letter from a certified arborist, which states that the final building and grading plans conform to the recommendations made in the assessment prepared for the site. Construction must adhere to the following mitigation measures.
- J. Submit plan review letters from the project engineering geologist and geotechnical engineer stating that the final grading, drainage and erosion control plans are in conformance with the recommendations made in the approved technical reports prepared for the project.
- K. Pay the current fees for Parks and Child Care mitigation for 3 bedroom(s). Currently, these fees are, respectively, \$1,000 and \$109 per bedroom.
- L. Pay the current fees for Roadside and Transportation improvements for 3 bedroom(s). Currently, these fees are, respectively, \$2,740 and \$2,740 per unit.
- M. Provide required off-street parking for 3 cars. Parking spaces must be 8.5 feet wide by 18 feet long and must be located entirely outside vehicular rights-of way. Parking must be clearly designated on the plot plan.
- N. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.
- O. Complete and record a Declaration of Restriction to maintain a non-habitable basement. You may not alter the wording of this declaration. Follow the instructions to record and return the form to the Planning Department.

- P. Complete and record a Declaration of Geologic Hazard. You may not alter the wording of this declaration. Follow the instructions to record and return the form to the Planning Department.
- III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
 - A. All site improvements shown on the final approved Building Permit plans shall be installed.
 - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
 - C. The project must comply with all recommendations of the approved soils reports.
 - D. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

IV. Operational Conditions

- A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.
- V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

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- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.
- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
 - 1. COUNTY bears its own attorney's fees and costs; and
 - 2. COUNTY defends the action in good faith.
- C. <u>Settlement</u>. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. <u>Successors Bound</u>. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

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

Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Application #: 09-0139 APN: 038-151-89 Owner: Brian Arthur

Approval Date:

Effective Date:

Expiration Date:

Don Bussey Deputy Zoning Administrator Robin Bolster-Grant Project Planner

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

EXHIBIT C

CALIFORNIA ENVIRONMENTAL QUALITY ACT NOTICE OF EXEMPTION

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

Application Number: 09-0139 Assessor Parcel Number: 038-151-89 Project Location: No Situs

Project Description: Proposal to construct an approximately 2,322 square foot single-family dwelling with 450 square foot attached garage, elevator, and 3'-6" retaining wall located within the required 20-foot front yard setback.

Person or Agency Proposing Project: Robert Goldspink

Contact Phone Number: (831) 688-8950

A	The proposed activity is not a project under CEQA Guidelines Section 15378.
B	The proposed activity is not subject to CEQA as specified under CEQA Guidelines
	Section 15060 (c).

- C. <u>Ministerial Project</u> involving only the use of fixed standards or objective measurements without personal judgment.
- **D.** <u>Statutory Exemption</u> other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type:

E. X Categorical Exemption

Specify type: Class 3 - New Construction or Conversion of Small Structures (Section 15303)

F. Reasons why the project is exempt:

Construction of a single-family dwelling in a residential zone.

In addition, none of the conditions described in Section 15300.2 apply to this project.

Date: 12/21/09

Robin Bolster-Grant, Project Planner





GREEN SLATE 3 LBS 3685

А.	Roof	Elk composition roofing, color: Antique Slate
₿.	Walls, generally	Elastomeric acrylic stucco top coat, Dryvit color to match Kelly Moore 'Keystone' #186
C .	Garage & Step walls	Elastomeric acrylic stucco top coat, Dryvit color to match Kelly Moore 'Wood Moss' #197 with heavier texture than rest of house
D.	Exterior Doors & Windows	White
Е.	Gutters & Downspouts	Copper
F.	Porch Canopy	Stainless steel frame with frosted glass canopy
G.	Fascias, Soffits & Struts	Painted wood, color: white
Н.	West Stair Balustrade	Powder-coated, galvanized wire mesh with tube posts and handrail, color: white
ĺ.	South Deck Balustrade	Powder-coated tube posts and handrail, color: white, with glass panels
J.	Steps & Landings	Colored, rock-salt concrete, color: Davis 'Slate Green'
К.	Driveway	Colored, stamped concrete, color: Davis 'Slate Green'

Arthur Residence EXTERIOR MATERIALS AND COLORS

Robert J Goldspink Architect 8042 Soquel Drive Aptos CA 95003 tel [831] 688 8950 fax [831] 688 4402

April 6th 2009











COUNTY OF SANTA CRUZ Discretionary Application Comments

Project Planner: Robin Bolster Application No.: 09-0139 APN: 038-151-89 Date: December 24, 2009 Time: 11:12:23 Page: 1

EXHIBIT 2 ·

Environmental Planning Completeness Comments

Environmental Planning Miscellaneous Comments

----- REVIEW ON JULY 20, 2009 BY ANTONELLA GENTILE ------ Miscellaneous comments:

1. A minimum amount of grading will be allowed outside of the 100-year geologic envelope for the purpose of directing drainage toward the street rather than over the slope.

2. Although this site is mapped as Riparian Woodland, upon site visit no riparian resources were found.

3. Prior to approval of this application, submit a plan review letter from the project arborist that references the site plan and grading and drainage plan and states the the plans conform to the recommendations in the arborist's report dated 11/8/07 submitted with application 07-0548.

