CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

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Th19c

Prepared November 3, 2015 for November 5, 2015 Hearing

To: Commissioners and Interested Persons

From: Susan Craig, District Manager
Ryan Moroney, Coastal Planner

Subject: STAFF REPORT ADDENDUM for Th19c
Application Number 3-14-0488 (Iceplant LLC Seawall)

The purpose of this addendum is to modify the staff recommendation for the above-referenced item with respect to conditions for revised final plans, construction plans, as-built plans, and public access improvements. Staff has worked closely with the Applicant on all permit conditions and the Applicant is in agreement with all permit conditions, including as amended here. Thus, the staff report is modified as shown below (where applicable, text in underline format indicates text to be added, and text in ~~strikethrough~~ format indicates text to be deleted):

1. **Minor adjustments to Revised Final Plans (Special Condition 1) and Construction Plan (Special Condition 3). Special Conditions 1** and **3** require the Applicant to submit Revised Final Plans and a Construction Plan, respectively, for Executive Director review and approval. These conditions are modified below to allow for minor changes to these plans, also subject to Executive Director review and approval, if such changes are deemed reasonable and necessary and do not adversely impact coastal resources.

The following sentence is added to the final paragraph of **Special Condition 1** on staff report page 7:

> *All requirements above and all requirements of the approved Revised Final Plans shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Revised Final Plans. Minor adjustments to these requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.*

The following sentence is added to the final paragraph of **Special Condition 3** on staff report page 9:

> *All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Construction Plan. Minor adjustments to*

these requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

2. **As-Built Plans. Special Condition 8** specifies the use of National Geodetic Vertical Datum (NGVD) for all elevations in the as-built plans. However, the North American Vertical Datum 88 reference (NAVD88) is now the more accurate system to use. Commission staff has discussed this proposed change with the Commission's Coastal Engineer, who is in agreement with this change.

Special Condition 8 on staff report page 11 is therefore modified as follows:

8. As-Built Plans. *WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, or within such additional time as the Executive Director may grant for good cause, the Permittee shall submit two copies of As-Built Plans for Executive Director review and approval showing all development authorized by this CDP. The As-Built Plans shall be substantially consistent with the approved Revised Final Plans (see Special Condition 1). The As-Built Plans shall include a graphic scale and all elevation(s) shall be described in relation to ~~National Geodetic Vertical Datum (NGVD)~~ North American Vertical Datum 88 (NAVD88). The As-Built Plans shall include color photographs (in hard copy and jpg format) that clearly show the as-built project, and that are accompanied by a site plan that notes the location of each photographic viewpoint and the date and time of each photograph. At a minimum, the photographs shall be from a sufficient number of upcoast, downcoast, inland and seaward viewpoints as to provide complete photographic coverage of the permitted project at this location.*

3. **Public Access Improvements.** Finally, clarifications to **Special Condition 2** are needed to expressly provide that the public access improvements associated with the project will be open to the public 24 hours a day, seven days a week for as long as the new shoreline protective structure is present.

Special Condition 2 on staff report pages 6-7 is therefore modified as follows:

2. Public Access Improvements Maintained. *The public access improvements (public viewing deck, beach stairs, and lateral access way) shall be available for public use 24 hours a day, 7 days a week for as long as the shoreline protective structure is present. Additionally ~~T~~the Permittee shall maintain the ~~proposed~~ enhanced public viewing platform, access path (including lateral access to the upcoast property and the County's stairway and viewing area downcoast), and beach stairs (as shown on page 2 of Exhibit 5) so that they continuously provide a usable connection from the County's Pleasure Point stairway to the beach and surf area located below the Permittee's property, and to the adjacent upcoast property and to adjacent areas of high relief associated with the Pleasure Point seawall at all times. If, in the opinion of the Executive Director, these public access components are adversely affected by coastal hazards (including by sea level rise) over time to the degree that they are no longer providing the public benefit and utility required by the terms and conditions of this CDP, the Applicant shall submit a CDP amendment application to the Commission that proposes to modify these public access components to ensure that they continue to provide the public benefit and utility required by the terms and conditions of this CDP, including by ensuring they remain*

usable at higher tides (e.g., by keeping the viewing platform and the public access path elevations above mean higher high water (MHHW) while still providing the access connections described above in this condition).

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Th19c

Filed:	10/8/2015
Action Deadline:	4/5/2016
Staff:	Ryan Moroney - SC
Staff Report:	10/23/2015
Hearing Date:	11/5/2015

STAFF REPORT: CDP HEARING

Application Number:	3-14-0488
Applicant:	Iceplant LLC
Project Location:	On the beach, surf zone, and the base of the bluff seaward of 3054 Pleasure Point Drive fronting the Pleasure Point surfing area directly upcoast of the Pleasure Point Park surfing access stairway in the Pleasure Point portion of the unincorporated Live Oak beach area of Santa Cruz County.
Project Description:	Reconstruct and augment existing seawall, and construct improvements for public beach and surfing access, including an improved viewing platform, and an enhanced public path across the lower portion of the seawall with stairs leading down to the beach and surfing area.
Staff Recommendation:	Approval with Conditions.

SUMMARY OF STAFF RECOMMENDATION

The proposed project site is located just seaward of the bluffs fronting Pleasure Point Park (located at the intersection of East Cliff Drive and Pleasure Point Drive) and the residence located immediately upcoast of the Park (at 3054 Pleasure Point Drive) in the Live Oak beach area of Santa Cruz County. The coastal bluff area at the site is located immediately upcoast from the County's Pleasure Point seawall and public surf and beach access stairway. The project site is nearly completely armored, with concrete and concrete gunite covering virtually all of the exposed bedrock and bluff deposits. The date of the initial armoring can be traced to prior to

1972, with substantial improvements and maintenance done following the severe winter storms of 1982-1983 and in 1995. The area fronting the bluffs is typically under water, expect during lower tides.

The proposed project would augment and replace the current armoring system with one roughly in the same configuration but modified to meet current armoring standards, including constructing and surfacing the armoring to mimic natural bluffs as much as possible. Specifically, the Applicant proposes to construct a contoured concrete seawall system designed to mimic natural bluff landforms that covers the existing coastal protection, and that extends further down the bluff where it would be keyed into the bedrock beach platform. The proposed project is intended to match the bluff camouflaging on the adjacent Pleasure Point/East Cliff Drive seawall that was approved by the Commission in 2007, and has generally been recognized as a good example of how to mimic natural bluffs with armoring work.

Shoreline armoring has a number of impacts on the coast, including, but not limited to, impacts from encroachment, fixing the back of the beach, and preventing the natural erosion of coastal bluffs that provides sandy material to the nearby beaches. As a result, the Coastal Act is premised on both hazard and shoreline armoring avoidance. The bluff here has been armored for many years, and thus these impacts already exist to a certain degree. This new project will extend certain such impacts and result in some new impacts. In this case, the proposed project's impacts on recreational access (e.g., coverage of a portion of beach/ocean area, retention of potential beach material, and long-term loss of beach due to passive erosion) can be mitigated with conditions to appropriately offset such impacts. In this case, the Applicant has proposed to build in mitigation for these impacts in the form of improvements to an existing public access viewing platform, new curb, new railing and safe new public beach and surf access stairs seaward of the Applicant's armoring, all of which would connect downcoast to the County's existing public access stairway and viewing platform. The proposed design of these improvements will result in a more natural looking, aesthetically pleasing seamless transition between the County seawall and the Applicant's seawall and related public access improvements. This type of mitigation appears particularly appropriate at this location because it responds to a critical problem created by the proposed armoring structure; namely the fact that it would otherwise encroach on a public easement area, and lateral access along the beach and bluffs. In addition, the seawall presents a potential obstacle to entering and exiting the surf during similar conditions; particularly important when a world class surf break like Pleasure Point is offshore and heavily used by the public. The proposed improvements will help offset these impacts by providing a means to get across and along the shoreline at the seawall location, including with respect to surfing ingress/egress, and particularly during times of higher tides and heavy surf when surfers may not be able to navigate to formal access points to exit the surf. Taken together, the public access enhancements will adequately mitigate for the impacts of the project. The proposed project will also improve the public viewshed along this area of coast both by providing an enhanced public viewing platform down near the water, and by including appropriate texturing, contouring, and coloring to mimic a natural bluff face and minimize the seawall's visual impact to the maximum degree feasible.

Therefore, staff recommends that the Commission approve a CDP for the proposed project, along with mitigations for the impacts of the project, including but not limited to: 1) provisions

to ensure that the project emulates and evokes natural bluff landforms as much as possible; 2) requirements to provide enhanced public recreational access amenities at the base of the seawall, including modifications if necessary in response to sea level rise; 3) requirements for other agency approvals; 4) assumption of risk, waiver of liability and indemnity agreements for coastal hazards; 5) monitoring and maintenance of the as-built project; 6) a landscaping plan to include only low-growing native blufftop plants, and to use them to help provide additional visual screening; 7) appropriate best management practices to protect water quality and public access during construction, and; 8) recordation of a deed restriction against the property governed by this permit. As conditioned, the project can be found consistent with the Coastal Act. The motion to act on this recommendation is found on page 5 below.

Staff Note: Unpermitted Development

A violation case (V-3-10-040) was opened in 2010 for two unpermitted extensions/expansions (by a previous property owner) of a blufftop deck that has impacts to views of the ocean from the County's public access path. In addition, in 2004, the prior owner was granted Emergency CDP 3-04-041-G to patch two holes in the existing gunite, and to fill a sea cave below the seawall with concrete. That prior owner never provided the information necessary to file the required regular follow-up CDP application (CDP application number 3-83-155-A1), and thus the emergency work is not considered permitted. The Applicant seeks to resolve these violation through this application and the CDP is conditioned to eliminate the unpermitted deck expansions and authorize the armoring structure that will encase these 2004 improvements. Approval of this application pursuant to the staff recommendation, issuance of the CDP, and the Applicant's subsequent compliance with all terms and conditions of the permit will result in resolution of the above described violations.

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I. MOTION AND RESOLUTION

Staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development. To implement this recommendation, staff recommends a **YES** vote on the following motion. Passage of this motion will result in approval of the CDP as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Motion: *I move that the Commission* ***approve*** *Coastal Development Permit Number 3-14-0488 pursuant to the staff recommendation, and I recommend a* ***yes*** *vote.*

Resolution to Approve CDP: *The Commission hereby approves Coastal Development Permit Number 3-14-0488 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. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable 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.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions:

1. **Revised Final Plans.** PRIOR TO ISSUANCE OF THE CDP, the Permittee shall submit two sets of Revised Final Plans to the Executive Director for review and approval. The Revised Final Plans shall be substantially in conformance with the plans submitted to the Coastal Commission (titled "Public Access and Coastal Protection Plans, 3054 Pleasure Point Drive, Santa Cruz CA 95062" by Haro Kasunich & Associates dated October 31, 2013 and dated revised December 2, 2014), but shall show the following changes and clarifications to the project:

   (a) Concrete Surfacing. All concrete surfaces shall be faced with sculpted concrete surface that mimics natural undulating bluff landforms in the vicinity in terms of integral mottled color, texture, and undulation to the maximum extent feasible, and seamlessly blends with the County's Pleasure Point seawall downcoast. Special emphasis and care shall be applied to the area directly adjacent to the County seawall and above the viewing platform to help that area, including the deck above, limit public view impacts as much as possible. Any protruding elements (e.g. corners, edges etc.) shall be contoured in a non-linear manner designed to evoke natural bluff undulations. The color, texture and undulations of the seawall surface shall be maintained throughout the life of the structure. PRIOR TO COMMENCEMENT OF FINISH CONCRETE SURFACING, the Permittee shall submit to the Executive Director for review and approval the qualifications of the contractor who will perform the finish concrete work, including photos and identification of similar completed projects. Finish concrete work shall not commence until the Executive Director has approved the finish concrete contractor.

   (b) Elimination of Recurve Features. All proposed recurves on the seawall shall be eliminated with the exception of the recurve at the most upcoast end of the proposed seawall. This upcoast recurve feature shall be minimized to the maximum extent feasible while still providing protection from wave overtopping, and shall include a wave-cut notch mimicking natural bedrock outcrops in the Pleasure Point area.

   (c) Elimination of Anti-climb Features. All proposed anti-climb features shall be eliminated.

   (d) Structural Concrete Foundation Reduction. The structural concrete foundation landward of the wall adjacent to the rear yard shall be lowered by two feet in order to facilitate lowering the height of the associated railing. The reduction in foundation height shall be consistent with ensuring the structural stability of the armoring sidewalls that extend vertically up toward the residence.

   (e) Railings. With respect to railings: (1) The proposed 42-inch-high railing on the rear yard wall (shown on page 1 of **Exhibit 5**) shall be replaced with a 12-inch-high transparent railing to be placed on the innermost portion of the rear yard wall in such a way that it is not visible from public viewing areas (including Pleasure Point Park, the County's blufftop access path, the County's stairs and the access improvements associated with

this project); (2) the railing along the seawall's public pathway (shown on page 1 of **Exhibit 5)** shall be eliminated and replaced with a "curb" feature (see page 2 of **Exhibit 5**) no taller than that provided at the adjacent Pleasure Point seawall viewing platform that shall be contoured and surfaced consistent with the requirements in **Special Condition 1(a)**; and (3) the railing along the decks on top of the blufftop shall be as visually permeable as possible (e.g., cable rail or equivalent).

