CALIFORNIA COASTAL COMMISSION
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Th-14b

RECORD PACKET COPY

Date Filed:	March 11, 2002
49th Day:	April 29, 2002
180th Day:	September 7, 2002
Staff:	CLK-SF
Staff Report:	April 18, 2002

STAFF REPORT: REGULAR CALENDAR

Application No.:	**2-02-003**
Project Applicant:	Helen Christie
Location:	6099 Highway 1, Bodega Bay, Sonoma County (Exhibit 1).
Project Description:	Repair an existing seawall.
Substantive File Documents:	Geotechnical Investigation, Erosion Affecting Seawall, 6099 Highway One, Sonoma County, California, BACE Geotechnical, November 26, 2001.
Local Approvals:	Sonoma County Local Coastal Development Permit CP #363

Summary of Staff Recommendation

The proposed development involves repairs to an existing concrete seawall at 6099 Highway 1 near Gleason Mann Beach, Sonoma County. The applicant proposes to repair the seawall by installing a new concrete keyway at its base and to fill the voids in the wall with reinforced concrete. Because the base of the seawall is below the mean high tide line, this portion of the repair work is located within the Commission's retained coastal development permit jurisdiction.

The proposed repair work would not result in the seaward encroachment of the seawall beyond its pre-existing footprint. The proposed work would require the temporary use of mechanized construction equipment on the beach. Public access to the beach in the immediate vicinity of the project site would be restricted due to construction-related hazards. Staff recommends approval of the proposed repair project with conditions to minimize construction-related public access impacts and requiring long-term monitoring and maintenance of the seawall for the life of the structure.

1.0 STAFF RECOMMENDATION

1.1 Motion

I move that the Commission approve Coastal Development Permit No. 2-02-003 pursuant to the staff recommendation.

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

1.2 Resolution to Approve the Permit

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

2.0 STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

3.0 SPECIAL CONDITIONS

The Commission grants this permit subject to the following special conditions:

1. **Assumption of Risk, Waiver of Liability and Indemnity.**

   A. By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from waves, storm waves, erosion, and earth movement; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

   B. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director incorporating all of the above terms of this condition. The deed restriction shall include a legal description of the applicant's entire parcel. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

2. **Conformance of Design and Construction Plans to Geotechnical Report Geologic Hazard**

   A. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in Section 5.0 of the Engineering Geologic Report prepared by BACE Geotechnical and dated November 26, 2001. **PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the Executive Director's review and approval, evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all of the recommendations specified in the above-referenced geologic evaluation approved by the California Coastal Commission for the project site.

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

3. **Construction Responsibilities and Debris Removal.** The permittee shall comply with the following construction-related requirements:

   (a) No construction materials, debris, or waste shall be placed or stored where it may be subject to wave erosion or dispersion;

   (b) Any and all debris resulting from construction activities shall be removed from the beach immediately,

(c) All excavated beach sand shall be redeposited on the beach;

(d) Sand from the beach, cobbles, or shoreline rocks shall not be used for construction material;

(e) Concrete trucks and tools used for construction of the approved development shall not be rinsed within 100 feet of the shoreline or any stream, drainage, or storm drain inlet;

(f) Staging and storage of construction machinery and storage of debris shall not take place on Scotty Beach.

4. **Maintenance Activities and Future Alterations.** The permittee shall be responsible for removing or redepositing any debris, rock or material that becomes dislodged after completion of the approved shoreline protection as soon as possible after such displacement occurs. The permittee shall contact the Coastal Commission District Office immediately to determine whether such activities require a coastal development permit.

5. **Shoreline Protection Monitoring Plan**

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a monitoring plan, prepared by a licensed geologist, or civil or geotechnical engineer for the review and written approval of the Executive Director. The plan shall be sufficient to assess movement and prevent future failure of the seawall that is the subject of this permit, and shall include at a minimum:

1. A description of the approved shoreline protection device;

2. A discussion of the goals and objectives of the plan, which shall include assessment of movement and prevention of future failure of the seawall;

3. Provisions for submission of "as-built" plans, showing the permitted structure in relation to the existing topography, within 30 days after completion of construction;

4. Provision for an annual inspection documented with photographs and a written report and including a comparison with the previous year's photographs to determine if any change in the condition of the seawall has occurred.

B. By November 1 of every year for the life of the structure, the permittee shall submit a monitoring report to the Executive Director that has been prepared by a licensed geologist, or civil or geotechnical engineer. Each monitoring report shall contain the following:

1. An evaluation of the condition and performance of the approved shoreline protection device, including an assessment of whether any weathering or damage has occurred that could adversely impact future performance of the device;

2. An analysis of erosion trends, annual retreat, and rate of retreat of the beach fronting the seawall that is the subject of this permit, in conformance with and based upon the measurements contained in the approved monitoring plan; and

3. Recommendations for repair, maintenance, modifications or other work to the device.

If a monitoring report contains recommendations for repair, maintenance or other work, the permittee shall contact the Coastal Commission District Office to determine whether such work requires a coastal development permit.

6. State Lands Commission Approval. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and approval of the executive director, either (1) approval of the proposed repair project by the California State Lands Commission, or (2) a written determination by the California State Lands Commission that no such approval is required for the project.

