Staff Report to the Zoning Administrator

Application Number: 07-0059

Applicant: Hamilton-Swift Land Use
Owner: David & Paula Fisher
APN: 043-152-58

Agenda Date: April 3, 2009
Agenda Item #: 2
Time: After 10:00 a.m.

Project Description: Proposal to construct an approximately 3,000 square foot three story, single family dwelling with a non-habitable first floor to comply with Federal Emergency Management Agency (FEMA) regulations and to grade approximately 986 cubic yards.

Location: Property located on the north side of Beach Drive, approximately 4,300 feet southeast of the intersection with Rio Del Mar Blvd and Beach Drive in Aptos.

Supervisoral District: Second District (District Supervisor: Ellen Pirie)

Permits Required: Coastal Development Permit, a Variance to increase the number of stories from two to three within the Urban Services Line and a Preliminary Grading Review, a Variance to reduce the required 20-foot setback to the entrance of the garage to about 11 feet.

Technical Reviews: Geologic Report Review, Soils Report Review, Preliminary Grading Review

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 07-0059, based on the attached findings and conditions.

Exhibits

A.	Project plans		comments, dated 3/3/09
B.	Findings	J.	Memo, Urban Designer, dated 3/25/08
C.	Conditions	K.	Geotechnical and Engineering Geology Report review letter, dated 1/29/08.
D.	Categorical Exemption (CEQA determination)	L.	Excerpt of Recommendations from Engineering Geologic Investigation prepared by Rogers E. Johnson & Associates, dated 10/30/06 (report on
E.	Assessor's parcel map		
F.	Zoning & General Plan map		
G.	Location Map		
H.	Reduced set of Project Plans		
I.	Printout, Discretionary application		

file)

M. Excerpts of Discussion, Conclusions and Recommendation from Geotechnical Investigation prepared by Haro, Kasunich and Associates, Inc., dated 12/08/06 (report on file)

N. Comments & Correspondence

Parcel Information

Parcel Size:	8,624 square feet (7,225 square feet outside of right of way)
Existing Land Use - Parcel:	Vacant
Existing Land Use - Surrounding:	Residential
Project Access:	Beach Drive
Planning Area:	Aptos
Land Use Designation:	R-UL (Urban Low Density Residential)
Zone District:	RB (Residential Beach)
Coastal Zone:	X Inside __ Outside
Appealable to Calif. Coastal Comm.	X Yes __ No

Environmental Information

Geologic Hazards:	FEMA Flood Zone V (Wave run-up hazard zone), landslide potential at the base of coastal bluff
Soils:	Beach sand (soils map index number 109) and Purisima Foundation Sands
Fire Hazard:	Not a mapped constraint
Slopes:	50% to over 70% (base of coastal bluff)
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	Approximately 986 cubic yards
Tree Removal:	One tree (13.5") proposed to be removed
Scenic:	Designated Coastal Scenic Resource Area
Drainage:	Drainage to beach
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 Sanitation District
Fire District:	Aptos/La Selva Fire Protection District
Drainage District:	Zone 6

History

The subject parcel is a vacant legal lot of record, a certificate of compliance was approved on April 8, 1983.

Project Setting

The project site is located on the bluff side of the private section of Beach Drive in Aptos, between two vacant lots. The property is steeply sloped, with the entire site in excess of 50% slopes. A line of single and two-story homes already exists on the coast side of Beach Drive, between the project site and the beach. A stepped walkway is built into the slope above the proposed single family dwelling. A condition of approval has been included as part this permit that requires that the walkway be removed.

Zoning & General Plan Consistency

The subject property is a 8,624 (7,225 square feet with the right of way deduction) square foot lot, located in the RB (Residential Beach) 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.

	RB Zone District Standard	Proposed
Front yard setback	10'*	11'
Setback to carport	20'	11'**
Side yard setbacks	0' and 5'	6'6" and 6'6"
Rear yard setback	10'	67±'
Lot Coverage	40%	28.5%
Floor Area Ratio	50%	46%
Maximum height	25' on bluff side	25'

* No front yard setback requirements for RB zoned parcels with slopes greater than 25% within 30 feet of the right-of-way per Section 13.10.323(d)(5)(B) of the County Code.
** Variance required.

Local Coastal Program Consistency

The proposed Single family dwelling is in conformance with 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 single family dwellings. Architectural style largely consists of three story, boxy structures with, flat roofs, many windows, and covered decks. The design submitted is not inconsistent with the existing range. The project site is not located between the shoreline and the first public road and is not identified as a priority acquisition site in the County's Local Coastal Program. The proposed project will not interfere with public access to the beach, ocean, or other nearby body of water as access to the beach is located down the street at the Rio Del Mar State Beach parking area.

Geologic Hazards

General Plan policy 6.2.10 requires all development to be sited and designed to avoid or minimize hazards as determined by geologic or engineering investigations. Due to the location of the parcel adjacent to an open beach at the toe of a coastal bluff, potential coastal flooding and landslide hazards cannot be avoided and therefore must be mitigated. General Plan policy 6.2.15 allows for new development on existing lots of record in areas subject to storm wave inundation or coastal bluff erosion where a technical report demonstrates that potential hazards can be mitigated over the 100-year lifetime of the structure. Mitigations in this case include, but are not limited to: building setback, elevation of the structure, friction pier or deep caisson foundations, retaining walls, steel structure with reinforced roof, and a deed restriction documenting the potential hazards on the site which is recorded on the property deed. If properly constructed and maintained, the project design is expected to provide protection from landslide hazards and flooding during 100-year storm events within the 100-year life span of the structure.

Engineering Geologic and Geotechnical Reports have been prepared addressing geologic hazards, site conditions, and hazard mitigations for the proposed dwelling (excerpts of conclusions and recommendations in Exhibits L & M). The project soils engineer and geologist recommend constructing the dwelling with a reinforced concrete structure designed to withstand the impact of expected landslides. This is a "bunker" style design with a flat roof constructed of reinforced concrete and the sides of the structure designed as retaining walls to prevent damage by landslide flows along the side yards. The structure will be built flush with the face of the slope to minimize impacts to the rear of the dwelling. To accomplish this construction a series of retaining walls are constructed on three sides resulting in a box. Within this box the home is constructed with a metal frame building that can resist the impact force from a debris flow. All of the foundation is designed to withstand forces that result from a slope failure while at the same time compensating for varying soils conditions. As recommended by the project geologist and soils engineer, deck areas will be covered by a roof to provide refuge in the event of a landslide.

The project site is located within the FEMA Flood Zone-V, an 100-year coastal flood hazard zone designating areas subject to inundation resulting from run-up from waves and storm surges. FEMA regulations and the County Geologic Hazards ordinance (Chapter 16.10) require flood elevation of all new residential structures within 100-year flood zones. FEMA determined the expected 100-year wave impact height to be 21 feet above mean sea level (M.S.L.). The lowest habitable floor of the proposed dwelling is elevated more than one foot above 21 feet M.S.L. to prevent the habitable portions of the dwelling from flooding due to a 100-year storm surge. The garage doors and non-load bearing walls must function as "break-away" walls and the parking slab must be frangible so that is will break apart during and intense storm as required by FEMA regulations and Chapter 16.10 of the County Code.

The dwelling at 641 Beach Drive was the first structure approved incorporating this design (approved in 1993 as permit 91-0506), and dwellings of a similar design have been approved elsewhere on Beach Drive, including Coastal Development Permits 99-0354, 04-0044, 05-0097, 05-0098 and 06-0688.

Grading and Erosion Control

General Plan/LCP policy 8.2.2 requires new development to be sited and designed to minimize grading, avoid or provide mitigations for geologic hazards and conform to the physical constraints and topography of the site. The project has been designed to step down the slope to reduce excavation and to conform to the topography of the site to the greatest extent possible while maintaining a dwelling of similar size to neighboring homes on Beach Drive.

The proposed dwelling will not destabilize or exacerbate erosion of the bluff, and when completed will act to retain and stabilize the toe of the bluff. The only potential for bluff destabilization will occur during excavation and construction. To minimize the chances of a failure occurring during this period, the project soils engineer has outlined a plan for construction phasing (Exhibit M). The key elements of this plan are as follows:

- Site grading and retaining wall construction must take place between April 15th and October 15th, when the site is dry.
- The project soils engineer and geologist must be on site during the work.
- Excavation and construction should begin at the top and work downward, a section at a time. Under this plan, a portion of the cliff would be excavated, followed by construction of that portion of the wall. After that section of the wall is completed, the next lower section of the cliff would be excavated.

A detailed work plan following these elements will be submitted with the building permit application. This work plan will detail the height of each individual section to be excavated and retained, and will take into account any concurrent excavation into the bluff for neighboring projects. Furthermore, a Waiver, Indemnification, Security, and Insurance Agreement will be required, which will include a requirement that the applicant/owner obtain and maintain Comprehensive Personal Liability (or equivalent) or Owner's Landlord and Tenant Liability Insurance coverage (as appropriate) of $1,000,000 plus an additional $1,000,000 of excess coverage to insure construction of the retaining structure will be completed in a timely manner (See Condition of Approval I.D). In addition, security bonds will be required to ensure bluff stabilization work can be completed by the County if construction stops prior to completion of all necessary shoring, retaining walls, tie-backs, and any other construction required to stabilize the bluff. One bond will be for 150% of the total construction cost to stabilize the bluff, which will be released after satisfactory completion of all retention structures as determined by the County Geologist. The second bond will be for 50% of the above construction costs, to be released not less than one year after final inspection (Condition of Approval II.H).

Public Access

The proposal complies with Policy 7.7.10 of the General Plan/LCP (Protecting Existing Beach Access) in that pedestrian and emergency vehicle access will not be impeded by the proposed dwelling and construction, and no public access easements exist across the subject property. Furthermore, the site is not designated for Primary Public Access in Policy 7.7.15 of the General Plan/LCP, and is not suitable for access due to the steep topography of the site.

Design Review

The project is located within a mapped scenic resource area, and therefore must comply with General Plan Policy 5.10b (New Development within Visual Resource Areas), which states that new development should be designed and constructed to have minimal to no adverse impact on visual resources. General Plan/LCP policies 5.10.2 and 5.10.3 also require that development be evaluated against the context of the environment, utilize natural materials, blend with the area and integrate with landforms. General Plan/LCP policy 5.10.7 allows structures to be visible from a public beach where compatible with the pattern of existing development.

Generally, impacts to existing public views occur when development extends into areas that are currently natural and are visible from the beach. In this case, the project site is located behind a line of existing single and two-story homes on the coast side of Beach Drive. The project is a "bunker" style design made of reinforced concrete. It is boxy with a flat roof, covered decks and is stepped back flush with the face of the slope to minimize landslide impacts to the rear of the dwelling. The home will be painted earth tone colors that blend with the bluff. The upper story of the proposed dwelling will be visible from the open beach at low tides. However, the design of the structure will be integrated into the Beach Drive neighborhood in terms of height, bulk, mass, scale, architectural style, color, and materials. The size of the proposed residence will be similar to recently approved homes and proportioned to the size of the lot, as the residence will comply with County standards for Floor Area Ratio and lot coverage. Stepping back the third floor to be flush with the hillside will break up the mass of the residence.

General Plan/LCP policies 8.6.5 and 8.6.6 require that development be complementary with the natural environment and that the colors and materials be chosen blend with the natural landforms. To comply with this policy, the proposed dwelling will incorporate earth-tone colored stucco to better blend in with the coastal bluff and vegetation behind the residence, minimizing the visual impact of the residence.

The County's Urban Designer evaluated the project for conformance with the County's Coastal Zone Design Criteria (Section 13.20.130) and the County's Site, Landscape, and Architectural Design Review Ordinance (Section 13.11) (Exhibit J). The Urban Designer determined the proposed single-family dwelling to be in conformance with all applicable provisions of these ordinances, including criteria regarding protection of the public viewshed and compatibility with the existing neighborhood and coastal setting. Although the project will be visible from the beach, the design, materials, and colors minimize the visual impact of the dwelling to the greatest extent possible while maintaining a similar bulk, mass, and scale to existing and proposed houses on the bluff side of Beach Drive.

Variances

Three stories within the Urban Service Line

Inside the Urban Services Line, the County Code prohibits single-family dwellings greater than two stories absent a variance approval. The area available to build is constrained by FEMA

regulations that require a non-habitable lower floor, and steep slopes. To compensate for FEMA flood elevation requirements, construct within the constraints of the site, and minimize grading, the applicant has requested a variance to construct a three-story single-family dwelling with approximately 2,600 habitable square feet. Without the variance the home would be limited to approximately 2,000 habitable square feet. The steep topography of the site (with slopes greater than 70%) and the FEMA flood elevation requirements are special circumstances inherent to the property that would deny the property owner a reasonably sized dwelling as enjoyed by residents of similar structures on the bluff side of Beach Drive, if the home were limited to two stories. Many homes along the bluff side of Beach Drive already have three stories, including the house at 641 Beach Drive and the dwellings recently approved on nearby lots that are currently under construction at 633 and 635 Beach Drive. For this reason, the granting of a variance to allow three stories will not constitute the granting of a special privilege.

Reduced setback to the face of garage

District site standards (County Code 13.10.323) require a twenty-foot minimum setback to a garage or carport entrance for all districts, to allow for off street parking and sight distance to exit. The proposal sets the face of the garage at approximately 11 feet from the edge of Beach Drive right of way and therefore requires a variance to the twenty-foot minimum setback to the garage entrance. The parcel's topography which consist of steep slopes and location at base of a bluff within the coastal hazard zone are special circumstances that restrict the location of a garage on the property to the first floor. In addition, to comply with the site standard the amount of grading on site would increase without a variance to the 20-foot setback to the entrance of a garage. The proposal requires three off street parking spaces and two have been provided within the garage and one outside that is partially covered and will not be provided within the area of reduced setback. The variance to allow a reduced setback to the garage will not be detrimental to the to public health, safety, or welfare or injurious to property or improvements in the vicinity as there are approximately 20 feet from the edge of the traveled roadway to the face of the garage. Eleven of those feet located entirely outside of the right of way to back out and all parking for the home is out of the right of way. In addition, the variance is not a grant of special privilege, as construction of a home under similar circumstance would be granted a similar variance.

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 **07-0059,** 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 RB (Residential Beach), a designation which allows residential uses. The proposed 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, as the parcel is not encumbered by any open space easements or similar land use contracts. The project will not conflict with any existing right-of-way easement or development restrictions as none exist. The proposed dwelling will not affect public access as none exists down the cliff face at this location, and the project will not impede lateral pedestrian access.

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.

The proposed single-family dwelling is consistent with the design criteria and special use standards and conditions of County Code Section 13.20.130 et seq. for development in the coastal zone. Specifically, the house follows the natural topography by stepping up the hillside, proposes minimal grading considering the topography of the site, is visually compatible with the character of the surrounding residential neighborhood, and includes mitigations for the coastal hazards which may occur within its' 100 year lifespan (landslides, seismic events and coastal inundation). The project is not on a ridgeline, and does not obstruct any public views to the shoreline. The design and siting of the proposed residence will minimize impacts on the site and the surrounding neighborhood. The house will incorporate earth-tone colors (ranging from brown to green) to blend in with the bluff.

The architecture is complementary to the existing pattern of development and will blend with the built environment. The size of the dwelling, approximately 2,600 habitable square feet, is comparable to most of the dwellings along the bluff side of Beach Drive. The structure will be flood elevated, but will meet the 25 foot RB height limit. This height is consistent with the existing older development along the bluff of side of Beach Drive, most of which is three stories similar to the proposed dwelling.

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.

The project site is located in the appealable area between the shoreline and the first through public road. Public access to the beach is located further up Beach Drive at the State Parks parking lot (about 1,000 feet northwest of the proposed dwellings). The proposed dwellings will not interfere with public access to the beach, ocean, or any other nearby body of water. The project site is not identified as a priority acquisition site in the County Local Coastal Program, and is not designated for public recreation or visitor serving facilities.

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

The proposed single-family dwelling is consistent with the County's certified Local Coastal Program in that a single family dwelling is a principal permitted use in the RB (Ocean Beach Residential) zone district with an approved Coastal Development Permit. General Plan policy 6.2.15 allows for development on existing lots of record in areas subject to storm wave inundation or beach or bluff erosion within existing developed neighborhoods and where technical reports demonstrate that the potential hazards can be mitigated over the 100-year lifetime of the structure.

Engineering Geologic and Geotechnical report have been prepared for this project evaluating the hazards and mitigations. These reports have been reviewed and accepted by the County of Santa Cruz. The proposed structure will be engineered to withstand landslide impacts on a reinforced roof, retaining most of the landslide materials on the roof with any excess flowing over the structure. The project is specifically designed to accommodate natural coastal erosion processes of the bluff face. The dwelling will be constructed flush with the bluff and the roof of the home will be constructed so that it will resist the impact from a large debris flow landslide. Furthermore the sides of the home will also be designed and constructed to resist the impact form this type of landslide. Thus, in combination the home will be designed to protect it occupants from landsliding. The dwelling will be elevated with no habitable portions under 21 feet above mean sea level, in accordance with FEMA, the County General Plan policies and Chapter 16.10 of the County Code for development within the 100-year wave hazard or V-zone. Thus, the proposed development is consistent with this General Plan policy.

General Plan/LCP policy 5.10.7 allows structures, which would be visible from a public beach, where compatible with existing development. The subject lot is located on the bluff side of Beach Drive within a line of existing and proposed single-family dwellings of a similar height. The project is consistent with General Plan policies for residential infill development, as the proposed dwelling will integrate with the built environment along Beach Drive by retaining a similar height, bulk, mass, and scale to existing and recently approved development in the vicinity. The height of the dwelling does note exceed 25 feet in conformance with the height limit for the RB zone district, and consistent with most of the existing and proposed adjacent residences. The approximately 2,600 habitable square foot size of the structure is consistent with many of the existing homes on the bluff side of Beach Drive. Dwellings on the beach side of Beach Drive have different site standards and therefore cannot be used to determine compatibility.

General Plan/LCP policies 8.6.5 and 8.6.6 require that development be complementary with the natural environment and that the colors and materials chosen blend with the natural landforms. The proposed dwelling will use stucco painted in earth-tone colors to blend in with the bluff behind them.

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, as the proposed project complies with all development regulations applicable to the site with the exception of the limitation on the maximum number of stories, for which a Variance is being sought. The parcel is located within a coastal hazard area and is expected to be subject to wave inundation, landslides and seismic shaking hazards. Engineering Geologic and geotechnical reports have been completed for this project analyzing these hazards and recommending measures to mitigate them. The habitable portions of the dwelling will be constructed above 21 feet mean sea level (msl), which is the expected height of wave inundation predicted for a 100-year storm event. The garage will incorporate break away garage doors and non-structural walls on the lower level to minimize structural damage from wave action.

Construction will comply with prevailing building technology, the Uniform Building Code, the County Building ordinance, and the recommendations of the Engineering Geologic and Geotechnical report to insure the optimum in safety and the conservation of energy and resources. The structure will be engineered to withstand landslide impacts by incorporating a flat reinforced concrete roof, retaining most of the landslide materials on the roof with any excess flowing over the structure. The project is specifically designed to accommodate natural coastal erosion processes of the bluff face. The dwelling must be constructed flush with the bluff face and be anchored into the bluff to withstand the impact of a catastrophic landslide event and prevent the structure from being displaced by landslide. An engineered foundation is required in order to anchor the dwellings in the event of a landslide impact and to withstand seismic shaking. Adherence to the recommendations of the soils engineer and geologist in the house design and construction will provide an acceptable margin of safety for the occupants of the proposed home. The project design will not change the existing pattern debris flow and will not adversely affect the adjacent dwellings. The retaining walls incorporated into the design of both dwellings will provide some stability to the toe of the cliff, but will not affect the stability of the upper cliff.

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.

The project is located within the RB (Ocean Beach Residential) zone district. The proposed dwelling will be consistent with all pertinent County ordinances, site standards, and the purpose of the RB zone district, with the exception of the number of stories and the reduction in the required 20 foot setback to the face of garage, for which Variances are sought. These increase in the number of stories will not significantly increase the bulk of building mass and will allow adequate light, air and open space to adjacent neighbors, as the design of the proposed single-family dwelling is consistent with that of the surrounding neighborhood, as it is visually compatible and integrated with the character of surrounding neighborhood, and meets the intent of County Code Section 13.10.130,

"Design Criteria for Coastal Zone Developments" and Chapter 13.11 "Site, Architectural and Landscape Design Review." Homes in the area range from one story on the beach side of Beach Drive to three-stories on the bluff side, with a wood or stucco exteriors and large expanses of windows and decks. The majority of houses in the neighborhood have flat roofs. The proposed colors and materials and architecture will harmonize and blend with the other homes in this neighborhood. Thus, the design of the proposed single-family dwelling is consistent with that of the surrounding neighborhood. As discussed in Finding #1, Engineering Geologic and Geotechnical reports have been prepared evaluating the landslide and coastal flooding hazards, which will be mitigated in accordance with the regulations, set forth in Chapter 16.10 (Geologic Hazards) of the County Code. As discussed in the Coastal Findings above, the project is consistent with the County's Coastal Regulations (Chapter 13.20).

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.

The project is located in the R-UL (Urban Low Residential) General Plan/Local Coastal Program land use designation. As discussed in Coastal Development Permit Finding 5, all General Plan/LCP policies have been met in the proposed location of the project, the hazard mitigations and with the required conditions of this permit. The design of the single-family dwelling is consistent with that of the surrounding neighborhood on the bluff side of Beach Drive, and is sited and designed to be visually compatible and integrated with the character of surrounding neighborhood and the coastal bluff. The dwelling will not block public vistas to the public beach and will blend with the built environment when viewed from the public beach. The house is designed to step down the slope, requiring minimal grading considering the limitations placed on the site with regards to slope and construction requirements to minimize geologic hazards. For this reason the project conforms with General Plan policies to minimize grading.

A specific plan has not been adopted for this portion of Rio Del Mar.

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, as the proposed single-family dwelling will not overload utilities and will not generate more than the acceptable level of traffic on the roads in the vicinity. Specifically, adequate water and sewer service is available to the property and there will be minimal increase in traffic resulting from the construction of one new single family dwelling on a legal lot of record designated for residential use. Traffic generated by construction will be limited to weekdays between the hours of 8 AM and 5 PM and any damage to Beach Drive resulting from heavy equipment will be required to be repaired (Condition of Approval III.H and IV.H).