(f) Gate. The proposed gate feature in the area of the existing block wall shall be constructed of stainless steel or other similar structural materials and covered with concrete mimicking natural undulating bluff landforms in the vicinity as required by Special Condition 1(a) in a manner that hides the fact that this is a gate as seen from public viewing areas. The gate shall contain no locks, knobs, hinges or other elements that detract from the camouflaging and that can be seen from any public area.

(g) Deck Cantilevers Removed. All deck features (but not including the catwalk between the two decks) shall be modified so that no portion of the decks cantilever over the top edge of the armoring structure (or the blufftop where there is no armoring structure).

(h) Landscaping. All new plants shall be native and noninvasive drought tolerant species, and shall be in substantial conformance with the Landscaping Plan (by Prime Landscape Service, Inc., dated March 12, 2015; see **Exhibit 6)**. Plants shall be chosen and planted in such a way as to trail over the armoring as much as possible at maturity in order to help provide softening of armoring features, especially at the top of the armoring structure, and especially so that other development (such as the side of the deck) are screened from view at the top edge of the armoring. All invasive and non-native species in the project area, including ice plant, shall be removed and shall not be allowed to persist. The plans shall include certification from a licensed landscape professional experienced with native species indicating that all plant species to be used are native and non-invasive. All plants shall be replaced as necessary to maintain the approved vegetation over the life of the project. The landscaping plan shall be implemented immediately following completion of the armoring, and all plantings shall be kept in good growing condition and replaced as necessary to maintain some visual screening of the armoring, including its top edge specifically, over the life of the project.

All requirements above and all requirements of the approved Revised Final Plans shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Revised Final Plans.

2. Public Access Improvements Maintained. The Permittee shall maintain the proposed enhanced public viewing platform, access path (including lateral access to the upcoast property and the County's stairway and viewing area downcoast), and beach stairs (as shown on page 2 of **Exhibit 5)** so that they continuously provide a usable connection from the County's Pleasure Point stairway to the beach and surf area located below the Permittee's property, and to the adjacent upcoast property and to adjacent areas of high relief associated with the Pleasure Point seawall at all times. If, in the opinion of the Executive Director, these public access components are adversely affected by coastal hazards (including by sea level rise) over time to the degree that they are no longer providing the public benefit and utility

required by the terms and conditions of this CDP, the Applicant shall submit a CDP amendment application to the Commission that proposes to modify these public access components to ensure that they continue to provide the public benefit and utility required by the terms and conditions of this CDP, including by ensuring they remain usable at higher tides (e.g., by keeping the viewing platform and the public access path elevations above mean higher high water (MHHW) while still providing the access connections described above in this condition).

3. **Construction Plan.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit two sets of a Construction Plan to the Executive Director for review and approval. The Construction Plan shall, at a minimum, include the following:

   (a) Construction Areas. The Construction Plan shall identify the specific location of all construction areas, all staging areas, all storage areas, all construction access corridors (to the construction site and staging areas), and all public pedestrian access corridors. All such areas within which construction activities and/or staging are to take place shall be minimized in order to minimize construction encroachment on all publicly available pathways, park areas, beach and beach access points, to have the least impact on public access and other coastal resources overall.

   (b) Construction Methods and Timing. The Construction Plan shall specify the construction methods to be used, including all methods to be used to keep the construction areas separated from public recreational use areas (including using the space available on the blufftop portions of the project area for staging, storage, and construction activities to the maximum extent feasible provided it does not significantly adversely affect public access, and including using unobtrusive fencing (or equivalent measures) to delineate construction areas), and including all methods to be used to protect Monterey Bay. All erosion control/water quality best management practices to be implemented during construction and their location shall be noted.

   (c) Construction Requirements. The Construction Plan shall include the following construction requirements specified by written notes on the Construction Plan. Minor adjustments to the following construction requirements may be allowed by the Executive Director if such adjustments: (1) are deemed reasonable and necessary; and (2) do not adversely impact coastal resources.

   - Public access to the Pleasure Point Park stairway shall be maintained at all times.

   - All work shall take place during daylight hours, and lighting of the beach and ocean area is prohibited.

   - Grading of intertidal areas is prohibited, except removal of existing debris, concrete, rubble, etc., is allowed in these areas.

   - Only rubber-tired construction vehicles are allowed on the beach, except track vehicles may be used if the Executive Director determines that they are required to safely carry out construction. When transiting on the beach, all such vehicles shall remain as close to the bluff edge as possible and avoid contact with ocean waters.

- All construction materials and equipment placed seaward of the bluffs during daylight construction hours shall be stored beyond the reach of tidal waters, except for materials kept inland of the concrete block wall. All construction materials and equipment shall be removed in their entirety from these areas by sunset each day that work occurs, except for erosion and sediment controls and/or construction area boundary fencing where such controls and/or fencing are placed as close to the toe of the coastal protection/bluff as possible, and are minimized in their extent.

- Construction (including but not limited to construction activities, and materials and/or equipment storage) is prohibited outside of the defined construction, staging, and storage areas.

- No work shall occur during weekends and/or the summer peak months (i.e., from the Saturday of Memorial Day weekend through Labor Day, inclusive) unless, due to extenuating circumstances (such as tidal issues or other environmental concerns), the Executive Director authorizes such work.

- Equipment washing, servicing, and refueling shall not take place on the beach, and shall only be allowed at a designated inland location as noted on the Plan. Appropriate best management practices shall be used to ensure that no spills of petroleum products or other chemicals take place during these activities.

- The construction site shall maintain good construction site housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain, including covering exposed piles of soil and wastes; dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the beach; etc.).

- All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday. At a minimum, silt fences, or equivalent apparatus, shall be installed at the perimeter of the construction site to prevent construction-related runoff and/or sediment from entering into Monterey Bay.

- All public recreational use areas and all beach access points impacted by construction activities shall be restored to their pre-construction condition or better within three days of completion of construction. Any native materials impacted shall be filtered as necessary to remove all construction debris.

- The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office at least three working days in advance of commencement of construction or maintenance activities, and immediately upon completion of construction or maintenance activities.

All requirements above and all requirements of the approved Construction Plan shall be enforceable components of this CDP. The Permittee shall undertake development in accordance with this condition and the approved Construction Plan.

4. Construction Site Documents & Construction Coordinator. DURING ALL CONSTRUCTION:

(a) Construction Site Documents. Copies of the signed CDP and the approved Construction Plan shall be maintained in a conspicuous location at the construction job site at all times, and such copies shall be available for public review on request. All persons involved with the construction shall be briefed on the content and meaning of the CDP and the approved Construction Plan, and the public review requirements applicable to them, prior to commencement of construction.

(b) Construction Coordinator. A construction coordinator shall be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and the coordinator's contact information (i.e., address, email, phone numbers, etc.) including, at a minimum, a telephone number and email address that will be made available 24 hours a day for the duration of construction, shall be conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with an indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the contact information (e.g., name, address, email, phone number, etc.) and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

5. Duration of Armoring Approval and Mitigation Period.

(a) Authorization Expiration. This CDP authorizes the approved armoring to remain until the time when the currently existing residence requiring protection is: 1) redeveloped as described in this condition below; 2) is no longer present or is uninhabitable; or 3) no longer requires a shoreline protective device, whichever occurs first. Prior to the anticipated expiration of the CDP and/or in conjunction with any proposed redevelopment of the property, the Permittee shall apply for a CDP amendment to remove the approved armoring.

(b) Redevelopment. As used in this condition, redevelopment is defined to include: 1) additions to the existing structure; 2) exterior and/or interior renovations, and/or; 3) demolition of the existing blufftop residence, or portions thereof, which result in:

1. Alteration of 50% or more of major structural components including exterior walls, floor and roof structures, and foundation, or a 50% increase in floor area. Alterations are not additive between individual major structural components; however, changes to individual major structural components are cumulative over time from the date of approval of this CDP as described in Condition 5(b)(2) below, or:

2. Demolition, renovation, or replacement of less than 50% of a major structural component where the proposed alteration would result in cumulative alterations exceeding 50% or more of a major structural component, taking into consideration previous alterations approved on or after the date of approval of this CDP; or an

alteration that constitutes less than a 50% increase in floor area where the proposed alteration would result in a cumulative addition of greater than 50% of the floor area, taking into consideration previous additions approved on or after the date of approval of this CDP.

(c) Mitigation. If the Permittee intends to keep the armoring in place after November 5, 2035, the Permittee must submit a complete CDP amendment application prior to November 5, 2035 that proposes mitigation for the coastal resource impacts associated with the retention of the armoring beyond 20 years, including maintaining the public viewing area and access path and beach stairs in such a way as to ensure that these public access components continue to function as intended, even if that means modifying these features in response to coastal hazards (see also **Special Condition 2**).

6. **State Lands Commission Authorization.** PRIOR TO COMMENCEMENT OF SEAWALL CONSTRUCTION, the Permittee shall submit to the Executive Director for review a copy of the State Lands Commission (SLC) authorizations for the approved project, or evidence from SLC indicating that no such authorization is necessary. Any changes to the approved project required by the SLC shall be reported to the Executive Director. No changes to the approved project shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally required.

7. **Monterey Bay National Marine Sanctuary Authorization.** PRIOR TO COMMENCEMENT OF SEAWALL CONSTRUCTION, the Permittee shall submit to the Executive Director for review a copy of the Monterey Bay National Marine Sanctuary (MBNMS) authorizations for the approved project, or evidence from MBNMS indicating that no such authorization is necessary. Any changes to the approved project required by the MBNMS shall be reported to the Executive Director. No changes to the approved project shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally required.

8. **As-Built Plans.** WITHIN 90 DAYS OF COMPLETION OF CONSTRUCTION, or within such additional time as the Executive Director may grant for good cause, the Permittee shall submit two copies of As-Built Plans for Executive Director review and approval showing all development authorized by this CDP. The As-Built Plans shall be substantially consistent with the approved Revised Final Plans (see **Special Condition 1**). The As-Built Plans shall include a graphic scale and all elevation(s) shall be described in relation to National Geodetic Vertical Datum (NGVD). The As-Built Plans shall include color photographs (in hard copy and jpg format) that clearly show the as-built project, and that are accompanied by a site plan that notes the location of each photographic viewpoint and the date and time of each photograph. At a minimum, the photographs shall be from a sufficient number of upcoast, downcoast, inland and seaward viewpoints as to provide complete photographic coverage of the permitted project at this location.

9. **Monitoring and Reporting.** The Permittee shall ensure that the condition and performance of the approved as-built project is regularly monitored, including that the armoring and all related components must be regularly monitored by a licensed civil engineer with experience in coastal structures and processes. Such monitoring evaluation shall at a minimum address

whether any significant weathering or damage has occurred that would adversely impact future performance, and identify any structural damage requiring repair to maintain the approved as-built project in its approved and/or required state, including: (a) the as-built armoring; and (b) the public viewing platform, access path, beach stairs and lateral access path to the upcoast property and to the County's viewing platform downcoast (see also **Special Condition 2**). Monitoring reports prepared by a licensed civil engineer with experience in coastal structures and processes, and covering the above-described evaluations, shall be submitted to the Executive Director for review and approval at five year intervals by November 1st of each fifth year (with the first report due November 1, 2020, and subsequent reports due November 1, 2025, November 1, 2030, November 1, 2035, etc.), for as long as the approved armoring exists at this location. The reports shall identify the existing configuration and condition of the armoring and all approved public access project components, shall recommend actions necessary to maintain the armoring and the public access components in their approved and/or required state, and shall include photographs taken from each of the same vantage points required in the As-Built Plans with the date and time of the photographs and the location of each photographic viewpoint noted on a site plan. Actions necessary to maintain the approved project in a structurally sound manner and its approved state shall be implemented within 30 days of Executive Director approval, unless a different time frame for implementation is identified by the Executive Director.

10. **Future Maintenance Authorized.** This CDP authorizes future armoring maintenance subject to the following:

    (a) Maintenance. "Maintenance" as it is understood in this special condition, means development that would otherwise require a CDP whose purpose is: 1) to maintain the approved armoring and all related components in their approved state; (2) to maintain the required public access components in their approved and/or required state (see also **Special Conditions 2 and 8)**.

    (b) Other Agency Approvals. The Permittee acknowledges that this maintenance condition does not obviate the need to obtain authorization from other agencies for any future maintenance and/or repair episodes.