4.0 Findings and Declarations

4.1 Project Description and Background

The project site is located at 6099 Highway 1, adjacent to Gleason Mann Beach, north of the town of Bodega Bay (Exhibit 1). The site is one of approximately 21 small lots located on a steeply sloped bluff directly adjacent to Highway 1 and abutting the coast developed with single-family homes constructed between 1937 and 1970. All of these lots are subject to direct wave attack and are protected from shoreline erosion by a collection of existing concrete seawalls. The seawall on the project site was originally constructed in the late 1960's. In 1997, the applicant undertook a landslide repair project pursuant to Sonoma County Coastal Development Permit CP #363 that involved structural reinforcement of the existing seawall including installation of tiebacks, construction of a concrete keyway, and shotcrete armoring of the slope above the seawall.

According to the applicant's geotechnical investigation, the existing seawall was constructed in stages with no ties between cold joints and was not keyed into bedrock. The seawall has been damaged by wave action, resulting in displaced blocks and voids. In the fall of 2000, the outside face of the seawall began to come apart and voids developed within and under the wall. Sand was then washed out from behind and under the seawall by wave action, and in January 2001, the south half of the seawall collapsed (Exhibits 2-5). Presently, the seawall is vulnerable to undermining and eventual failure (BACE 2001).

In the fall of 2001, without benefit of a coastal development permit, the applicant began to repair the seawall by pumping concrete behind it to replace the sand that had been washed out. Because the area behind the seawall is inland of the Mean High Tide Line (MHTL), it is located within Sonoma County's original coastal development permit jurisdiction. The County has not granted a coastal development permit for the repair work undertaken in 2001.

The applicant proposes to complete repairs to the seawall by installing a new concrete keyway at its base and to fill the voids in the wall with reinforced concrete. The proposed keyway would be embedded a minimum of five feet into bedrock and tied into the existing wall with steel reinforcement bar dowels (Exhibit 8). Because the base of the seawall is below the MHTL, this portion of the repair work is located within the Commission's retained coastal development permit jurisdiction.

The proposed work would require temporary excavation of sand from the beach to expose the underlying bedrock. The depth of sand varies on the beach by as much as ten feet both seasonally and from day to day depending on tidal and wave conditions. Thus, the volume of

sand required to be temporarily removed will depend on the actual conditions at the time of work.

The applicant proposes to trench the keyway a minimum of 5 feet deep into firm bedrock using an excavator. A backhoe or front-end loader may also be used depending on the sand depth at the time that the work is undertaken. Heavy equipment would be used on the beach for a total of approximately two weeks. The keyway would be constructed using Portland Type V cement with a maximum water to cement ratio of 0.4 and minimum compressive strength after 28 days of 5,000 psi. The same material would be used to fill and repair voids in the base and seaward face of the existing seawall. The engineering criteria provided for the permit application also specify that reinforcing steel shall be epoxy coated to reduce corrosion.

4.2 Other Agency Approvals

4.2.1 California State Lands Commission

The portion of the seawall that is seaward of the MHTL is located on state tidelands. As such, the proposed repair project must be authorized by the California State Lands Commission (SLC). Consistent with this requirement, Special Condition 6 specifies that as a prerequisite to the issuance of the coastal development permit, the applicant must provide to the executive director written verification of either: (1) approval of the proposed repair project by the SLC, or (2) a determination by the SLC that no such approval is required for the project.

4.3 Permit Authority, Extraordinary Methods of Repair and Maintenance, Shoreline Protection Structures

Coastal Act Section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an addition to, or enlargement or expansion of the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures that involve a risk of substantial adverse environmental impact as enumerated in Section 13252 of the Commission regulations.

Section 30610 of the Coastal Act provides, in relevant part:

> *Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas: . . .*
>
> *(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter.* [Emphasis added]

Section 13252 of the Commission regulations provides, in relevant part:

(a) For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:

(1) Any method of repair or maintenance of a seawall revetment, bluff retaining wall, breakwater, groin, culvert, outfall, or similar shoreline work that involves:

(A) Repair or maintenance involving substantial alteration of the foundation of the protective work including pilings and other surface or subsurface structures;

(B) The placement, whether temporary or permanent, of rip-rap, artificial berms of sand or other beach materials, or any other forms of solid materials, on a beach or in coastal waters, streams, wetlands, estuaries and lakes or on a shoreline protective work except for agricultural dikes within enclosed bays or estuaries;

(C) The replacement of 20 percent or more of the materials of an existing structure with materials of a different kind; or

(D) The presence, whether temporary or permanent, of mechanized construction equipment or construction materials on any sand area, bluff, or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams.

. . .

(b) Unless destroyed by natural disaster, the replacement of 50 percent or more of a single family residence, seawall, revetment, bluff retaining wall, breakwater, groin or any other structure is not repair and maintenance under section 30610(d) but instead constitutes a replacement structure requiring a coastal development permit.

[Emphasis added]

The proposed project does not involve the replacement of 50% or more of the existing seawall and is thus considered a repair and maintenance project under Section 13252(b) of the Commission's regulations. Section 13252 of the regulations requires a coastal development permit for extraordinary methods of repair and maintenance enumerated in the regulation. The proposed development involves repair to an existing seawall that would involve substantial alteration of the seawall foundation as well as the use of mechanized equipment and the placement of construction materials within 20 feet of coastal waters. The proposed repair project therefore requires a coastal development permit under Sections 13252(a)(1) of the Commission regulations.