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, as the home will not appear significantly different from the existing homes, or future development on the bluff side of Beach Drive (which will be bunker and will also have non-habitable lower floors and flat roofs). The proposed project will result in a home

of a similar size and mass to other homes on the bluff side of Beach Drive, and will be designed to be visually compatible and integrated with the character of the surrounding neighborhood.

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 single-family dwelling is consistent with the County's Design Review Ordinance as the site design, architectural style, materials, colors, flat roof, and three story design within the RB zone district height result in a structure that is compatible with the surrounding development along the bluff side of Beach Drive (see Urban Designer's comments in Exhibit J).

Variance Findings

1. That because of special circumstances applicable to the property, including size, shape, topography, location, and surrounding existing structures, the strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity under identical zoning classification.

This finding can be made, as the subject parcel contains very steep slopes (slopes in excess of 70%) on an unstable coastal bluff, with the only suitable area for development near the base of the bluff within the coastal flood hazard area (Flood Zone-V). Due to the topography and location within a flood hazard area, the structure must be elevated above the expected 100-year coastal inundation level at 21 feet above mean sea level in accordance with the regulations set forth by the Federal Emergency Management Agency (FEMA) and Chapter 16.10 (Geologic Hazards Ordinance) of the County Code. The lower floor area cannot be used as habitable space due to potential flood hazards from wave run-up, so a variance has been requested to increase the maximum number of stories from two to three in order to construct a home of a reasonable size of approximately 2,600 habitable square feet, comparable to existing and recently approved homes in the vicinity. The majority of homes along the bluff side of Beach Drive are three stories, so a variance to height requirements would not constitute the granting of a special privilege as existing dwellings in the neighborhood already have three stories. Due to the step-down design of the structure, the house will still meet the maximum 25-foot height limit for the RB zone district despite the increase in the number of stories.

This finding can be made in that other homes in the vicinity have a reduction in the 20 foot setback to the face of garage. The RB zone district allows for a ten foot front yard setback (County Code 13.10.323), in addition, no front yard setback requirements for RB zoned parcels with slopes greater than 25% within 30 feet of the right-of-way per Section 13.10.323(d)(5)(B) of the County Code. The subject property contains slopes greater than 25% and therefore requires no front yard setback. However, zone district site standards (County Code 13.10.323) also require a twenty-foot minimum setback to a garage or carport entrance for all districts, to allow for off street parking and sight distance to exit. The proposal sets the face of the garage at approximately 11 feet from the edge of Beach Drive right of way and therefore requires a variance to the twenty-foot minimum setback to the garage entrance. The parcel's topography which consist of steep slopes and location at base of a

bluff within the coastal hazard zone are special circumstances that restrict the location of a garage on the property to the first floor. In addition, to comply with the site standard the amount of grading on site would increase without a variance to the 20-foot setback to the entrance of a garage.

2. That the granting of the Variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to the public health, safety, or welfare or injurious to property or improvements in the vicinity.

Compliance with the recommendations and construction methods required by the Engineering Geologic and Geotechnical reports accepted by the Planning Department will insure that granting the variance to construct the proposed three-story single family dwelling will not be materially detrimental to the public health, safety and welfare or be materially injurious to property or improvements in the vicinity. The residence is required to be elevated above 21 feet mean sea level with no habitable features on the ground floor and constructed with a break-away garage door and walls (except those used as support structures). No mechanical, electrical or plumbing equipment shall be installed below the base flood elevation. The dwelling will be engineered to withstand landslide impacts upon the roof and to allow slide debris to accumulate upon it. This design allows for the natural pattern of debris flow and minimizes deflection onto the adjacent properties.

The reduction in the required 20-foot setback to the face of garage will continue to comply with required off street parking. The proposal requires three off street parking spaces and two have been provided within the garage and one outside that is partially covered and will not be provided within the area of reduced setback. The variance to allow a reduced setback to the garage will not be detrimental to the to public health, safety, or welfare or injurious to property or improvements in the vicinity as there is approximately 20 feet from the edge of the traveled roadway to the face of the garage with 11 of those feet located entirely outside of the right of way to back out and all parking for the home is out of the right of way.

3. That the granting of such variances shall not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated.

The granting of variances to increase the maximum number of stories from two to three will not constitute a grant of special privilege, as similar variances have been granted for houses of similar construction on the bluff side of Beach Drive due to FEMA flood elevation requirements. Two approved variances, permits 05-0097 and 05-0098, which are immediately adjacent properties to the southeast that are currently under construction.

The granting of variance to reduce the 20-foot setback to the face of garage is not a grant of special privilege, as construction of a home under similar circumstance would be granted a similar variance and other homes along this stretch of Beach Drive have been constructed with a reduced setback.

Conditions of Approval

Exhibit A: Project plans, eight sheets, prepared by Robert Goldspink Architect, dated revised
Project plans, three sheets, prepared by Robert DeWitt, dated reissued 11/10/08
Project plan, one sheet, prepared by Donald Urfer, dated 2/2/07.
Project plans, four sheets, prepared by Dunbar and Craig, dated revised 11/29/07.

This permit authorizes the construction of a three story Single Family Dwelling with a non-habitable first floor to comply with FEMA regulations. 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. The owner shall execute the attached WAIVER, INDEMNIFICATION, SECURITY, AND INSURANCE AGREEMENT with the County (see Attachment 1 to the conditions of approval) and meet all requirements therein. This agreement will require the applicant/owner to obtain and maintain Comprehensive Personal Liability (or equivalent) or Owner's Landlord and Tenant Liability Insurance coverage (as appropriate) of $1,000,000 plus an additional $1,000,000 of excess coverage per single-family dwelling. Proof of insurance shall be provided.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder).

B. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. Any changes from the approved Exhibit "A" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

EXHIBIT C

1. Identify finish and color of exterior materials and roof covering for approval by the Zoning Administrator and Urban Designer for visual compatibility with the coastal bluff environment. Colors shall be earth tone. This color board must be in 8.5" x 11" format.

2. Exterior elevations identifying finish materials and colors. Colors shall be earth tone in the muted green to brown range. All windows facing the beach shall utilize non-glare glazing materials.

3. Submit a detailed erosion and sedimentation control plan to be reviewed and accepted by Environmental Planning. The plan shall indicate that prior to the commencement of grading, the Permittees shall delineate the approved construction areas with fencing and markers to prevent land-disturbing activities from taking place outside of these areas. The Erosion and Sedimentation Control Plan shall identify the type and location of the measures that will be implemented during construction to prevent erosion, sedimentation, and the discharge of pollutants during construction. These measures shall be selected and designed in accordance with the California Storm Water Best Management Practices Handbook. Among these measures, the plans shall limit the extent of land disturbance to the minimum amount necessary to construct the project; designate areas for the staging of construction equipment and materials, including receptacles and temporary stockpiles of grading materials, which shall be covered on a daily basis; provide for the installation of silt fences, temporary detention basins, and/or other controls to intercept, filter, and remove sediments contained in any runoff from construction, staging, and storage/stockpile areas; and provide for the replanting of disturbed areas immediately upon conclusion of construction activities in that area. The plans shall also incorporate good construction housekeeping measures, including the use of dry cleanup measures whenever possible; collecting and filtering cleanup water when dry cleanup methods are not feasible; cleaning and refueling constructions equipment at designated offsite maintenance areas; and the immediate clean-up of any leaks or spills.

4. 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 25-feet for the structure.

5. State the name of the architect or civil engineer that will certify compliance with FEMA Coastal Construction Standards and related County Building Code requirements (including Section 1612.A5 CBC

Flood Hazards) at the completion of the project.

6. The lowest structural member of the lowest floor and all elements that function as part of the structure must be elevated above the Base Flood Elevation (21 feet).

7. The foundation and structure attached thereto shall be anchored to prevent floatation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have one percent chance of being equaled or exceeded in any given year.

8. The space below the lowest floor shall either be free of obstructions or constructed with non-supporting breakaway walls intended to collapse under wind and water loads without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system.

9. The use of fill for structural support of buildings, including the parking slab is prohibited. Plans shall show no fill to be placed beneath the slab per Coastal Construction Manual section 6.4.3.3 and County Code section 16.10.070(h)5(vii).

10. An engineered grading, drainage and erosion control plan shall be submitted for review and approval by Environmental Planning.

11. Utilities shall not be located within breakaway walls. All utilities below the base flood elevation shall be mounted on structural components only.

12. The retaining wall used for the gas meter shall be a structural wall with pier foundation.

13. The parking slab shall be a maximum of 4 inches thick and shall be non-structural. Concrete slab shall be designed to break apart upon impact from storm surges.

14. The plans shall comply with all recommendations provided in the geotechnical engineering and engineering geology reports.

15. Windows along the side of the building in the area of debris impact may be clustered, but may not have dimension(s) greater than 12 inches, and shall be designed for impact.

16. Shoring shall be installed under the continuous inspection of the project engineer.

17. The Base Flood Elevation shall be shown on cross-sections and profiles.

18. The project geotechnical engineer, or a similar qualified testing laboratory, shall be employed to provide continuous inspection and testing of all the fill material placed on the site.

19. Remove the walkway improvements for landscape access beyond the top of roof. Walkway along the west side of the building shall be built to grade and made of concrete that shall painted and maintained be in a subdued earth tone in color to be approved by the Urban Designer.

20. The plans shall include a destination for excavated material.

21. Submit a final shoring plan to be consistent with Architectural and Civil Engineer plans to be reviewed and accepted by Environmental Planning staff. The current preliminary shoring plan (sheet S1) shows an approximate 3 foot offset.

22. Show shoring and drainage swale on Architectural elevations and cross-sections on sheets 2 and 3. Include the height of the drainage swale retaining wall and rear shoring wall.

23. The replacement retaining wall within the 40-foot Beach Drive right of way shall not exceed three feet in height.

C. 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.

D. Plan review letters shall be required from the soils engineer and project geologist stating that the plans conform to the recommendations in the accepted reports.

E. The owner shall record a Declaration of Geologic Hazards to be provided by Environmental Planning staff on the property deed. Proof of recordation shall be submitted to Environmental Planning. **YOU MAY NOT ALTER THE WORDING OF THIS DECLARATION**. Follow the instructions to record and return the form to the Planning Department.

F. A Deed Restriction shall be recorded which prohibits the use of the roof, side yards and rear yard except for the purpose of maintenance or repair.

G. Submit an engineer's statement estimating construction costs including earthwork, drainage, all inspections (soils, structural, and civil engineers, etc.), and erosion control associated with the foundation, retaining walls, and drainage system for review and approval per the Waiver, Indemnification, Security, and Insurance Agreement. These estimates will be reviewed by the County Geologist and will be used for determining the appropriate amounts for each bond.

H. The two security bonds (one for 150% of the total construction cost released after completion of all slope stabilization construction, one for 50% released one year after final inspection) shall be in place prior to issuance of the building permit. Please submit proof indicating if Certificate of Deposits or Letters of Credit will be used to satisfy the bonding requirement.

I. Meet all requirements of and pay Zone 6 drainage fees to the County Department of Public Works, Drainage. Drainage fees will be assessed on the net increase in impervious area.

J. A final landscape plan. This plan shall include the location, size, and species of all existing and proposed trees and plants within the front yard setback and shall meet the following criteria:

a. Plant Selection. At least 80 percent of the plant materials selected for non-turf areas (equivalent to 60 percent of the total landscaped area) shall be drought tolerant. Native plants are encouraged. The plan shall not include any species listed on the *California Invasive Plant Council List*. Vegetation must be able to survive without irrigation once established.

b. Turf Limitation. Turf area shall not exceed 25 percent of the total landscaped area. Turf area shall be of low to moderate water-using varieties, such as tall fescue. Turf areas should not be used in areas less than 8 feet in width.

c. The plans must show tree protection fencing at the dripline of the 22-inch cypress.

K. Meet all requirements and pay any applicable plan check fee of the Aptos/La Selva Fire Protection District.

L. The project architect or engineer shall sign a certification prepared by the County Planning Department that indicates that the plan comply with all FEMA regulations.

M. Pay the current fees for Parks and Child Care mitigation for three bedroom(s). Currently, these fees are, respectively, $1,000 and $109 per bedroom.

N. Pay the current fees for Roadside and Transportation improvements for one unit. Currently, these fees total $5,080 per new single-family residence.

O. Provide required off-street parking for three 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.

P. Any new on-site electrical power, telephone, and cable television service connections shall be installed underground.

Q. 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.

R. Obtain a permit from the Monterey Bay Air Pollution District, if required. This permit may require a diesel health risk assessment depending on the equipment used, the timing, and the distance of the construction from the nearest residence.

S. Submit a signed, notarized, and recorded maintenance agreement for the silt & grease traps prior to permit issuance.

T. Submit photos showing the condition of Beach Drive past the gate. These photos will be used to determine if any repairs are required to Beach Drive after construction due to construction related damage. Any repair to the public road segment shall be coordinated with the Department of Public Works.

III. Prior to and during site disturbance and construction:

A. Prior to any disturbance on either property the applicant shall convene a pre-construction meeting on the site with the grading contractor supervisor, construction supervisor, project geologist, project geotechnical engineer, Santa Cruz County grading inspector, and any other Environmental Planning staff involved in the review of the project.

B. All land clearing, grading and/or excavation shall take place between April 15 and October 15. Excavation and/or grading is prohibited before April 15 and after October 15. Excavation and/or grading may be required to start later than April 15 depending on site conditions, as determined by Environmental Planning staff. If grading/excavation is not started by August 1st, grading must not commence until after April 15th the following year to allow for adequate time to complete grading prior to October 15th

C. Erosion shall be controlled at all times. Erosion control measures shall be monitored, maintained and replaced as needed. No turbid runoff shall be allowed to leave the immediate construction site.

D. Dust suppression techniques shall be included as part of the construction plans and implemented during construction. These techniques shall comply with the requirements of the Monterey Air Pollution Control District.

E. All earthwork and retaining wall construction shall be supervised by the project soils engineer and shall conform with the Geotechnical report recommendations.

F. All foundation and retaining wall excavations shall be observed and approved in writing by the project soils engineer prior to foundation pour. A copy of the letter shall be kept on file with the Planning Department.

G. Prior to sub-floor building inspection, compliance with the elevation requirement shall be certified by a registered professional engineer, architect or surveyor and submitted to the Environmental Planning section of the Planning Department. Construction shall comply with the FEMA flood elevation requirement of 21 feet above mean sea level for all habitable portions of the structure. **Failure to submit the elevation certificate may be cause to issue a stop work notice for the project.**

H. Construction shall only occur between the hours of 8 AM and 5 PM, Monday through Friday, with no construction activity allowed on weekends and holidays.

I. The applicant shall designate a disturbance coordinator and a 24-hour contact number shall be conspicuously posted on the job site. The disturbance coordinator shall record the name, phone number, and nature of all complaints received regarding the construction site. The disturbance coordinator shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

IV. 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. The project geotechnical engineer, or a similar qualified testing laboratory, shall submit a written summary of the compaction testing. The summary shall include a copy of the grading plan that indicates the relative compaction test locations. All related test data must be included in a table with a reference number that correlates the table data to the test location on the grading plan. The testing shall include the backfill for any retaining walls.

E. Final letters shall be submitted from the soils engineer and project geologist stating that the completed project conforms to their recommendations.

F. The architect or engineer shall sign a certification form prepared by the County Planning Department stating that the completed project meets all requirements of FEMA for development4 within the V zone.

G. 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.

H. Any damage to Beach Drive caused by construction activities shall be repaired.

V. Operational Conditions

A. Modifications to the architectural elements including but not limited to exterior finishes, window placement, roof design and exterior elevations are prohibited, unless an amendment to this permit is obtained.

B. All portions of either structure located below 21 feet mean sea level shall be maintained as non-habitable.

1. The ground floor shall not be mechanically heated, cooled, humidified or dehumidified.

2. The structure may be inspected for condition compliance twelve months after approval and at any time thereafter at the discretion of the Planning Director.

C. This permit prohibits any use of the roof, side yards and rear yard except for the purpose of maintenance and/or repair of the dwelling.

D. The homes must be maintained at all times. In the event of a significant slope failure, the owner must remove the debris from the roof within 48 hours under the direction of a civil engineer.

E. All landscaping shall be permanently maintained.

F. The residence shall maintain a muted earth-tone coloration.

G. No pile driving shall be permitted.

H. Grading calculations exceeding 1,000 cubic yards shall result in an Initial Study and an Amendment to Coastal Development Permit.

I. 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.

VI. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless

the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. 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. Successors Bound. "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 two years from the effective date listed below unless the conditions of approval are complied with and the use commences before the expiration date.

Action Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey	Maria Perez
Deputy Zoning Administrator	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.

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: 07-0059
Assessor Parcel Number: 043-152-58
Project Location: No Situs

Project Description: Proposal to construct a three story single family dwelling, with a non-habitable first floor to comply with Federal Emergency Management Agency regulations.

Person or Agency Proposing Project: Hamilton-Swift Land Use

Contact Phone Number: 831-459-9992

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

Specify type:

E. __X__ **Categorical Exemption**

Specify type: Class 3 - New Construction (Section 15303)

F. Reasons why the project is exempt:

Proposal to construct a single family dwelling.

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

_____ Date: _____
Maria Perez, Project Planner

EXHIBIT D

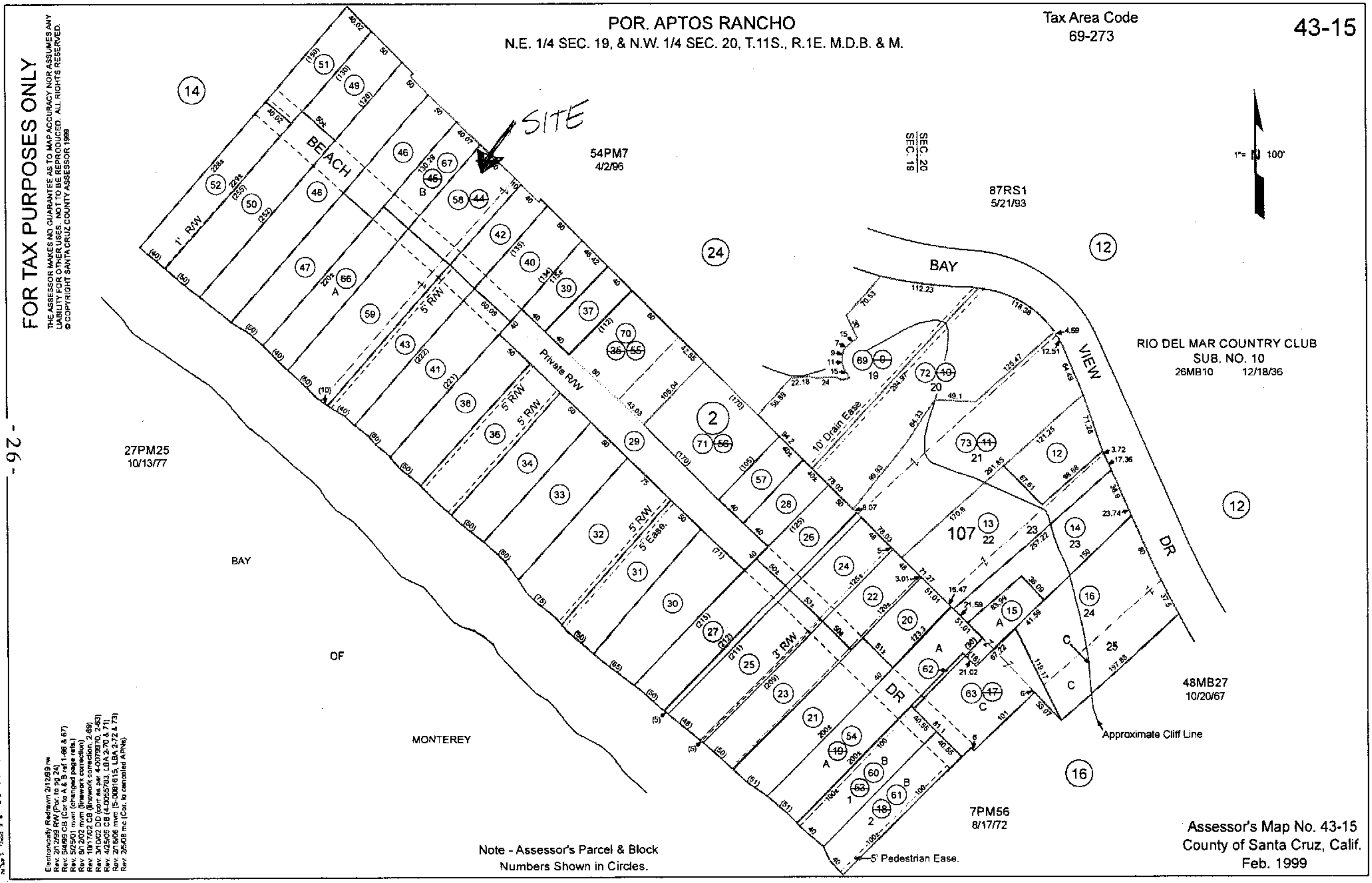
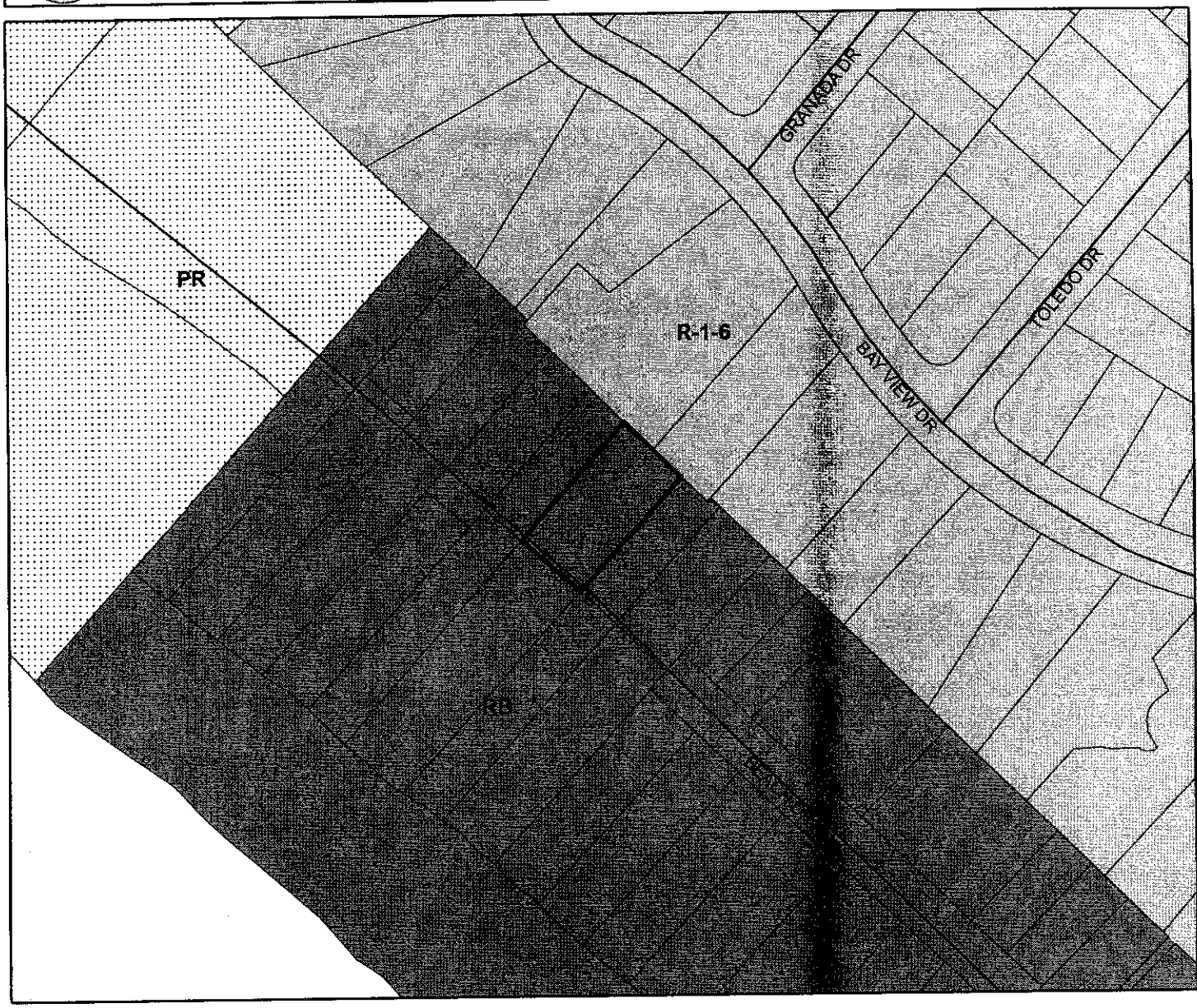