    (c) Maintenance Notification. At least 30 days prior to commencing any maintenance event, the Permittee shall notify, in writing, planning staff of the Coastal Commission's Central Coast District Office. The notification shall include: a detailed description of the maintenance event proposed; any plans, engineering and/or geology reports describing the event; a construction plan that complies with all aspects of the approved construction plan as described above in Special Condition 3; identification of a construction coordinator and his/her contact information (i.e., address, email, phone numbers, etc.) as described above in Special Condition 4; other agency authorizations; and any other supporting documentation (as necessary) describing the maintenance event. The maintenance event shall not commence until the Permittee has been informed by planning staff of the Coastal Commission's Central Coast District Office that the maintenance event complies with this CDP. If the Permittee has not been given a verbal response or sent a written response within 30 days of the notification being received in the Central Coast District Office, the maintenance event shall be authorized as if planning staff

affirmatively indicated that the event complies with this CDP. The notification shall clearly indicate that the maintenance event is proposed pursuant to this CDP, and that the lack of a response to the notification within 30 days constitutes approval of it as specified in the permit. Absence of such description in the notification shall negate the automatic approval provisions of this condition. In the event of an emergency requiring immediate maintenance, the notification of such emergency episode shall be made as soon as possible, and shall (in addition to the foregoing information) clearly describe the nature of the emergency.

(d) Maintenance Coordination. Maintenance events shall, to the degree feasible, be coordinated with other maintenance events proposed in the immediate vicinity with the goal being to limit coastal resource impacts, including the length of time that construction occurs in and around the beach and bluff area, and beach and surf access points. As such, the Permittee shall make reasonable efforts to coordinate the Permittee's maintenance events with other adjacent events, including adjusting maintenance event scheduling as directed by planning staff of the Coastal Commission's Central Coast District Office.

(e) Construction Site Documents and Construction Coordinator. All requirements set forth in **Special Conditions 3 and 4** above shall apply to any maintenance event.

(f) Restoration. The Permittee shall restore all beach and rocky shore platform areas and all access points impacted by maintenance activities to their pre-construction condition or better at the conclusion of any maintenance event. Any native materials impacted shall be filtered as necessary to remove all construction debris from the area within three days of completion of construction. The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office upon completion of restoration activities to arrange for a site visit to verify that all restoration activities are complete. If planning staff identifies additional reasonable measures necessary to restore the affected area, such measures shall be implemented as quickly as reasonably possible.

(g) Noncompliance with CDPs. If the Permittee is not in compliance with the terms and conditions of any Coastal Commission CDPs or other coastal authorizations that apply to the project area at the time that a maintenance event is proposed, then the maintenance event that might otherwise be allowed by the terms of this future maintenance condition shall not be allowed by this condition until the Permittee is in full compliance with those terms and conditions.

(h) Emergency. In addition to the emergency provisions set forth in subsection (c) above, nothing in this condition shall serve to waive any Permittee rights that may exist in cases of emergency pursuant to Coastal Act Section 30611, Coastal Act Section 30624, and Subchapter 4 of Chapter 5 of Title 14, Division 5.5, of the California Code of Regulations (Permits for Approval of Emergency Work).

(i) Duration of Covered Maintenance. Future maintenance under this CDP is allowed subject to the above terms throughout the length of the armoring approval (see **Special Condition 5**) and subject to Executive Director review and approval every five years to verify that there are not changed circumstances associated with such maintenance that

necessitate re-review. It is the Permittee's responsibility to request Executive Director approval prior to the end of each five-year maintenance period (i.e., with the first maintenance period ending on November 5, 2020. Maintenance can be carried out beyond November 5, 2020 (and beyond subsequent five-year periods) if the Permittee requests an extension prior to the end of each five-year maintenance period and if the Executive Director extends the maintenance term in writing. The intent of this permit is to allow for five-year extensions of the maintenance term for as long as the permitted armoring remains authorized unless there are changed circumstances that may affect the consistency of this maintenance authorization with the policies of Chapter 3 of the Coastal Act and thus warrant a re-review of this permit. The Permittee shall maintain the permitted armoring in its approved state. No expansion or enlargement of the permitted armoring is allowed.

11. **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the site is subject to hazards from episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, tidal scour, coastal flooding, and the interaction of same; (ii) to assume the risks to the Permittee and the property that is the subject of this CDP 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 CDP against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims due to such hazards), expenses, and amounts paid in settlement arising from any injury or damage.

12. **Liability for Costs and Attorneys' Fees.** By acceptance of this CDP, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns, to reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys' fees (including but not limited to such costs/fees that are: (1) charged by the Office of the Attorney General; and (2) required by a court) that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Permittee against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this CDP. The Permittee shall reimburse the Coastal Commission within 60 days of being informed by the Executive Director of the amount of such costs/fees. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

13. **Deed Restriction.** PRIOR TO ISSUANCE OF THE CDP, the Permittee shall submit for Executive Director review and approval documentation demonstrating that the Permittee has executed and recorded against the property governed by this CDP a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this CDP, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the special conditions of this CDP as covenants, conditions and restrictions on the use and enjoyment of the property. The deed restriction shall include a legal

description and graphic description of the parcels governed by this CDP. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this CDP shall continue to restrict the use and enjoyment of the subject property so long as either this CDP or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

14. **Resolution of Violation.** Within 90 days of issuance of this CDP, or within such additional time as the Executive Director may grant for good cause, the Permittee shall eliminate the cantilevered portions of the deck consistent with the requirements of **Special Condition 1(g)**. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.

IV. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. PROJECT LOCATION, BACKGROUND AND DESCRIPTION

Project Location and Background

The project site is located in the Pleasure Point portion of the Live Oak beach area of Santa Cruz County. Pleasure Point is the name of the predominantly residential area located roughly between upcoast Moran Lake and downcoast 41st Avenue. The project site is immediately upcoast from the County's Pleasure Point seawall and parkway project, and is located immediately adjacent to Pleasure Point Park fronting the ocean. The ocean area just seaward of the project site is part of the world famous Pleasure Point surfing area, and is a prime visitor destination. Public access to the beach and surfing area at this location is provided by the County's public access stairway that extends down to the water from Pleasure Point Park above, with a viewing platform closer to the water at the base of the stairway. There also exists a viewing platform at the base of the bluff below the Applicant's site as well, that is also accessed from the County's stairway.

The coastal bluff at this location is approximately 32 feet high and consists of about 22 feet of more easily eroded terrace deposits atop harder siltstone bedrock. A portion of the bluff on the Applicant's property juts out to a point, on top of which is a deck that cantilevers over the bluff edge. The bluff area proposed for augmented armoring is currently encased with concrete and concrete gunite that covers virtually all of the bedrock and terrace deposits at this location. Most of the blufftop homes along Pleasure Point have historically used concrete gunite surfacing to protect against coastal erosion and wave runup. This type of shoreline protection structure was first installed in the 1940's and 1950's and continued to be used into the 1980's. For the residence in question, a gunite surface over wire mesh was originally installed prior to 1972 and this armoring extends from the base of the bluff up to the residence. A block wall that encloses a

portion of the lower bluff platform was also installed prior to coastal permitting requirements.[1] There is an existing stairway that leads down from the residence to the enclosed bluff platform area, and a gate in the block wall provides the residents access to the rocky shoreline and the ocean below. As discussed in more detail below, the Commission authorized repairs to the existing shoreline protection in 1983 and again in 1995. A 2004 emergency CDP was also granted (Emergency CDP 3-04-041-G), although that work was never followed up with a CDP (see below).

A small raised concrete platform is located adjacent and downcoast of the existing seawall structure between the Applicant's property and ocean. The platform is a popular spot for viewing the ocean and the surf, and for access to the surfing area. It is also physically connected to the County's viewing platform immediately adjacent on County property at the base of the County stairway. The platform fronting the Applicant's site runs along the base of the bluff and is approximately ten feet above bedrock and the beach. The platform is approximately 2,000 square feet in size and previously consisted of APN 032-242-15 and a portion of APN 032-251-01. The Applicant has worked with the County over the last two years to acquire all of APN 032-242-15 and a portion of APN 032-251-01, while continuing to provide a public access easement over the platform and shoreline area involved.[2] The Applicant is also in the process of finalizing a lease with the State Lands Commission for the portions of the proposed project that are located on State Lands property, namely the base of the proposed armoring, including the proposed stairway access to the beach and surf.

See **Exhibit 1** for the project location map, **Exhibit 4** for photographs of the project site and **Exhibit 3** for the Purchase and Lease Area Figure.

Site CDP History

The project site is developed with a residence that was constructed in 1965. The date of the initial armoring at the project site can be traced prior to 1972, as borne out by air photo analysis (see page 1 of **Exhibit 4**), with substantial improvements and maintenance having been done following severe winter storms in 1982-83 and in 1995. Specifically, in February 1983, Commission staff issued an emergency CDP (M-83-19) to the then-property owner to fill a 20-foot-deep sea cave with reinforced concrete. The Commission subsequently approved CDP Number 3-83-155 authorizing the sea cave fill work done under the emergency CDP, as well as the new installation of approximately 75 cubic yards of concrete to form a new seawall. In 1995, the Commission issued a waiver (3-83-155-W) to allow for additional repair work consisting of re-guniting several small spalled areas on the seawall. In 2004, the prior owner was granted Emergency CDP 3-04-041-G to patch two holes in the existing gunite, and to fill a sea cave below the seawall with concrete. That prior owner never provided the information necessary to file the required regular follow-up CDP application (CDP application number 3-83-155-A1), and thus the emergency work is not considered permitted.

[1] Coastal permits were first required at this location starting in February of 1973 under 1972's Proposition 20 ("The Coastal Initiative").

[2] The grant deeds transferring these properties to the Applicant from the County reserve to the County "a perpetual nonexclusive easement over and across the property for the purposes of public shoreline access."

Project Description

The proposed project is a seawall reconstruction project meant to protect the existing 50-year old home. The existing decades-old shoreline armoring is in severe disrepair, and the proposed project would augment and reconstruct this armoring to current standards. The proposed project also includes public access improvements, including enhancement of the existing public walkway area extending from the adjacent County viewing platform at the base of the Pleasure Point Park stairway, improving the existing public viewing platform area, and adding stairs to the beach to replace the existing notches currently used that are slippery and somewhat difficult to navigate for many users.

Construction access to the site would be primarily through the Applicant's property but would also require some use of the County's existing public access stairway. The base of the proposed seawall and public access improvements are located at or below the mean high tide line. The work (excavation of footings, removal of spoils, construction of tie-backs, fabrication and installation of seawall reinforcing steel for foundations and placement of structural and aesthetic shotcrete) would be accomplished during lower tide conditions using a temporary cofferdam installed in small sections and moving the cofferdam landward as the work progresses. Construction would begin at the farthest seaward point and continue up the bluff toward the residence. Tiebacks are proposed along the lower wall, the block front wall and the upper wall and would be buried behind the faux bluff concrete fascia and would not be visible. They would be spaced five to nine feet on center and would consist of one-inch high-strength steel rods grouted in a six-inch-diameter drilled shaft 20 to 25 feet in length. Due to the lot size and project location, smaller portable equipment and a work force experienced in working in the tidal zone will be employed. Demolition and excavation would be by hand labor with pneumatic jack hammers and hand tools, and spoils would be removed by hand labor. Drilling would be by a portable rock driller and the tie backs would be inserted by hand labor as would the fabrication and placement of reinforcing steel. The faux bluff concrete fascia would be hydraulically pumped and pneumatically placed with hand labor.

The project itself would occur in phases. The first phase would consist of demolition and removal of the existing degraded gunite and concrete. Such demolition work would occur by use of hand tools and jack-hammers powered via a generator located on top of the bluff on the Applicant's property. The demolition work would be expected to take about 30 days. The second phase of the project would be construction of the enhanced viewing platform and walkway extending from the area at the base of the Pleasure Point Park stairs, in order to prioritize construction of these public access improvements in that area first and to enhance and improve the view benefits and safety improvements as quickly as possible. This second phase of the project would be expected to take approximately 30 days. The third phase of the project would consist of replacement of the lower portion of seawall and construction of the enhanced public access path and stairs, in order to prioritize provision of the public benefits and minimize the amount of time spent working on the shore and/or lower bluff. That third phase would be expected to take another roughly 30 days. The fourth phase of the work would consist of construction of the upper portions of the project and would involve the mid and upper seawall areas adjacent in the area of the existing block wall, slabs and planters on the walls adjacent to the residence, and placement of aesthetic concrete over the structural concrete of the mid and

upper seawalls to match the adjacent Pleasure Point seawall. That part of the project is expected to take another 60 days. The final part of the project would be construction cleanup and landscaping. The Applicant has obtained a Right of Entry/Encroachment Permit from the County for use of the street fronting the Applicant's property (Pleasure Point Drive) for construction parking and staging when concrete trucks are required.

Ultimately, the project will result in an armoring structure intended to mimic natural bluff landforms as much as possible, and an enhanced public viewing and beach/surf access system. The total length of the proposed seawall armoring, including along the undulating armoring alignment directly adjacent to the house, would be approximately 140 feet, and is designed to prevent erosion of the easily eroded terrace deposits that exist in the upper 18 to 22 feet of the bluff face. The proposed lower shotcrete wall would start at the toe of the bluff and would be keyed into the bedrock beach platform for stability and integrity. The seawall would extend from the bedrock beach platform at about -2 feet NAVD88 up to the top of the bluff at about +34 feet NAVD88.