In considering a permit application for a repair or maintenance project pursuant to the above-cited authority, the Commission reviews whether the proposed *method* of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development.

4.4 Hazards

Section 30253 of the Coastal Act provides in applicable part that new Development shall:

> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along-bluffs and cliffs.*

The existing seawall has substantially altered the natural landform of the bluff in conflict with Coastal Act Section 30253(2). However, as discussed above, because the proposed project involves only the repair of an existing seawall, the Commission will review for conformity with the Chapter 3 policies of the Coastal Act the proposed *method* of repair as opposed to the existing seawall itself. In this case, the Commission must consider whether the proposed method of repair would minimize risks to life and property from hazards, assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area.

The primary purpose of the proposed project is to repair and reinforce an existing seawall that is designed to protect an existing single-family residence from the risk of damage from shoreline erosion and wave and storm forces. As discussed above, the project site is located on a steep bluff directly adjacent to the shoreline and is exposed to severe wave and surf conditions (see Exhibits 2-5). Because the parcel is situated in a narrow strip between Highway 1 and the shoreline, relocation of the existing residence further from the shoreline (i.e., retreat) is not a feasible alternative to shoreline armoring. Therefore, the only feasible means to minimize the risk to life and property at this location from shoreline hazards would be to either maintain the existing seawall as proposed or to replace the existing seawall with a new shoreline protection device.

The proposed repair project is based on the recommendations of a site-specific geotechnical investigation, including subsurface exploration and assessment of geologic and seismic risk factors (BACE 2001). The proposed engineering design criteria for the keyway and seawall repair take these site-specific hazard risk factors into account. Pursuant to **Special Condition 2**, the applicant is required to carry out the repair project in accordance with the recommendations contained in the site-specific engineering geological report. The Commission finds that as conditioned, the proposed methods of repair would minimize the risks to life and property from shoreline hazards consistent with the requirements of Coastal Act Section 30253. In addition, pursuant to **Special Condition 5**, the applicant is required to monitor and maintain the seawall to ensure its long-term performance. The Commission finds that **Special Condition 5** is necessary to further minimize the risks of shoreline hazards by protecting against future failure of the seawall.

The Commission finds that the proposed method of repair along with the monitoring and maintenance requirements of **Special Condition 5** would reduce the risk of hazards to life and property caused by shoreline erosion and wave and surf conditions at the site. However, as stated in the applicant's geotechnical investigation, blufftop development is inherently hazardous and the conditions of the project site severely constrain the mitigation of such inherent hazards.

Therefore, despite the proposed repair project and monitoring and maintenance requirements of this permit, a potential risk of hazard to life and property remains.

Because the applicant proposes to maintain an existing development in an inherently hazardous location, the Commission imposes **Special Condition 1**, requiring the applicant to assume the risks of any losses associated with the proposed seawall repairs due to hazards, waive any claim of liability on the part of the Commission for such losses, and indemnify the Commission in the event that third parties bring an action against the Commission as a result of the any hazards associated with the proposed project. The Commission finds that **Special Condition 1** is required because the applicant has voluntarily chosen to implement the project despite the risk of hazards. Therefore, as conditioned, the Commission finds that the proposed project would be undertaken in a manner that minimizes risks to life and property in an area of high geologic and wave and surf hazard and is consistent with Section 30253 of the Coastal Act.

4.5 Public Access

Coastal Act Section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30211 states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act 30214 states in part:

> *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:*
>
> *(1) Topographic and geologic site characteristics.*
>
> *(2) The capacity of the site to sustain use and at what level of intensity.*

Coastal Act Section 30211 prohibits development that would interfere with the public's rights to access to the sea, including the use of dry sand, on public beaches. Public access to the beach in front of the project site is available during low tides via Scotty Beach approximately 700 feet to the south. There are no public recreational facilities serving this beach area and parking is limited to informal pullouts along Highway 1. Scotty Beach is a small pocket beach that is used primarily by local residents. Extensive public beach facilities with improved parking lots and restrooms are available nearby both to the north and south of the project area at the Sonoma Coast State Beach sites. Because the quality of beach access in the area immediately adjacent to the project site is poor and is available only at low tide, and because higher quality improved

beach access is available nearby, public use of the beach at the project site is low. Nevertheless, the Commission must consider whether the proposed method of repair would interfere with the public's rights to access the sea.

The proposed repair project involves repairs to the seaward face of the existing seawall, including replacement of failed portions of the wall. As proposed to be repaired, the seawall would not extend further seaward than the pre-existing wall. Thus, the repair project would not result in the seaward encroachment of the seawall further onto the public beach in front of the wall. The applicant proposes to remove from the beach concrete debris from the failed wall as part of the project. Removal of debris and construction materials from the beach during project construction and for the life of the development is further required pursuant to **Special Conditions 3, 4 and 5**. These conditions are necessary to ensure that the seawall is repaired and maintained in a manner that will minimize adverse impacts to public beach access. As such, the Commission finds that upon completion, the proposed repair project as conditioned would not interfere with the public's rights to access the sea in accordance with Coastal Act Sections 30210 and 30211.