POR. APTOS RANCHO
N.E. 1/4 SEC. 19, & N.W. 1/4 SEC. 20, T.11S., R.1E. M.D.B. & M.
Tax Area Code
69-273
43-15
FOR TAX PURPOSES ONLY
THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.
© COPYRIGHT SANTA CRUZ COUNTY ASSESSOR 1999
1"= 100'
SITE
54PM7
4/2/96
SEC. 20
SEC. 19
87RS1
5/21/93
RIO DEL MAR COUNTRY CLUB
SUB. NO. 10
26MB10 12/18/36
BAY VIEW DR
BEACH DR
Private R/W
10' Drain Ease.
5' Ease.
5' R/W
3' R/W
1' R/W
27PM25
10/13/77
BAY OF MONTEREY
48MB27
10/20/67
Approximate Cliff Line
7PM56
8/17/72
5' Pedestrian Ease.
Note - Assessor's Parcel & Block Numbers Shown in Circles.
Assessor's Map No. 43-15
County of Santa Cruz, Calif.
Feb. 1999
Electronically Redrawn 2/12/99 rw
Rev. 2/12/99 RW (Por. to pg 24)
Rev. 5/4/99 CB (Cor to A & B ref 1-68 & 67)
Rev. 5/25/01 mvm (changed page refs.)
Rev. 6/12/02 mvm (linework correction)
Rev. 10/17/02 CB (linework correction, 2-69)
Rev. 3/10/02 DD (corr as per 4-007970, 2-63)
Rev. 4/25/05 CB (4-0055783, LBA 2-70 & 71)
Rev. 2/16/06 mvm (5-008161S, LBA 2-72 & 73)
Rev. 2/5/08 mc (Cor. to cancelled APNs)

EXHIBIT E

Zoning Map



Legend

- APN 043-152-58
- Assessors Parcels
- Streets
- County Boundary
- RESIDENTIAL- OCEAN BEACH (RB)
- RESIDENTIAL-SINGLE FAMILY (R-1)
- PARK (PR)

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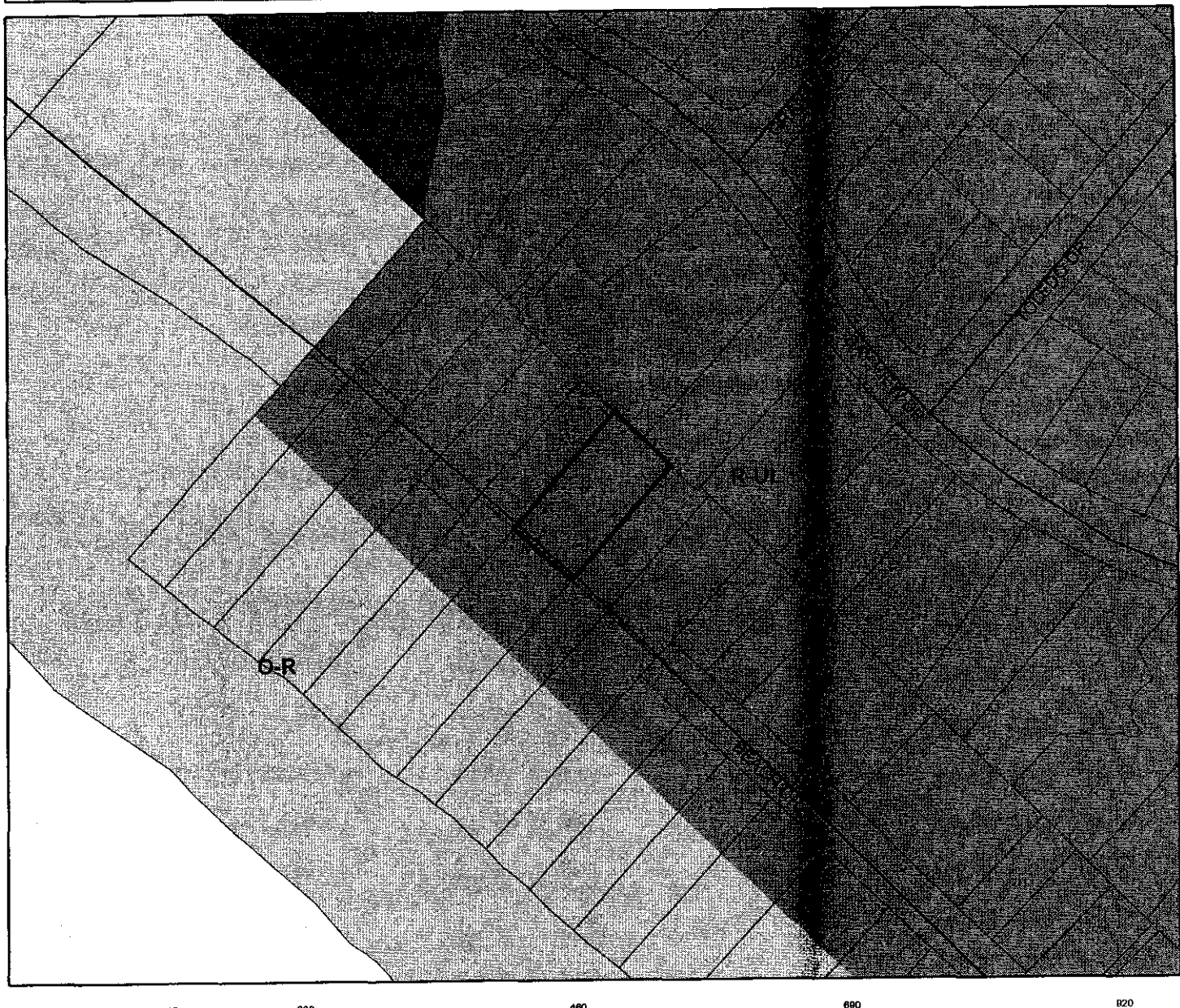
W E
S

Map Created by
County of Santa Cruz
Planning Department
February 2007

EXHIBIT F

General Plan Designation Map



0 115 230 460 690 920 Feet

Legend

- APN 043-152-58
- Assessors Parcels
- Streets
- County Boundary
- Residential - Urban Low Density (R-UL)
- Parks and Recreation (O-R)
- Urban Open Space (O-U)

N
W E
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Map Created by
County of Santa Cruz
Planning Department
February 2007

EXHIBIT F

Location Map

Legend

- APN 043-152-58
- Assessors Parcels
- Streets
- County Boundary

N
W E
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Map Created by
County of Santa Cruz
Planning Department
February 2007

EXHIBIT G

REVISIONS

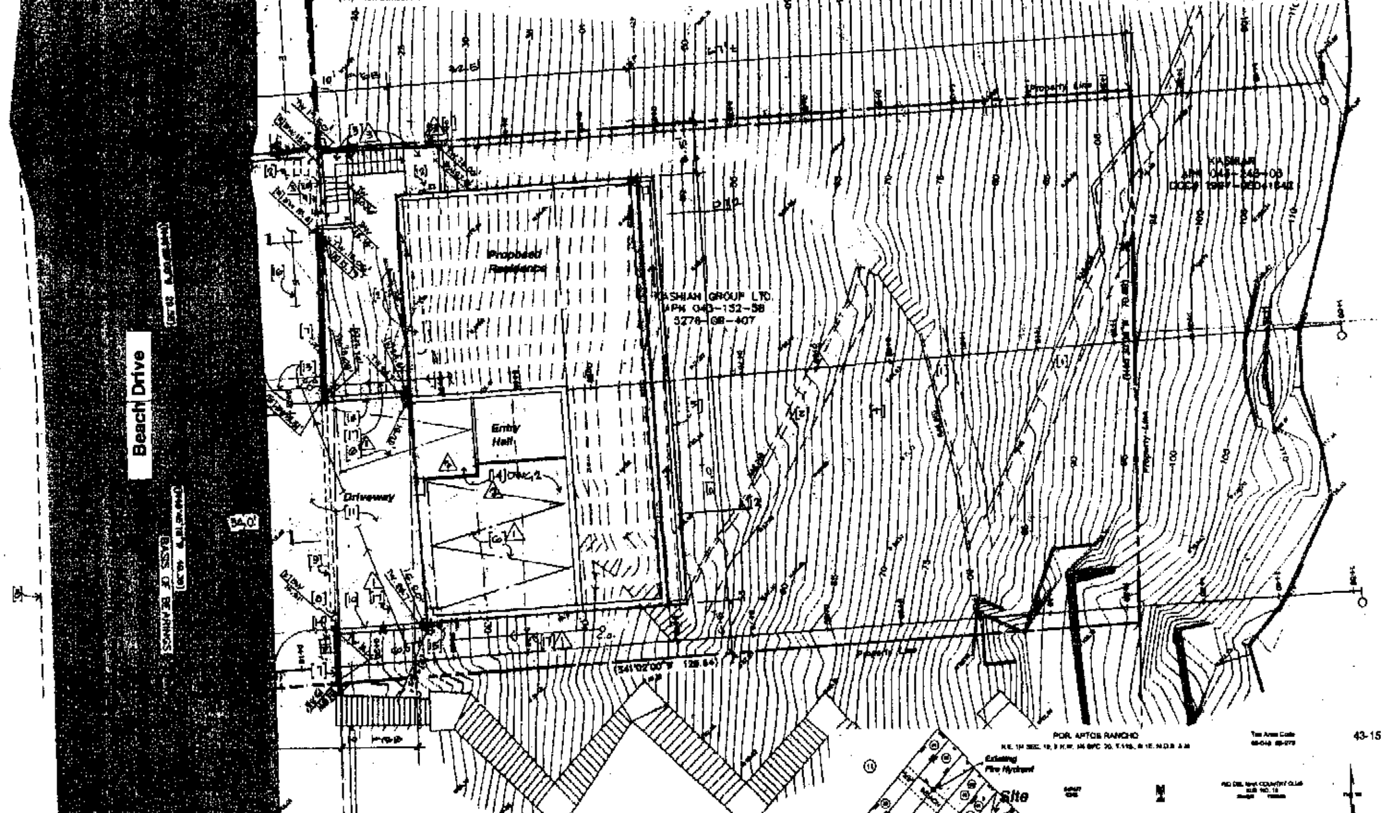
△1 2-19-07 REVISED PARKING SPACE [ALSO SEE GAR. LEVEL PLAN, DWG. 2]; SANITARY DRAIN & CLEAN-OUTS ADDED AT EAST & SOUTH OF PLAN, NOTE [17] ADDED, ALSO SEE FLOOR PLANS, DWG 2 FOR PLUMBING FIXTURES; REVISED DRAWING LIST; AMENDED GRADING TO MATCH DWG 4

△2 2-19-08 REVISED PARKING SPACE WIDTH, SEE DRAWING 2; AMENDED PROJECT DESCRIPTION AREAS AT GARAGE & ENTRY TO MATCH REV. 1 & REV. 2; ADDED DWGS 8 & C3 TO DWG LIST; ADDED NOTES [18] & [19]

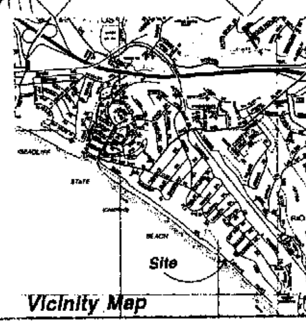
△3 11-5-08 AMENDED STEPS TO ELEC. & GAS METERS; ADDED RET. WALL HTS; REVISED NOTES [3], [7], AND [10]. ADDED NOTES [19], [20] & [21]

Notes

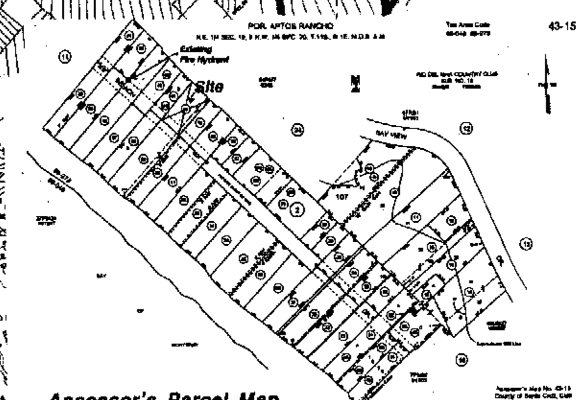
[1] Existing stepped walkway to remain
[2] Existing stepped walkway to be removed
△2 [3] New pervious concrete walkway steps and landings to gas and electric meters
[4] Existing landscaped area to remain undisturbed
[5] New concrete drainage swale
[6] Parking space (8.5' x 18')
△3 [7] Existing landscape retaining wall replaced, 2' 9" average height. Top and bottom of wall indicated at various places
[8] Edge of road right of way
[9] Existing landscape retaining wall removed
△3 [10] New sloped concrete retaining wall, 2' 6" average height. Top and bottom of wall indicated
[11] New pervious pavers at driveway. See Drawing C-1
[12] New gas and electric meters
[13] New sewer lateral to connect with existing sanitary main in Beach Drive
[14] New domestic and fire service water meter boxes
[15] Fire sprinkler riser
[16] Approximate location of electrical overhead line
[17] Sanitary Drain
[18] Prior issuance of the final building inspection Donald C. Urfer & Associates, structural engineers, will certify in writing that construction has been completed in accordance with FEMA Coastal Construction standards and related County Building Code requirements (including Section 1612 All CBC Flood Hazards)
△3 [19] All shoring shall be installed under the inspection by the project engineer or a designated special inspector
△3 [20] New concrete retaining wall located outside R.O.W. and within front yard setback
△3 [21] New concrete retaining wall



Site Plan
1/8" = 1'-0"



Vicinity Map



Assessor's Parcel Map

Project Data

PROJECT NAME	Kashian Residence		
PROJECT ADDRESS	Beach Drive Aptos CA 95003		
APN	043 152 58		
OWNERS	The Kashian Group Ltd 8885 North Fresno Street, Suite 180 Fresno CA 93720		
	David Fisher Fisher Family Trust 1420 South Mills Ave., Suite M Lodi CA 95242	tel (209) 333 3400	
MUNICIPALITY	County of Santa Cruz		
ZONING	R6, Coastal Zone Setbacks: front and rear 10ft, sides zero and 5ft, 25ft height limit 40% lot coverage, 50% floor area ratio		
UTILITIES DISTRICTS	County of Santa Cruz Sanitation District Soquel Creek Water District		
CONSTRUCTION	CBC 2007 Type V-N, sprinklered		
OCCUPANCY	R-3		
PROJECT DATA	Gross Site Area Right of Way Net Site Area Proposed Building Footprint	8,625 sf 1,400 sf 7,225 sf 2,059 sf	28.49% Net Site Coverage
PROJECT DESCRIPTION	New 2,631 sf. 3-bedroom, 3 1/2-bathroom, single-family residence arranged on two levels over 2-car, 375 sf. garage, and 108 sf. basement entry. All habitable accommodation and mechanical equipment elevated above 21.00 ft. flood level △2		
PARKING	Total 3 parking spaces (2 spaces in Garage, 1 space in driveway)		
GRADING	Excavation approx. 886.22 cu. yd. △1		
GEOTECHNICAL ENGINEER	Haro, Kasunich & Associates, Inc. 116 East Lake Avenue Watsonville CA 95076 attn Rick Parks	tel (831) 722 4175 fax 722 3202	
GEOLOGIST	Rogers Johnson & Associates 41 Hangar Way, Suite B Watsonville CA 95076	tel (831) 728 7200 fax 728 7218	
STRUCTURAL ENGINEER	Donald C. Urfer & Associates, Inc. 2715 Porter Street Soquel CA 95073 Attn Karen Winkler	tel (831) 476 3881 fax 476 3721	
CIVIL ENGINEER	Robert Dewitt & Associates, Inc. 1607 Ocean Street Santa Cruz CA 95060	tel (831) 425 1617 fax 425 0824	
SURVEYOR	Dunbar & Craig 1011 Cedar Street	tel (831) 425 7533 fax 426 9182	

Drawing List

1 SITE PLAN
2 FLOOR PLANS, SECTIONS A & B
3 ELEVATIONS & ROOF PLAN
4 GRADING DIAGRAM & CALCULATIONS
5 LANDSCAPE PLAN
△1 6 ARBORIST PLAN
△1 7 PERSPECTIVES
△2 8 HIGH STRENGTH WINDOWS
C1 DRAINAGE & EROSION CONTROL
C2 EROSION CONTROL DETAIL & NOTES
△2 C3 UPSTREAM DRAINAGE BOUNDARY
S1 PRELIMINARY TEMPORARY SHORING
T1 TOPOGRAPHIC SURVEY
T2 TOPOGRAPHIC CROSS SECTION A
T3 TOPOGRAPHIC CROSS SECTION B
T4 TOPOGRAPHIC CROSS SECTION C

Fire Protection Notes

[A] These plans shall comply with currently adopted California Building & Fire Codes and all District Amendments
[B] Job copies of the building and fire systems plans and permits must be on-site during inspections
[C] The building shall be protected by an approved automatic fire sprinkler system complying with the currently adopted edition of NFPA 13D and adopted standards of the local Authority having jurisdiction
[D] The certified sprinkler designer/installer shall submit three sets of shop drawings and calculations for the underground and overhead residential automatic fire sprinkler system for approval by the local Authority having jurisdiction. Installation shall follow all district guidelines
[F] Roof shall be minimum Class B
[G] Address numbers minimum 4" height and of a color contrasting to the background shall be installed at a location visible from the street
[H] A 30' clearance will be maintained with non-combustible vegetation around all structures or to the property line, whichever is a shorter distance. Exception: Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided they do not form a means of rapidly transmitting fire from native growth to any structure
[J] Fire Hydrant is located at 528 Beach Drive and is within 150' of subject property