As stated above, the existing platform area at the base of the Pleasure Point Park stairs is a popular spot for viewing the ocean and the surf, and for accessing the surf as well. However, the transition area between that existing platform area and the walkway at the base of the Applicant's property and existing armoring is narrow and often wet, slippery and covered with algae. The public access component of the project is designed to remediate the dangerous slip-and-fall scenario described above by creating a faux rock "curb" and safe public beach access pathway and stairway descending across the County's public access easement area to the beach and surf below, as well as to the adjacent upcoast property. The proposed public access improvements will also slightly widen the transition area and provide for a safer path and stairs to the beach. These features are proposed to be designed to result in a natural looking, curvilinear non-linear concrete rock motif and aesthetically pleasing seamless bluff and access transition between the County's Pleasure Point seawall and stairway and the Applicant's seawall and associated enhanced public access features.

The proposed project initially included new steel railings that would have extended from the County viewing platform area and along the accessway leading to the enhanced beach and surf access via a stairway (see page 1 of **Exhibit 5**). However, to address coastal resource concerns, the Applicant has agreed to eliminate steel rails from the public viewing platform, the access path and stairs to the beach and replace them with a rock curb to ensure a natural looking rock and bluff structure while providing for public safety (see page 2 of **Exhibit 5)**. Such a rock curb will mimic what was approved by the Commission for the platform area associated with the County's adjacent seawall project, and will better integrate with that area as a result. It will also avoid problems with surf ingress/egress during higher tides and swell when railings in the surf zone can become dangerous to surfers. Along the area of the block wall that encloses the lower bluff platform nearest the Applicant's residence, the Applicant has proposed further refinements to eliminate unnatural looking features (e.g., the project proposes to significantly reduce and set back a shortened rail element to avoid, enhance and protect public views, and will ensure that the gate will mimic a rock bluff without publicly visible and exposed hardware, locks, knobs or hinges). In order to address other coastal resource concerns, the Applicant also proposes to

remove a portion of an existing upper deck (constructed by a prior property owner) that is slightly cantilevered over the bluff edge.

See **Exhibit 2** for proposed project plans.

B. STANDARD OF REVIEW

The proposed project falls within the Commission's retained jurisdiction and thus the standard of review is the Coastal Act. As relevant, Santa Cruz County's certified LCP can provide non-binding guidance. However, the LCP and Coastal Act policies are very similar as regards allowing shoreline armoring and protecting against its impacts. Thus, the LCP policies do not provide significantly different policy direction in this case, and their usefulness in this review is limited as a result.

C. GEOLOGICAL CONDITIONS AND HAZARDS

Coastal Act Section 30235 addresses the use of shoreline protective devices:

> ***30235.*** *Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.*

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and to avoid landform altering protective measures in the future. Section 30253 provides, in part:

> ***Section 30253.*** *New development shall do all of the following:*
>
> *(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.*

Consistency Analysis

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or "hard" methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, with the exception of coastal-dependent uses, Section 30235 limits the construction of shoreline protective works to those required to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of negative impacts on coastal resources, including adverse effects on sand supply, public access, coastal views, natural

landforms, and overall shoreline beach dynamics on and off site, ultimately resulting in the loss of beaches.

Under Coastal Act Section 30235, a shoreline structure may be approved if: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) shoreline-altering construction is required to protect the existing endangered structure; and (4) the required protection is designed to eliminate or mitigate its adverse impacts on shoreline sand supply. The first three questions relate to whether the proposed armoring is necessary, while the fourth question applies to mitigating some of the impacts from it.

Existing Structure to be Protected

For the purposes of shoreline protective structures, the Coastal Act distinguishes between development that is allowed shoreline armoring, and development that is not. Under Section 30253, new development is to be designed, sited, and built to allow the natural process of erosion to occur without creating a need for a shoreline protective device. Coastal development permittees for new shorefront development are thus making a commitment to the public (through the approved action of the Commission, and its local government counterparts) that, in return for building their project, the public will not lose public beach access, offshore recreational access, sand supply, visual resources, and natural landforms, and that the public will not be held responsible for any future stability problems.

Coastal Act Section 30235 allows for shoreline protection in certain circumstances (if warranted and otherwise consistent with Coastal Act policies) for "existing" structures. Based on a plain reading of Section 30235, "existing structures" refers to those structures in place prior to the effective date of the Coastal Act. Logically speaking, coastal zone development approved and constructed prior to the Coastal Act went into effect was not subject to Section 30253 requirements. Although some local hazard policies may have been in effect prior to the Coastal Act, these pre-Coastal Act structures have not necessarily been built in such a way as to avoid the future need for shoreline protection (in contrast to those evaluated pursuant to Section 30253 and similar LCP policies since).

In this case, the existing residence at the site was originally constructed in 1965 and is clearly seen in a photograph taken from offshore in 1972 (see page 1 of **Exhibit 4**). Thus, the residence predates the coastal permitting requirements of both 1972's Proposition 20 (the Coastal Initiative)[3] and the 1976 Coastal Act. As such, the residence qualifies as an existing structure for the purposes of Section 30235.

Danger from Erosion

The Coastal Act allows shoreline armoring to protect existing structures in danger from erosion, but it does not define the term "in danger." There is a certain amount of risk involved in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, large waves, flooding, earthquakes, and other geologic hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. As a result, it is arguably the case that all development along the immediate California coastline is in a certain amount of "danger." It is a

[3] Proposition 20's coastal permitting requirements began in 1973.

matter of the degree of threat that distinguishes between danger that represents an ordinary and acceptable risk, and danger that justifies shoreline armoring per 30235. Lacking Coastal Act definition, the Commission has in the past evaluated the immediacy of any threat in order to make a determination as to whether an existing structure is "in danger." While each case is evaluated based upon its own particular set of facts, the Commission has in the past interpreted "in danger" to mean that an existing structure would be unsafe to occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the no project alternative).

In this case, the residence straddles a narrower section of bluffs wedged between two promontories. Although the bluffs are almost entirely armored, the existing armoring is old and showing visible signs of disrepair. After conducting an extensive geotechnical, geologic and coastal engineering investigation, the Applicant's geotechnical consultant concluded as follows:

> *The project site coastal bluff is about 32 feet high and consists of about 22 feet of easily eroded terrace deposits atop siltstone bedrock. The terrace deposits are extremely erodible, and the siltstone bedrock is susceptible to erosion and abrasion from wave action…. The existing site is completely armored with concrete and gunite shore protection covering almost all of the bedrock and all of the terrace deposits to retard blufftop recession and prevent undermining of the blufftop improvements. In the absence of coastal protection, the home would be in imminent danger from erosion. The gunite is cracked and deteriorating. Ocean wave impact is damaging the coastal protection and threatening to perforate it and undermine the home.*

Additional correspondence (see **Exhibit 7**) from the Applicant's geotechnical consultant was provided in response to inquiries from Commission staff regarding the current site conditions, and includes the following observations from the consultant:

- At least 15 feet of natural bedrock outcropping seaward of the original gunite seawall has been eroded, exposing the point and removing a natural groin that historically contained sand and offered more extended periods of protection during each winter storm.

- The wave profile and runup forces associated with high tide storm waves and increasing sea level have increased over time due to the reduction of beach sand.

- The elevation where significant wave forces occur is increasing due to the loss of natural bedrock and beach sand protection and the increase in sea level rise.

Commission staff, including the Commission's senior geologist, Dr. Mark Johnsson and senior Coastal Engineer, Dr. Lesley Ewing, have visited the site, have reviewed the relevant materials, and concur with the Applicant's geotechnical consultant that the existing residence is "in danger from erosion" as that term is understood in a Coastal Act context, and thus the project meets the second test of Section 30235 of the Coastal Act.

Feasible Protection Alternatives to a Shoreline Structure

The third Section 30235 test that must be met is that the proposed armoring must be "required" to protect the existing threatened structure. In other words, shoreline armoring can be permitted

if it is the only feasible alternative capable of protecting the structure.[4] When read in tandem with other applicable Coastal Act policies cited in these findings, this Coastal Act Section 30235 evaluation is often conceptualized as a search for the least environmentally damaging feasible alternative that can serve to protect existing endangered structures. Other alternatives typically considered include: the "no project" alternative; abandonment of threatened structures; relocation of threatened structures; sand replenishment programs; drainage and vegetation measures on the blufftop; and combinations of each.

The Applicant's geotechnical consultants prepared an alternatives analysis for the proposed project, and each of the possible alternatives is discussed briefly below.

No Project Alternative: Erosion from wave runup will continue at the toe of the bluff and further undermining of the seawall will occur. Wave runup will exacerbate this condition during each winter storm season. The existing coastal protection will be perforated and rapid terrace deposit erosion will then occur. The home will be undermined, which will result in it becoming unsafe and unusable.

*Relocation***:** According to the County's GIS system, the Applicant's residential parcel is approximately 7,905 square feet, but this square footage includes areas of steep slopes on the site. The relatively flat blufftop area of the site that is developed with the residence is considerably less than this square footage, and is located between Pleasure Point Park, the street right-of-way, and the blufftop edge. There is insufficient space within which to relocate the residence, including in light of required setbacks. Even if the residence were demolished and reduced in size, there would not be adequate development area on the site to accommodate a residence without the need for shoreline armoring. In addition, such a project would be better described as a demolition and rebuild project rather than relocation of an existing structure.

Beach Nourishment: Beach nourishment involves importation of sand from offsite and placement of sand on the beach that is subject to erosion, with the intent being to help develop an elevated and widened beach that can help absorb ocean energy and potential erosion before it reaches bluffs. The widened beach causes waves to breach farther from the coastal bluffs and the wave energy is absorbed there to a greater degree. The Applicant's geotechnical consultant's initial observations were that this option was not feasible primarily on the basis that: 1) substantial onshore and offshore sand mobility exists in the Pleasure Point area; 2) very strong downcoast littoral currents occur seasonally during strong winter northwest swells and such swells have displaced large volumes of sand across Pleasure Point; and 3) strong littoral drift, sand mobility and beach scour will continue after nourishment and will reduce or eliminate the effectiveness of any nourishment. In addition, a single nourishment project would have only limited utility in an area where any sand deposited would not be expected to remain for any substantial length of time. And in this case, the beach area at the project site is very limited and is often nonexistent at even moderate tides.

[4] Although Section 30235 does not define "required" in terms of feasibility, logically speaking shoreline armoring would not be "required" if a feasible alternative existed to protect an existing threatened structure. Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Modify Existing Surface Drainage Patterns. According to the Applicant's geotechnical consultant, surface drainage does not appear to play a significant role in coastal bluff erosion processes at the site. Therefore, modifying onsite drainage does not appear to be a viable alternative to protect the existing residence.

Install Temporary Erosion Control. Temporary erosion control, such as installing thin temporary coating of shotcrete, can be effective for short periods. However, this alternative is not well suited for long-term protection, and would have only temporary protective ability.

Construct Rip-Rap Revetment. Construction of an engineered rip-rap structure at the base of the bluff could provide long-term protection of the area landward of the rip-rap. However, by its nature, rip-rap structures extend far out onto the beach from the base of the bluff and impact beach use and lateral access, particularly during the winter. Given the physical characteristics of this site, such a revetment would extend out into the surf break as well, leading to other impacts. Because of the slope of the bluff at this location, a large volume of rip-rap would be required to protect the residence and such rip-rap would have significant beach and ocean coverage.

Continue to Repair Existing Coastal Protection. The Applicant considered continuing to repair (i.e., to patch with shotcrete) the existing coastal protection as a long-term solution. This alternative was rejected because the existing armoring is in need of extensive repairs and upgrades to adequately protect the residence consistent with current armoring standards, and the danger to the residence would continue if the existing armoring were simply patched.

Reconstruct Seawall – Preferred Alternative. The proposed long-term coastal protection is to reconstruct and augment the existing coastal protection structure and improve the existing coastal access across the property. This alternative includes construction of tied-back structural contoured concrete seawall system designed to mimic natural bluff landforms to support and cover the existing armoring. Concrete structures that resemble a natural undulating bluff face are the most preferred alternative for the lower half of the bluff. Tieback elements will be used in the walls that extend down to the beach to minimize the wall footprint at the base of the bluff and will therefore minimize the loss of recreational beach area and associated impacts on public access. The contoured concrete seawall system will be shaped, textured and colored to resemble the adjacent undulating protected bluffs along East Cliff Drive downcoast of the site.

As discussed above, other alternative options are not feasible or preferred under the Coastal Act, and the proposed coastal protection is required to protect the existing residence at the project site. Thus, the project meets the third test of Section 30235 of the Coastal Act.

Sand Supply Impacts

The fourth test of Section 30235 that must be met in order to allow Commission approval is that shoreline structures must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.