Conditions

Prior to building permit issuance:

1. Plans shall be prepared in conformance with the geology report prepared by Rogers E. Johnson dated October 24, 2005 and all updates, the geotechnical engineering report by Haro, Kasunich and Associates dated November 2005 and all updates and the arborist's report dated 11/8/07 by Nature First and all updates.

2. Plans shall include references to the geology report/updates, the geotechnical engineering report/updates, and the arborist's report/updates.

3. Apply for a grading permit at the time of building permit application submittal. Grading plans shall include all grading volumes and calculations, a destination for off-hauled material, existing and proposed contours, and top-of-wall and bottom-of-wall elevations for all retaining walls.

4. Provide an erosion control plan.

5. Provide updates and plan review letters from the geotechnical engineer, the geologist, and the project arborist.

6. Submit 2 copies of all technical reports for inclusion with the building permit plans.

Prior to permit final:

Project Planner: Robin Bolster Application No.: 09-0139 APN: 038-151-89 Date: December 24, 2009 Time: 11:12:23 Page: 2

1. A pre-construction meeting shall be held onsite prior to the commencement of construction. Environmental Planning staff, the geotechnical engineer, the contractor, the applicant, and the arborist shall attend. Please note this on the building permit plans.

2. Final letters shall be required from the geologist, the geotechnical engineer, the arborist, and the civil engineer or architect who prepares the grading plans.

A plan review letter is required from the arborist at this time to confirm that the recommendations from the arborist are reflected on the plans.

See above for conditions.

Dpw Drainage Completeness Comments

LATEST COMMENTS HAVE NOT YET BEEN SENT TO PLANNER FOR THIS AGENCY

======= REVIEW ON JULY 14. 2009 BY TRAVIS RIEBER ========

1. Please submit the Civil Engineering Calculations, demonstrating the adequacy of the offsite drainage path, from discretionary application 07-0548 dated 10/2/08 for review.

2. What type of surfacing is being proposed for the driveway? The county would prefer the use of semi-impervious surfacing (paver blocks, base rock, gravel, pervious concrete) where feasible.

The applicant is encouraged to discuss the above comments with the reviewer to avoid unnecessary additional routings. A \$210.00 additional review fee shall be applied to all re-submittals starting with the third routing.

The plans with revisions dated 9/18/2009, Civil Engineering Computations dated 10/2/2008 and Evaluation of Culvert Analysis dated 8/15/2008 have been received and are approved for the building application stage. Please see miscellaneous comments for issues to be addressed at the building application stage.

Dpw Drainage Miscellaneous Comments

LATEST COMMENTS HAVE NOT YET BEEN SENT TO PLANNER FOR THIS AGENCY

2. For fee calculations please provide tabulation of new impervious and semi-impervious (gravel, base rock, paver blocks, pervious pavment) areas resulting from the Project Planner: Robin Bolster Application No.: 09-0139 APN: 038-151-89 Date: December 24, 2009 Time: 11:12:23 Page: 3

proposed project. Make clear on the plans by shading or hatching the limits of both the existing and new impervious areas. To receive credit for the existing impervious surfaces to be removed please provide documentation such as assessor-s records, survey records, aerial photos or other official records that will help establish and determine the dates they were built.

Note: A drainage fee will be assessed on the net increase in impervious area. Reduced fees are assessed for semi-pervious surfacing (50%) to offset costs and encourage more extensive use of these materials.

3. A civil engineer has to inspect the drainage improvements on the parcel and provide public works with a letter confirming that the work was completed per the plans. The civil engineer-s letter shall be specific as to what got inspected whether invert elevations, pipe sizing, the size of the mitigation features and all the relevant design features. Notes of -general conformance to plans- are not sufficient. An as-built plan may be submitted in lieu of the letter. Upon approval of the project a hold will be placed on the permit to be released once a satisfactory letter is received. ______ UPDATED ON OCTOBER 21, 2009 BY TRAVIS RIEBER _______ See previous miscellaneous comments

Aptos-La Selva Beach Fire Prot Dist Completeness C

----- REVIEW ON JULY 9, 2009 BY ERIN K STOW ----- DEPARTMENT NAME: Aptos/La Selva Fire District APPROVED

Aptos-La Selva Beach Fire Prot Dist Miscellaneous

----- REVIEW ON JULY 9, 2009 BY ERIN K STOW ------ NO COMMENT



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, 4[™] FLOOR, SANTA CRUZ, CA 95060 (831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123 TOM BURNS, PLANNING DIRECTOR

December 20, 2005

Emily and Tom Oswalt, Trustees P.O. Box 310 Aptos, CA 95001

Subject: Review of Engineering Geology Report, by Rogers E. Johnson dated October 24, 2005, Project # C05041-56 and Geotechnical Engineering Report by Haro, Kasunich and Assoicates, Inc. Dated November 2005, Project #: SC8970 APN 038-151-89, Application #: 05-0753

Dear Emily and Tom Oswalt,

The purpose of this letter is to inform you that the Planning Department has accepted the subject reports and the following items shall be required:

- 1. All construction shall comply with the recommendations of the reports.
- 2. Final plans shall reference the reports and include a statement that the project shall conform to the reports' recommendations.
- 3. Before building permit issuance a *plan review letters* shall be submitted to Environmental Planning. The authors of the reports shall write the *plan review letters*. These letters shall state that the project plans conform to the reports' recommendations.
- 4. The Engineering Geologist must identify the location of the Coastal Bluff on their geologic map, and a copy of that map must be submitted with any future permit application. All further submittal to the County must include a site plan that has a representation of the site relief, the geologic acceptable development envelope, and the Coastal Bluff. A civil engineer must prepare this site plan and any grading plans.
- 5. The attached declaration of geologic hazards must be recorded before the issuance of the building permit issuance.