The proposed method of repair of the existing seawall involves the use of mechanized construction equipment on the beach. The proposed use of heavy equipment on the beach would temporarily interfere with public beach access in the area of the project site. Given the constraints of the site and the nature of the proposed repair project, there is no feasible alternative method of repair that would lessen or avoid this temporary impact to public beach access. Therefore, the proposed use of heavy equipment on the beach during project construction raises an issue of conformity with Section 30211. However, pursuant to Coastal Act Section 30214, the public access policies of the Coastal Act, including Section 30211, must be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the capacity of the site to sustain use and at what level of intensity.

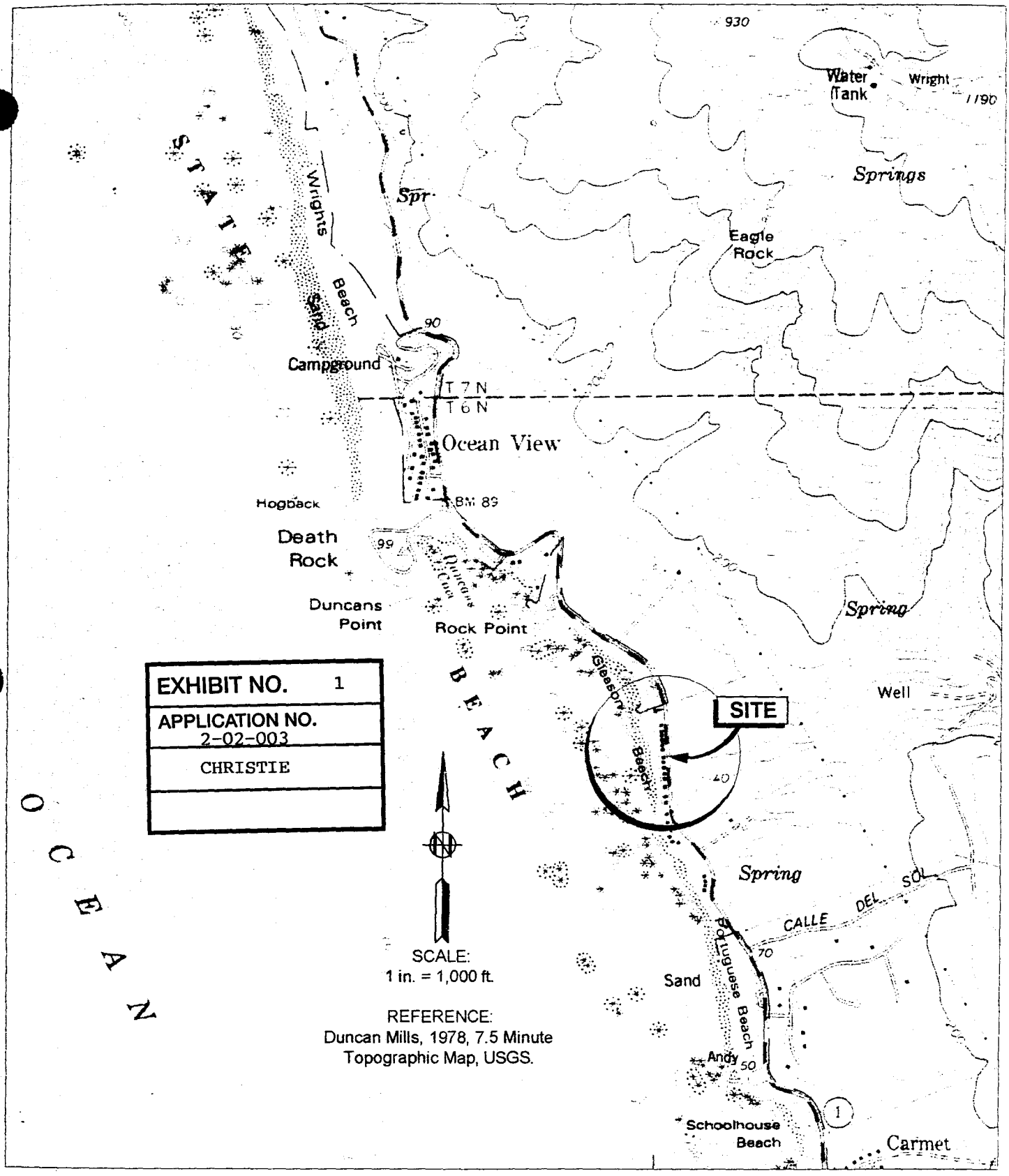
During most times, the beach in front of the project site has the capacity to sustain a low level of public use because it is exposed only during low tide and because parking is limited in the immediate area. This limited capacity to sustain public use would be even further restricted during the approximately two-week seawall repair project due to the operation of heavy equipment on the beach. Consistent with Coastal Act Section 30214, the Commission finds that the time, place and manner of public access may be temporarily restricted to protect the public from construction-related hazards during the project construction period. **Special Condition 3** would minimize the temporary construction impacts to public access by prohibiting the staging and storage of construction materials, debris and equipment on Scotty Beach and requiring the immediate removal of construction-related debris from the beach. Therefore, the Commission finds that as conditioned, the proposed seawall repair project is consistent with the public access policies of the Coastal Act.

4.6 CEQA

Section 13096 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits

a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act policies at this point as if set forth in full. The proposed project has been conditioned to be found consistent with the policies of the Coastal Act and to minimize all adverse environmental effects. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact, which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, and can be found consistent with Coastal Act requirements to conform to CEQA.