Shoreline Processes

Beach sand material comes to the shoreline from inland areas, carried by rivers and streams; from offshore deposits, carried by waves; and from coastal dunes and bluffs, becoming beach material when the bluffs or dunes lose material due to wave attack, landslides, surface erosion, gullying, et cetera. Coastal dunes are almost entirely beach sand, and wind and wave action often

provide an ongoing mix and exchange of material between beaches and dunes. Many coastal bluffs are marine terraces (i.e., ancient beaches that formed when land and sea levels differed from current conditions). Since the marine terraces were once beaches, much of the material in the terraces is often beach-quality sand or cobble, and is a valuable contribution to the littoral system when it is added to the beach. While beaches can become marine terraces over geologic time, the normal exchange of material between beaches and bluffs is for bluff erosion to provide beach material. Bluff retreat and erosion is a natural process resulting from many different factors such as erosion by wave action causing cave formation, enlargement and eventual collapse of caves, saturation of the bluff soil from groundwater causing the bluff to slough off, and natural bluff deterioration. When the back-beach or bluff is protected by a shoreline protective device, the natural exchange of material either between the beach and dune or from the bluff to the beach will be interrupted and, if the shoreline is eroding, there will be a measurable loss of material to the beach. Since sand and larger grain material are the most important material for beach formation, only the sand portion of the bluff or dune material is quantified as sandy beach material.

These natural shoreline processes affecting the formation and retention of sandy beaches can be significantly altered by the construction of shoreline armoring structures because bluff retreat is one of several ways that beach quality sand is added to the shoreline, and is also one of the critical factors associated with beach creation/retention. Bluff retreat and erosion are natural processes that result from the many different factors described above. Shoreline armoring directly impedes these natural processes.

The project site is located within the Santa Cruz Littoral Cell. The Santa Cruz Littoral Cell is a high volume cell with annual longshore transport estimated between 300,000 and 500,000 cubic yards of beach quality materials annually.[5] The dominant direction of longshore transport in this sand supply system is north north-west to south south-east (roughly from upcoast to downcoast in relation to the site).[6] Materials in this system have been estimated to come mainly from coastal streams (roughly 75%), with 20% coming from bluffs, and 5% coming from coastal ravines and sand dunes.[7]

Some of the effects of engineered armoring structures on the beach (such as scour, end effects and modification to the beach profile) are temporary or are difficult to distinguish from all the other actions that modify the shoreline. Others are more qualitative (e.g., impacts to the character of the shoreline and visual quality). Some of the effects that a shoreline structure may have on natural shoreline processes can be quantified, however, including: (1) the loss of the beach area on which the structure is located; (2) the long-term loss of beach that will result when the back-beach location is fixed on an eroding shoreline; and (3) the amount of material that would have been supplied to the beach if the back-beach or bluff were to erode naturally.[8]

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[5] United States Army Corps of Engineers (USACOE), San Francisco District, 1994.

[6] Ibid.

[7] Griggs and Best, 1991.

[8] The sand supply impact refers to the way in which the project impacts creation and maintenance of beach sand. Although this ultimately translates into beach impacts in this case, the discussion here is focused on the first part of the equation and the way in which the proposed project would impact sand supply processes.

Encroachment on the Beach

Shoreline protective devices are all physical structures that occupy space. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used as beach. This generally results in a loss of public access as well as a loss of sand and/or areas from which sand generating materials can be derived. The area where the structure is placed will be altered from the time the protective device is constructed, and the extent or area occupied by the device will remain the same over time, until the structure is removed or moved from its initial location, or in the case of a revetment, as it spreads seaward over time. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint.

In this case, the existing seawall extends out approximately 18 inches from the bluff and the new seawall will add approximately 24 inches of additional thickness to the existing shoreline protection structure over the 140-foot undulating length of the entire structure. Thus, the overall coverage for the augmented and new shoreline armoring system is 490 square feet.[9] The loss of a square foot of beach area can be roughly converted to the volume of sand that would be required to nourish an equivalent area of beach. The Commission has not been able to establish an actual conversion factor for the Pleasure Point vicinity.[10] However, if a 1.0 cubic yard conversion factor is used that assumes that the active range of sand transport is at the lower limit of the expected range (i.e., the low end of the spectrum of values typically assumed by coastal engineers), a conservative estimate of the cubic yard equivalent of 490 square feet of beach sand per year can be calculated. Using the same conversion factor described above, the sand volume equivalent for the direct loss of beach due to encroachment by the proposed project would be 490 cubic yards of beach-quality sand.

Fixing the back beach

Where the shoreline is eroding and armoring is installed, the armoring will eventually define the boundary between the sea and the upland. On an eroding shoreline, a beach will exist between the shoreline/waterline and the bluff as long as sand is available to form a beach. As bluff erosion proceeds, the profile of the beach also retreats and the beach area migrates inland with the bluff. This process stops, however, when the backshore is fronted by a hard protective structure such as a revetment or a seawall. While the shoreline on either side of the armor continues to retreat, shoreline in front of the armor eventually stops at the armoring. The beach area will narrow, being squeezed between the moving shoreline and the fixed backshore. Eventually, there will be no available dry beach area and the shoreline will be fixed at the base of the structure. In the case of an eroding shoreline, this represents the loss of a beach as a direct

[9] 3.5 feet of coverage along 140 linear feet of the base of the armoring.

[10] This conversion value is based on the regional beach and nearshore profiles, and overall characteristics. When there is not regional data to better quantify this value, it is often assumed to be between 1 and 1.5, the idea being that to build a beach seaward one foot, there must be enough sand to provide a one-foot wedge of sand through the entire region of onshore-offshore transport. If the range of reversible sediment movement is from -30 feet msl to +10 feet msl, then a one-foot beach addition must be added for the full range from -30 to +10 feet, or 40 feet total. This 40-foot by 1 foot square parallelogram could be built with 1.5 cubic yards of sand (40 cubic feet divided by 27 cubic feet per cubic yard). If the range of reversible sediment transport is less than 40 feet, it will take less than 1.5 cubic yards of sand to rebuild one square foot of beach; if the range of reversible sediment transport is larger than 40 feet, it will take more than 1.5 cubic yards of sand to rebuild one square foot of beach.

result of the armor.

The Commission has established a methodology for calculating passive erosion, or the long-term loss of beach due to fixing the back beach. This impact is equivalent to the footprint of the bluff area that would have become beach due to erosion and is equal to the long-term average annual erosion rate multiplied by the width of property that has been fixed by a resistant shoreline protective device.[11] In this case, the proposed seawall will extend out over Purisima siltstone bedrock that projects seaward at the base of the parcel and upon which the residence sits. The proposed seawall will also cover some areas of sandy beach and for purposes of determining the impacts from fixing the back beach, it is assumed that new beach area would result from landward retreat of the bluff. The shoreline is irregular and indurated, but the area affected by passive erosion can be approximated as a 140-foot-long curvilinear bluff. Prior projects in the Pleasure Point area have estimated the average bluff recession for this area at 10 inches per year, which is within the regional range of 8 to 12 inches per year. Therefore the average impacts from fixing the back beach will be the annual loss of 116.6 square feet of beach. Assuming a 20-year impact mitigation horizon, this would result in a loss of 2,333 square feet of beach that would have been created if the back beach had not been fixed by the proposed seawall. Using the beach-area to beach-sand conversion factor discussed above, this would be equivalent to an annual loss of 116.6 cubic yards of beach quality sand, and a loss over 20 years of 2,333 cubic yards of beach quality sand that can be attributed to fixing of the back beach.

In addition, sea level has been rising slightly for many years. There is a growing body of evidence that there has been an increase in global temperature and that acceleration in the rate of sea level rise can be expected to accompany this increase in temperature (some shoreline experts have indicated that sea level could rise 4.5 to 6.0 feet by the year 2100). The Coastal Commission's Sea Level Rise Policy Guidance identifies the National Research Council's "Sea Level Rise for the Coasts of California, Oregon and Washington: Past, Present and Future," (NRC Report) as the current best available science for sea level rise.[12] The NRC Report uses a year 2000 baseline and produced sea level rise projections for 2030, 2050 and 2100, taking into account geophysical differences north and south of Cape Mendocino attributed to vertical land movement. Based on the NRC Report projections, the estimated range of sea level rise for 2065 and 2090 (appropriate for a 50-year or 75-year project life respectively) can be interpolated between the projections for 2050 and 2100 to be from 7 inches to 35 inches (0.19 m to 0.88 m) for 2065 and from 14 inches to 56 inches (0.36 m to 1.4 m) for 2090. The observed trend for global sea level has been a long-term, persistent rise. Mean water level affects shoreline erosion several ways, and an increase in the average sea level will exacerbate all these conditions. On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore. This, too, leads to loss of the beach as a direct result of the armor as the beach is squeezed between the landward migrating ocean and the fixed backshore.

[11] The area of beach lost due to long-term erosion (Aw) is equal to the long-term average annual erosion rate (R) times the number of years that the back-beach or bluff will be fixed (L) times the width of the property that will be protected (W). This can be expressed by the following equation: Aw = R x L x W. The annual loss of beach area can be expressed as Aw' = R x W.

[12] California Coastal Commission Sea Level Rise Policy Guidance (Adopted August 12, 2015) at pp. 47-49.

Retention of Potential Beach Material

If natural erosion were allowed to continue (absent the existing seawall and the proposed augmented armoring), some amount of beach material would be added to the beach at this location, as well as to the larger littoral cell sand supply system fronting the bluffs. Because littoral drift at this location travels in an upcoast to downcoast manner (i.e., towards the downcoast area of Opal Cliffs) the impact would be relatively more towards Opal Cliffs and Capitola than upcoast towards Blacks Point. The volume of total material that would have gone into the sand supply system over the lifetime of the shoreline structure would be the volume of material between (a) the likely future bluff-face location with shoreline protection; and (b) the likely future bluff-face location without shoreline protection. Since the main concern is with the sand component of this bluff material, the total material lost must be multiplied by the percentage of bluff material which is beach sand, giving the total amount of sand that would have been supplied to the littoral system for beach deposition if the proposed device were not installed. The Commission has established a methodology for identifying this impact.[13] Using this methodology, the total volume of sand that would have been provided to the littoral cell by bluff erosion would be about 30 cubic yards per year or 600 cubic yards over a 20-year period.

Beach and Sand Supply Impact Mitigation

The proposed project would result in quantifiable shoreline sand supply impacts. There would be beach sand loss due to: 1) placement of the base of the armoring structure onto approximately 490 square feet of sandy beach/ocean that otherwise would be available for public use (equating to 490 cubic yards when converted for volume); 2) fixing of the back beach location, resulting in the loss of 2,333 square feet of sandy beach that would have been created over the 20-year impacts evaluation horizon (116.6 square feet of loss annually, equating to 116.6 cubic yards annually and 2,333 cubic yards over 20 years when converted for volume); and; 3) retention of 600 cubic yards of sandy material over the 20-year horizon (30 cubic yards of sand per year). If these impacts were to be mitigated through a beach nourishment effort, the mitigation efforts would be comparable to the deposition of 490 cubic yards of beach quality sand at the start of the project (or roughly 49 large truck loads), and about 147 cubic yards (or roughly 15 large truck loads) of beach-quality

[13] The equation is Vb = (S x W x L) x [(R x hs) + (1/2hu x (R + (Rcu - Rcs)))]/27. Where: Vb is the volume of beach material that would have been supplied to the beach if natural erosion continued (this is equivalent to the long-term reduction in the supply of bluff material to the beach resulting from the structure); S is the fraction of beach quality material in the bluff material; W is the width of property to be armored; L is the design life of structure, if assumed a value of 1, an annual amount is calculated; R is the long term average annual erosion rate; hs is the height of the shoreline structure; hu is the height of the unprotected upper bluff; Rcu is the predicted rate of retreat of the crest of the bluff during the period that the shoreline structure would be in place, assuming no seawall were installed (this value can be assumed to be the same as R unless the Applicant provides site-specific geotechnical information supporting a different value); Rcs is the predicted rate of retreat of the crest of the bluff, during the period that the seawall would be in place, assuming the seawall has been installed (this value will be assumed to be zero unless the Applicant provides site-specific geotechnical information supporting a different value); and divide by 27 (since the dimensions and retreat rates are given in feet and volume of sand is usually given in cubic yards, the total volume of sand must be divided by 27 to provide this volume in cubic yards, rather than cubic feet).

sand yearly. Over twenty years, these mitigation efforts would equate to a total of about 3,423 cubic yards of sand.[14]

In this case, the existing site is nearly completely armored with concrete and gunite protection covering most of the exposed bedrock and bluff deposits. The proposed augmentation project will result in further encroachment seaward of the existing protective structure and will perpetuate the impacts of the existing armoring (with respect to sand supply and fixing the back beach) by virtue of rebuilding it. The proposed armoring project is thus considered a new armoring project, and it is therefore appropriate to mitigate for such impacts.