KASHIAN RESIDENCE

Beach Drive
Aptos CA 95003

APN 043-152-58

ROBERT J GOLDSPINK ARCHITECT
C 12,796

8042 Soquel Drive Aptos CA 95003
tel (831) 688 8950 fax (831) 688 4402

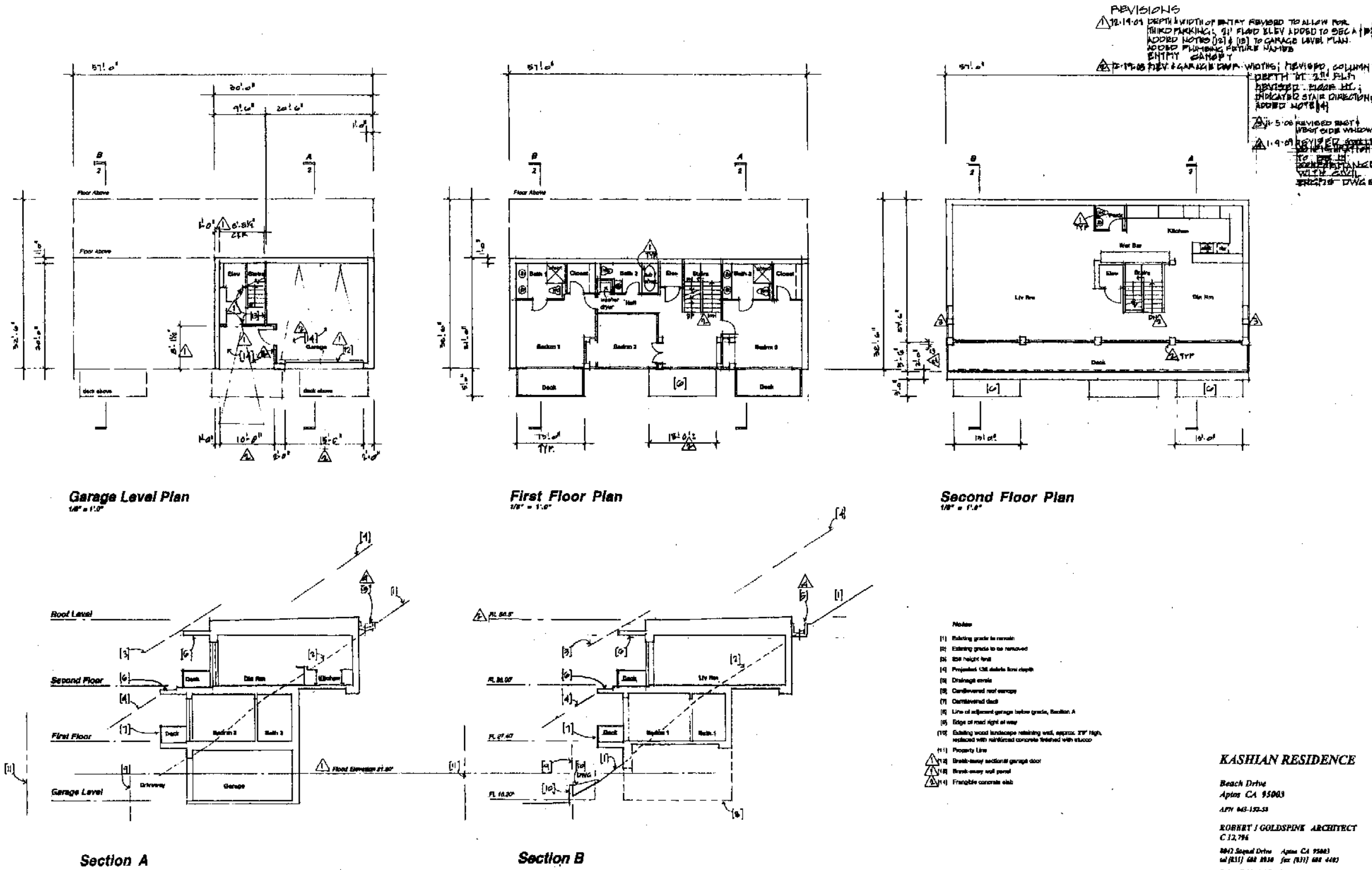
RobertGoldspink@aol.com

date 8.15.06

1

Site Plan

EXHIBIT H



Notes

[1] Existing grade to remain
[2] Existing grade to be removed
[3] 28' height limit
[4] Projected 136 debris flow depth
[5] Drainage swale
[6] Cantilevered roof canopy
[7] Cantilevered deck
[8] Line of adjacent garage below grade, Section A
[9] Edge of road right of way
[10] Existing wood landscape retaining wall, approx. 2'0" high, replaced with reinforced concrete finished with stucco
[11] Property Line
[12] Break-away sectional garage door
[13] Break-away wall panel
[14] Frangible concrete slab

KASHIAN RESIDENCE

Beach Drive
Aptos CA 95003

APN 043-152-53

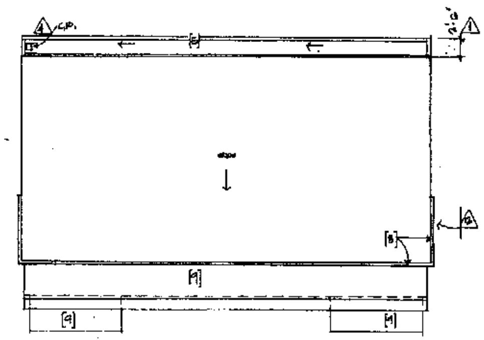
ROBERT J GOLDSPINE ARCHITECT
C 12,796

8042 Soquel Drive Aptos CA 95003
tel (831) 688 8950 fax (831) 688 4482

date 3.15.06

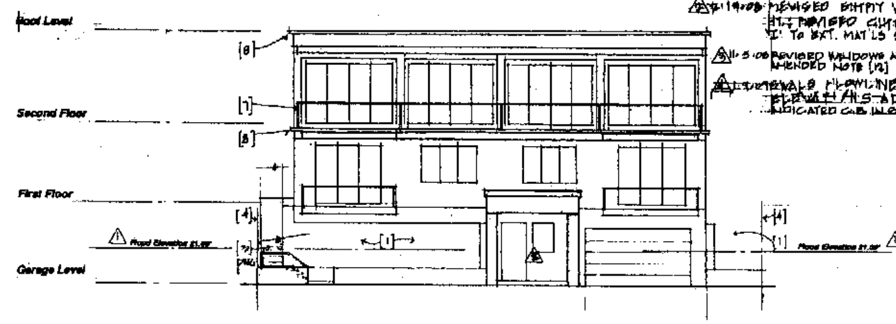
2

Floor Plans & Sections



Roof Plan

1/8" = 1'-0"



South Elevation

REVISIONS:

1. 12·19·04 21' FLOOD ELEV. ADDED TO BLDG. ELEV.; REVISED ENTRY WIDTH TO ALLOW FOR PARKING, SEE SITE PLAN, DWG 1 & FLOOR PLAN, DWG 2; REVISED DRAINAGE SWALE TO MATCH CIVIL DWG. C1; AMENDED EXTERIOR MATERIALS SCHEDULE; INDICATED DOOR & WINDOW AT RECESSED ENTRY
2. 2·19·05 REVISED ENTRY WIDTH; REVISED ROOF HT.; REVISED GUTTER AT ROOF; ADDED ITEM 'I' TO EXT. MAT'LS SCHED.
3. 11·5·06 REVISED WINDOWS AT SIDE ELEVATIONS; AMENDED NOTE [12]
4. SWALE FLOWLINE & TOP OF WALL ELEVATIONS ADDED AT EAST & WEST ELEV. INDICATED C.B. IN SWALE - SEE DWG. C-1

Notes

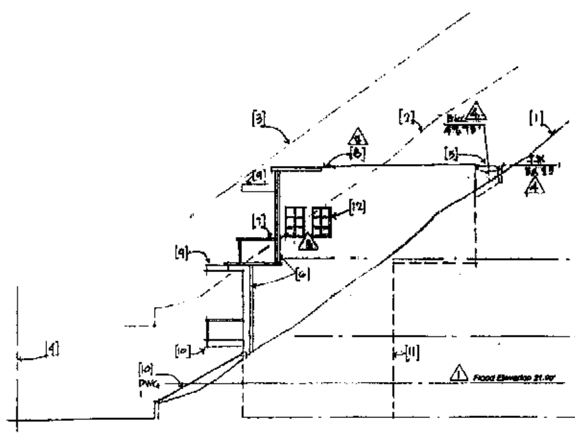
[1] Existing grade
[2] Projected hill debris flow depth
[3] 28ft height limit
[4] Property line
[5] Drainage swale
[6] Rainwater leader
[7] Balustrade
[8] Gutter
[9] Cantilevered roof canopy
[10] Cantilevered deck
[11] Line of proposed house below grade
[12] Vacation side window size: SEE DWG. 5, REVISION 3

Proposed Exterior Materials

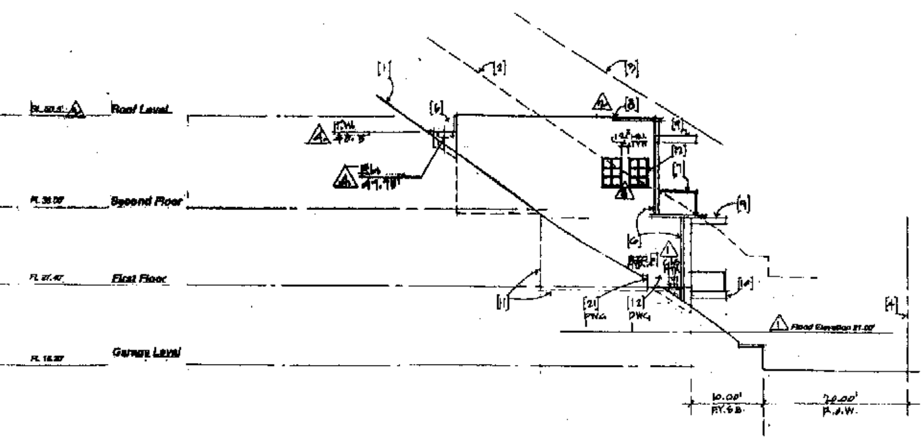
Item	Element	Material, finish, color
A.	Roof	Inter hot-mop membrane with granulated finish, color: gray-black
B.	Gutters & Roof Flashings	Copper
C.	Walls & Landscape Retaining Walls	Stucco, Dryvit color XMIMAD 'Mole'
D.	Door & Windows	Painted metal clad, color: Norco color P301 'Sea Foam'
E.	Garage Door	Painted to match stucco color
F.	Deck Balustrades	Stainless steel 'Cablerail' system
G.	Downspouts	Copper
H.	Decks, Entry Porch Surround	Limestone tile
I.	Roof and Deck Soffits	Benjamin Moore #1549

Neighboring Properties

All surrounding parcels are zoned for single-family dwellings. Parcels on each side of this project are undeveloped. Existing houses on North side of Beach Drive are 3-stories, approx. 28ft high. Existing houses on South side of Beach Drive are 1 and 2-stories, approx. max. 20ft high



East Elevation



West Elevation

KASHIAN RESIDENCE

Beach Drive
Aptos CA 95003
APN 043-153-58

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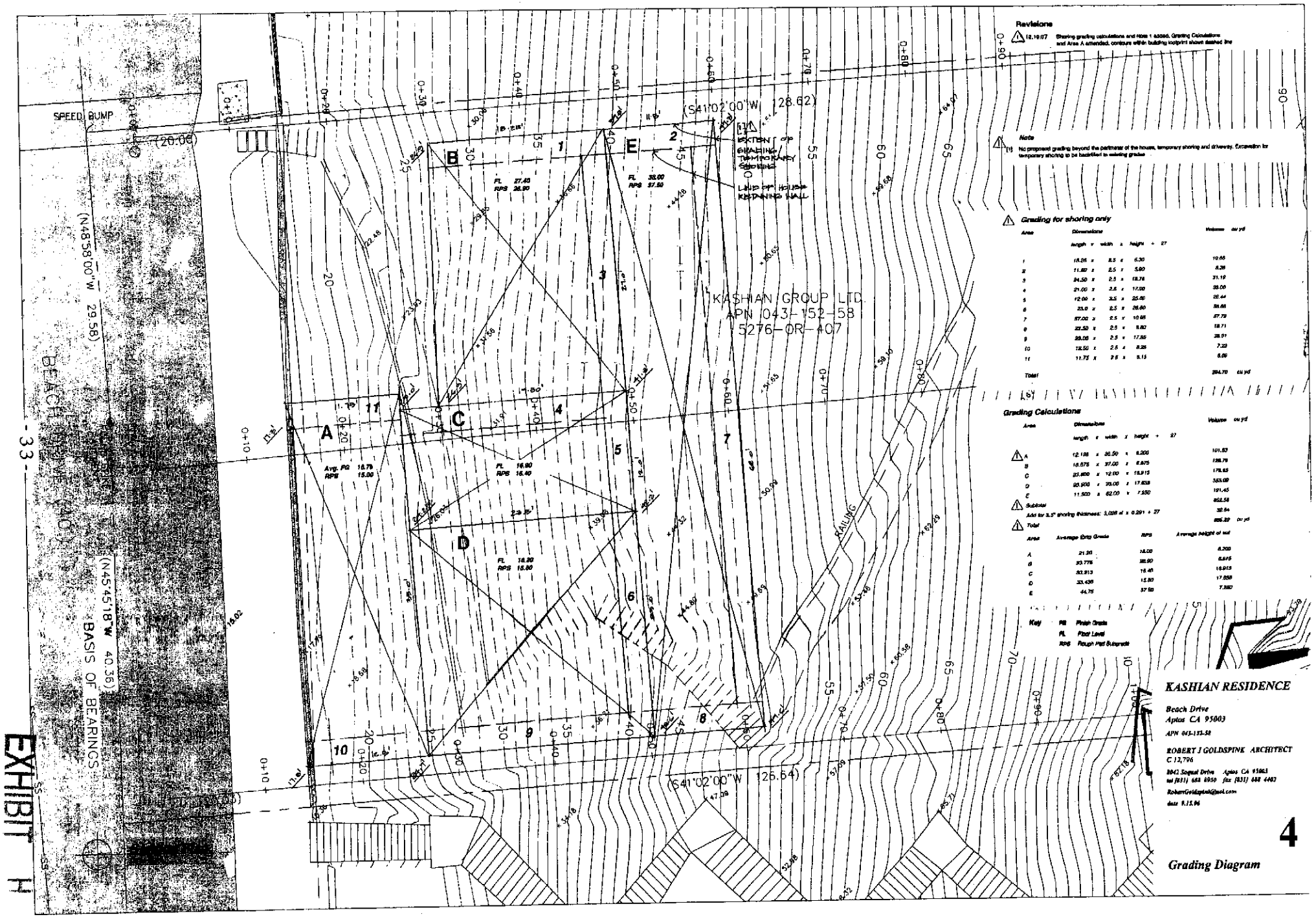
C 13,796
8042 Soquel Drive Aptos CA 95003
tel [831] 688 1950 fax [831] 688 4482
RobertGoldspink@aol.com
date 9.13.06

3

Elevations & Roof Plan


Revisions
12.19.07 Shoring grading calculations and note 1 added. Grading Calculations and Area A amended, contours within building footprint shown dashed line
Note
1 No proposed grading beyond the perimeter of the houses, temporary shoring and driveway. Excavation for temporary shoring to be backfilled to existing grades
Grading for shoring only
Grading Calculations
KASHIAN GROUP LTD.
APN 043-152-58
5276-OR-407
(S41°02'00"W 128.62)
(S41°02'00"W 126.64)
(26.06)
SPEED BUMP
(N48°58'00"W 29.58)
(N45°45'18"W 40.36)
BASIS OF BEARINGS
BEACH DRIVE
EXTENT OF TEMPORARY SHORING
LINE OF HOUSE
RETAINING WALL
RAILING
KASHIAN RESIDENCE
Beach Drive
Aptos CA 95003
APN 043-153-58
ROBERT J GOLDSPINK ARCHITECT
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tel (831) 688 4950 fax (831) 688 4483
RobertGoldspink@aol.com
date 9.15.96
4
Grading Diagram
EXHIBIT H
- 33 -

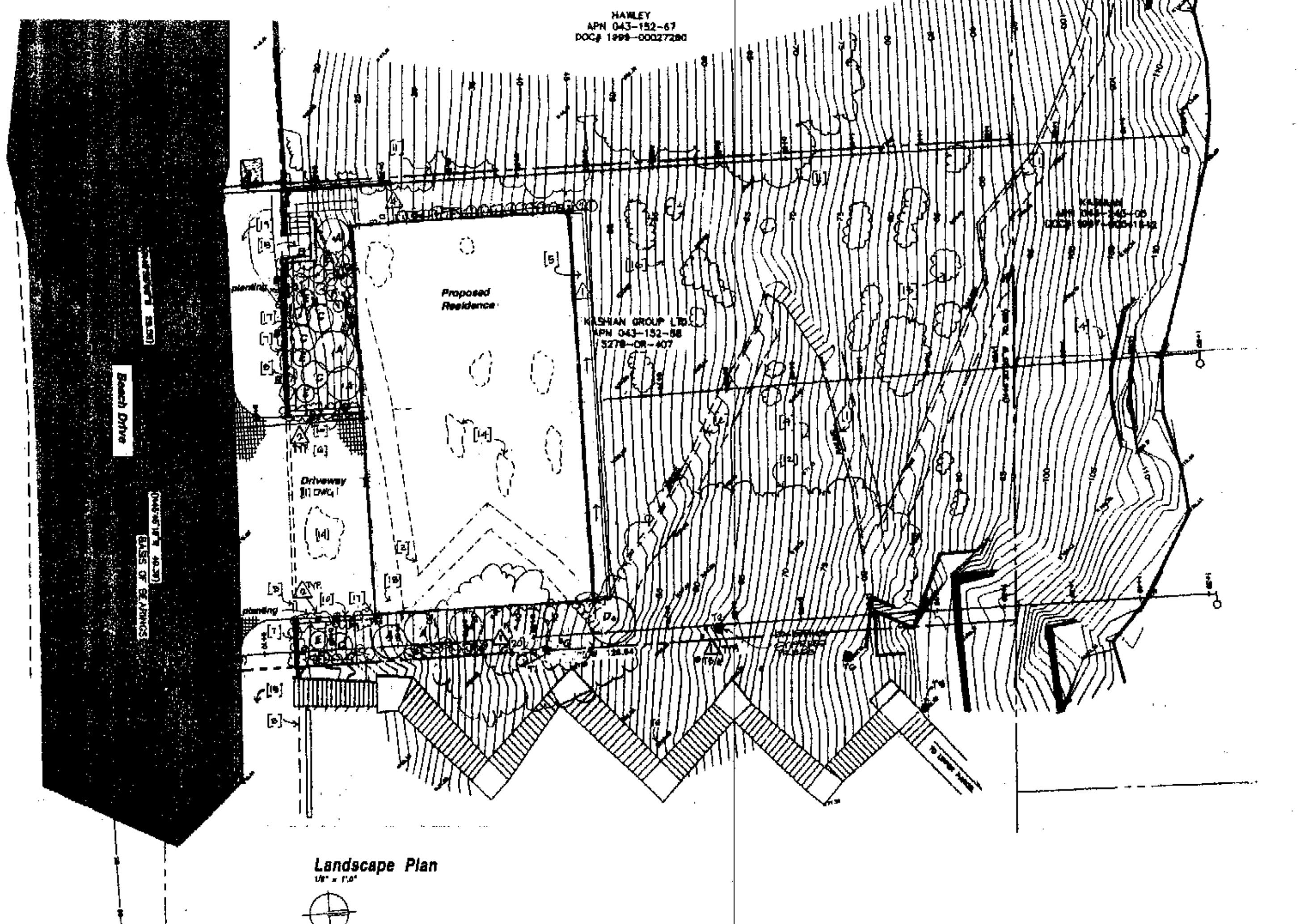
Planting List

Type		Botanical name	Common name	Size
Shrubs	A	Rhaphiolepis umbellata	Hawthorn	5 gal.
	B	Rosmarinus prostratus	Dwarf rosemary	1 gal.
	C	Cistus x hybridus	White rockrose	5 gal.
	D	Ceanothus griseus horizontalis	Ceanothus 'Yankee Point'	1 gal.
Perennial	E	Verbena 'de la mina'	Verbena	1 gal.
Groundcover	F	Fragaria chiloensis	Wild strawberry	flats
	G	Cotoneaster	C.dammeri & C.'Lowfast'	1 gal.

Existing Tree Schedule

All Trees Cypress

Number	Size (dbh)
T1	13.87"
T2	22.00"
T3	12.00"
T4	8.00"
T5	11.75"
T6	22.00"



REVISIONS:

1 12-11-07 REVISED NOTE [6]; REVISED SHAPE OF DRAINAGE SWALES; ADDED EXISTING TREE SCHEDULE & KEYED TO SITE PLAN AT EAST BOUNDARY; ADDED NOTE [20]; REVISED PLANTING LIST.

2 2-19-08 REVISED PLANTING LIST & SHOWED PLANTING PLAN; REV. NOTE 13

4 1.9.09 AMENDED WEST SIDE YARD STEPS TO MATCH DWG 1, REV. 5.