BACE Geotechnical
a division of
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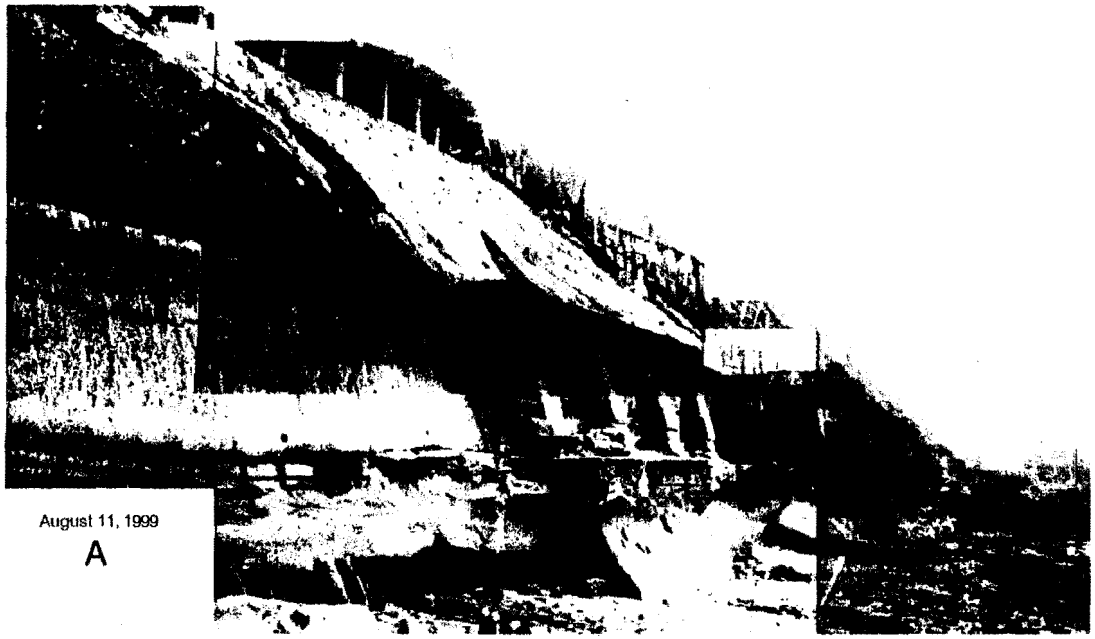
(707) 838-0780

Job No.: 10967.5
Appr.:
Date: 11/26/01

VICINITY MAP
Christie Residence
6099 Highway One
Sonoma County, California

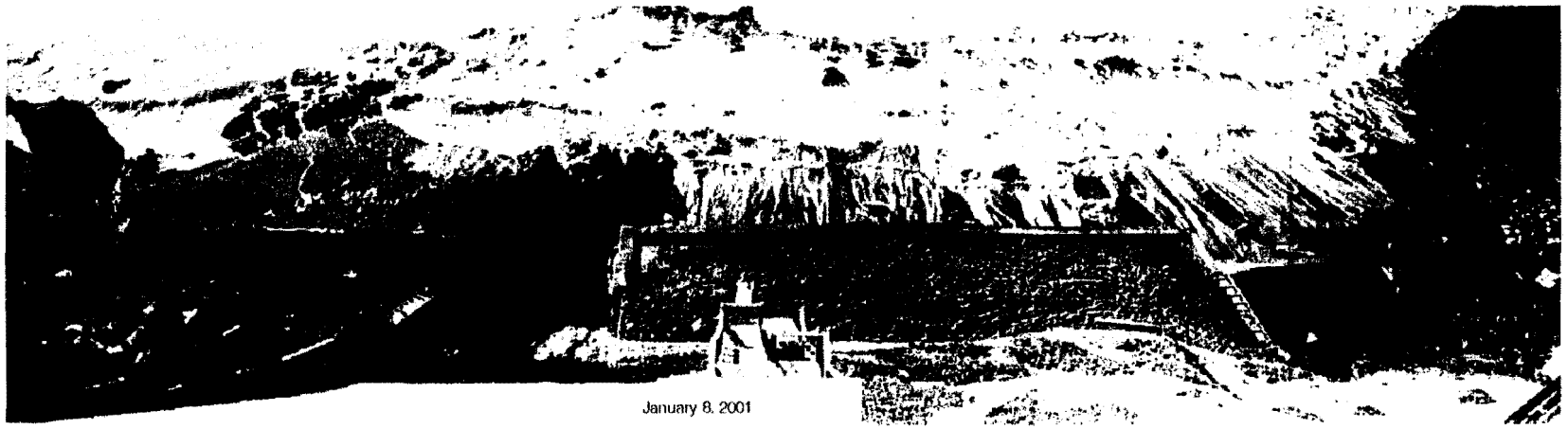
PLATE
1

EXHIBIT NO. 2
APPLICATION NO. 2-02-003
CHRISTIE



August 11, 1999

A



January 8, 2001

B

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Job No.: 10967.5
Appr.: EEO
Date: 11/26/01