It has proven difficult over the years to identify appropriate mitigation for such impacts. Partly this is because creating an offsetting beach area is not an easy task, and finding appropriate properties that could be set aside to become beach area over time (through natural processes, including erosion) is difficult both due to a lack of such readily available properties and the cost of such coastal real estate more broadly. As a proxy, other types of mitigation typically required by the Commission for such direct sand supply impacts have been in-lieu fees and/or beach nourishment, and in some cases compensatory beach access improvements. With regards to beach nourishment, a formal sand replenishment strategy can introduce an equivalent amount of sandy material back into the system over time to mitigate the loss of sand that would be caused by a protective device over its lifetime. Obviously, such an introduction of sand, if properly planned, can feed into the Santa Cruz Littoral Cell sand system to mitigate the impact of the project. However, as opposed to other areas with established programs (e.g., SANDAG in San Diego) there are not currently any existing beach nourishment programs directed at this beach area. Absent a comprehensive program that provides a means to coordinate and maximize the benefits of mitigation efforts in the area now and in the future, the success of piecemeal mitigation efforts, such as an Applicant-only project to drop equivalent amounts of sand over time at this location, is questionable. In addition, the beach area fronting the subject site is generally under water, except at lower tides, and the effect of a nourishment program as applied to this property would likely be negligible.

As an alternative mitigation mechanism, the Commission oftentimes uses an in-lieu fee when in-kind mitigation of impacts is not available.[15] In situations where ongoing sand replenishment or other appropriate mitigation programs are not yet in place, the in-lieu mitigation fee is deposited into an account until such time as an appropriate program is developed, and the fees can then be used to offset the designated impacts. When mitigation funds are pooled in this way for multiple projects in a certain area, the cumulative impacts can also be better addressed inasmuch as the pooled resources can sometimes provide for a greater mitigation impact than a series of smaller mitigations based on individual impacts and fees. The Commission has also required beach access improvements to offset impacts.[16]

[14] That is, 490 cubic yards from encroachment, 2,333 cubic yards from passive erosion, and 600 cubic yards from retention of materials.

[15] See, for example, CDP A-3-SLO-01-040 (Brett), CDP 3-98-102 (Panattoni) and CDP 3-97-065 (Motroni-Bardwell).

[16] See, for example, CDP 3-02-107 (Podesto), CDP A-3-SCO-06-006 (Willmott), CDP 3-09-029 (Rusconi), CDP 3-09-042 (O'Neill), and 3-10-044 (Crest Apartments).

The project's shoreline sand supply impacts translate directly into degradation of public access to and along the beach, and to the surf area offshore.[17] As such, shoreline sand supply mitigations targeted toward these access impacts is appropriate in this case. Fortunately, this case offers appropriate mitigation alternatives both at the seawall itself and directly adjacent to the seawall location (and under the control of the Applicant) that can effectively address these impacts. In terms of the former, the Applicant has proposed mitigation in the form of an enhanced public access pathway and viewing platform, a safety curb, and a public stairway leading down to the beach and the surf area. These access components would provide a seamless connection between the County's public access stairway and the beach/surf area below the Applicant's property (see **Exhibit 2** for the proposed project plans and **Exhibit 5** for a visual simulation of the proposed access improvements). This type of mitigation is particularly appropriate at this location because it responds to a critical problem created by construction of the seawall; namely the fact that it would encroach on lateral access along the beach, and this mitigation allows such lateral access, albeit at a higher elevation. In addition, the existing armoring and bluff configuration at this location presents an obstacle of sorts to entering and exiting the surf during similar conditions because the transition area from the County's stairway to the water across the base of the site is narrow and often wet, slippery and covered with algae. This is particularly problematic because a world class and heavily used surf break is located directly offshore of Pleasure Point. The proposed improvements will help offset these impacts by providing a safer means to get across and along the shoreline at the seawall location, including with respect to surfing ingress/egress, and particularly during times of higher tides and heavy surf when surfers may not be able to navigate to formal access points to exit the surf (see additional discussion in the "Public Access" section below).

Although the Applicant's access improvements are a good start, there is a concern that over time these access components will be less useful in providing access across the seawall and to the beach as sea level rises. (As previously noted, although sea level rise will occur regardless of the applicant's proposed shoreline armoring, the applicant's proposed and existing shoreline armoring will exacerbate sand supply and public access impacts when considering sea level rise as a "baseline condition.")Fortunately, this issue is easily addressed by conditions to ensure that the access improvements be maintained and available for public viewing and access connecting across the seawall and to/from the beach and adjacent areas of high relief on the Pleasure Point seawall if that means modifying the access amenities in light of sea level rise over time (e.g., raising the viewing platform and pathway elevation while still camouflaging it as faux bluff). Specifically, **Special Condition 2** requires long-term maintenance of the viewing platform, accessway path (including lateral access to the upcoast parcel), and beach stairway for the life of the armoring structure, including the requirement that the viewing platform and accessway path be modified as necessary (through the CDP amendment process) over time to address sea level rise to ensure a continuing connection between the County's Pleasure Point stairway, the viewing platform, the access path and the beach stairway, as well as the areas of high relief on the County's Pleasure Point seawall. Moreover, **Special Conditions 5(a)(b)** tie the length of development authorization to the timeframe of the residential structure being protected and require the Permittee to submit an application for a permit amendment to remove the armoring when the currently existing residential structure that warrants armoring is redeveloped, is no

[17] See also Public Access finding below for further discussion.

longer present, or no longer requires armoring. Because the mitigation is based on a 20-year impact assessment time frame, **Special Condition 5(c)** also requires the Permittee to submit an application for a permit amendment prior in 20 years to ensure continued mitigation for the seawall's ongoing impacts.

Taken together, the proposed project's improved access components will, over the next 20 years, adequately mitigate for the beach and sand supply impacts of the project (see also Public Access finding below for further discussion).

Thus, as conditioned, the project satisfies the Coastal Act Section 30235 requirements regarding mitigation for sand supply impacts, and thus also meets all Section 30235 tests for allowing such armoring.

Long-Term Stability, Maintenance, and Risk

Coastal Act Section 30253 requires the project to assure long-term stability and structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. For the proposed project, the main Section 30253 concern is assuring long-term stability. This is particularly critical given the dynamic shoreline environment within which the proposed project would be placed. Also critical to the task of ensuring long-term stability, as required by Section 30253, is a formal long-term monitoring and maintenance program. If the proposed armoring were damaged in the future (e.g. as a result of flooding, landsliding, wave action, storms, etc.), it would lead to a degraded public access condition. In addition, such damages could adversely affect nearby beaches by resulting in debris on the beaches and/or creating a hazard to the public using the beaches. Therefore, in order to find the proposed project consistent with Coastal Act Section 30253, the proposed project must be maintained in its approved state. Further, in order to ensure that the Applicant and the Commission know when repairs or maintenance are required, the Applicant must regularly monitor the condition of the subject armoring, particularly after major storm events. Such monitoring will ensure that the Permittee and the Commission are aware of any damage to or weathering of the armoring and can determine whether repairs or other actions are necessary to maintain the armoring and the offsetting access improvements in their approved state before such repairs or actions are undertaken. To assist in such an effort, monitoring plans should provide vertical and horizontal reference distances from armoring structures to surveyed benchmarks for use in future monitoring efforts.

To ensure that the proposed project is installed in compliance with the proposed plans and properly maintained to ensure its long-term structural stability, **Special Conditions 8 and 9** require the submission of as-built plans and a monitoring and maintenance program. Such a program shall provide for evaluation of the condition and performance of the proposed project and overall bluff stability, and shall provide for necessary maintenance, repair, changes or modifications. **Special Condition 10** allows the Applicant to maintain the project in its approved state, subject to the terms and conditions identified by the special conditions. Such future monitoring and maintenance activities will be understood in relation to clear as-built plans that will be submitted by the Applicant.

In terms of recognizing and assuming the hazard risks for shoreline development, the Commission's experience in evaluating proposed developments in areas subject to hazards has

been that development has continued to occur despite periodic episodes of heavy storm damage and other such occurrences. Development in such dynamic environments is susceptible to damage due to such long-term and episodic processes. Past occurrences statewide have resulted in public costs (through low interest loans, grants, subsidies, direct assistance, etc.) in the millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden for damages onto the people of the State of California, applicants are regularly required to acknowledge site hazards and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (**see Special Condition 11**).

Coastal Act Section 30620(c)(1) authorizes the Commission to require applicants to reimburse the Commission for expenses incurred in processing CDP applications. Thus, the Commission is authorized to require reimbursement for expenses incurred in defending its action on the pending CDP application in the event that the Commission's action is challenged by a party other than the Applicant. Therefore, consistent with Section 30620(c), the Commission imposes requiring reimbursement for any costs and attorneys' fees that the Commission incurs in connection with the defense of any action brought by a party other than the Applicant challenging the approval or issuance of these permits (**Special Condition 12**).

To ensure that future property owners are properly informed regarding the terms and conditions of this approval, this approval is also conditioned for a deed restriction to be recorded against the property involved in the application (see **Special Condition 13**). This deed restriction will record the conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property.

Long-Term and Cumulative Considerations

Thus, in this case and in this context, approval consistent with the Coastal Act is possible. That said, regarding the more general issue of how best to address existing and augmented shoreline armoring more generally, such as is proposed here, the Commission is faced with a complex issue that is not easily simplified or addressed in a general way independent of site specific considerations. In addition, the prospects of climate change and accelerated sea level rise are bringing these issues to the fore in a manner that requires the Commission to consider both individual and cumulative impacts at perhaps a broader scale than ever before.

The proposed project site and the sites both upcoast and downcoast are already armored, as is most of the shoreline in the urbanized areas of Santa Cruz County. The vast majority of such armoring appears to pre-date coastal permitting requirements.[18] As such, the project vicinity is not an undeveloped shoreline within which planning decisions about whether or not to armor, or whether to pursue planned retreat or other adaptive shoreline planning responses, can be neatly considered. In this case, the project site is located in a heavily urbanized area, which includes a significant coastal roadway and public access trail and park system on the bluffs adjacent to the site, with a shoreline that is predominantly armored. These seawalls join other seawalls protecting both private and public development and infrastructure along this stretch of coast. In

[18] In fact, although there has certainly been augmentation of armoring structures, there have been relatively few *new* armoring structures installed since coastal permitting requirements came into effect.

short, significant full bluff armoring has been used to protect important public resources (e.g., the East Cliff Drive corridor), even while the inevitable impacts of these structures on other shoreline resources, such as public recreational resources, have been recognized. Most of the remaining bluffs both upcoast and downcoast also have been armored to protect private residential development and public resources.

Over the long run, a more comprehensive strategy to address shoreline erosion and the impacts of armoring needs to be developed (e.g. planned or managed retreat, relocation of structures inland, abandonment of structures, mitigation for armoring that is allowed, internalization of risks and costs for development in hazardous areas, etc.). Here, managed retreat options appear not to be feasible at this location at this time as opposed to other locations where shoreline armoring is atypical. In this case, the proposed seawall meets the conditions under which shoreline armoring can be approved under Section 30235 of the Coastal Act because the house is a structure that pre-dates Proposition 20 and Coastal Act coastal permitting requirements, it is in danger from erosion, the existing seawall protecting the existing endangered structure is in a degraded state, and the impacts from redevelopment of the seawall can be mitigated. Such mitigation is directly related and roughly proportional to the impacts of the project, and will provide important public access mitigation designed to offset project impacts in a way that adds to the other public access amenities in an area that is a well-known and very popular public recreational access destination. Thus, in this case, the project includes appropriate mitigation for the sand supply and related public recreational access and viewshed impacts that will be caused by the proposed development.

That said, it also is clear that the proposed project firmly commits this site to being armored for the foreseeable future. As indicated, such an outcome is consistent with the manner in which the Commission has historically treated this area in and around Pleasure Point, including most recently with the Pleasure Point seawall project, which is located directly downcoast from the site. As also indicated, such an outcome does not mean that other more comprehensive efforts to better address urban shorelines in light of erosion and sea level rise are not relevant or should not be pursued. On the contrary, it is clear that the State (and County) must come to grips with issues related to sea level rise, shoreline armoring, and the protection of natural and public recreational shoreline resources, particularly in urban and largely or increasingly armored areas. The County is currently working on an update to the coastal hazards provisions of its LCP that it is hoped will start to provide such a discussion and guidance.

One significant cumulative effect of shoreline armoring is that over time beaches in these areas will be lost, particularly as sea level rise accelerates. Mitigations can be imposed on armoring projects to reduce such impacts, as is the case here, but mitigation for the long-term impacts to the public caused by individual armoring projects and the overall cumulative effect of armoring projects taken together with all the existing armoring along the coastline has proven more difficult. Some of these long-term impacts were “inherited” by the people of the State because many urban coastlines, such as urban Santa Cruz County, were already largely armored to a certain degree when the coastal permitting requirements of Proposition 20 and the Coastal Act were instituted in the early 1970s.

Absent a more comprehensive strategy, including relevant updates to the County’s LCP, the larger planning and cumulative impact questions related to shoreline erosion and armoring are not readily addressed through an individual project. Rather, projects such as the one proposed are

probably best shaped to provide the best possible Coastal Act outcome for a site, including providing impact mitigation, as is the case here. Such an outcome does not preclude or prevent potential future efforts to address California's beaches and shoreline more globally or within specific regions. On the contrary, it is expected that this site, along with other armored sites like it, must be part of any overall solution, and this project does not change that premise.