After building permit issuance the soils engineer *must remain involved with the project* during construction. Please review the *Notice to Permits Holders* (attached). In addition, the engineering geologist will need to approve in writing the location of the buildings footings and provide a

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-YUDIT.

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Review of Engineering Sogy Report, By Rogers E. Johnson and Ssocaites, Project # C05041-56, and Geotechnical Engineering, by Haro Kasunich and Associates, Report No.: SC8970 APN: 038-151-89

Page 2 of 5

final letter at the end of the project that indicates that all of the work complies with the recommendations to the report.

Our acceptance of the reports is limited to its technical content. Other project issues such as zoning, fire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please call the undersigned at (831) 454-3175, or e-mail joe.hanna@co.santa-cruz.ca.us if we can be of any further assistance.

Sincerely, los

Seph L. Hanna, CEG 1313
 Jounty Geologist
 c: Robert Loveland, Environmental Planning
 Haro, Kasunich and Assoicates, Inc, attention Rick Parks PE
 Rogers E. Johnson and Associates

Tom Oswalt October 24, 2005 Job No. C05041 - 56 Page 11

coefficient (k) of 0.54. This is based on a predicted <u>PGA of 0.64g</u> (mean plus one standard deviation), a total bluff height of 99 feet and an estimated slide height of 37 feet, occurring within the marine terrace deposits and Aromas Sand.

Current Santa Cruz County standards require that the pseudostatic slope stability analysis show the site stable beyond a 1.2 factor of safety. Given this standard, a minimum seismic coefficient (k) of 0.15 should be used as suggested within Special Publication 117 (California Division of Mines and Geology, 1997).

Aseismic Slope Stability

The sea cliff is also subject to slope failure under aseismic conditions. Not all of the materials that are loosened by earthquakes fail as landslides; some remains on the bluff. This "earthquake weakening" together with weathering of the bluff can produce loose debris on the slope. Subsequent storms can mobilize this loose debris. Although generally smaller than seismically generated failures, storm generated landslides are an order of magnitude more common (a ten year cycle versus a hundred year cycle).

Our review of time sequential aerial photographs revealed numerous failures of the subject coastal bluff. Subsequent to construction of the seawall, these failures were primarily the result of over saturation of loose debris mantling the slope. Individual failures tended to be localized either within the upper bluff composed of the marine terrace deposits and the Aromas Sand or within the lower bluff composed of the Purisima Formation sandstone. A significant portion of the failures were relatively large, covering the entire width of the property.

During a site visit on August 10, 2005, we observed a relatively large, aseismic, joint controlled, block failure of the bluff at the subject property. The failure was restricted to the upper approximately 30 feet of the Purisima Formation sandstone and incorporated approximately 150 cubic yards of material. It spanned about a 30 foot width of bluff-face and was up to a maximum of 6 feet thick (measured perpendicular to the bluff-face).

CONCLUSIONS and RECOMMENDATIONS

1. The coastal bluff at the subject property is protected from surf erosion and as a consequence the rate of retreat of the toe of the bluff is very slow. However, the top of the bluff at the subject property will continue to retreat until the alluvial deposits reach their natural angle of repose, forming a stable slope. The ultimate configuration of the bluff top in 100 years is difficult to predict with accuracy. However, given our observations of the materials that underlie the bluff at the subject property we can establish a reasonable estimate. The Purisima Formation sandstone forming the base of the bluff may continue to fail in joint bounded blocks. Therefore we have estimated an additional 20 feet of additional block failure (measured perpendicular to the bluff-face, see Plate 2). The upper bluff deposits, which include the Aromas Sand and marine terrace deposits, will continue

Tom Oswalt October 24, 2005

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Job No. C05041 - 56 Page 12

to erode and fail until the angle of their slope is about 33 degrees (1.5:1 slope gradient). The projection of the 1.5:1 slope to the terrace surface from the contact in the cliff face of the upper bluff deposits with the underlying Purisima Formation sandstone defines the 100 year bluff top. This estimate assumes no significant shifts in climactic conditions causing an increased rate of erosion. All future construction on the bluff top should be located behind this 100 year geologic setback line (Plate 1).

2. The site is located in an area of high seismic activity and will be subject to strong seismic shaking in the future. Modified Mercalli Intensities of up to VIII are possible. The controlling seismogenic source for the subject property is the San Andreas fault, 12 kilometers to the northeast. The design earthquake on this fault should be M_w 7.9. Expected duration of strong shaking for this event is about 31 seconds. Deterministic analysis for the site yields a mean peak ground acceleration plus one dispersion of 0.64g.