PHOTOGRAPHS A and B
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE 3

2

September 14, 1999

C

November 11, 2000

D

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Date: 11/26/01

PHOTOGRAPHS C and D
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE
4

EXHIBIT NO. 3
APPLICATION NO. 2-02-003
CHRISTIE

March 7, 2001

E

January 24, 2001

F

EXHIBIT NO. 4

APPLICATION NO. 2-02-003

CHRISTIE

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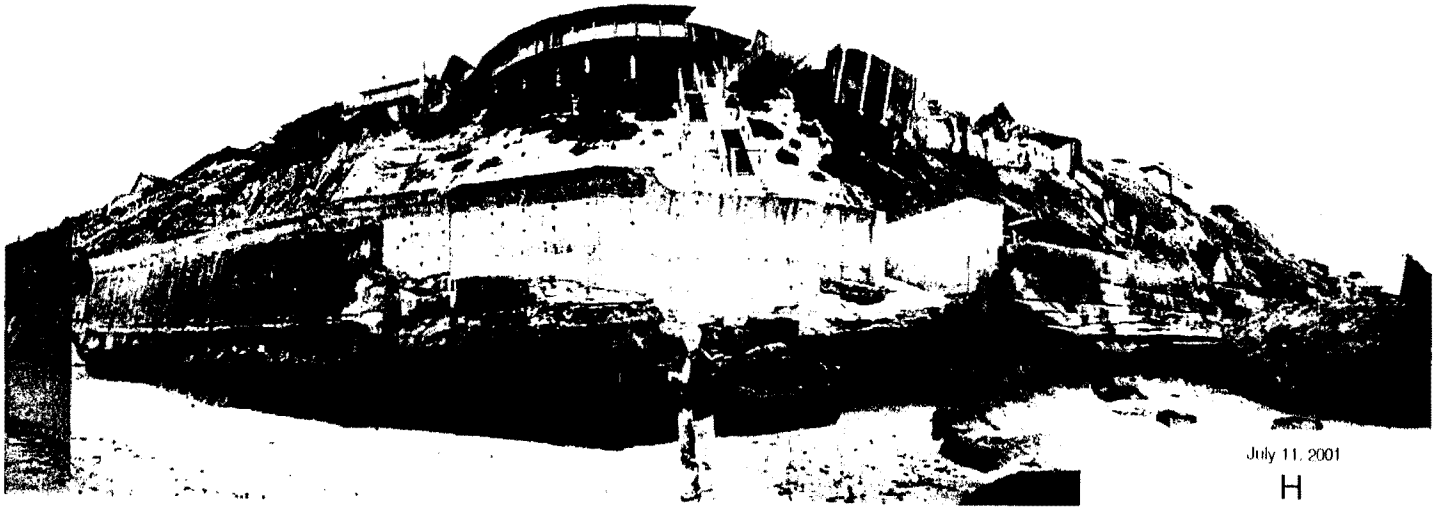
Appr.: EEO
Date: 11/26/01

PHOTOGRAPHS E and F
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE 5

April 27, 2001

G



July 11, 2001

H

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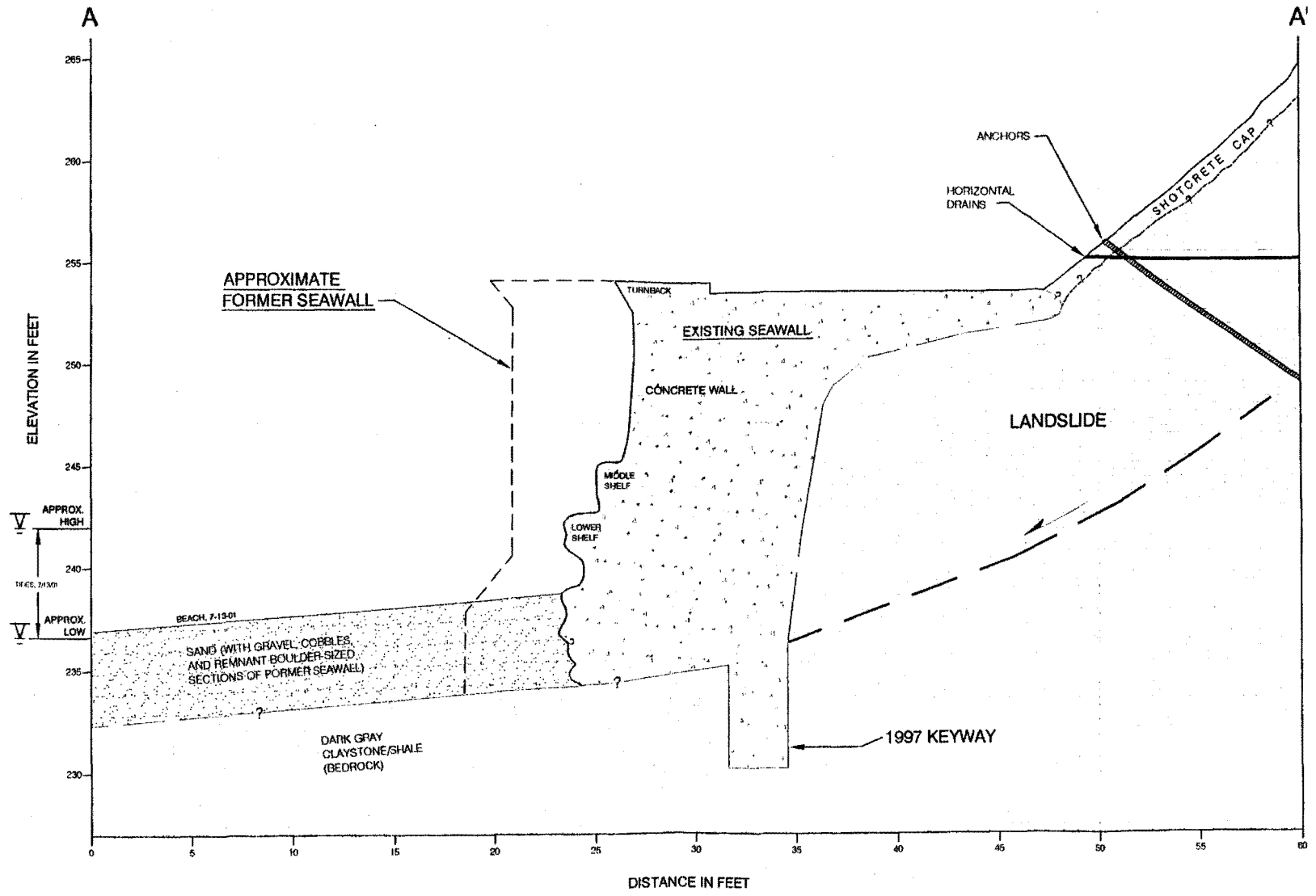
Job No.: 10967.5
Appr.: EEO
Date: 11/26/01