Geologic Conditions and Hazards Conclusion

In this case and for this site and this fact set, the proposed project, as conditioned, can be found consistent with Coastal Act Sections 30235 and 30253. That said, it is clear that the proposed project firmly commits this site to being armored for the foreseeable future. As indicated, such an outcome is consistent with the manner in which the Commission has historically treated armoring projects in and around Pleasure Point, including with the County's Pleasure Point seawall project, which is located directly adjacent to the site. As also indicated, such an outcome does not mean that parallel and more global efforts to better address urban shorelines in light of erosion and sea level rise are not relevant or should not be pursued. On the contrary, it is clear that the State must come to grips with issues related to shoreline armoring as it relates to urban and largely armored areas and rising sea levels. The individual and cumulative effect of such armoring is that, over time, beaches in these areas will be lost. Mitigations can be imposed on armoring projects to reduce such impacts, but mitigation for the long-term impacts to the public, both as a result of individual armoring projects and the overall cumulative effect of armoring projects together with all the existing armoring along the coastline, has proven more difficult. Some of these long-term impacts were "inherited" by the people of the State because many such urban coastlines, such as urban Santa Cruz County, were already largely armored to a certain degree when the coastal permitting requirements of Proposition 20 and the Coastal Act were instituted in the early 1970s. With sea level continuing to rise and the shoreline continuing to erode, it is expected that the beaches fronting these areas, like all California beaches on which armoring is located and on which the back-beach has thus been effectively "fixed" in location, will eventually disappear over time. However, absent a more comprehensive strategy, including relevant updates to the County's LCP, resolving the larger planning and cumulative impact questions related to shoreline erosion and armoring is not readily addressed through an individual project. Projects such as the one proposed are probably best shaped to provide the best possible Coastal Act outcome for a site, including providing for long-term impact mitigation, as is the case here.

D. PUBLIC ACCESS AND RECREATION

Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and public recreation policies of [Coastal Act] Chapter 3." The proposed project is located seaward of the first through public road (East Cliff and Pleasure Point Drives). Coastal Act Sections 30210 through 30224 specifically protect public access and recreation. In particular:

> ***30210.*** *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.

30211. *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.*

30212.5*. Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.*

30213. *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. …*

30214. *(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… (b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access… (c) In carrying out the public access policies of this article, the commission and any other responsible public agency shall consider and encourage the utilization of innovative access management techiques…*

30220. *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

30221. *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

30223. *Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

These overlapping policies clearly protect access to and along the shoreline and to offshore waters for public access and recreation purposes, particularly free and low cost access.

Analysis

As discussed in the finding above in Section IV.C, shoreline structures can have a variety of negative impacts on coastal resources including adverse effects on beaches and sand supply, which ultimately result in the loss of the beach with associated impacts to public recreational access. The proposed project's impact to sand supply, and ultimately to public access, would result from encroachment of the proposed project onto the beach and surf area, the loss of beach creation due to passive erosion, and the loss of sand that would be supplied to the shoreline system from erosion if the bluffs were not armored. As discussed in the preceding findings, these impacts total some xxx cubic yards of sand. All such impacts would be located at the site of a regionally significant public recreational access destination (i.e. Pleasure Point), thus only increasing the magnitude of the degradation to access that would result. In fact, Pleasure Point is

an extremely popular recreational surfing destination that is well known around the world. It is not uncommon to see more than 100 surfers in the water, even more when prime surfing conditions are present, and to see small groups of people lining East Cliff Drive both enjoying the shoreline view and watching the surfing below. Seawalls can affect waves, and thus surfing activities, due to changes in the interaction between waves and the bluffs (i.e., seawalls can change the reflection location of the wave, or change the amount of energy that is reflected). Reflection of wave energy can change the offshore wave patterns and diminish the quality of surfing waves. Often referred to as "backwash," reflected wave energy causes waves to break in unpredictable ways, and disrupts the clean line and peel of waves that make Pleasure Point a particularly high quality surf break. In addition, the passive erosion phenomenon described in the previous finding also affects surfing breaks inasmuch as a seawall stops shoreline retreat, and thus eliminates the potential areas within which a surf break might reestablish itself as sea level rises (i.e., makes it so that new 'tripping features' don't move inland, eventually leading to the loss of breaking waves).

In terms of potential offshore surfing impacts specifically, it appears that this project will have a negligible effect, including because the majority of this shoreline fronting the Pleasure Point surf area (including the project site) is already armored, and because the proposed seawall will replace existing armoring that is currently located in roughly the same location. According to USGS data, over time and based on the undersea bathymetry, the wave break at Pleasure Point is not expected to move landward much at all, perhaps a few meters, in the next 100 years – with or without seawalls in this location.[19] In other words, although seawalls have other detrimental effects, their effect on the main surfing break over time does not appear to be significant. Clearly, at times of very high tides (and particularly with smaller waves), there may be some additional reflection associated with the seawall that muddies the break, but this shouldn't be much more than current conditions, if at all. In addition, this site is located along the general trending line of the surf break, and not directly in front of it, and thus surfing impacts are expected to be even further limited. Moreover, although the redeveloped seawall will result in the loss of some sand that would be supplied to the system (as described above) that provides unknown sand bar formation and reef-filling (and that also causes waves to break), the effect of this singular impact on surfing is difficult to model and its effect is equally difficult to isolate and quantify. In short, the potential surfing impact due to this seawall appears to be negligible.

That said, the redevelopment of the armoring to protect the residence will have an impact more generally on public recreational access (as described above). Fortunately, this case offers appropriate mitigation alternatives both at the seawall itself and directly adjacent to the seawall location (and under the control of the Applicant) that can effectively address such impacts. First, the proposed project includes incorporation of an enhanced public access viewing platform and pathway along the lower portion of the proposed seawall. This pathway will provide a connection from the downcoast Pleasure Point Park stairway, across the most-seaward side of the seawall to the adjacent upcoast parcel, and will also connect to a beach/surf access stairway.

In short, these public access improvements are consistent with the public access policies

[19] Storlazzi, Curt D., Barnard, Patrick L., Collins, Brian D., Finlayson, David P., Golden, Nadine E., Hatcher, Gerry A., Kayen, Robert E., and Ruggiero, Peter, 2007, High-resolution topographic, bathymetric, and oceanographic data for the Pleasure Point area, Santa Cruz County, California; 2005-2007: U.S. Geological Survey Open-File Report 2007-1270, 23 p. [http://pubs.usgs.gov/of/2007/1270/].

identified above because they: provide maximum public access and recreational opportunities consistent with public safety needs and the Applicant's private property rights (Section 30210); facilitate the public's right of access to the sea (Section 30211); mitigate overcrowding at other points along the immediate seashore by providing enhanced public access and recreation (Section 30212.5); provide infrastructure for free public access and recreation at Pleasure Point (Section 30213); balance rights of the public's right to access and the Applicant's private property rights and further represents an innovative access management approach (Section 30214); protect this area for water-oriented recreational activities (Sections 30220, 30221); and protects upland areas necessary to support coastal recreational uses at Pleasure Point (Section 30223).

To ensure the continued usability of these public access components in terms of upcoast and downcoast connections and in terms of high tide access over time, especially with respect to ongoing sea level rise (i.e., when the seawall would otherwise block and/or make such lateral access most difficult), this approval is conditioned (see **Special Condition 2**) to ensure a continued connection from the downcoast Pleasure Point Park stairway across the proposed seawall structure to the adjacent upcoast parcel and beach stairway, as well as to areas of high relief on the existing Pleasure Point seawall. Specifically, this condition require modifications to the project's public access components (e.g., increase in elevation) over time if necessary to ensure that they continue to be useable, including in light of sea level rise.[20] In this sense, to be useable at higher tides, the path elevation would generally need to remain above mean higher high water (MHHW).

Finally, with respect to construction impacts, this project will: require the movement of equipment, workers, materials, and supplies at the project location, near Pleasure Point Park, and in and around Pleasure Point Drive, East Cliff Drive, and the adjacent beach area; result in the loss of recreational beach and other public access use areas to a construction zone (at the immediate project area); encroach on State Lands and Monterey Bay National Marine Sanctuary waters; and generally intrude and negatively impact the aesthetics, ambiance, serenity, and safety of the recreational experience at this location. These public recreational use impacts have been (through the Applicant's proposed best management practices (BMPs), which are extensive) and can be (by condition to implement the Applicant's BMPs and include those typically applied by the Commission in cases like this one) contained through construction parameters that limit the area of construction, limit the times when work can take place (to avoid both weekends and peak summer use months when recreational use is highest), clearly fence off the minimum construction area necessary, require off-beach equipment and material storage during non-construction times, clearly delineate and avoid to the maximum extent feasible public use areas, and restore all affected public access areas at the conclusion of construction. A detailed construction plan is required for this purpose (see **Special Condition 3**). In addition, to provide maximum information to the beach-going public during all construction, the Applicant must

[20] As previously discussed, sea level rise will occur regardless of the Applicant's proposed shoreline armoring or not. In the absence of the Applicant's proposed shoreline armoring, however, beach sand supply and resulting public access impacts would be lessened, even when accounting for sea level rise as a "baseline condition." Therefore, the presence of the Applicant's proposed shoreline armoring will exacerbate such impacts when considered with the inevitable effect of sea level rise. Thus, impacts of the proposed shoreline armoring justify the ongoing requirement of Special Condition 2 that the Applicant modify the public access components if necessary to ensure continued usability in light of sea level rise.

maintain copies of the CDP and approved construction plans available for public review at the construction site, as well as provide a construction coordinator whose contact information is posted at the site to respond to any problems and/or inquiries that might arise (see **Special Condition 4**). Although the required construction conditions can minimize the impacts of this project on the public, the conditions cannot completely compensate for the unavoidable degradation of the usual public recreational experience available at this location, including the overall diminution of aesthetics and ambiance, due to construction of the proposed project. Mitigation is necessary to offset these impacts to public recreational uses. Fortunately, the mitigation package described above can adequately address these remaining temporary construction impacts as well. Moreover, **Special Condition 5** ties the length of development authorization to the timeframe of the structure being protected and requires the Permittee to submit an application for a permit amendment to remove the armoring when the currently existing structures warranting armoring are redeveloped, are no longer present, or no longer require armoring. In addition, because the initial mitigation timeframe is 20 years, **Special Condition 5(c)** also requires the Permittee to submit an application for a permit amendment to ensure these public access features are maintained beyond a 20-year timeframe, and that any additional or different mitigation required for ongoing impacts is appropriately assessed at that time. Therefore, the project as conditioned is consistent with the identified public access and recreational policies because the conditions on construction: balance public access and recreation with public safety needs (Section 30210); and take into account the need to regulate the time, place, and manner of public access during construction phases (Section 30214).

In conclusion, provided the project's public access components are maintained in a usable good condition for as long as the seawall and/or residence are present, appropriate construction BMPs are used, other agency approvals are granted, and the approval includes a requirement for revisiting the mitigation after 20 years, these mitigations can appropriately offset the public recreational access impacts associated with the proposed project. As conditioned, the project is consistent with the Coastal Act access and recreation policies sited above.

E. VISUAL RESOURCES

Coastal Act Section 30251 states:

> ***Section 30251.*** *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Much of the bluff along this portion of East Cliff Drive has been armored at its base, primarily by vertical concrete seawalls, some of which have been camouflaged to replicate the look of a natural bluff face. Downcoast of the project site, 1,100 lineal feet of bluff has been covered with the Pleasure Point seawall, which was designed to mimic bluff landforms.

The existing public viewshed and landform at the project site are currently degraded. The existing concrete and gunite shoreline protection is cracked, falling apart and has an unnatural pinkish color. Moreover, the residence itself and the cantilevered deck create an unnatural look and impede public views (see photographs of the area in **Exhibit 4**).However, the bulk of the proposed armoring structure and associated public access improvements will be located behind a large rock outcropping, and therefore will not be highly visible from views along the Pleasure Point Parkway or the beach below, except for the small pocket beach located at the base of the proposed improvements. In this sense, whereas the Applicant's stairway and the area it accesses might be problematic in other cases, as they would be unnatural in the viewshed and would take away from the faux bluff camouflaging intended to make the area appear as natural bluffs, they aren't in this case as they are not visible from public viewing areas along the downcoast beach and the Pleasure Point Parkway. It is within this context that the project should be understood.

Although the seawall would introduce some new massing into the public viewshed, the bulk of the new massing is offset by and incorporates public access improvements by design. Moreover, these improvements would be encapsulated in a faux bluff design that is expected to approximate the look of a natural bluff and blend in seamlessly with the existing Pleasure Point seawall and the County's public access stairway. Provided the camouflaging treatment appropriately works, the project should result in a modest enhancement of the public view above present conditions (see **Exhibit 5** for a visual simulation of the proposed project). The Applicant proposes to sculpt, color, and texture the concrete facing of the proposed seawall to approximate a natural bluff and to blend in seamlessly with the downcoast Pleasure Point seawall. If done correctly, such sculpting can help to camouflage large slabs of concrete; when done poorly, however, it just reinforces the unnatural element present in the back beach area. This approval is conditioned to ensure that the armoring is made to mimic the look of a natural undulating bluff landform, similar to the adjacent Pleasure Point seawall in terms of integral mottled color, texture, and undulation to the maximum extent feasible (see **Special Condition 1(a)**).