3. If the project geotechnical engineer performs pseudostatic slope stability analysis of the coastal bluff backing the subject residence, they should utilize our geologic cross sections. Current practice suggests that a site-specific seismic coefficient (k) be used in the analysis when considering a factor of safety of greater than 1.0. Ashford and Sitar (2002) recommend a method for calculating a site-specific pseudostatic seismic coefficient (k) specifically for a coastal bluff top setting. Following their guidelines yields a coefficient (k) of 0.54. Current Santa Cruz County standards require that the pseudostatic slope stability analysis show the site stable beyond a 1.2 factor of safety. Given this standard, a minimum seismic coefficient (k) of 0.15 should be used as suggested within Special Publication 117 (California Division of Mines and Geology, 1997).

4. Drainage from improved surfaces, such as walkways, patios, roofs and driveways, at the top of the bluff should be collected in impermeable gutters or pipes and either carried to the base of the bluff via closed conduit or discharged into an established storm drain system that does not issue onto the bluff. At no time should any concentrated discharge be allowed to spill directly onto the ground adjacent to the existing residence. Any drain water on paved areas should not be allowed to flow toward the residence or toward the bluff top. The control of runoff is essential for control of erosion and prevention of ponding.

5. We request the privilege of reviewing all geotechnical engineering, civil engineering, drainage, and architectural reports and plans pertaining to the proposed development.

INVESTIGATION LIMITATIONS

1. The conclusions and recommendations contained herein are based on probability and in no way imply that the proposed development will not possibly be subjected to ground failure, seismic shaking or landsliding of such a magnitude that it overwhelms the site.

31/56 Rogers E. Johnson & Associates



DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our investigation, the proposed project appears compatible with the site, provided the following recommendations are incorporated into the design and construction of the proposed project.

One of the primary purposes of our investigation was to work with the project engineering geologists, Rogers Johnson & Associates, to estimate the configuration of the coastal blufftop in 100 years in order to determine a blufftop setback line allowing for a project building envelope design life of at least 100 years.

The slope stability model used to determine the blufftop setback included 20 feet of recession of the blufftoe/bluff face preceding a design seismic failure of the blufftop. We have included a copy of the <u>Geologic Map</u> dated 5 October 2005 with this report showing the "100 Year Geologic Setback Line" and the "Geologically Stable Building Envelope". The delineated building envelope is about 32 feet landward of the existing blufftop.

1.1 2.2

The referenced parcel is one of about sixteen bluff parcels including Seacliff Beach State Park, which are situated above Las Olas Drive. Historically, bluff face failures or rockfall events have impacted the blufftoe and the adjacent Las Olas Drive. Rockfall

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mitigation recommendations for the referenced parcel are beyond the scope of this report. We recommend future owners of the parcel consult with a geotechnical engineer or engineering geologist experienced in rockrfall mitigation regarding such measures.

The proposed residence may be founded upon a drilled pier and grade beam foundation system.

The following recommendations should be used as guidelines for preparing project plans and specifications:

Site Grading

1. The geotechnical engineer should be notified <u>at least four (4) working days</u> prior to any site clearing or grading so that the work in the field can be coordinated with the grading contractor, and arrangements for testing and observation can be made. The recommendations of this report are based on the assumption that the geotechnical engineer will perform the required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

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2. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557 current.

3. Areas to be graded should be cleared of all obstructions including loose fill, building foundations, trees not designated to remain, or other unsuitable material. Existing depressions or voids created during site clearing should be backfilled with engineered fill.

4. Cleared areas should then be stripped of organic-laden topsoil. Stripping depth should be from 2 to 4 inches. Actual depth of stripping should be determined in the field by the geotechnical engineer. Strippings should be wasted off-site or stockpiled for use in landscaped areas if desired.

5. Areas to receive engineered fill should be scarified to a depth of 6 inches, moisture conditioned, and compacted to at least 90 percent relative compaction. Portions of the site may need to be moisture conditioned to achieve suitable moisture content for compaction. These areas may then be brought to design grade with engineered fill.

6. Engineered fill should be placed in thin lifts not exceeding 8 inches in loose thickness, moisture conditioned, and compacted to at least 90 percent relative



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compaction. The upper 12 inches of pavement and slab subgrades should be compacted to at least 95 percent relative compaction. The aggregate base below pavements should likewise be compacted to at least 95 percent relative compaction.

7. If grading is performed during or shortly after the rainy season, the grading contractor may encounter compaction difficulty, such as pumping or bringing free water to the surface, in the upper surface clayey and silty sands. If compaction cannot be achieved after adjusting the soil moisture content, it may be necessary to over-excavate the subgrade soil and replace it with angular crushed rock to stabilize the subgrade. We estimate that the depth of over-excavation would be approximately 24 inches under these adverse conditions.

8. Fills should be keyed and benched into firm soil in areas where existing slope gradients exceed 6:1 (horizontal to vertical). Subdrains will be required in areas where keyways or benches expose potential seepage zones.

