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FACSIMILE COVER SHEET

To:

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Company:

Leventhal, Schlosser Architects

Telephone No.:

707-961-0911

Fax No.: 707-961-0912

Project Name:

Heritage House, 5200 North Highway One, Little River, Mendocino

County, California.

Project Number:

11166.1

Faxed Document:

1998 bluff evaluation letter for a previous real estate transaction.

From:

Erik Olsborg

Date:

10/25/2005

Pages, incl. cover: 7

Note: I will send a Service Agreement for a reconnaissance to compare my 1997 field photographs and notes to current conditions. The recon will include kayaking in to examine the sea caves, which I did not do before. The geologic data and setbacks that I would develop should be plotted on a topographic map (including the bluff toes, not just the upper bluff edges) of the property. I remember running into Dick Scale out there one time. If he, or the other local surveyors are too busy, Fred Phelps (829-0400) in Sebastopol has expressed an interest in working in this area. I am currently using Fred for two surveys on the Mendo South coast because no one local was available. Erik Olsborg.

If you encounter any problems with this fax, please call (707) 838-0780.

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11166.1

June 23, 1998

Ms. Maureen O'Conner c/o Mr. Charlie Reed Mendo Realty P.O. Box 14 Mendocino, CA 95460

RE: Engineering Geologic Reconnaissance, Ocean Bluffs at the Heritage House, 5200 North Highway One, Little River, Mendocino County, California

Dear Ms. O'Conner:

This letter presents the results of our Engineering Geologic Reconnaissance of the ocean bluffs at the Heritage House, 5200 North Highway One, Mendocino County, California. The site is located on the southwest side of Highway One approximately two and one half miles south of the community of Little River.

Our Principal Engineering Geologist performed a reconnaissance of the site on December 19, 1997. At the time of our reconnaissance the tide level varied from about plus three feet to plus four and one half feet, according to published tide tables. As part of our reconnaissance we studied aerial photographs, dated June 30, 1963, and June 24, 1981, both enlarged to a scale of about one inch equals 200 feet. We also reviewed the Ukiah Sheet of the Geologic Map of California, dated 1960, prepared by the California Division of Mines and Geology.

Due to the length of time between our initial reconnaissance and the completion of this letter, a second site visit to the Smith Creek inlet portion of the property was performed by our Principal Engineering Geologist on June 19, 1998.

The purpose of our reconnaissance was to evaluate the bluff stability at the property, particularly in areas with nearby structures. BACE Geotechnical (BACE) was not requested to examine other slopes and/or other structures within the Heritage House property. Our scope of services, as outlined in our Service Agreement dated December 18, 1997, consisted of reviewing published geologic maps and aerial photographs, site reconnaissance, and the preparation of this letter.

Site Conditions

The property is situated in the northerly portion of Section 20, T 16 N, R 17 W. The property bluffs extend from the boundary line between Sections 20 and 17 (to the north), southeasterly to the mouth of Dark Gulch. The bluffs consist of a series of small peninsulas and inlets, with several, small offshore rocks and one rock

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"island" near the northwest end of the property. Both of our referenced acrial photographs show that this rock island was once joined to the adjacent peninsula by some form of a (natural?) bridge structure. One inlet in the south-central area of the property bluffs is formed by the mouth of Smith Creek.

The bluffs are very steep, from approximately one half horizontal to one vertical (1/2H:1V) to vertical. The bluff toes are all under water except for a couple of small beaches; one is in the back of the Smith Creek inlet, the other at the back of an inlet at the north-central area of the property. There is also a large beach at the mouth of Dark Gulch; this beach extends several hundred feet to the north along the adjacent bluff toe. A wood stairway leads down from the upper terrace level to the beach via the creek channel at the southeast end of the property.