Notes

[1] Existing stepped pervious walkway to remain
[2] Existing stepped pervious walkway to be removed
[3] New stepped, pervious walkway to replace existing [relocated]
[4] Existing planted area to remain undisturbed
[5] Drainage swale
[6] Pervious paving
[7] Existing wood landscape retaining wall, approx. 2' 0" high, replaced with reinforced concrete finished with stucco
[8] Edge of road right of way
[9] Existing landscape retaining wall removed
[10] New sloped concrete retaining wall, 5' 6" average height, finished with stucco
[11] Drip line of existing Acacia trees (trunks on adjacent property)
[12] Drip line of existing Cypress trees
[13] Existing Purple Sage and Salvia Leucophylla shrubs intermixed, to remain
[14] Existing Purple Sage, Salvia Leucophylla, shrub to be removed
[15] Porous concrete steps and landing
[16] Existing planting approx. 5ft beyond North wall of proposed house generally to remain undisturbed
[17] An automatically-timed drip irrigation system will be installed
[18] Trash & Recycling bins in Garage
[19] Existing unpaved, pervious parking area
[20] Tree # 1 removed per Arborist Plan, Dwg 6. Replanted for erosion control with Cotoneaster and Ceanothus. See Plant List. Full description of planting plan and interim erosion control shall be submitted with Building Permit Application documents

Impervious Area calculations

House	57 x 32.5 =	1,852.50 sf	
Drainage swale	57 x 2.75	156.75	
Part of Beach Drive	70 x 11.50	805.00	
Total		2,814.25 sf	(32.62 %)

(Driveway, walkway and steps all pervious surfaces)

BASIS OF BEARINGS

BEARINGS ARE BASED UPON THE CENTERLINE OF BEACH DRIVE AS SHOWN ON THAT MAP FILED IN VOLUME 54 OF PARCEL MAPS AT PAGE 7, SANTA CRUZ COUNTY RECORDS, AND ESTABLISHED BETWEEN MONUMENTS FOUND AS SHOWN

= SOUTH 45°45'18" EAST

LEGEND

( ) RECORD DATA PER
● MONUMENT FOUND AS SHOWN
PROPERTY LINE
EASEMENT
RETAINING WALL
CONCRETE
ASPHALT

KASHIAN RESIDENCE

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APN 043-153-58

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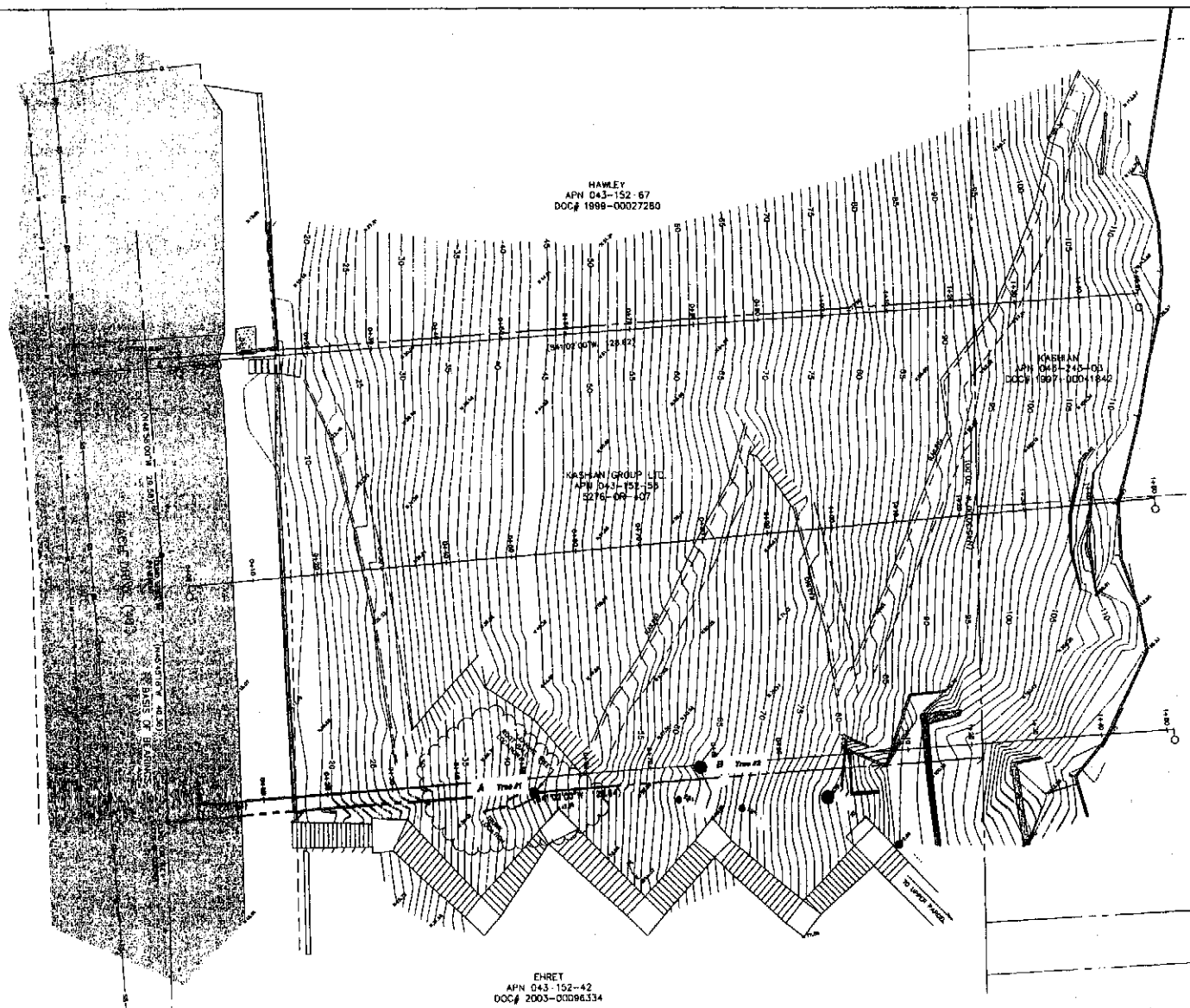
RobertGoldspink@aol.com
date 9.18.06

5

Landscape Plan

EXHIBIT H



Maureen Hamb-WCISA Certified Arborist #2280
Professional Consulting Services

Telephone: 831-426-1247
Fax: 831-426-1251
Mobile: 831-234-7735

TREE LOCATION PLAN
KASHIAN PROPERTY
APN 043-152-58

A REMOVE DUE TO RISK OF FAILURE

B RETAIN

KASHIAN RESIDENCE

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APN 043-153-58

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tel (831) 688 2950 fax (831) 688 6483
RobertGoldspink@aol.net
12.19.07

849 Almar Ave, Suite C #319
Santa Cruz, CA 95060
email: maureenmh@sbcglobal.net

6

Arborist Plan

REVISIONS			
1	11/26/07	JMG	ADD TREES AND UTILITIES

DUNBAR and CRAIG
LICENSED LAND SURVEYORS
1011 CEDAR STREET, SANTA CRUZ, CA 95060
P.O. BOX 1016, SANTA CRUZ, 95061
TEL(831) 429-8535

TOPOGRAPHIC MAP OF
LANDS OF KASHIAN GROUP LTD.

Situate in
APTOS RANCHO
County of Santa Cruz, State of California

FILE NO. 3915 — GENERAL DATE 9/26/2005

SCALE : 1/8 INCH = 1 FEET	DRAWN JMG	JOB NO. 05438	SHEET
DATE: OCT. 2005	CHECKED	INDEX	ONE
FIELDWORK: MS/BF	ACAD NO. 05438.dwg	FILE NO.	OF FOUR

LICENSED LAND SURVEYOR
CURT G. DUNBAR
5615
LICENSE RENEWAL DATE
31 SEPT 2007
STATE OF CALIFORNIA

GRAPHIC SCALE
(IN FEET)
1 inch = 8 ft.

Artist rendering: perspective view from mean high tide line on beach from South

Artist rendering: perspective view from Southwest

KASHIAN RESIDENCE

Beach Drive
Aptos CA 95003

APN 043-152-58

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tel (831) 688 8950 fax (831) 688 4402

RobertGoldspink@aol.net

12.19.97

7

Perspectives

REVISIONS:
△ 11-5-08 AMENDED NOTE [3], ADDED NOTE [5] ON DETAILS; CHANGED DESIGN & DIMENSIONS ON 'ELEVATION', ADDED ENGINEERING CALCS BY DONALD URFER & ASSO.

Glass Load Resistance Report – Kashian Residence

Glazing Information

Edge Supports: 4 Sides
Glazing Angle: 90°
Lite Dimensions
Width: 17.2 in.
Height: 19.8 in.

Project Details

Project Name: Kashian Residence
Location: Aptos, CA
Comments: Long duration load provided to Oldcastle Glass is 65 PSF.

Glass Construction (Rectangular)

Single Glazed Lite (Heat Strengthened)
Interlayer Type: PVB
Outboard Ply Thickness: 1/8 in.
Interlayer Thickness: 0.05 in
Inboard Ply Thickness: 1/8 in.
Nominal Thickness: 1/4 in.

Long Load Duration, Resistance, and Deflection Data

Load (~ 30 days): 68.0 psf
Load Resistance: > 209 psf
Approximate center of glass deflection: 0.11 in.

Conclusion

Based on your design information, the load resistance is greater than or equal to the specified loading.

Statement of Compliance

Procedures followed in determining the resistance of this window glass are in accordance with ASTM E1300-04.

Disclaimer:
[illegible]

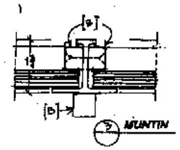
Prepared by: ____________________ on 3/13/2008
Matt Manning

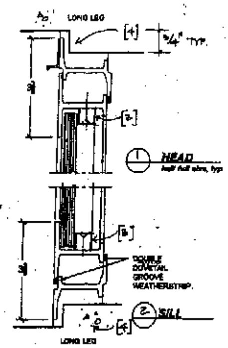
Window Glass Design 2004 - Version [1.23] Copyright © 2007 SGG, Inc.

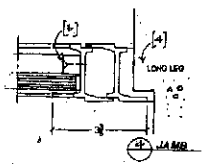
HOPE'S®
Jamestown 175™ Series
modified as shown

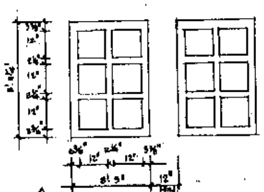
Impact Approved Steel Windows

Notes
[illegible]









△ WINDOW 'C'

Hope's Jamestown 175 Series outward-opening steel casement windows with 5/16" thick laminated safety glass

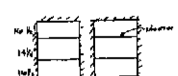
Steel Window Elevations
1/4" = 1'-0"

△ Donald C. Urfer & Assoc. Inc.

PROJECT: Kashian	SHEET NO. 1
JOB NO. 06058	
CALCULATED BY KH	DATE 3/08

Windows in Sidewall

Ht of landslide soil = 8' max



Glass:
Soil load = 19.5 H = 19.5 × 8' = 156 psf
Use 1/4" glass mfr.
Capacity = 209 psf per manuf.

Muntin:
7/8" × 7/8" solid steel bar
S = 0.112 in³
I = 0.049 in⁴
w = 156 psf × 15 3/8"/12 = 200#/ft
M = 200 × 2.75² / 8 = 189 lb-ft
f_b = 189 × 12 / (0.112 × 2) = 10.2 ksi
Δ = 5 × 200 × 2.75⁴ × 12³ / (384 × 29 × 10⁶ × 0.049 × 2) = 0.09 in < L/384

Use 2 - 7/8" × 7/8" muntins

Window Frame:
Tested for 80 psf with a 30" × 98" window
G.F. total load of 80 psf × (30" × 98" / 12²) = 2122# > 156 psf × 2.75' × 0.9375' = 400 p
OK.

Frame at wall:
Capacity = 80 psf × 98/12 / 2 = 326#/ft > 156 psf × 2.46/2 = 193#/ft OK.

Hope's Jamestown 175 Series OK.

KASHIAN RESIDENCE

Beach Drive
Aptos CA 95003
APN 043-152-58

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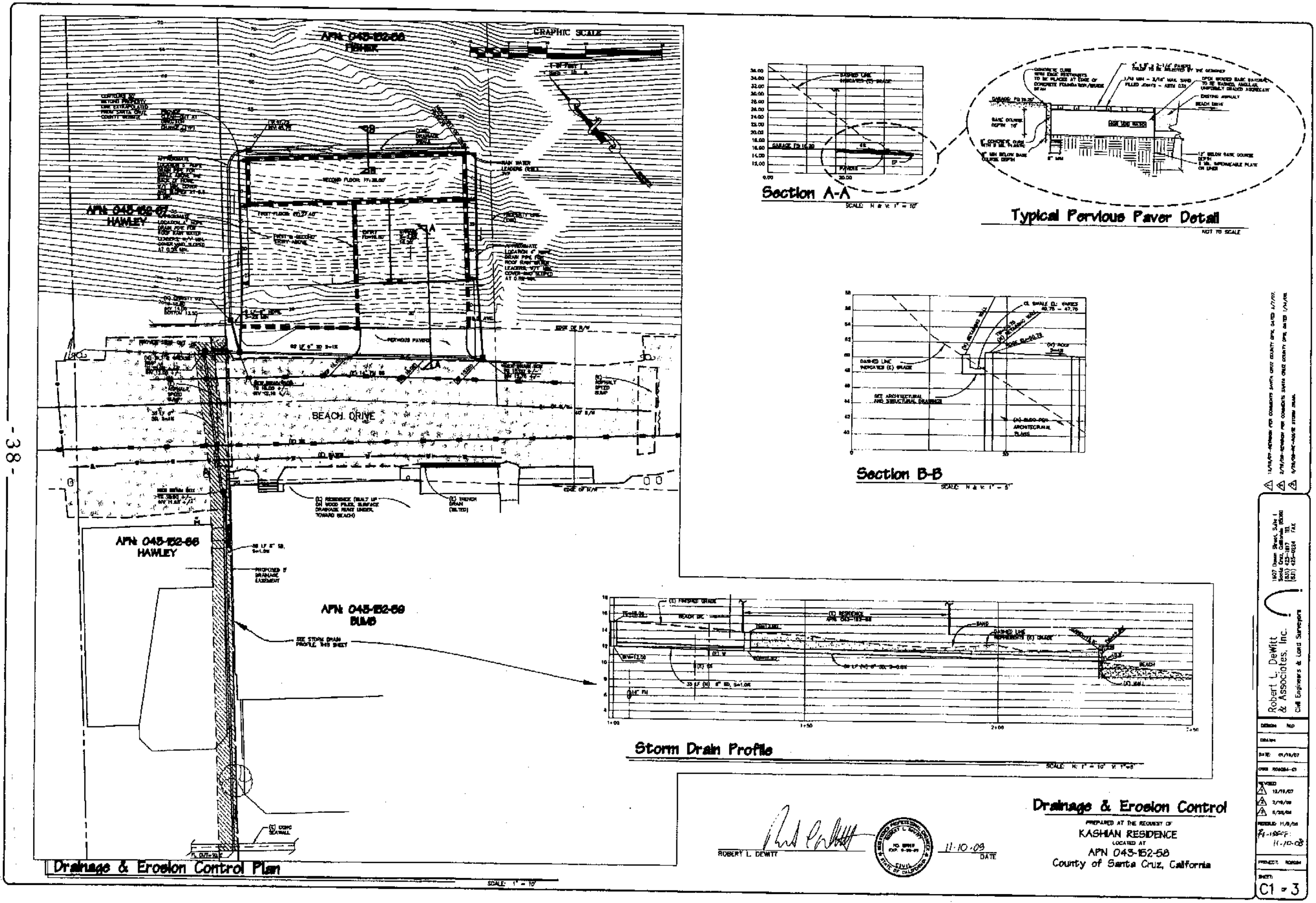
RobertGoldspink@sgol.net
3.19.08

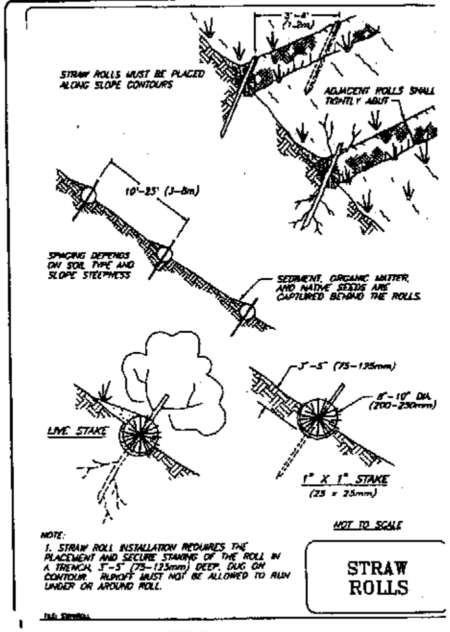
8

High Strength Windows

EXHIBIT



Drainage & Erosion Control Plan
SCALE: 1" = 10'
GRAPHIC SCALE
APN 045-152-68
FISHER
APN 045-152-67
HAWLEY
APN 045-152-66
HAWLEY
APN 045-152-69
BUMB
BEACH DRIVE
SEE STORM DRAIN PROFILE THIS SHEET
PERVIOUS PAVERS
Section A-A
SCALE: H & V: 1" = 10'
Typical Pervious Paver Detail
NOT TO SCALE
Section B-B
SCALE: H & V: 1" = 5'
Storm Drain Profile
SCALE: H: 1" = 10' V: 1"=5'
Drainage & Erosion Control
PREPARED AT THE REQUEST OF
KASHIAN RESIDENCE
LOCATED AT
APN 045-152-58
County of Santa Cruz, California
ROBERT L. DEWITT
11-10-08
DATE
Robert L. DeWitt & Associates, Inc.
Civil Engineers & Land Surveyors
DESIGN: NJD
DATE: 01/15/07
REVISED
12/18/07
2/19/08
5/28/08
PROJECT: KORSIN
SHEET: C1 of 3



BMP - STRAW ROLLS AND COIR LOGS

DESCRIPTION

Straw rolls are manufactured from straw wrapped in netting. Coir logs are similar, but are filled with coconut fiber rather than straw. The logs are placed and staked in shallow trenches along the contour of newly constructed or disturbed slopes. They can be used to provide perimeter protection, settling, reduction in water velocity/erosive forces and habitat protection.

APPLICATIONS

The BMP may be used for temporary soil stockpile protection, drop inlet protection, temporary check dams, bank or slope stabilization, and streambank toe protection. This BMP may be used for perimeter sediment control, and is preferred over silt fencing and straw bales. It may also be used to replace missing sections of earthen berms (example: above new ditch relief culverts).

Straw rolls should be manufactured of rice straw or a sterile (non-seed bearing) straw to prevent the introduction of non-native grasses. Polypropylene or coir netting is preferred over plastic netting.

LIMITATIONS

This BMP should *not* be used:

- where flow volume or water velocity inhibit its usefulness.

CONSTRUCTION GUIDELINES

- Logs are placed in 2 to 3 inch deep trenches and staked along the contours of newly constructed or disturbed slopes.
- Log spacing depends on soil type and slope steepness.
- Adjacent logs shall be tightly abutted to prevent water flow and gully formation between logs.
- Ensure that logs are in contact with the ground in the trenches to prevent water flow under logs.
- Live staking may be used in conjunction with logs.

BMP MAINTENANCE

- During construction, inspect daily during the workweek.
- Schedule additional inspections during storm events.
- Make any required repairs immediately.
- For perimeter control installations (securing spoils, etc.), remove sediment deposits when they reach ½ the height of the log/roll.

BMP REMOVAL

- Remove sediment buildup in front of BMP.
- Revegetation of the site may be necessary.
- Dispose of netting properly. Straw or coir filling may be used as mulch.
- BMP removal may not be necessary.

EROSION CONTROL NOTES

1. BETWEEN OCTOBER 15, AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. HAY BALES, FILTER BERMS, OR OTHER MEANS SHALL BE EMPLOYED TO PREVENT TURBID RUNOFF TO ADJOINING PROPERTIES.

2. UNNECESSARY GRADING AND DISTURBING OF SOIL SHALL BE AVOIDED.

3. STOCKPILES ARE TO BE STORED UNDER PLASTIC SHEETING PRIOR TO ANY FORECAST OF RAIN AND MUST BE INSPECTED BEFORE AND AFTER ALL RAINFALL EVENTS, AND AT LEAST WEEKLY THROUGHOUT THE JOB. SEE STORAGE AREAS INDICATED ON THE GRADING AND EROSION CONTROL PLANS.

4. UPON COMPLETION OF CONSTRUCTION, ALL REMAINING EXPOSED AREAS SHALL BE PERMANENTLY RE-VEGETATED PER LANDSCAPE OR REVEGETATION PLANS.

5. DURING CONSTRUCTION, NO TURBID SITE WATER SHALL BE PERMITTED TO ENTER THE CHANNEL OR STORM DRAIN SYSTEM. USE OF SILT AND GREASE TRAPS, FILTER BERMS, OR HAY BALES MAY BE USED TO PREVENT SUCH DISCHARGE.

6. CONTRACTOR SHALL NOTIFY THE COUNTY OF SANTA CRUZ AT LEAST 48 HOURS BEFORE ANY EARTHWORK IS BEGUN.

7. ALL CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF THE COUNTY OF SANTA CRUZ. NO CLEARING, GRADING, OR EXCAVATION SHALL TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15 UNLESS THERE IS AN APPROVED WINTER EROSION CONTROL PLAN. ALL DISTURBED SOIL SHALL BE SEEDED, MULCHED, OR OTHERWISE PROTECTED BY OCTOBER 15.

8. CONTRACTOR SHALL INSTALL UNDERGROUND STORM DRAIN SYSTEM AND EROSION CONTROL BARRIERS PRIOR TO OCTOBER 15.

9. APPROVAL OF LAND CLEARING SHALL MEET THE FOLLOWING CONDITIONS. ALL DISTURBED SURFACES SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION AND THE ESTABLISH NATIVE OR NATURALIZED VEGETATIVE GROWTH COMPATIBLE WITH AREA. THIS CONTROL SHALL CONSIST OF:
   A. EFFECTIVE TEMPORARY PLANTING SUCH AS BARLEY AT A RATE OF 2–4 LB PER 1000 SQ FT, MULCH WITH RICE STRAW AT A RATE OF 1.25 BALES PER 1000 SQ FT. OTHER SOIL COVERING MATERIAL MAY BE RECOMMENDED BY THE ENGINEER. THIS INCLUDES SOIL STABILIZATION FABRICS OR OTHER MULCHING MATERIALS.
   B. PERMANENT PLANTING OF NATIVE OR NON-INVASIVE DROUGHT RESISTANT SPECIES OF SHRUBS, TREES, ETC., PURSUANT TO THE COUNTY'S LANDSCAPE CRITERIA, WHEN THE PROJECT IS COMPLETED, LANDSCAPE CRITERIA, WHEN THE PROJECT IS COMPLETED.
   C. MULCHING, FERTILIZING, WATERING OR OTHER METHODS MAY BE REQUIRED TO ESTABLISH NEW VEGETATION.

10. THE PROTECTION REQUIRED BY THIS SECTION SHALL BE INSTALLED PRIOR TO CALLING FOR FINAL APPROVAL OF THE PROJECT AND AT ALL TIMES BETWEEN OCTOBER 15 AND APRIL 15. SUCH PROTECTION SHALL BE MAINTAINED FOR AT LEAST ONE WINTER UNTIL PERMANENT PROTECTION IS ESTABLISHED.

11. NO LAND CLEARING SHALL TAKE PLACE PRIOR TO APPROVAL OF THE EROSION CONTROL PLAN. VEGETATION REMOVAL BETWEEN OCTOBER 15 AND APRIL 15 SHALL NOT PRECEDE SUBSEQUENT GRADING OR CONSTRUCTION ACTIVATES BY MORE THAN 15 DAYS. DURING THIS PERIOD, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE.

12. DURING STORM EVENTS, SCHEDULE ADDITIONAL INSPECTIONS BY THE ENGINEER OR REPRESENTATIVE.

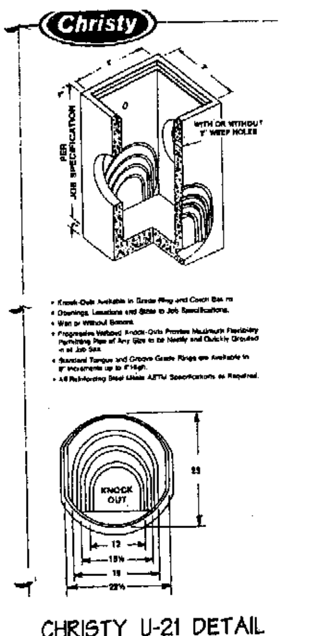
13. MAKE ANY REQUIRED REPAIRS TO THE EROSION CONTROL MEASURES IMMEDIATELY.

14. FOR PERIMETER CONTROL INSTALLATIONS (SECURING SPOILS, ETC), REMOVE SEDIMENT DEPOSITS WHEN THEY REACH 1/2 THE HEIGHT OF THE STRAW OR COIR LOG/ROLL.