9. The on-site soils generally appear suitable for use as engineered fill. Materials used for engineered fill should be free of organic material, and contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent larger than 4 inches.

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10. We estimate shrinkage factors of about 15 percent for the on-site materials when used in engineered fills.

11. All permanent cut and fill slopes should be inclined no steeper than 2:1 (horizontal to vertical).

12. Following grading, all exposed slopes should be planted as soon as possible with erosion-resistant vegetation.

13. After the earthwork operations have been completed and the geotechnical engineer has finished his observation of the work, no further earthwork operations shall be performed except with the approval of and under the observation of the geotechnical engineer.

Foundations

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14, The proposed residence may be supported on a drilled pier and grade beam foundation system. The foundation perimeter should be setback from the blufftop in conformance with the building envelope delineated on the project <u>Geologic Map</u>, Figure 2 in the Appendix of this report.

Drilled Piers

15. We recommend a drilled pier and grade beam foundation to support the proposed residence.

16. Drilled piers should be at least 18 inches in diameter and be embedded at least10 feet below existing grades.

17. Piers constructed in accordance with the above may be designed for an allowable end bearing of 4 ksf.

18. For passive lateral resistance, an equivalent fluid pressure of 250 psf may be assumed to act against two pier diameters. The upper 3 feet of soil should be neglected when computing passive resistance.

19. Prior to placing concrete, all foundation excavations should be thoroughly cleaned. The foundation excavations must be observed by the geotechnical engineer or his representative prior to placing concrete.

Retaining Walls and Lateral Pressures

20. Retaining walls should be designed to resist lateral earth pressures, a seismic surcharge and any additional surcharge loads. Walls up to 12 feet high should be

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designed to resist an active equivalent fluid pressure of 35 pcf for level backfills, and 50 pcf for sloping backfills inclined up to 2:1 (horizontal to vertical). Restrained walls should be designed to resist uniformly applied wall pressure of 23H psf per linear foot of wall for level backfills. A seismic surcharge within the retaining wall active pressure zone of 18H psf per linear foot of wall should also be used. The seismic surcharge should be applied at 0.6H above the base of the active zone.

21. The above lateral pressures assume that the walls are fully drained to prevent hydrostatic pressure behind the walls. Drainage materials behind the wall should consist of Class 1, Type A permeable material (Caltrans Specification 68-1.025) or an approved equivalent. The drainage material should be at least 12 inches thick. The drains should extend from the base of the walls to within 12 inches of the top of the backfill. A perforated pipe should be placed (holes down) about 4 inches above the bottom of the wall and be tied to a suitable drain outlet. Wall backdrains should be plugged at the surface with clayey material to prevent infiltration of surface runoff into the backdrains.

Slabs-on-Grade

22. We recommend that proposed slabs-on-grade be supported on at least 12 inches of non-expansive engineered fill compacted to at least 95 percent relative compaction. Prior to construction of the slab, the subgrade surface should be proof-

rolled to provide a smooth, firm, uniform surface for slab support. The project design professionals should determine the appropriate slab reinforcing and thickness, in accordance with the anticipated use and loading of the slab. However, we recommend that consideration be given to a minimum slab thickness of 5 inches and steel reinforcement necessary to address temperature and shrinkage considerations. At is recommended that rebar in lieu of wire mesh be used for slab reinforcement. The steel reinforcement should be held firmly in the vertical center of the slab during placement and finishing of the concrete with pre-cast concrete dobies.

23. In areas where floor wetness would be undesirable, a blanket of at least inches of free-draining gravel should be placed beneath the floor slab to act as a capillary break. Capillary break material should be free-draining, clean, angular gravel such as 3⁄4-inch drainrock. The gravel should be washed to remove fines and dust prior to placement on the slab subgrade. The vapor retarder should be a high quality membrane at least 10 mil thick and puncture resistant. An acceptable product for use as a vapor retarder is the Stego Wrap 10-mil Class A vapor retarder system manufactured by Stego Industries, LLC. Provided the Stego Wrap system is installed per manufacturers recommendations, the concrete may be poured directly upon the Stego Wrap Vapor Retarder. The primary considerations for installing the vapor retarder are: taping all seams; sealing all penetrations such as pipe, ducting, wire, etc; and repairing all punctures.

24. It should be clearly understood slabs are not waterproof, nor are they vaporproof. The aforementioned moisture retardant system will help to minimize water and water vapor transmission through the slab; however moisture sensitive floor coverings require additional protective measures. Floor coverings must be installed according to the manufacturer's specifications, including appropriate waterproofing applications and/or any recommended slab and/or subgrade preparation. Consideration should also be given to recommending a topical waterproofing application over the slab.

25. Exterior concrete slabs-on-grade should be founded on firm, well-compacted ground. Reinforcing should be provided in accordance with the anticipated use and loading of the slab. The reinforcement <u>should not</u> be tied to the building foundations. These exterior slabs can be expected to suffer some cracking and movement. However, thickened exterior edges, a well-prepared subgrade including premoistening prior to pouring concrete, adequately spaced expansion joints, and good workmanship should minimize cracking and movement.