Structures near the bluff edges consist of a gazebo at the point of a small peninsula in the north-central area of the property bluffs, and two rental structures on the north side of the Smith Creek inlet. The Meadows 1 & 2 building is near the back of the Smith Creek inlet, and the Same Time & Next Year building is further to the west. The Seacliff 1 through 4 rental building is located east of Meadows 1 & 2 on the bank edge above the Smith Creek channel, east of the waterfall that drops onto the beach at the back of the inlet. The other Heritage House structures are well back of the bluffs. The main building is on the top of a small knoll; many other structures are situated on the slopes of the knoll. The other structures closer to the bluff edge, including Garden and Deerfield units in the southeast portion of the property, are on a gently sloping to near level, marine terrace.

Several sea caves are present within the lower bluffs between the Smith Crcek inlet and the northwest end of the property. One cave, about 30 feet wide by about 30 feet high, is located at the northwest corner of the property; this cave extends into the northerly neighbor's property. The largest cave goes completely under the peninsula which once had a bridge to the nearby rock island. The southeast cave mouth is approximately 50 feet wide by about 50 feet high. The northwest cave mouth is about five feet wide by about 10 feet high. This cave connects the backs of the two inlets that are on either side of the peninsula.

Several other caves are located in the inlet on the southeast side of the peninsula containing the gazebo. These caves vary from about 10 to 30 feet wide by about 10 to 20 feet high. Two caves that are adjacent to each other appear to be connected within the bluff. The cave depths (into the bluff) are uncertain, but appear to be on the order of about 15 to 25 feet. The Carrousel rental unit building is the nearest to these caves, however, the caves do not appear to get closer than about 40 feet to this building. A small cave is located at the back of the inlet west of the Same Time and



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Next Year building. The dimensions of this cave could not be determined from our upper bluff edge viewpoints. One other large cave is located on the north side of the Smith Creek inlet. This cave trends toward the east side of the Same Time and Next Year building. The cave is about 30 feet wide by 30 feet high, and has a sandy beach exposed at low tides, at the back of the cave about 30 feet from the cave entrance. The extent of the cave could not be determined from our viewpoint, but probably does not go beyond the observed beach. Therefore, this cave probably does not reach under the nearby building.

In passing, it was noticed that the downslope side of the driveway is settling above the building that contains the Pilot I louse through the Firehouse. This part of the driveway is probably on old fill that was pushed into place with little or no foundation preparation or compactive effort.

There were slight stream flows in the Smith Creek and Dark Gulch channels at the time of our reconnaissance. Minor seepage was observed in local areas of the upper bluffs, especially at the southeast portion of the property bluffs. Site vegetation consists of lawns and landscaping throughout most of the facility with brush and trees in the Smith Creek and Dark Gulch channels.

Site Geology

The property bluffs and the knoll in the main building vicinity are comprised of Cretaceous-Tertiary Period coastal belt Franciscan Complex sandstone and minor shale. These bedrock materials are moderately to closely fractured, moderately hard to hard, and little weathered. No bedding orientation was observed in the exposed rocks. Rock jointing is primarily orientated northeasterly and southeasterly. Erosion along joint planes has created the sea caves and is mostly responsible for their orientation.

The upper bluffs are capped by Pleistocene Epoch terrace deposits. The thickness of these deposits varies from about three to six feet throughout the bluffs, except south of the peninsula on the southeast side of the Smith Creek inlet. There the terrace deposits thicken to as much as about 15 feet. No terrace deposits were observed at the southeast end of the property bluffs. The terrace deposits consist of poorly consolidated silty sands and sandy silts, with minor clay and gravel.

Several small landslides or erosion areas are located on the upper bluff edges, particularly in the southeast portion of the property. The largest landslide is located near the northwest property corner. This landslide consists of a slump block about 40 feet across and that has dropped about 12 feet. The four landslides in the southeasterly portion of the property vary from about 10 to 30 feet across and from



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about five to 15 feet in depth. The bluff edge railing has had to be moved back several feet in two areas to avoid these landslide areas. One other small crosion area is located south of the Same Time and Next Year building.

A large rock fall has occurred on the near vertical bluff face below the Meadow 1 & 2 building. This rock fall is evidenced by the exposed fresh, light-colored rock on the bluff face, and the boulders on the beach below. The rock fall(s) has caused the upper bluff edge to retreat to within approximately 15 feet from the southeast corner of that building. The attached deck extends out to near the bluff edge. Our reexamination on June 19, 1998, found only minor, additional rock falls have occurred in this area since our December 19, 1997 site reconnaissance.