15. REMOVE SEDIMENT BUILDUP IN FRONT OF THE BMP.

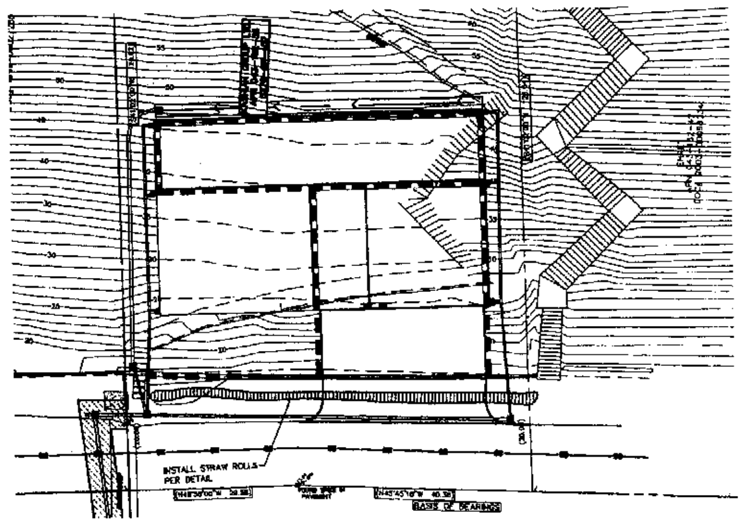
16. RE-VEGETATION OF THE SITE MAY BE NECESSARY.

17. BMP REMOVAL MAY NOT BE NECESSARY, THE ENGINEER WILL ADVISE.



CHRISTY U-21 DETAIL

NOT TO SCALE



Erosion Control PLan

SCALE: 1"=10'

ROBERT L. DEWITT

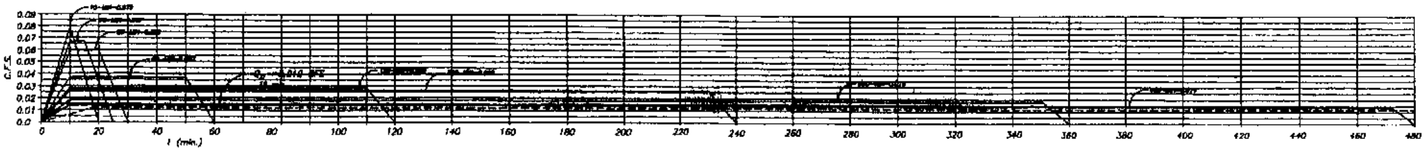
11-5-08
DATE

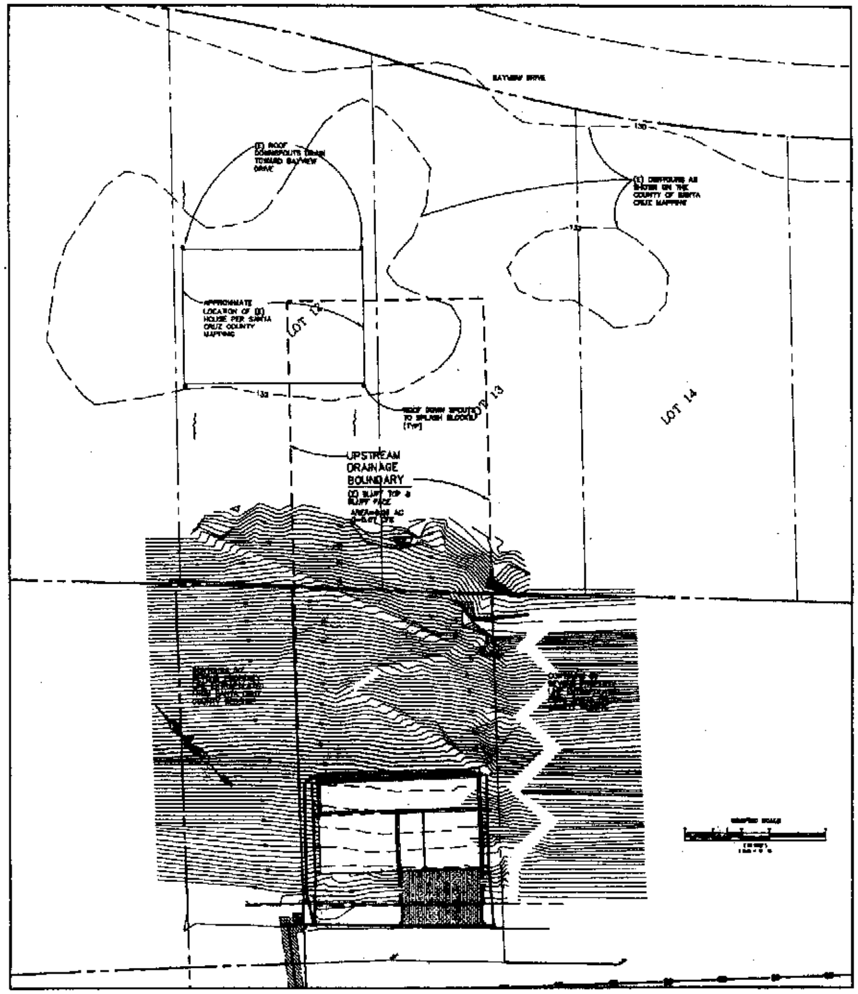
Erosion Control Detail & Notes

PREPARED AT THE REQUEST OF
KASHIAN RESIDENCE
LOCATED AT
APN 043-152-58
County of Santa Cruz, California

Robert L. DeWitt & Associates, Inc.
Civil Engineers & Land Surveyors
1607 Ocean Street, Suite 1
Santa Cruz, California 95060
(831) 425-1617 TEL
(831) 425-0224 FAX

SHEET: C2 of 3





DRAINAGE CALCULATIONS

CALCULATIONS BASED ON SANTA CRUZ CO. DESIGN CRITERIA
10 YEAR STORM

P_{60} = 1.4 C_t 10 YR. = 1.0

PRE-DEVELOPMENT CONDITIONS T_{c-pre} = 15 MIN. = I = 1.7 in./hr.

i_5 =(1.7)(0.84)=1.43 in./hr.
i_{10} =(1.7)(1.0)=1.70 in./hr.
i_{25} =(1.7)(1.2)=2.04 in./hr.
i_{100}=(1.7)(1.49)=2.53 in./hr.

PROJECT AREA = 1,900S.F. (0.044 AC)

COMPOSITE C VALUE = 0.20

PRE-DEVELOPMENT RUNOFF

Q_5 =C_tCIA = (1.0)(0.20)(1.43 in./hr.)(0.044 AC) = 0.012CFS

POST-DEVELOPMENT CONDITIONS T_{c-post}=10 MIN. = I = 2.0 in./hr.

i_5 =(2.0)(0.84)=1.68 in./hr.
i_{10} =(2.0)(1.0)=2.0 in./hr.
i_{25} =(2.0)(1.2)=2.4 in./hr.
i_{100}=(2.0)(1.49)=2.98 in./hr.

COMPOSITE C VALUE = 0.90

POST-DEVELOPMENT RUNOFF

Q_5 =C_tCIA = (1.0)(0.90)(1.68 in./hr.)(0.044 AC) = 0.066 CFS
Q_{10} =C_tCIA = (1.0)(0.90)(2.0 in./hr.)(0.044 AC) = 0.079 CFS
Q_{25} =C_tCIA = (1.1)(0.90)(2.4 in./hr.)(0.044 AC) = 0.098 CFS

10 YEAR STORM

RETENTION VOLUME CALCULATIONS

P_{60}=1.4 C_t 10 YR.=1.0 Tc-post=10 MIN.=2.0 IN/HR

VOLUME SIZED TO HANDLE POST-PROJECT 10-YR. STORM:
Q_{10}=C_tCIA = (1.0)(0.90)(2.0 in./hr.)(0.044AC) = 0.079 CFS

STORM DURATION	INTENSITY I=IN/HR	POST RUNOFF	CF-MIN SEC*	REQUIRED VOLUME	
10 MIN.	2.0	0.079 C.F.S.	0.67	40.2 CF	
15 MIN.	1.7	0.067 C.F.S.	0.83	49.8 CF	
20 MIN.	1.5	0.059 C.F.S.	0.94	56.4 CF	
60 MIN.	0.85	0.037 C.F.S.	1.26	75.6 CF	
180 MIN.	0.72	0.028 C.F.S.	1.83	168.8 CF	
240 MIN.	0.70	0.028 C.F.S.	3.29	197.4 CF	CONTROL
360 MIN.	0.48	0.018 C.F.S.	2.13	127.8 CF	
480 MIN.	0.38	0.014 C.F.S.	0.98	58.4 CF	

* THIS QUANTITY REPRESENTS THE AREA UNDER EACH CURVE, BUT ABOVE THE PRE-DEVELOPMENT LINE OF 0.012 CFS. MULTIPLIED BY 60 SEC/MIN, IT GIVES THE REQUIRED VOLUME

→USE 1.25 SAFETY FACTOR: REQ. V =(1.25)(197 CF)=246.25 CF

DESIGN VOLUME = 30' X 19.5' X 1.5' = 877.5 CF
VOID RATIO=0.40 877.5 CF * 0.40 = 351 CF

ROBERT L. DEWITT

11-5-08
DATE

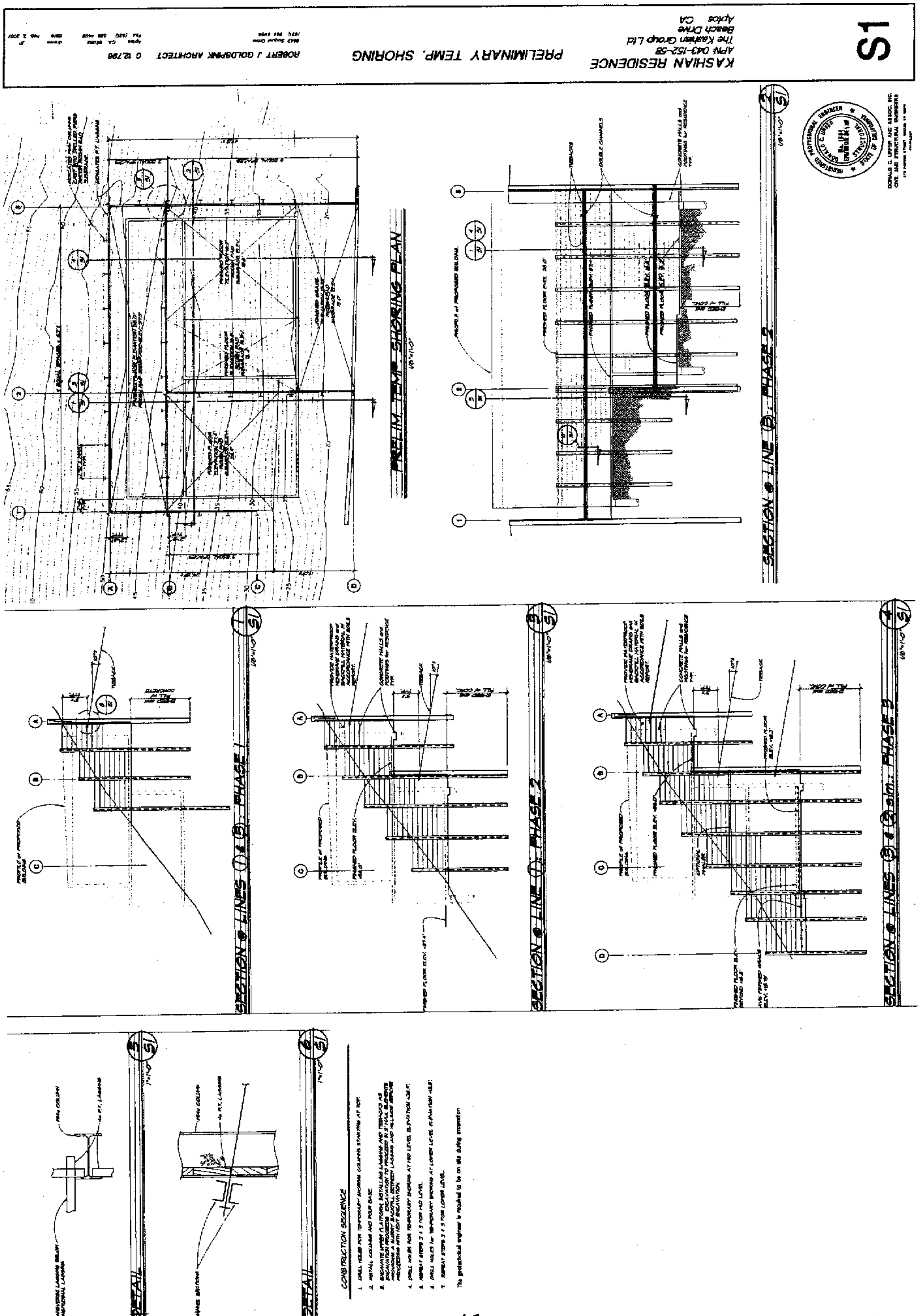
PREPARED AT THE REQUEST OF
KASHIAN RESIDENCE
LOCATED AT
APN 048-152-58
County of Santa Cruz, California

Robert L. DeWitt & Associates, Inc.
Civil Engineers & Land Surveyors
1607 Ocean Street, Suite 1
Santa Cruz, California 95060
(831) 425-1617 TEL
(831) 425-2224 FAX

Upstream Drainage Boundary

SCALE 1" = 10'

SHEET C3 of 3


KASHIAN RESIDENCE
APN 043-152-58
The Kashian Group Ltd
Beach Drive
Aptos CA
PRELIMINARY TEMP. SHORING
ROBERT J GOLDSPINK ARCHITECT C 12,798
S1
PRELIM. TEMP. SHORING PLAN
CONSTRUCTION SEQUENCE

EXHIBIT

Project Planner: Maria Perez
Application No.: 07-0059
APN: 043-152-58

Date: March 3, 2009
Time: 14:13:36
Page: 1

Environmental Planning Completeness Comments

========= UPDATED ON JANUARY 15, 2008 BY ANTONELLA GENTILE =========
1. Arborist's report by Maureen Hamb dated 12/7/07 has been accepted.

2. Comment addressed.

3. Grading amount exceeds 1,000 cubic yards.This project will require an Initial Study.

4. Comment addressed.

5. Submit a certified statement from the architect or civil engineer stating that the preliminary plans conform to FEMA requirements.

6. The soils and geology reports have been accepted per the letter from Joe Hanna dated 1/9/08. Please revise the plans to meet the requirements listed in the letter.

7. Plan review letters will be required from the soils engineer and the project geologist prior to this application being deemed complete. The letters must reference the final set of grading, drainage, erosion control, and shoring plans and state that the plans conform to the recommendations made in their respective reports. ========= UPDATED ON APRIL 17, 2008 BY ANTONELLA GENTILE =========
Above comments have been addressed.

Please submit an owner-agent form signed by the adjacent property owner to acknowledge removal of tree #1. ========= UPDATED ON DECEMBER 19, 2008 BY ANTONELLA GENTILE =========
Original signatures are required from all owners of the adjacent property on which tree #1 is proposed for removal. Provide wet-signed letters from all property owners stating that theyaccept the proposal for removal of the tree.

Environmental Planning Miscellaneous Comments

========= REVIEW ON MARCH 1, 2007 BY ANDREA M KOCH =========

1) Please print on the building permit application plans the following FEMA flood-related information:

- Structures must be elevated on pilings and columns so that the bottom of the lowest portion of the lowest structural member of the lower floor and elements that function as part of the structure, such as furnace, hot water heater, etc., are elevated to or above the base flood level.

(Also indicate on the plans the elevation of the lowest part of the lowest habitable floor.)

- Foundations and attached structures shall be anchored by a method adequate to prevent floatation, collapse, and lateral movement of structures due to the forces that may occur during the base flood, including hydrostatic and hydrodynamic loads

EXHIBIT I

and the effects of buoyancy.

- Materials and utility equipment below the base flood elevation of 21 feet must be resistant to flood damage.

- Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities must be designed and/or located to prevent water from entering or accumulating within the components during conditions of flooding.

- Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls allowing for the entry and exit of flood water.

Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or shall provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.

2) Please have a registered professional engineer or architect sign a statement on the plans that says all proposed work conforms to the above FEMA requirements.

3) State on building permit application plans the proposed destination of excavated soils.

4) Prior to permit final, you must record a Declaration of Geologic Hazards at the Recorder's office. Please call 831-454-3164 for the Declaration form.

5) Prior to permit final, you must submit an elevation certificate from a licensed surveyor or engineer stating that the lowest part of the lowest habitable floor is elevated to or above the base flood elevation. Please call 831-454-3164 to obtain the elevation certificate.
========= UPDATED ON JANUARY 15, 2008 BY ANTONELLA GENTILE =========
Compliance comments:

This project must meet the requirements set forth in the technical report acceptance letter from Joe Hanna, County Geologist, dated 1/9/08. Many of these requirements must be met prior to the public hearing in order to avoid significant changes to the project after it has been approved. Changes to the project during the building application phase, such as window size alterations, may require a Variation or an Amendment to the Coastal Permit.

Conditions of Approval:

Prior to issuance of the building permit:

1. Submit detailed grading, drainage, and shoring plans.

2. The project architect or civil engineer must certify that the plans comply with FEMA requirements.

EXHIBIT I

3. Building plans must include a destination for excavated material.

4. Submit plan review letters from the soils engineer and project geologist referencing the final set of revised plans and stating that they conform to the recommendations in their respective reports.

5. Plans must comply with all requirements set forth in the letter by Joe Hanna dated 1/9/08.

6. Show tree protection fencing at the dripline of the 22-inch cypress on the grading/erosion control plan.

Prior to building permit final:

1. Submit a recorded Declaration of Geologic Hazards.

2. Submit a letter from the architect or civil engineer stating that the project complies with the FEMA Coastal Construction Standards and flood protection provisions of the County Building Code.

3. Submit final letters from the soils engineer and the project geologist stating that the project has been completed in conformance with all recommendations made the the soils and geology reports. ========= UPDATED ON APRIL 17, 2008 BY ANTONELLA GENTILE =========
Compliance comments:

This project is out of compliance with item 2 in the letter from Joe Hanna dated 1/29/08. The proposed walkway improvements for landscape access shall not be approved for this project.

This project is out of compliance with item 3 in the letter from Joe Hanna dated 1/29/08. Windows with dimension(s) over 12 inches shall not be approved for this project. ========= UPDATED ON DECEMBER 19, 2008 BY ANTONELLA GENTILE =========
The proposed walkway improvements have been removed from sheet 1, however they are still shown on sheet 5. Walkway improvements will not be approved beyond the roofline.

Compliance comment regarding window size has been addressed.

Dpw Drainage Completeness Comments

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

========= REVIEW ON MARCH 1, 2007 BY DAVID W SIMS =========
1st Review Summary Statement:

The on-site development proposal is well developed and clearly presented. However the proposal lacks sufficient off-site information for complete evaluation of impacts. The Stormwater Management section cannot yet recommend approval of the project.

Reference for County Design Criteria: http://www.dpw.co.santa-cruz.ca.us/DESIGNCRITERIA.PDF

Policy Compliance Items:

Item 1) Mitigation of runoff from structures and pavements has been proposed, including use of best management practices and minimization of impervious surfacing. Mitigations must provide control up through a 10-year event, which appears to require a substantially larger facility than the 2-year design proposed. Please revise accordingly. See miscellaneous comments and mark-ups for other calculation errors.

Item 2) The upslope runoff area and sediment that reaches the concrete drainage swale above the back of the home must be routed independently from the structure downspouts and not discharged into the gravel pit. This configuration is required by multiple CDC criteria.

Item 3) Other potential policy requirements exist but are unknown until offsite information requested below is received.

Information Items:

Item 4) Incomplete. Provide a downstream impact assessment evaluating and fully describing in a report and on the plans the contributing upstream drainage area and the routing and functional capacity of runoff structures (or lack thereof) from this parcel to a point of safe and functional discharge on the beach.

Item 5) Incomplete. County Design Criteria requires topography be shown a minimum of 50 feet beyond the project work limits. Provide this amount, and further extents where necessary, to properly illustrate offsite drainage conditions such as the road drainage.

Item 6) Incomplete. Provide a stamped and signed review letter from a geotechnical engineer commenting on the adequacy of the proposed drainage and site mitigation design. Any comment and recommendation from the professional must remain consistent with, and serve to resolve, the mitigation requirements for the development, unless specific written request for an exception is granted by the Stormwater Management section.

Please see miscellaneous comments. ========= UPDATED ON JANUARY 14, 2008 BY DAVID W SIMS =========
2nd Review Summary Statement:

The proposal lacks sufficient off-site information for complete evaluation of impacts. The Stormwater Management section cannot yet recommend approval of the project.

The applicant will need to deposit an additional $585.00 through the project planner in addition to the amounts already deposited in order to establish a $1000.00 total 'at-cost' account from which additional review time will be charged.

Policy Compliance Items:

Item 1) Mitigation of runoff from structures and pavements up through a 10-year event has been proposed, including use of best management practices and minimization of impervious surfacing. See miscellaneous comments.

Item 2) The upslope runoff area and sediment that reaches the concrete drainage swale above the back of the home is now shown routed independently from the structure downspouts.

Item 3) Other potential policy requirements exist but are unknown until offsite information requested below is received.

Information Items:

Item 4) Incomplete. Item not fully addressed. See prior comments. No detail was given about the upstream drainage boundaries. The written description of downstream runoff routing is good as far as it goes, however more detail is still needed. What are the ground conditions around the neighboring home across the street where it is described that runoff routes under the pier-raised home? Is there garage space or any other ground level improvements that could receive runoff in a problematic way? There is a raised seawall that blocks surface runoff from reaching the undeveloped beach, and there appear to be decks or patios covering large portions of the lot. Is there potential for erosion, sedimentation or puddles under the house or elsewhere on this private property or other properties from the runoff received in a 10-year event? The assessment must contain clear statements by the civil engineer of what these configurations are like and that the pre-existing drainage situation for the neighboring properties is fully adequate to receive a 10-year runoff event without any negative impacts. If this is not the case, the problematic conditions must be described and improvements may be needed. Provide a signed letter from each property owner affected by runoff from the subject development stating that they have had no problems receiving runoff from upslope areas, or have them describe the problems that they experience. Include a contact phone number and the name and address for each affected owner on the letter.

Item 5) Incomplete. Item not fully addressed. See prior comments. See CDC, Part 1. Please provide on the plans a significant number of spot elevations along the street and within the parcel interiors of the neighboring homes in order to identify the local drainage patterns and demonstrate the topography of the area relative to surrounding improvements. Illustrate the entire reach of these drainage patterns (beyond just the street surface) with flow arrows, spot elevations, and where possible with contour lines.