Flexible Pavements

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26. Asphaltic concrete, aggregate base and subbase, and preparation of the subgrade should conform to and be placed in accordance with the Caltrans Standard Specifications, latest edition, except that the test method for compaction should be determined by ASTM D1557-Current.

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27. To have the selected sections perform to their greatest efficiency, it is important that the following items be considered:

- A. Moisture condition the subgrade and compact to a minimum relative compaction of at least 95 percent, at about 2 percent over optimum moisture content.
- B. Provide sufficient gradient to prevent ponding of water.
- C. Use only quality materials of the type and thickness (minimum) specified.
 Base rock should meet Caltrans Standard Specifications for Class II
 Aggregate Base, and be angular in shape.
- D. Compact the base rock to a relative dry density of 95 percent.
- E. Place the asphaltic concrete during periods of fair weather when the free air temperature is within prescribed limits per Caltrans specifications.
- F. Provide a routine maintenance program.

Site Drainage

28. Thorough control of runoff is essential to the performance of the project.

29. Runoff must not be allowed to sheet flow over graded slopes. Berms or lined Vditches should be constructed at the top of slopes to divert water toward suitable collection facilities.

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30. Permanent subdrains may be required adjacent to pavements or building foundations where groundwater levels are near the surface. The location and depth of these drains will need to be determined in the field by the geotechnical engineer.

31. Surface drainage should include provisions for positive gradients so that surface runoff is not permitted to pond adjacent to foundations and pavements. Surface drainage should be directed away from the building foundations.

32. Full roof gutters should be placed around all eaves. Discharge from the roof gutters should be conveyed away from the downspouts by closed conduit to either: an approved energy dissipater; on site detention; or street drainage as determined by the project civil engineer.

33. The migration of water or spread of extensive root systems below foundations, slabs, or pavements may cause undesirable differential movements and subsequent damage to these structures. Landscaping should be planned accordingly.

Plan Review, Construction Observation, and Testing

34. Our firm should be provided the opportunity for a general review of the final project plans prior to construction so that our geotechnical recommendations may be properly interpreted and implemented. If our firm is not accorded the opportunity of

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making the recommended review, we can assume no responsibility for misinterpretation of our recommendations. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. The recommendations presented in this report require our review of final plans and specifications prior to construction and upon our observation and, where necessary, testing of the earthwork and foundation excavations. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.



Registered Civil and Geotechnical Engineer 101 Forest Avenue, Santa Cruz, CA 95062-2622 soilsurgeon@cruzio.com cell (831) 234-5966 Tel. (831) 429-9364 Fax (831) 429-9822

File Number: 12073

15 August 2008

Mr. Brian Arthur 382 Belle Monti Avenue Aptos, CA 95003

Subject: Proposed Single Family Dwelling Development, APN 038-151-89 Oakhill Road Santa Cruz County, California Evaluation of Culvert Analysis

Dear Mr. Arthur:

)

As requested by Mr. Tracy Johnson on your behalf, I am providing a more detailed evaluation of the culvert drainage system presently assumed to receive surface runoff from your property and other properties within the tributary area of the culver receiving inlet.

A visit to the subject site was performed on 08 August 2008. The culvert drainage system was observed, documented, and photographed at that time. Refer to the attached photographs. The culvert drainage system consists of the following elements. Please note the following quantities are approximate due to restrictions in site access. The culvert runs from the inlet on the south side of Oakhill Road under Oakhill Road to the base of the north road bank. This portion of the culvert is an approximately 12-inch diameter CMP. The culvert then transitions into an approximately 16-inch diameter ADS flume with a semi-circular cross section supported by a redwood box. The culvert then transitions into an approximately 16-inch diameter ADS flume transitions into an approximately 18-inch CMP which runs down into the gully and into very heavy brush. The culvert appears to be in good condition and appears to be functioning adequately at this time with no indications of failure, leakage or other inadequate features.

Based on the above culvert dimensions, I conclude the assumptions provided in my previous drainage calculations¹ for the culvert are very conservative, are an adequate analysis, and indicate the culvert has sufficient capacity to accept the addition post-development runoff from the proposed project impermeable features.

¹ Mike Van Horn, Inc., <u>Civil Engineering Computations</u>, (Santa Cruz, CA, 4.28.08), File Number 12073, Application Number 07-0548.

Mike Van Horn, Inc.

File Number 12073

FXHB

This concludes this letter. If you have any questions, please contact this office.

Sincerely Yours,



Mr. Mike Van Horn, CE 35615, GE 2047 (expires 9/30/09)

COPIES: 1 to Addressee

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- 3 to Tracy Johnson, Residential Design
- 1 to File

Page425054

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EXHIBIT



Figure 1 - Culvert Inlet: Redwood Box in Good Condition



Figure 2 – Culvert at ADS in Redwood Box

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Figure 3 – Culvert ADS Transition to Redwood Flume Box



Figure 4 – Culvert Transition to Gully CMP

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Registered Civil and Geotechnical Engineer 101 Forest Avenue, Santa Cruz, CA 95062-2622 soilsurgeon@cruzio.com cell (831) 234-5966 Tel. (831) 429-9364 Fax (831) 429-9822

File Number: 12073

22 August 2008

Mr. Brian Arthur 382 Belle Monti Avenue Aptos, CA 95003

Subject: Proposed Single Family Dwelling Development, APN 038-151-89 Oakhill Road Santa Cruz County, California Evaluation of Brick Retaining Wall

Dear Mr. Arthur:

As requested by Mr. Tracy Johnson on your behalf, I have visited the subject site, observed the condition of the existing brick retaining wall, and I have observed the under floor area of the residence east/adjacent to the brick retaining wall. I am providing herein my conclusions regarding the stability of the brick retaining wall with respect to its proposed alterations to the affected site features.