PHOTOGRAPHS G and H
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE
6

EXHIBIT NO. 5
APPLICATION NO. 2-02-003
CHRISTIE



EL ON JULY 13, 2001.

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(707) 838-0780

Job No.: 10967.5
Appr: EEO
Date: 11/26/01

CROSS-SECTION A-A'
(LOOKING NORTH)
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE
7

EXHIBIT NO. 6
APPLICATION NO. 2-02-003
CHRISTIE

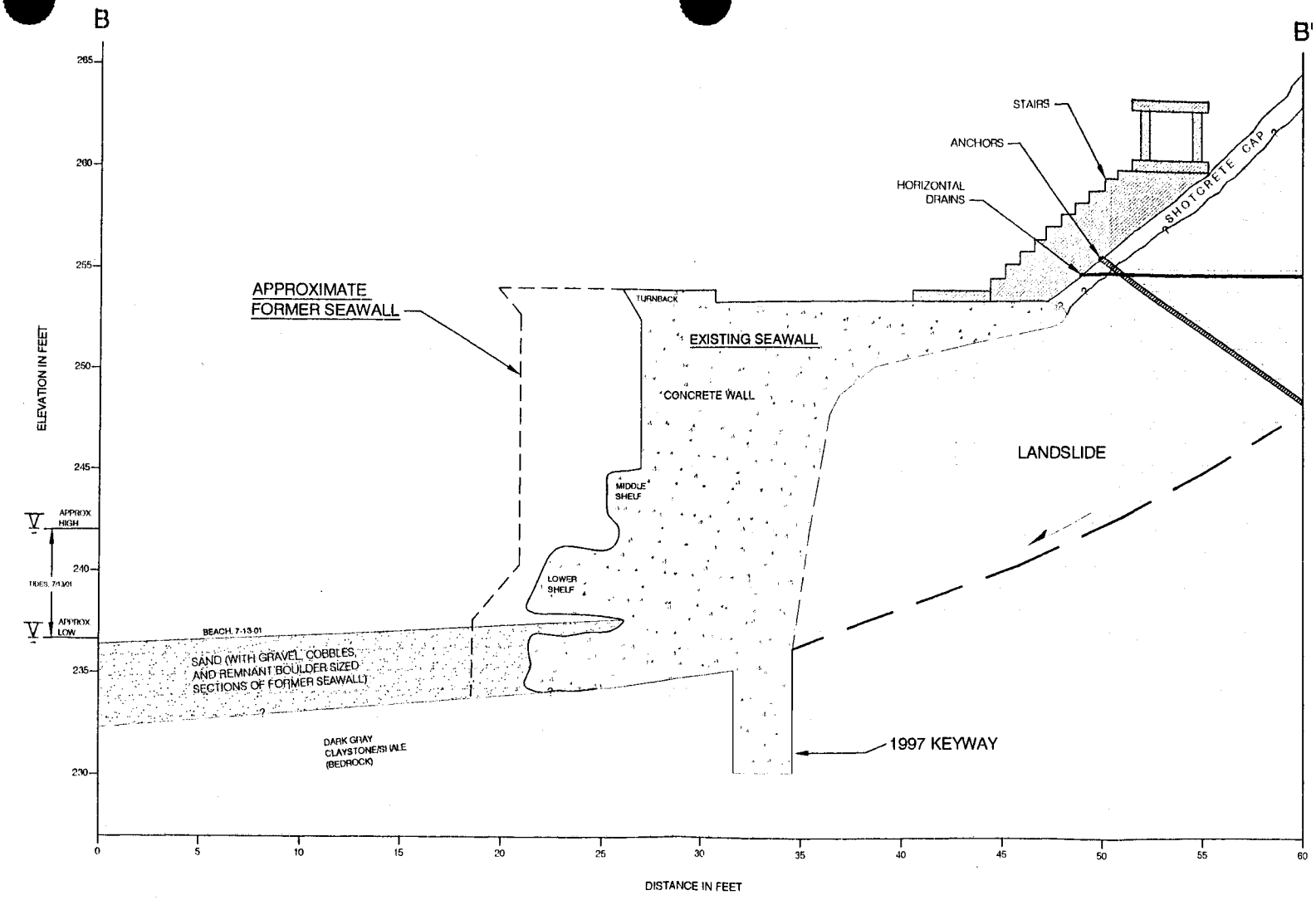

EXHIBIT NO. 7
APPLICATION NO. 2-02-003
CHRISTIE

VEL ON JULY 13, 2001.