Item 6) Complete. Stamped and signed review letter provided.

Please see miscellaneous comments. ========= UPDATED ON JANUARY 14, 2008 BY DAVID W SIMS =========
========= UPDATED ON APRIL 14, 2008 BY TRAVIS RIEBER =========
Previous comments have not been addressed completely.

1. It is not clear how the upstream drainage boundary area was defined. It is noted that lot 12 drains toward Beach Drive but is not included in the drainage area boundary. The county GIS website suggests that the drainage area boundary is larger

EXHIBIT

than what is shown on sheet 3.

2. Prior item 4 has not been addressed completely. More details are needed for the raised seawall that blocks surface runoff from reaching the beach. How does it drain, are there currently any problems with drainage behind the wall? Is there potential for erosion, sedimentation or puddles under the pier-raised house, that runoff is being routed under, or elsewhere on this private property or other private properties from the runoff received in a 10-year event? The assessment must contain clear statements by the civil engineer of what these configurations are like and that the pre- existing drainage situation for the neighboring properties is fully adequate to receive a 10-year runoff event without any negative impacts. If this is not the case, the problematic conditions must be described and improvements may be needed. Provide a signed letter from each property owner affected by runoff from the subject development stating that they have had no problems receiving runoff from up-slope areas, or have them describe the problems that they experience. Include a contact phone number and the name and address for each affected owner on the letter.
========= UPDATED ON DECEMBER 19, 2008 BY TRAVIS RIEBER =========
The civil plans with revisions dated 11/10/08 have been received and are approved for the discretionary application stage. 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

========= REVIEW ON MARCH 1, 2007 BY DAVID W SIMS =========
A) Detailed maintenance procedures for the drainage facilities and mitigation measures must be provided on the plans. It is recommended that maintenance notes include periodic inspection and removal of any sliding soils reaching the roof top, so that this sediment won't flow into the downspout system.

B) The concentration and point discharge of upslope runoff and transported sediments is still an impact that needs consideration if off-site drainage facilities are questionable. This issue should be discussed in the required assessment.

C) (Sheet C1) Cleanouts are recommended at directional pipe changes.

D) (Sheet C1) Section A-A shows pipe ends terminating against the gravel fill. To avoid pipe clogging, the gravel should be placed below the pipes such that discharge of flows is unimpeded.

E) (Sheet C2) Grass pavers are not recommended due to the difficulty to maintain this vegetation in an adequate manner. Better products are available.

F) Surveyor's stamp is out-of-date.

A copy of calculation markups (sheet C1) was returned to the engineer. Please review these mark-ups for the following:

G) The post development runoff coefficient is incorrect. The impervious area amount is smaller compared with architect's itemization on sheet 5. The length and depth of

EXHIBIT

the structure ratios has been reversed, and this does affect the calculation accuracy.

H) What is the source or rationale for the soil permeability figure used? The NRCS soil survey does not provide a permeability figure for this location. If a test was performed please submit supporting data.

A recorded maintenance agreement may be required for certain stormwater facilities.

A drainage impact fee will be assessed on the net increase in impervious area. The fees are currently $0.95 per square foot, and are assessed upon permit issuance. Reduced fees are assessed for semi-pervious surfacing to offset costs and encourage more extensive use of these materials.

Because this application is incomplete in addressing County requirements, resulting revisions and additions will necessitate further review comment and possibly different or additional requirements.

All resubmittals shall be made through the Planning Department. Materials left with Public Works will not be processed or returned.

Please call the Dept. of Public Works, Stormwater Management Section, from 8:00 am to 12:00 noon if you have questions. ========= UPDATED ON JANUARY 14, 2008 BY DAVID W SIMS =========
I) The flow line elevation of the pipe under the driveway is too shallow and will not work.

J) Provide sump elevations for all silt and grease traps.

K) More complete calculations will be required with the building plans that demonstrate the adequate design of the mitigation system. It will need to be shown that the 10 year Qpre release rate of 0.019 cfs can be achieved into the available soils, or is otherwise controlled. Also the design depth of the vertical pits will need to be assumed to be less than 15 feet because of tidal intrusion of several feet near the bottom. Facility enlargement may be necessary.

L) Sheet C2: The gap spacing between paver joints needs to be more substantial. The gap spacing of 1/16" specified is too tight to assure good permeability at intense rainfall rates. Many paver products are specifically designed with notches or lugs that automatically provide the necessary gap spacing and assure the high permeability needed, while also providing paver stone stability against tipping.

========= UPDATED ON APRIL 14, 2008 BY TRAVIS RIEBER =========
See previous miscellaneous comments

1. It is recommended that the sump depth be increased for the catch basins due to the potential for clogging from sand and upslope debris.

2. Show on the plans the grate elevation, pipe invert elevation and bottom invert elevation for the catch basin at the downstream end of the proposed concrete drainage swale. Provide a cross section construction detail of the proposed concrete

drainage swale.

3. Provide calculations quantifying the amount of upslope runoff being intercepted by the concrete swale and directed to the trench bubbler in the property frontage. Demonstrate that the concrete swale and 6 inch pipe have adequate capacity to convey runoff received in a 10-year storm event.

4. More complete calculations will be required with the building plans that demonstrate the adequate design of the mitigation system. It will need to be shown that the 10 year Qpre release rate based on the final design can be achieved into the available soils, or is otherwise controlled. ========= UPDATED ON DECEMBER 19, 2008 BY TRAVIS RIEBER =========
1. Provide an updated tributary drainage area map for the proposed drainage system. Submit hydrology and pipeline calculations stamped and signed by the engineer demonstrating that the pipe sizes are adequate to convey runoff for a 10-year storm event. Also describe and show on the plans a safe overflow path for a 25- year storm event.

2. The property owner is responsible for securing easements for construction and maintenance of the proposed drainage system along its entire path to the outfall at the beach.

3. A recorded maintenance agreement will be required for all permanent drainage facilities being constructed onsite and offsite.

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

Note: A civil engineer has to inspect the drainage improvements on and off 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.

Please call the Dept. of Public Works, Storm Water Management Section, from 8:00 am to 12:00 noon if you have questions.

Dpw Driveway/Encroachment Completeness Comments

========= REVIEW ON FEBRUARY 16, 2007 BY RUTH L ZADESKY =========
No Comment, project adjacent to a non-County maintained road.

Dpw Driveway/Encroachment Miscellaneous Comments

========= REVIEW ON FEBRUARY 16, 2007 BY RUTH L ZADESKY =========
No comment.

EXHIBIT I

Dpw Road Engineering Completeness Comments

========= REVIEW ON FEBRUARY 14, 2007 BY TIM N NYUGEN =========
NO COMMENT

Dpw Road Engineering Miscellaneous Comments

========= REVIEW ON FEBRUARY 14, 2007 BY TIM N NYUGEN =========
NO COMMENT

Dpw Sanitation Completeness Comments

========= REVIEW ON JANUARY 9, 2008 BY CARMEN M LOCATELLI =========
NO COMMENT

Dpw Sanitation Miscellaneous Comments

========= REVIEW ON JANUARY 9, 2008 BY CARMEN M LOCATELLI =========
NO COMMENT

Aptos-La Selva Beach Fire Prot Dist Completeness C

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

========= REVIEW ON FEBRUARY 26, 2007 BY ERIN K STOW =========
DEPARTMENT NAME:Aptos/La Selva Fire Dept. APPROVED
All Fire Department building requirements and fees will be addressed in the Building Permit phase.
Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.

Aptos-La Selva Beach Fire Prot Dist Miscellaneous

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

========= REVIEW ON FEBRUARY 26, 2007 BY ERIN K STOW =========
NO COMMENT

EXHIBIT I

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: *07-0059 (third routing)*

Date: March 25, 2008

To: Maria Porcila Perez

From: Larry Kasparowitz, Urban Designer

Re: new single family residence at Beach Drive, Aptos

Design Review Authority

13.20.130 The Coastal Zone Design Criteria are applicable to any development requiring a Coastal Zone Approval.

Design Review Standards

13.20.130 Design criteria for coastal zone developments

Evaluation Criteria	Meets criteria In code (✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
Visual Compatibility			
All new development shall be sited, designed and landscaped to be visually compatible and integrated with the character of surrounding neighborhoods or areas	✔		
Minimum Site Disturbance			
Grading, earth moving, and removal of major vegetation shall be minimized.	✔		
Developers shall be encouraged to maintain all mature trees over 6 inches in diameter except where circumstances require their removal, such as obstruction of the building site, dead or diseased trees, or nuisance species.	✔		
Special landscape features (rock outcroppings, prominent natural landforms, tree groupings) shall be retained.	✔		
Ridgeline Development			
Structures located near ridges shall be sited and designed not to project above the ridgeline or tree canopy at the ridgeline			**N/A**

EXHIBIT J

Land divisions which would create parcels whose only building site would be exposed on a ridgetop shall not be permitted			N/A
Landscaping			
New or replacement vegetation shall be compatible with surrounding vegetation and shall be suitable to the climate, soil, and ecological characteristics of the area	✔		

Rural Scenic Resources			
Location of development			
Development shall be located, if possible, on parts of the site not visible or least visible from the public view.			N/A
Development shall not block views of the shoreline from scenic road turnouts, rest stops or vista points			N/A
Site Planning			
Development shall be sited and designed to fit the physical setting carefully so that its presence is subordinate to the natural character of the site, maintaining the natural features (streams, major drainage, mature trees, dominant vegetative communities)			N/A
Screening and landscaping suitable to the site shall be used to soften the visual impact of development in the viewshed			N/A
Building design			
Structures shall be designed to fit the topography of the site with minimal cutting, grading, or filling for construction			N/A
Pitched, rather than flat roofs, which are surfaced with non-reflective materials except for solar energy devices shall be encouraged			N/A
Natural materials and colors which blend with the vegetative cover of the site shall be used, or if the structure is located in an existing cluster of buildings, colors and materials shall repeat or harmonize with those in the cluster			N/A
Large agricultural structures			
The visual impact of large agricultural structures shall be minimized by locating the structure within or near an			N/A

EXHIBIT J

existing group of buildings			
The visual impact of large agricultural structures shall be minimized by using materials and colors which blend with the building cluster or the natural vegetative cover of the site (except for greenhouses).			N/A
The visual impact of large agricultural structures shall be minimized by using landscaping to screen or soften the appearance of the structure			N/A
Restoration			
Feasible elimination or mitigation of unsightly, visually disruptive or degrading elements such as junk heaps, unnatural obstructions, grading scars, or structures incompatible with the area shall be included in site development			N/A
The requirement for restoration of visually blighted areas shall be in scale with the size of the proposed project			N/A
Signs			
Materials, scale, location and orientation of signs shall harmonize with surrounding elements			N/A
Directly lighted, brightly colored, rotating, reflective, blinking, flashing or moving signs are prohibited			N/A
Illumination of signs shall be permitted only for state and county directional and informational signs, except in designated commercial and visitor serving zone districts			N/A
In the Highway 1 viewshed, except within the Davenport commercial area, only CALTRANS standard signs and public parks, or parking lot identification signs, shall be permitted to be visible from the highway. These signs shall be of natural unobtrusive materials and colors			N/A
Beach Viewsheds			
Blufftop development and landscaping (e.g., decks, patios, structures, trees, shrubs, etc.) ***in rural areas*** shall be set back from the bluff edge a sufficient distance to be out of sight from the shoreline, or if infeasible, not visually intrusive			N/A
No new permanent structures on open beaches shall be allowed, except			N/A

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where permitted pursuant to Chapter 16.10 (Geologic Hazards) or Chapter 16.20 (Grading Regulations)			
The design of permitted structures shall minimize visual intrusion, and shall incorporate materials and finishes which harmonize with the character of the area. Natural materials are preferred			N/A

Design Review Authority

13.11.040 *Projects requiring design review.*

(a) Single home construction, and associated additions involving 500 square feet or more, within coastal special communities and sensitive sites as defined in this Chapter.

13.11.030 Definitions

(u) 'Sensitive Site" shall mean any property located adjacent to a scenic road or within the viewshed of a scenic road as recognized in the General Plan; ***or located on a coastal bluff***, or on a ridgeline.

Design Review Standards

13.11.072 Site design.

Evaluation Criteria	Meets criteria In code (✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
Compatible Site Design			
Location and type of access to the site	✔		
Building siting in terms of its location and orientation	✔		
Building bulk, massing and scale	✔		
Parking location and layout	✔		
Relationship to natural site features and environmental influences	✔		
Landscaping	✔		
Streetscape relationship			N/A
Street design and transit facilities			N/A
Relationship to existing structures	✔		
Natural Site Amenities and Features			
Relate to surrounding topography	✔		
Retention of natural amenities	✔		
Siting and orientation which takes advantage of natural amenities	✔		

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Ridgeline protection			N/A
Views			
Protection of public viewshed	✔		
Minimize impact on private views	✔		
Safe and Functional Circulation			
Accessible to the disabled, pedestrians, bicycles and vehicles			N/A
Solar Design and Access			
Reasonable protection for adjacent properties	✔		
Reasonable protection for currently occupied buildings using a solar energy system	✔		
Noise			
Reasonable protection for adjacent properties	✔		

13.11.073 Building design.

Evaluation Criteria	Meets criteria In code (✔)	Does not meet criteria (✔)	Urban Designer's Evaluation
Compatible Building Design			
Massing of building form	✔		
Building silhouette	✔		
Spacing between buildings	✔		
Street face setbacks	✔		
Character of architecture	✔		
Building scale	✔		
Proportion and composition of projections and recesses, doors and windows, and other features	✔		
Location and treatment of entryways	✔		
Finish material, texture and color	✔		
Scale			
Scale is addressed on appropriate levels	✔		
Design elements create a sense of human scale and pedestrian interest	✔		
Building Articulation			
Variation in wall plane, roof line, detailing, materials and siting	✔		

EXHIBIT J

Solar Design			
Building design provides solar access that is reasonably protected for adjacent properties	✔		
Building walls and major window areas are oriented for passive solar and natural lighting	✔		

EXHIBIT J

COUNTY OF SANTA CRUZ

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

January 29, 2008

Dave Fisher
C/o Robert Goldspink, AIA
8042 Soquel Drive
Aptos, CA 95003

Subject: Geotechnical Engineering Report by Haro, Kasunich, and Associates December 8, 2006, Project Number SC-9188; and **Engineering Geology Report** by Rogers E. Johnson dated October 30, 2006, Job Number C06020-57

Reference: **APN: 043-152-58**
APPL#: 07-0059

Dear Applicant:

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

1. A retention facility with a pit is proposed that is compromised by ground water conditions. Ground water is as close as 2 feet from the surface of the ground and can flood the proposed pit. Furthermore, all of the proposed drainage improvements must comply with FEMA regulations with regards to breakaway requirements. Revise the plans to either install the system in a manner consistent with State Statue, FEMA regulations, and County Code, or eliminate the system.

2. The proposed concrete stairways must end at the roofline.

3. Windows maybe clustered, but may not have a width greater than 12 inches, and must be designed for impact of the landslide debris.

4. All shoring shall be installed under the inspection by the project engineer, architect, or a designated special inspector.

5. Show the Base Flood Elevation on the building plans cross-sections and profiles, and note the requirement for frangible parking slabs on the foundation plan.

6. The home must be elevated above the Base Flood Elevation.

7. State on the first sheet of the plans the name of the architect or civil engineer who will certify compliance with FEMA Coastal Construction standards and related County Building Code requirements (including Section 1612.A5 CBC Flood Hazards.) The architect or civil engineer must state in writing before the final

(over)

EXHIBIT K

inspection that the project complies with the FEMA Coastal Construction Standards and Flood protection provision of the County Building Code.

8. The project geotechnical engineer, or a similar qualified testing laboratory, must be employed to provide ***continuous inspection*** and testing of all the fill material placed on the site. Before final inspection, a written summary of the compaction testing must be submitted to the County. With this summary, a copy of the grading plan must be submitted that indicates the relative compaction tests' location, and all related test data must be included in a table with a reference number that correlates the table data to the test location indicated on the grading plan. This testing includes the backfill of any retaining walls.

9. The attached notice of geologic hazards must be recorded before the final of the building permit.

10. Before the submittal of the application of the Building Permit, the geotechnical engineering report must be updated to supply the additional information required within the 2007 CBC.

11. The consultants must e-mail a PDF of their reports to pln953@co.santa-cruz.ca.us .

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 if we can be of any further assistance.

Sincerely,

Joe Hanna CEG 1515
County Geologist

Kent Edler PE
Civil Engineer

Cc Rogers E. Johnson and Associates
Haro, Kasunich, and Associates

EXHIBIT K

NOTICE TO PERMIT HOLDERS WHEN A SOILS REPORT AND ENGINEERING GEOLOGIST HAVE BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your soils engineer to be involved during construction. Several letters or reports are required to be submitted to the County at various times during construction. They are as follows:

1. **When a project has engineered fills and / or grading**, a letter from your soils engineer must be submitted to the Environmental Planning section of the Planning Department prior to foundations being excavated. This letter must state that the grading has been completed in conformance with the recommendations of the soils report. Compaction reports or a summary thereof must be submitted.

2. **Prior to placing concrete for foundations**, a letter from the soils engineer must be submitted to the building inspector and to Environmental Planning stating that the soils engineer has observed the foundation excavation and that it meets the recommendations of the soils report.

3. **At the completion of construction,** a *final letter* from your soils engineer is required to be submitted to Environmental Planning that summarizes the observations and the tests the soils engineer has made during construction. The final letter must also state the following: "Based upon our observations and tests, the project has been completed in conformance with our geotechnical recommendations."

   If the *final soils letter* identifies any items of work remaining to be completed or that any portions of the project were not observed by the soils engineer, you will be required to complete the remaining items of work and may be required to perform destructive testing in order for your permit to obtain a final inspection.

EXHIBIT K

County of Santa Cruz

PLANNING DEPARTMENT

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

STEPS FOR COMPLETING THE ENCLOSED DECLARATION OF GEOLOGIC HAZARDS

Read the following instructions and carry out all steps. Do not make any alterations to the form, except as allowed by #2 below. FAILURE TO FOLLOW THE INSTRUCTIONS OR ALTERATIONS TO THE FORM WILL RESULT IN A DELAY IN THE ISSUANCE OF YOUR PERMIT.

Read the entire Declaration.

1 Check the information filled in by County staff (ownership, Assessor's Parcel Number, recordation dates, volume and page number and address). IF THERE ARE OMISSIONS, FILL IN THE BLANKS. The information can be found on the recorded deed or in the County Recorder's Office. If you feel there are any other errors, contact Environmental Planning staff for instructions. The form is a formal document and shall not be altered as above. Any unauthorized change(s) will result in an additional delay in processing your permit.

2 Have all owner(s) signatures acknowledged by a notary public. An acknowledgement is a form obtained from the notary verifying that the signatory is the person stated on the Declaration.

3 Take, do not mail, the form and recording fee to:

Office if the County Recorder
County Government Center
701 Ocean Street, Room 230
831) 454-2800

4 Bring or send a copy of the recorded document to:

County of Santa Cruz
Planning Department
701 Ocean Street, 4th Floor
Santa Cruz, Ca. 95060

YOUR PERMIT CANNOT BE APPROVED UNTIL THE ABOVE STEPS ARE COMPLETED. Please call Joe Hanna at 831-454-3175 if you have any questions regarding this form.

(over)

Return recorded form to:
Planning Department
County of Santa Cruz
701 Ocean Street, 4th Floor

Attention: Joe Hanna
County Geologist
831-454-3175

Notice

THIS PAGE ADDED TO PROVIDE ADEQUATE SPACE FOR RECORDING INFORMATION (CALIFORNIA GOVERNMENT CODE §27361.6)

EXHIBIT K

RECORDED AT REQUEST OF:
County of Santa Cruz

WHEN RECORDED MAIL TO:

Santa Cruz County Planning
701 Ocean St.
Santa Cruz, CA 95060

(Space above this line for Recorder's use only)

Note to County Recorder:

Please return to the staff geologist in the Planning Department when completed.

DECLARATION REGARDING THE ISSUANCE OF A DEVELOPMENT PERMIT IN AN AREA SUBJECT TO GEOLOGIC HAZARDS

DECLARATION REGARDING THE ISSUANCE OF A DEVELOPMENT PERMIT IN AN AREA SUBJECT TO GEOLOGIC HAZARDS

The undersigned _____ (names of property owners) (does) (do) hereby certify to be the owner(s) of the real property located in the County of Santa Cruz, State of California, commonly known as_____ _____ (Street address); legally described in that certain deed recorded in Book _____ on Page _____ of the official records of the Santa Cruz County Recorder on _____ (deed recordation date); Assessor's Parcel Numbers 043-152-58.

And, acknowledge that records and reports, filed with the Santa Cruz County Planning Department, indicates that the above described property is located within an area that is subject to geologic hazards, to wit:

> The proposed home will be constructed at the toe of the slope and will be designed so that any landslide debris from the slope above the home will flow onto and around the home without damaging it. The home is also designed to resist wave action and will be raised above the Base Flood Elevation. A **Geotechnical Engineering Report by** Haro, Kasunich, and Associates dated December 8, 2006, Project Number SC9188; and a **Engineering Geology Report** by October 30, 2006, Job Number C06020-57 specify a building envelope and standards for the foundations that reduce the potential damage to the site from flooding, coastal erosion, and slope instability. This property will also be subject to intense seismic shaking.

In addition, having full understanding of said hazards and the proposed mitigation of these hazards, we elect to pursue development activities in an area subject to geologic hazards and do hereby agree to release the County from any liability and consequences arising from the issuance of the development permit.

EXHIBIT K

This declaration shall run with the land and shall be binding upon the undersigned, any future owners, encumbrancers, their successors, heirs, or assignees. This document should be disclosed to the forgoing individuals. This declaration may not be altered or removed from the records of the County Recorder without the prior consent of the Planning Director of the County of Santa Cruz.

OWNER: _____ OWNER: _____
Signature Signature

ALL SIGNATURES ARE TO BE ACKNOWLEDGED BEFORE A NOTARY PUBLIC. IF A CORPORATION, THE CORPORATE FORM OF ACKNOWLEDGEMENT SHALL BE USED.