It is my understanding the existing brick retaining wall, located within the geologic setback within the subject site, is planned to be reduced in length such that only the east most approximately nine to ten feet of the retaining wall is to remain following completion of the proposed improvements. The proposed plans also call for the reduction of the height of the backfill for a significant portion of the remaining brick wall.

I visited the subject site today, 22 August 2008. I observed the existing conditions of the brick retaining wall. The east most nine feet of the retaining wall is in relatively good condition and is slightly curved in plan view. The retaining wall does <u>not</u> extend under the residence to the east of the wall.

Additionally, at the home owner's permission, I observed the under floor area of the residence to the east of the wall and observed the foundation of this residence extends down to the base elevation of the brick retaining wall so that the residence's foundation does not depend upon the presence of the brick retaining wall for structural support of any kind.

Based on the above conditions and assumptions, I conclude the proposed alterations to the brick retaining wall and adjacent grade do not threaten the structural integrity of the wall.

Mike Van Horn, Inc.

This concludes this letter. If you have any questions, please contact this office.

Sincerely Yours,



Mr. Mike Van Horn, CE 35615, GE 2047 (expires 9/30/09)

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 - 3 to Tracy Johnson, Residential Design
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Page 490/1526

ROGERS E. JOHNSON & ASSOCIATES CONSULTING ENGINEERING GEOLOGISTS 41 Hangar Way, Suite B Watsonville, California 95076-2458 e-mail: rogersjohnson@sbcglobal.net Ofc (831) 728-7200 • Fax (831) 728-7218

30 April 2008 First Revision 2 May 2008 Second Revision 15 April 2009

Brian Arthur 382 Belle Monte Avenue Aptos, California 95003 Job No. C07027-56

Geologic Plan Review of Proposed Single-Family Dwelling Oak Hill Road, Aptos, California Santa Cruz County APN 038-151-89

Dear Mr. Arthur:

Subject:

We have reviewed the plan set for the above-referenced subject parcel. The plans, prepared by Robert Goldspink, the project architect were received by our office on 13 April 2009. The plans include a sheet by Mike Van Horn, the project civil engineer (sheet 11). We specifically reviewed sheets 6 (Sections A & B), 8 (Grading and Drainage), 10 (Offsite Drainage), 11 (Sections and Details) and 12 (Site Section C) for conformance with the recommendations in our Geologic Investigation (REJA, 2005).

The plans depict the proposed single-family dwelling, supported by piers, behind the 100-year geologic setback line depicted on Plate 1 of our report (REJA, 2005). Minor grading near the blufftop is proposed to achieve positive drainage toward Oak Hill Road. Drainage for the proposed development is controlled and directed towards Oak Hill Road, away from the bluff top.

The plans are geologically acceptable and in general conformance with our geologic report (REJA, 2005).

If you have any questions or comments, please contact us at your convenience.

Sincerely,

ROGERS E. JOHNSON AND ASSOCIATES GREGORY EASTON regory Eastøn CERTIFIED Project Geologist ENGINEERING 50/56 C.E.G. No. 2502

Rogers E. Johnson Principal Geologist 6 C.E.G. No. 1016



Copies:

Addressee (1) Robert Goldspink (4) Haro, Kasunich and Associates, Inc., Attn. Rick Parks (1)

References:

- Robert J. Goldspink Architect, 2009, development plans for Arthur Residence, Oak Hill Road, Aptos, California, 12 sheets, dated 10 March 2009.
- Mike Van Horn, 2008, Sections and Details, for Brian Arthur, New Single Family Dwelling, Oak Hill Road, Aptos, California, Sheet 11, dated 14 March 2008, revised 25 March 2009.

Rogers E. Johnson and Associates, 2005, Geologic Investigation, Oswalt Property, Oak Hill Road, Aptos, California, Santa Cruz County APN 038-151-89, prepared 24 October, 2005, unpublished consultants report, Job No. C05041-56.

FXHIBIT

COLLECTING GEORGIANCAN & COASTA, ENGNEERS

Project No. SC9551 16 April 2009

MR. BRIAN ARTHUR 382 Belle Monti Avenue Aptos, California 95003

Subject: Geotechnical Review of Project Plans

Reference: Proposed Blufftop Residence APN 038-151-89 Oak Hill Road Santa Cruz County, California

Dear Mr. Arthur:

This letter outlines our review of the geotechnical aspects of the Architectural and Civil Engineering project plan sheets for the proposed blufftop residence at the referenced parcel.

Our Geotechnical Investigation for the proposed project is dated 25 November 2005.