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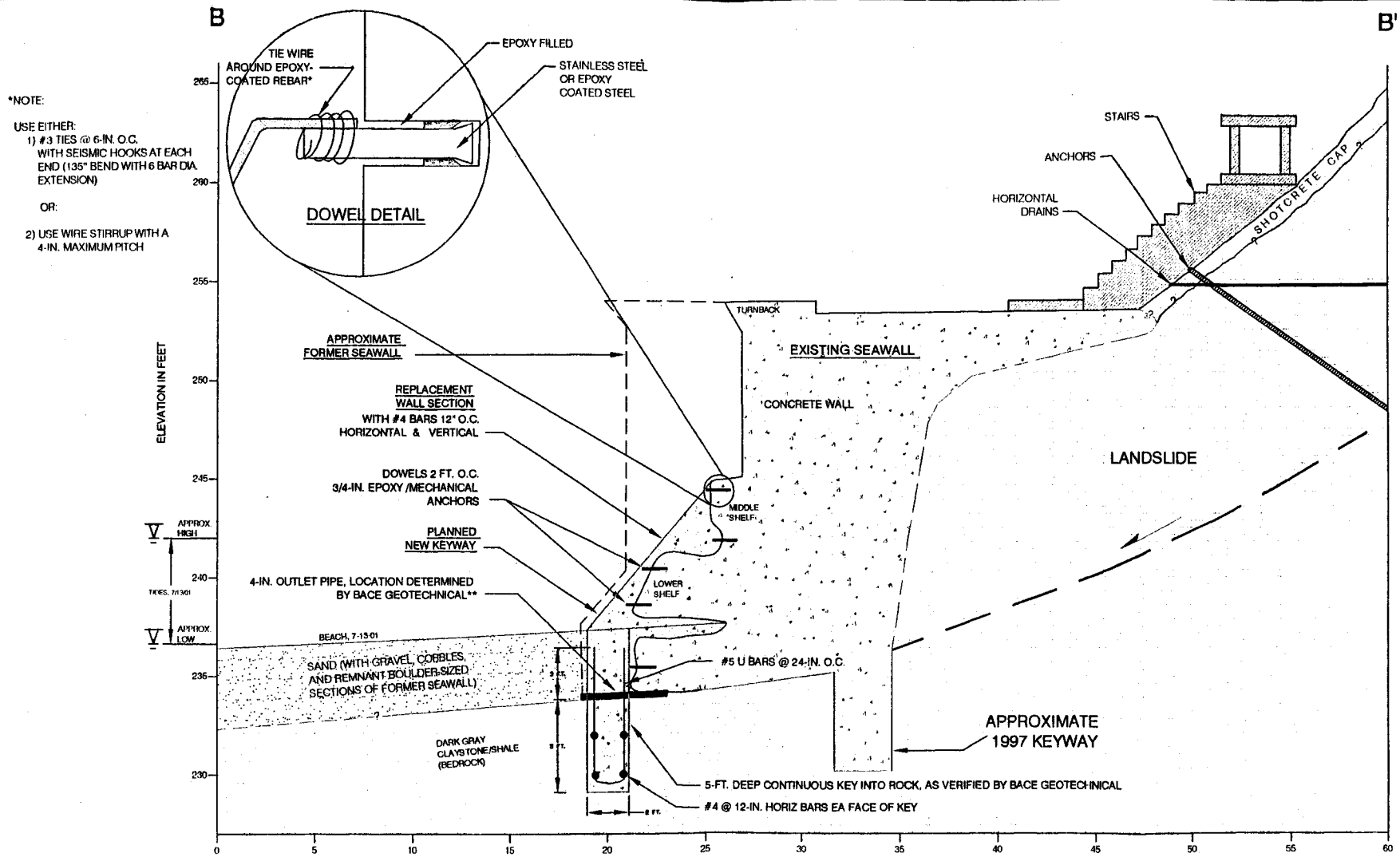
Job No.: 10967.5
Appr.: E.E.O
Date: 11/26/01

CROSS-SECTION B-B'
(LOOKING NORTH)
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE
8



** EIGHT MINIMUM, SDR 35 OR EQUAL.

NOTE: Excavate keyway 5 feet into bedrock, as verified by BACE Geotechnical

AL DESIGN WIND LEVEL ON JULY 13, 2001.

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Job No.: 10967.5
Appr.: EED
Date: 11/26/01

TYPICAL REPAIR SECTION
(LOOKING NORTH)
CHRISTIE RESIDENCE
6099 HIGHWAY ONE
Sonoma County, California

PLATE
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EXHIBIT NO. 8
APPLICATION NO. 2-02-003
CHRISTIE