EXHIBIT A

Excerpted from

The portion of the coastline in the site vicinity is protected by an equilibrium beach that dampens most wave energy. Beach Drive and a row of homes oceanward of Beach Drive also help protect the bluff from surf erosion. The row of residences on the seaward edge of Beach Drive have their first floor levels at about +15 feet MSL. This row of houses and the concrete seawall fronting the houses will act as an effective buffer against significant coastal erosion at the subject property.

Our analysis of stereo aerial photography indicates there was about 25 feet of retreat at the bluff top upslope from the subject property between 1928 and 2006, a rate of about 0.3 feet per year. Most of the retreat occurred as a result of two debris slide events, one in 1968-69 and the other in 1982. It should be noted that calculated cliff retreat rates are only average values determined over moderate to long time intervals. As suggested by the two landslide events at the subject property, actual cliff retreat may take place at a loss of several feet of cliff in one year with little or no retreat for many years after that.

Liquefaction

Our geologic cross section and data from Boring B-1 of Haro, Kasunich and Associates 1991 geotechnical report indicates about 12 feet of beach sand underlies that part of the parcel fronting Beach Drive. Dupré (1975) indicates there is a high potential for liquefaction in beach sand in Santa Cruz County.

Based on prior investigations in the site vicinity, Haro, Kasunich and Associates indicate the liquefaction potential at the subject property is low. We did not observe any springs or streams near the parcel, suggesting tidal fluctuations control the water table gradient. Past experience indicates it is unlikely that the water table gradient will rise high enough to saturate potentially liquefiable near-surface earth materials at the subject property under maximum expected tidal fluctuations.

CONCLUSIONS

The proposed homesite lies at the foot of a steep coastal bluff that has historically experienced small to moderate scale landsliding. Although the slope has been subjected to strong groundshaking following a wet winter (e.g., the 1906 San Francisco earthquake), it has not experienced large-scale landsliding. In light of the historical record and the slope stability analysis by Haro, Kasunich and Associates, there is the potential for three types of slope failure at the subject site. There is a low probability for significant, arcuate failures, five feet deep at the base which encompass about 15 feet of the bluff top including the retaining walls and/or hardscape; a low to moderate probability of moderate-scale planar, translational failures about twenty feet deep on the bluff face resulting from seismic shaking; and a moderate to high probability of shallow, planar, translational landsliding and/or debris flows about ten feet deep on the bluff face above the dwelling during the lifetime of the proposed development as a result of saturation. In our opinion, the type of failure most likely to occur during the lifetime of the proposed development will be a shallow, translational failure above the proposed residence about

EXHIBIT L

ten feet deep within the colluvium and loose, upper surfaces of the underlying Purisima Formation and marine terrace deposits.

The foundation of the proposed residence will be terraced into the hillside by a series of retaining walls, with the top of the back wall (essentially the roof) at an elevation of 49.5 feet above mean sea level. A shallow translational landslide occurring upslope from the constructed residence would involve about 975 cubic yards of material.

Material incorporated in debris flows and translational landslides could impact the roof top at velocities of up to about 30 feet per second.

Haro, Kasunich and Associates and Ifland Engineers indicate the potential hazards associated with these bluff failures can be mitigated with proper building and foundation design.

The lower slopes of the subject property may be subject to coastal flooding. Coastal flooding could attain an elevation of +23.5 feet MSL at the subject property during a 100-year flood. FEMA regulations require all habitable structures to lie at least 1 foot higher than the maximum expected elevation of a 100-year flood (i.e., +24.5 feet MSL). There is a low probability coastal flooding will exceed +23.5 feet MSL in the lifetime of the development. The potential hazard to critical portions of the proposed home can be mitigated with proper building site selection. There is a low to moderate probability that non-critical structures below +23.5 feet MSL will be subject to flooding.

With the exception of landsliding and sloughing, coastal erosion has virtually been non-existent at the subject property since the late 1930's. The row of homes, Beach Drive, and the seawall on the southeast side of Beach Drive and the broad equilibrium beach southwest of the homes help protect the subject property from wave attack; therefore, the probability of coastal erosion due to wave attack at the subject property is low.

Haro, Kasunich and Associates indicate liquefiable earth materials lie well above the maximum expected rise in the water table at the subject property; therefore, the probability of liquefaction at the subject property is low.

Based on the information gathered and analyzed, it is our opinion that development of the subject parcel is geologically suitable. Development of the proposed single-family dwelling will probably be subject to "ordinary" risks (as defined in Appendix B) if our recommendations are followed. Appendix B should be reviewed in detail by the property owner to determine whether this risk as defined in the appendix is acceptable. If this level of risk is unacceptable to the property owner, then the risk should be further mitigated to an acceptable level.

EXHIBIT L

RECOMMENDATIONS

1) The building and foundation design jointly developed by Haro, Kasunich and Associates and Ifland Engineers should be implemented.

2) The lowest habitable floor and all critical utility connections should lie at a minimum elevation of +24.5 MSL.

3) The procedures and practices regarding the maintenance of hillside homesites presented in Appendix C herein should be followed.

4) Runoff should not be allowed to accumulate at the uphill wall of the residence or at the base of the slope. Runoff should also not be directed along the sides of the residence or at the toe of the slope.

5) The seismic parameters, debris volume estimates and debris flow impact velocities presented in this report should be made available to architects and engineers for their use in designing the proposed dwelling.

6) We recommend the homeowner implement the simple procedures outlined in Peace of Mind in Earthquake Country by Peter Yanev for improving the home's strength and safety in a large earthquake. This book contains a wealth of information regarding seismic design and precautions the homeowner can take to reduce the potential for injury, property damage, and loss of life.

   Injury and loss of life during large earthquakes results mainly from falling objects, overturned furniture and appliances, and fires caused by severed utility lines. The majority of damage in the City of San Francisco in the 1906 earthquake resulted from the fires that burned out of control for weeks after the quake. Securing furniture and large appliances to the floor or structural components of the building will help to reduce this risk.

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. The report does suggest that using the site for residential purposes in compliance with the recommendations contained herein is an acceptable risk.

2. This report is issued with the understanding that it is the duty and responsibility of the owner or his representative or agent to ensure that the recommendations contained in this report are brought to the attention of the architect and engineers for the project,

incorporated into the plans and specifications, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. If any unexpected variations in soil conditions or if any undesirable conditions are encountered during construction, Rogers E. Johnson and Associates should be notified so that supplemental recommendations may be given.

EXHIBIT L

Excerpts from "

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

The residential structure is to be supported by drilled piers embedded into undisturbed sandstone bedrock. The Purisima Formation is described by geologic maps (Brabb, 1989) as a siltstone/sandstone. The Purisima formation along the base of the Beach Drive bluff consists of very dense, silty sand with very little cementation. Pier drilling below the average groundwater elevation, about +2 feet NGVD, is problematic. At a minimum, we anticipate full length casing will be needed to maintain pier excavation integrity. Weighted drilling fluid may also need to be used with the casing to mitigate the potential for saturated sands flowing into the casing as the auger is withdrawn. We have recently observed the use of a small vibratory hammer in conjunction with a conventional drill rig to drill foundation piers at three Beach Drive project sites; the DeMattei; the Royon; and the Lane residences. All pier holes were first predrilled to design diameter. The excavator mounted vibratory hammer was then used to effectively seat the casing into the Purisima Formation in order to minimize heaving of the bottom. Pile driving or the use of vibratory hammers without predrilling to design pier diameter is not recommended.

The residential structure will be elevated above the FEMA Base Flood Elevation, 21 feet NGVD. The entrance driveway and the seaward portion of the understory for the proposed residence will be situated upon about 16 feet of beach sand, talus deposits, and roadway fill. During a severe seismic event the soil materials within the wave cut platform area may settle due to either dry seismic consolidation and/or liquefaction. The vertical bearing of

EXHIBIT M

the proposed residence will not be effected by either liquefaction or lateral spreading provided the piers are designed per our geotechnical recommendations. During severe seismic shaking, we do expect the driveway and possibly the understory parking frangible slab on grade to be damaged and need to be repaired or replaced. To minimize settlement and maintenance from normal usage, we recommend the driveway area subgrade soils plus 3 feet horizontally in all directions on property be redensified to a depth of at least 12 inches to at least 95 percent relative compaction. As per FEMA guidelines the understory frangible slabs on grade will be displaced during a design storm event, allowing flood waters to flow through the foundation systems with minimal obstruction and wave deflection. The driveway and parking slab on grade at the residence is expected to be undermined, lost and replaced during the design life of the structure.

We recommend the proposed structure be constructed to withstand impact and debris loads from the inevitable future slope failures occurring above the completed residence. It is our opinion a concrete roof supported by a steel and concrete frame will be necessary to protect the residence. In order to prevent landslide debris from being deflected onto the adjacent upcoast and downcoast parcels, the roof should be flat.

EXHIBIT M

Due to the transition from infilled wave cut platform to undisturbed, dense native soil at the seaward perimeter of the building envelope, and to comply with the FEMA requirement that the residence be supported by an open foundation system, it will be necessary to support the structure on a drilled pier foundation system. The seaward piers will penetrate the beach sand and fill materials. Drilled piers should be embedded such that the bases are at least 10 feet horizontally from the surface of the undisturbed sandstone bluff face. The Geologic Cross Section can be utilized to estimate the minimum pier depths.

During construction of the residence, it will be necessary to temporarily shore the excavated backslope as well as portions of the side yard talus slopes. The talus deposits above the proposed residence are loose and not cemented. The loose sandy soils can be expected to slough when cut at near vertical. We will work with the project earthwork contractor and engineering geologist during construction to evaluate the upslope talus deposit wedge prior to final design of the temporary shoring system. Chemical grouting may be a means to minimize sloughing of vertical cuts in the talus deposits during temporary shoring construction.

Our geotechnical recommendations for the design of the Fisher residence are based upon the need for the proposed structure to withstand and survive future landsliding of the bluff above the residence as well as predicted coastal flooding. If all recommendations in the geologic and geotechnical reports are closely followed and properly implemented during

EXHIBIT M

design and construction, and maintained for the lifetime of the proposed residence, then in our opinion, the occupants within the residence should not be subject to risks from geologic hazards beyond the "Ordinary Risks Level," as defined in the "Scale of Acceptable Risks" contained in the Appendix of this report.

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

Site Grading and Engineered Fill

1. The geotechnical engineer should be notified at least four (4) working days 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.

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

EXHIBIT M

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 a 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 compaction. The upper 12 inches of driveway pavement and exterior slab subgrades should be compacted to at least 95 percent relative compaction. If engineered fill is utilized upslope of the residences to fill voids between the structures and the hillside, engineered fill requirements will be prepared on a specific basis during the final structural engineering design process.

EXHIBIT M

The aggregate base below asphaltic pavement sections should likewise be compacted to at least 95 percent relative compaction.

7. 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.

8. We estimate shrinkage factors of about 20 percent for the on-site materials when used in engineered fills.

9. We recommend a maximum vertical height of five (5) feet for temporary cut slopes. We recommend top down construction for the bluff face retaining wall system and limiting vertical excavation below the tieback anchors to two (2) feet prior to tensioning the anchors to temporary lockoff loads. The bluff face talus deposits, consisting of loose sandy soils, can be expected to slough when cut at near vertical. We will work with the project earthwork contractor and engineering geologist during construction to evaluate the upslope talus deposit wedge prior to final design of the temporary shoring system. Chemical grouting may be a means to minimize sloughing of vertical cuts in the talus deposits during temporary shoring.

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

11. 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

12. The proposed residential structure may be supported on a drilled pier foundation system. Drilled piers should penetrate talus deposits and beach sand and be embedded into undisturbed Purisima sandstone.

Drilled Piers

13. Drilled piers should be at least 18 inches in diameter and be embedded at least 8 feet into undisturbed Purisima sandstone. Drilled piers should be embedded such that the bases are at least 10 feet horizontally from the surface of the undisturbed sandstone bluff face as delineated on the Rogers E. Johnson and Associates Geologic Cross-Section.

14. Piers constructed in accordance with the above may be designed for an allowable end bearing capacity of 20 ksf for a minimum piers spacing of three (3) pier diameters or

EXHIBIT M

greater. This value may be increased by one third for short term seismic and wind loading. The bottom of the excavation should be clear of debris. Due to the loose nature of the talus deposits and groundwater at about +2 feet, NGVD, we anticipate the pier holes will need to be cased, shielded or maintained with weighted drilling mud. We are available to work with the project structural engineers to determine added pier bearing capacity by drilling deeper than our minimum embedment.

15. For passive lateral resistance, all fill materials, beach sand and the top 1 foot of the cut Purisima Formation should be neglected in pier design. A horizontal setback of 5 feet between the top of the passive zone and the surface of the engineering geologist's undisturbed native slope boundary should also be maintained. From -1 foot to -4 feet below the aforementioned horizontal setback, a lateral passive lateral resistance of 500 pcf (efw) times 2 pier diameters may be used. Below -4 feet, a passive lateral resistance of 600 pcf (efw) times 3 pier diameters may be used for structural design.

16. To resist uplift forces, an allowable skin friction value of 315 psf of pier sidewall may be used within the Purisima formation. The uplift skin friction requires a horizontal setback of at least 5 feet from the face of the Purisima sandstone delineated on the Geologic Cross-Sections.

EXHIBIT M

Temporary Shoring

17. The bluff toe is to be supported during excavation with an engineered shoring system to prevent failure of the cut slopes during construction. Top down construction is mandated. The shoring plan prepared by the project structural engineers will be reviewed by both the project geotechnical engineer and the Santa Cruz County Building Department. The primary shoring plan components necessary to stabilize the bluff toe excavation during construction as follows:

a) Limiting excavation of the bluff toe from 15 April to 1 September with the permanent bluff face wall and side yard temporary shoring completed by 15 October;

b) Limiting unsupported vertical cuts to five (5) feet;

c) Limiting vertical excavation below tieback anchors to two (2) feet prior to tensioning anchors to temporary lockoff loads;

d) Grouting of the bluff face temporary shoring pier hole excavations above the structural pier embedment sections. Controlled density fill or lean cement and sand grout has been previously used for this purpose along Beach Drive The grouted pier holes are then excavated as the temporary wall lagging is placed from the top to the base of the temporary shoring wall; and

e) Pressure grouting of the void space between the temporary bluff face wall lagging and the cut bluff face.

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The bluff face talus deposits, consisting of loose sandy soils, can be expected to slough when cut at near vertical. We will work with the project earthwork contractor and engineering geologist during construction to evaluate the upslope talus deposit wedge prior to final design of the temporary shoring system. Chemical grouting may be a means to minimize sloughing of vertical cuts in the talus deposits during temporary shoring.

We recommend the project structural engineers contact the Santa Cruz County Environmental Planning Department to ascertain current county policy and requirements regarding bluff toe excavation and temporary shoring.

Retaining Walls and Lateral Pressures

18. Retaining walls for the proposed residence should be designed to resist both lateral earth pressures and a seismic surcharge load. Cantilever or unrestrained bluff face walls up to 30 feet high should be designed to resist an active equivalent fluid pressure of 70 pcf for sloping backfills inclined up to 1:1 (horizontal to vertical). Restrained bluff face walls should be designed to resist uniformly applied rectangular wall pressures of 45H psf where H is the height of the wall. The configuration of the landward portion of the residence can have a dramatic effect on active and seismic surcharge loading. A stepped floor system at 1:1 (H:V) or less steep up the hillside will significantly reduce surcharge loading from above structure levels as well as break up the total height of the active zone into smaller components versus a 30 foot height active zone. We will work with the project architect

and structural engineer to evaluate specific design scenarios in order to produce an efficient design.

19. Within the active zone, a seismic surcharge of 18H/ft should be utilized in design of the retaining walls. The resultant of the seismic loading should act at 0.6H, where H is the height of the wall.

20. In addition, the walls should be designed for any adjacent live or dead loads which will exert a force on them.

21. Retaining walls that act as interior house walls should be thoroughly waterproofed.

22. For fully drained conditions as delineated above, we recommend a geotextile drainage blanket equivalent to Miradrain 6000 be used.

23. If engineered fill is utilized upslope of the residence to fill voids between the structure and the hillside, engineered fill requirements will be prepared on a specific basis during the final structural engineering design process.

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Tieback Anchors

24. For design of the tieback anchors, the pressure grouted anchor bulb (bonded zone) should be at least 20 feet from the face of the retaining wall.

25. Tieback loading is dependent upon anchor tendon strength. The small diameter anchor shafts should be designed for tension in the direction of the axis of the anchor.

26. Grouted tieback anchors should have a minimum overburden cover of at least 25 feet.

27. A working shaft bond friction of 2,500 psf between soil and non-pressure grouted anchor diameters may be considered for design of small diameter (4 to 8 inch) tieback anchors where building envelope/property boundaries allow the use of a longer bonded zone tieback.

28. The maximum bond strength/design load should not exceed 100,000 pounds. The maximum test load should not exceed 133,000 pounds.

29. The tieback anchors may be installed up to a maximum angle of 20 degrees from horizontal.

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30. After completion of the backfill behind the walls, all tiebacks should permanently stress to at least 60 percent of their design load or as directed by the project structural engineer. In addition, all tiebacks must be tested by the contractor per methodology outlined in the current edition of the Post Tensioning Institute – Recommendations for Prestressed Rock and Soil Anchors in the presence of the geotechnical engineer. Any tiebacks that fail during testing must be replaced and re-tested by the contractor.

31. All tiedback anchor systems must be corrosion protected and reviewed by the project structural engineer and the project geotechnical engineer before the contractor purchases and installs them.

Landslide Debris - Dead Loads

32. Landslide debris may pile up on the flat roof with the pile having slopes on the sides and front of about 1.5:1 (horizontal to vertical).

33. We recommend designing the sidewalls and windows below 13.5 feet above finish grade to accommodate static active earth pressures of 30 pcf for a non-restrained condition or 19.5 H psf/ft if the floor and roof between the sidewalls act to restrain the walls. During the design process, we will work with the project design team to specify sidewall debris loading relative to a working design.

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Lateral Spreading Active Force

34. The seaward perimeter (only) foundation system piers for the proposed residence should be designed to withstand an active lateral force of 30 pcf (efw) to accommodate any future lateral spreading of the beach sediments above the historic sour line. The potential lateral spreading will extend from the historic scour line at 0 feet NGVD up to an elevation of +6 feet NGVD.

Parking Slab on Grade

35. As outlined in the FEMA Coastal Construction Manual, see Figures 23 to 26, parking may be facilitated by use of an unreinforced slab, supported directly on the soil present at the site.

36. It is our opinion paving stones or asphaltic pavement may be used as an alternative to the unreinforced frangible concrete driveway section outlined by FEMA.

37. For design of the driveway parking area, we recommend the proposed pavement section, unreinforced frangible concrete slab or paving blocks be supported by at least 12 inches of the redensified soils compacted to at least 95 percent relative compaction. As per FEMA guidelines, the understory slabs on grade will be displaced during a design storm event, allowing flood waters to flow through the foundation system with minimal obstruction and wave deflection. The parking platforms are expected to be undermined,

lost and replaced during the design life of the structure.

38. Where floor dampness must be minimized or where floor coverings will be installed, concrete slabs-on-grade should be constructed on a capillary break layer at least 4 inches thick, covered with a membrane vapor retarder. 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.

It should be clearly understood concrete slabs are not waterproof, nor are they vapor-proof. 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

Site Drainage

39. An erosion control and drainage plan should be prepared for the project. The plan should be reviewed and approved by the project geotechnical engineer and engineering geologist. Because of the potential slope instability at the site, erosion control and drainage systems will need to be maintained, repaired and replaced in the future after instability occurs.

40. We recommend a concrete v-ditch be constructed at the top of the uppermost retaining walls that will collect surface water which flows downslope as a result of direct rainfall or surface water spilling onto the top of the bluff from above.

Plan Review, Construction Observation and Testing

41. 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 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

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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.

CYPRESS ENVIRONMENTAL AND LAND USE PLANNING
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November 4, 2008

Don Bussey, Zoning Administrator
Maria Perez, Project Planner
County of Santa Cruz Planning Department
701 Ocean Street, 4th floor
Santa Cruz, CA 95060

SUBJECT: Application 07-0059 (Fisher Dwelling); APN 43-152-58; Beach Drive, Rio Del Mar

Dear Mr. Bussey and Ms. Perez,

I understand that the Fisher dwelling project will be scheduled for hearing by the Zoning Administrator in the near future. On behalf of my clients, Jack and Lisa Troedson, I am requesting written notification of the hearing date be provided to both myself and my clients. (See their address below). We are also requesting any approval of a Coastal Zone Permit for this project include conditions that minimize the impacts of construction activities on other properties and neighbors on Beach Drive in Rio Del Mar. As you know, there have been several bunker homes under construction on Beach Drive this past summer that have generated substantial noise, earth vibration, dust and traffic impacts to Beach Drive residents.

To minimize the type of impacts described above with the Fisher project we are requesting the following type of conditions be included in the Coastal Zone Permit approval for this project:

a. That at least one travel lane of Beach Drive be kept open at all times so traffic is not blocked;
b. Erosion control measures include a sediment barrier that prevents sediment from flowing on to Beach Drive;
c. Any dirt tracked on to Beach Drive from construction vehicles shall be removed at the end of each work day;
d. Construction to be limited to *weekdays* during 8:00 A.M. to 9:00 P.M.;
e. Pile driving include methods to reduce ground vibrations beyond the site;
f. Pile driving be monitored and quantifiably measured by a qualified engineer hired by the applicant to ensure ground vibrations are insignificant to other properties on Beach Drive;
g. Posting the name and phone number of the project construct disturbance coordinator who will respond to neighbor concerns and complaints within 24 hours; and
h. Specifying Planning's ability to stop all work if the disturbance coordinator does not resolve a valid complaint within 24 hours of receipt of the complaint.

We believe that a condition to protect Beach Drive residents from the effects of pile driving (or similar construction practices) must include methods that will minimize horizontal ground vibrations that will be felt at other properties. For example, I understand that vibratory pile hammers can contain a system of counter-rotating eccentric weights, powered by hydraulic motors, and designed in such a way that horizontal vibrations cancel out, while vertical vibrations are transmitted into the pile. We request you have the applicant explore such a method with their engineers and contractors and discuss how such methods can be implemented at the project site before this project is scheduled for hearing.

Sincerely,

Kim Tschantz, MSP, CEP

cc: Jack and Lisa Troedson
165 Sausal Drive, Portola Valley, CA, 94028

letr to MPerez-FisherSFD

EXHIBIT