The project plan sheets were prepared by Robert Goldspink Architect and Mike Van Horn, Inc (MVH). Specifically we reviewed the following plan sheets:

- a. Sheet 1 Site Plan dated 3/10/09;
- b. Sheet 2 Upper and Lower Floor Plans dated 3/10/09;
- c. Sheet 3 Garage Floor Plan dated 3/10/09;
- d. Sheet 4 Elevations North & East dated 3/10/09;
- e. Sheet 5 Elevations South & West dated 3/10/09;
- f. Sheet 6 Sections A & B dated 3/10/09 showing conceptual caisson and grade beam foundation system;
- g. Sheet 7 Roof Plan dated 3/10/09;
- h. Sheet 8 Grading & Drainage dated 3/10/09 showing proposed blufftop swale to convey runoff away from bluff face;
- Sheet 9 Erosion Control & Grading/Drainage Notes w/ Landscape Plan dated 3/10/09;
- j. Sheet 10 Offsite Drainage dated 3/10/09;
- k. Sheet 11 Sections & Details (MVH) revised 3/25/09;
- I. Sheet 12 Site Section C dated 3/10/09;
- m. Sheet 13 Floor Area Calculations dated 3/10/09 w/no geotechnical aspects; and
- n. Sheet T Partial Topographic Map dated 8/27/07 by Robert L. DeWitt & Associates.



Mr. Brian Arthur Project No. SC9551 Oak Hill Road 16 April 2009 Page 2

It is our opinion the geotechnical aspects of the aforementioned plan sheets were prepared in general conformance to our geotechnical recommendations.

We will work with the project architect and structural engineer during the design of the pier and grade beam system to support the proposed residence and associated retaining walls.

If you have any questions regarding this letter, please call our office.

Very truly yours,

HARO, KASUNICH AND ASSOCIATES, INC

Rick L. Parks GE 2603



RLP/sq Copies:

1 to Addressee

3 to Robert Goldspink Architect



Professional Tree Care & Management, Inc.

November 8, 2007

Brian Arthur 382 Belle Monti Avenue Aptos, CA 95003

Re: 735 Oak Hill, Aptos

Dear Brian,

Thank you for providing Nature First Professional Tree Care & Management with the opportunity to review your project. Following are our recommendations and prices:

Findings:

Species: Sequoia sempervirens Common name: coast redwood DBH (diameter breast height): 4.4 feet Canopy spread: 50 feet

The redwood tree is located in the southeast corner of the property and there is a multileader or co-dominent top in the tree. A utility pole is located adjacent to the tree and P.G. & E has cleared the power lines creating an oddly-shaped canopy.

The property is sloped with an existing driveway and a demolished carport situated along the highest point of the property. The large redwood is surrounded by low growing vegetation. A brick retaining wall is located approximately 10-12 feet below the tree.

Intent:

The intent of the plan is to build a new home. The blueprint calls for a twenty-foot cut into the property from the street and installation of a driveway using pavers with sand and brick. A garden retaining wall is scheduled to be installed approximately five feet away from the highest side of the redwood tree and wrap half circle toward the street. The wall is forming a garden planter to be installed at the main entrance.

> NATURE FIRST TREE CARE, INC. CERTIFIED ARBORISTS 5736 Soquel Drive, Soquel, CA 954756831462-8233 Fax 831462-8236 E-mail: naturefirst@sbcglobal.net Website: www.naturefirsttreecare.com CA Contractors Lic. #775940

SXHBIT LA

November 6, 2007 Brian Arthur Page 2

Purpose:

The purpose of this report is to address the preservation and management of specified trees during construction. The following goals are intended to provide consistent care for the trees:

- a. Insure and promote preservation of the existing tree canopy.
- b. Provide standards of maintenance and care.
- c. Establish criteria for determining when a tree is unsafe.
- d. Provide standards for the replacement of trees that are scheduled for removal.
- e. Increase the survivability of trees during and after construction by providing standards and best management practices.

Recommendations:

The excavation of the driveway is going to create a grade change. The health of the tree is not to be compromised. In addition, the installation of the footings for the garden wall will require trenching to a depth of twelve to fourteen inches. It appears that most of the digging will be performed at the drip line of the redwood tree and all trenching is to be done by hand. The roots of the tree are most likely growing beyond the drip line, but with proper tree protection and a preservation plan, the work can be executed. Deep root fertilization of the tree is required due to the impact of the grade change and construction. Recommend the redwood tree to be pruned upon completion and nitrified mulch applied over the root zone.

The following steps shall be incorporated in the Tree Protection and Preservation plan:

- a. Verification of tree protection the arborist shall verify in writing that all pre-construction conditions have been met.
- b. A pre-construction meeting of the contractors is to be held on site to review procedures, tree protection measures and haul routes, and staging areas.

EXHIBIT I

c. Strict adherence to the enclosed construction guidelines.

See attached conditions which are hereby made a part of this estimate and agreement. Full payment is due upon completion unless prior arrangement have been made. November 6, 2007 Brian Arthur Page 3

Please feel free to call the office if you have any questions. We look forward to serving you.

Sincerely,

Mimi X coppettore

MiMi Scoppettone Certified Arborist WE-1555A