The large cave through the peninsula near the northwest property corner was created by erosion within the trace of an inactive, northwest trending fault that dips to the northeast at about 45 degrees from horizontal. No other faults were observed by BACE and no faults are shown in the property vicinity on the published geologic map that we reviewed. The active San Andreas fault is located offshore, approximately five miles southwest of the property.

Seismicity

The Mendocino County coast is within a zone of potentially high seismic activity related to the San Andreas Fault system located along the shoreline. Future damaging earthquakes could occur on the San Andreas Fault during the lifetime of the existing structures. In general, the intensity of ground shaking at the site will depend on the distance to the causative earthquake epicenter, the magnitude of the shock, and the response characteristics of the underlying earth materials.

Conclusions

Despite the inherent risk of any blufftop property ownership, purchase of the property appears to be a reasonable risk. The existing facility is in relatively good condition and does not appear to be threatened by bluff retreat. The bluffs nearest existing structures are marginally stable and are not undergoing major landsliding.

Our review of the 1963 and 1981 aerial photograph enlargements compared with what is visible now, shows no major changes in the site or within the local coastline configuration (except for construction of some of the buildings and associated improvements). The upper bluff retreat rate appears to be relatively minimal; probably an average of an inch or less per year.



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The lower bluffs are comprised of hard rocks that are generally resistant to wave erosion, except for erosion within the weaker fracture or fault zones. The bluffs are partially protected from direct wave attack by the offshore rocks which tend to break up the ocean waves and absorb some of the wave energy.

The rockfall on the bluff face below the Meadow 1 & 2 building will probably continue (slowly) over the years. The bluff retreat in this area should be monitored, especially during winter storms. When the bluff has retreated to within about 10 feet of the building, or starts to undermine the attached deck, the building should be moved inland several feet. BACE should be consulted if conditions worsen and a new site needs to be selected.

None of the sea caves that we observed are in eminent danger of rapid enlargement/collapse. Cave formation is usually a very slow process (in human terms). Generally, sea caves lengthen along weaker fault or fracture planes; they generally don't widen into surrounding unfaulted or unfractured rock. The vertical erosion of the caves slows down as the cave roof reaches above the zone influenced by "typical" storm waves. Therefore, the caves inside the bluffs are probably not much larger than their external appearances would suggest. The cave roofs are composed of a thick mass of hard rock that is sound and too high to be continually subject to wave actions.

The driveway above the Pilot House-Firchouse building should be monitored by the new owner. If the pavement distress noticeably worsens, BACE should be consulted with regarding a retaining wall between the driveway and the building.

The site will be subject to strong ground shaking during future, nearby, large magnitude earthquakes. Generally, wood-framed structures, founded in firm earth materials, and designed in accordance with current building codes, are well suited to resist the effects of ground shaking. As typical of the Mendocino coastal region, structures on fill or weak terrace soils may have a potential for settlement (a fraction of an inch to several inches) during moderate or severe earthquakes.

Since water is the primary driving force of crosion, sliding and foundation settlement, a prudent recommendation would be to keep as much water as possible away from the structure foundations and adjacent bluff edges. Wherever practical, collected drainage water should be conducted directly into a natural drainage area or creek channel.



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Limitations

This site review of the existing structures and nearby ocean bluffs was performed in accordance with the usual and current standards of the profession, as they relate to this and similar localities. No other warranty, expressed or implied, is provided as to the conclusions and professional advice presented in this report. Our conclusions are based upon reasonable geologic and engineering interpretation of available data.

Changes in the condition of a site can occur with the passage of time, whether they are due to natural events or to human activities on this, or adjacent sites. In addition, changes in applicable or appropriate codes and standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, this report may become invalidated wholly or partially by changes outside of our control. Therefore, this report is subject to review and revision as changed conditions are identified.

We trust the above information suits your needs at this time. Please call if you have any questions.

Respectfully submitted,

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Three copies submitted