Portions of the proposed seawall also include recurves and "anti-climb" features that would result in a negative public viewshed impact, including because such recurve and anti-climb features makes it more obvious that the seawall is a concrete structure and not a bluff, thus reducing the effectiveness of its faux bluff finish in terms of camouflaging the seawall altogether. The Applicant's engineer indicates that recurved areas on the proposed seawall will help dissipate and disperse expected wave overtopping. In discussions with the Applicant's engineer, Commission staff determined that it is appropriate to include a recurve at the most upcoast end of the proposed seawall (see **Exhibit 5)**. However, **Special Condition 1(c)** requires that the recurve be designed to be minimized and closely monitored during construction to reflect a wave-cut notch mimicking the look of a natural bedrock outcropping.[21] All other proposed recurve and anti-climb features are to be eliminated from the proposed project to ensure consistency with the visual resource protection requirements of Coastal Act Section 30251 (see **Special Conditions 1(b)** and **1(c)**).

Moreover, the proposed railing along the top of the former block wall and adjacent to the bluff platform there will not look natural or bluff-like when seen from public viewpoints (see **Exhibit 5**). **Special Condition 1(d)** requires that the structural concrete foundation landward of the wall

[21] A wave-cut notch is an indentation cut into a bluff at water level by wave action.

directly be lowered by two feet in order to facilitate lowering the height of the railing. In addition, **Special Condition 1(e)** also requires that the proposed 42-inch-high railing be replaced with a 12-inch-high transparent railing that is not visible to the public. This railing would be placed on the innermost side of the top of the wall in order to avoid impacts to public views from Pleasure Point Park, the blufftop public access path, the County's stairs and from the beach itself.

Finally, the project proposes a new gate to replace the existing gate that provides the Applicant access from the residence to the shoreline. As proposed, this gate would appear unnatural and reduce the effectiveness of the seawall's camouflaging finishes. However, this gate will not be highly visible from the existing and proposed public access amenities because of its location behind a large rock outcropping (see **Exhibit 5**). However, to fully minimize the proposed gate's visual impacts, especially as seen from enhanced access improvements at the base of the proposed seawall, **Special Condition 1(f)** requires that the proposed gate feature be covered with faux concrete rock to provide a seamless natural rock face along the entire seaward wall, with no visible locks, knobs or hinges in order to limit its visibility to the maximum extent feasible from any public area.

The above mitigations will help offset the proposed project's visual impacts. However, the Commission typically requires landscaping designed to cascade over the top of armoring projects to partially screen the top of such projects from public view and to provide a more natural edge to the top of the wall as seen from above and below. The project design includes planters to allow for cascading plants to partially screen the top and middle sections of the wall from public view, and to provide a more natural edge to the top of the wall as seen from above and below. The Applicant has included a landscaping plan (**Exhibit 6**), consisting of appropriate native plants, designed to effectuate this purpose. **Special Condition 1(h)** is included to ensure this mitigation is included in the final project.

As conditioned, the Commission finds the project consistent with the above-cited Coastal Act public viewshed policies.

F. MARINE RESOURCES

Coastal Act Section 30230 requires that marine resources be maintained, enhanced, and restored. New development must not interfere with the biological productivity of coastal waters or the continuance of healthy populations of marine species. Coastal Act Section 30230 states:

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

Coastal Act Section 30231 requires that the productivity of coastal waters necessary for the continuance of healthy populations of marine species shall be maintained and restored by minimizing waste water discharges and entrainment and controlling runoff. Coastal Act Section 30231 states:

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

Among other things, Coastal Act Section 30233(a) lists the type of development that is allowed to fill open coastal waters (as is proposed here). Section 30233(a) states:

Section 30233(a). *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource dependent activities.

Filling Coastal Waters

The proposed seawall requires fill below the mean high tide line (i.e., fill of coastal waters). Section 30233 of the Coastal Act identifies seven allowable uses for the dredging, diking, and filling of coastal waters; seawalls are not one of the listed uses. As a result, a seawall is prohibited in coastal waters by Section 30233(a). However, Section 30235 of the Coastal Act requires the Commission to approve a seawall if it is necessary to protect an existing structure and if it meets the other requirements of that section. Section 30235 clearly anticipates dredging, diking, and filling of coastal waters for seawalls and is a more specific policy than Section 30233(a) in this regard. In other words, Section 30235 of the Coastal Act requires the Commission to approve seawalls in certain circumstances, even though such activities may not comply with the allowable-use test of Section 30233(a) of the Coastal Act. Thus, to the extent Section 30235 requires that the

Commission approve this project, the more specific direction of Section 30235 would override in this case.[22]

MBNMS/State Lands

The proposed project includes project components that reach down into the MBNMS and State Lands. This area at the base of the armoring structure is typically under water, except for during lower tides. It is in an area that is subject to fairly severe wave effects, and is fairly scoured as a result. There are some algaes on the rocks at the base of the structure, but there do not appear to be any significant sensitive marine resources in the immediate area. There are, however, sandy beach and intertidal areas that appear to provide the type of resource values generally attributable to such features along the shoreline. In addition, this area is part of the Sanctuary and is State Lands, only increasing its relative status in that respect.

The previous mitigations attached to this approval would appear adequate in this caser and based on these understandings to address Coastal Act concerns in this respect, including in terms of a construction plan necessary to protect coastal resources as much as possible during construction activities. In any case, however, the project will require approval of both MBNMS and the State Lands Commission, and it is conditioned accordingly (**Special Conditions 6 and 7**). The project can be found consistent with the Marine Resource policies of the Coastal Act.

G. VIOLATION

Violations of the Coastal Act exist on the subject property including, but not limited to, deck expansion and armoring. With respect to deck expansion, two unpermitted extensions/expansions (by a previous property owner) of a blufftop deck previously took place that impact to views of the ocean and Monterey Bay as seen from the County's blufftop public access path. With respect to armoring, in 2004, the prior owner was granted Emergency CDP 3-04-041-G to patch two holes in the then existing gunite, and to fill a sea cave below the seawall with concrete. That prior owner never provided the information necessary to file the required regular follow-up CDP application (CDP application number 3-83-155-A1), and thus the emergency work is not considered permitted.

The Applicant seeks to resolve the violations through this application and the permit is conditioned to eliminate all cantilevered deck elements (**Special Condition No. 1(g)**) and to authorize the armoring structure that will encase these 2004 improvements. Approval of this application pursuant to the staff recommendation, issuance of the CDP, and the Applicant's subsequent compliance with all terms and conditions of the CDP will result in resolution of the above described violations.

[22] Note that other coastal resource issues associated with such fill are addressed in previous findings. Note too that the requirements of Section 30233(a) as regards mitigating impacts and identifying the last environmentally damaging feasible alternative would still apply. The intent of this finding is to explain the distinction between Sections 30233(a) and 30235 as it relates to seawalls occupying coastal waters. Giving precedence to the more particular provisions of Section 30235 over the more general provisions of Sections 30233(a) and is in accord with generally applicable principles of California law (see, for example, Civil Code Section 3534 ("Particular expressions qualify those which are general")).

Although development has taken place prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Commission review and action on this permit does not constitute a waiver of any legal action with regard to the alleged violations, nor does it constitute an implied statement of the Commission's position regarding the legality of development, other than the development addressed herein, undertaken on the subject site without a coastal permit. In fact, approval of this CDP is possible only because of the conditions included herein and failure to comply with these conditions would also constitute a violation of this CDP and of the Coastal Act. Accordingly, the Applicant remains subject to enforcement action unless and until the conditions of approval included in this CDP are satisfied.

In order to ensure that the unpermitted development component of this application is resolved in a timely manner, **Special Condition 14** requires, within 90 days of CDP issuance, that the Applicant eliminate the cantilevered portions of the deck consistent with the requirements of **Special Condition 1(g)**. Failure to comply with **Special Condition 14** permit may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act. Only as conditioned is the proposed development consistent with the Coastal Act.

H. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of 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.

Santa Cruz County, acting as the CEQA lead agency, determined on December 15, 2014 that the project was categorically exempt from CEQA review on the basis that it was restoration or rehabilitation of deteriorated or damaged structures. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The preceding CDP findings discuss the relevant coastal resource issues with the proposal, and the permit conditions identify appropriate modifications to avoid and/or lessen any potential for adverse impacts to said resources. All public comments received to date have been addressed in the findings above, which are incorporated herein in their entirety by reference.

As such, there are no additional feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as conditioned, would have on the environment within the meaning of CEQA. Thus, if so conditioned, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

1. Geotechnical, Geologic and Coastal Engineering Investigation – Seawall Reconstruction, Bluff Stabilization and Public Access Improvements, Haro, Kasunich & Assoc. December 2014.
2. Landscape Plan, Prime Landscape Service, Inc., dated March 12, 2015.

Project Location

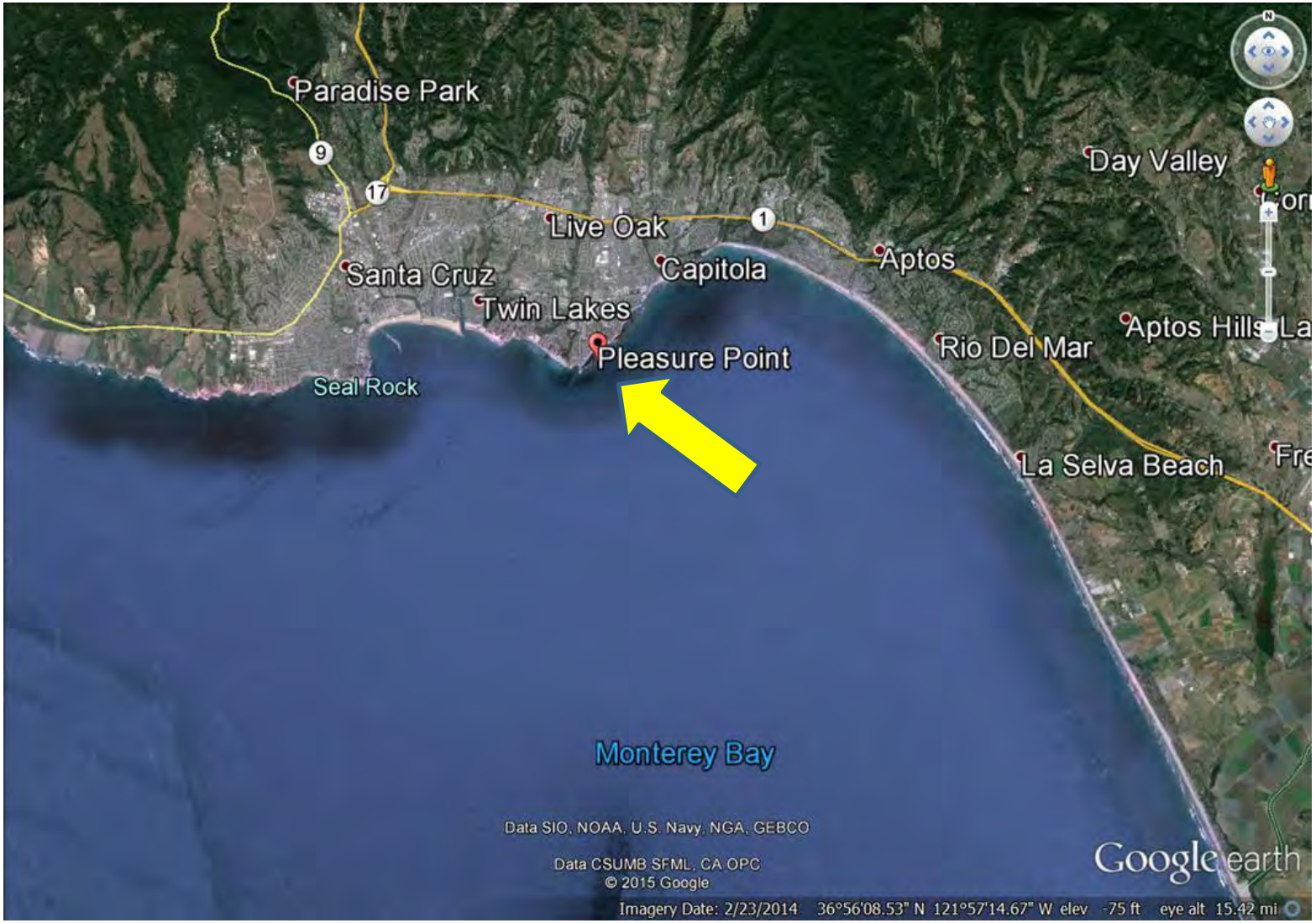
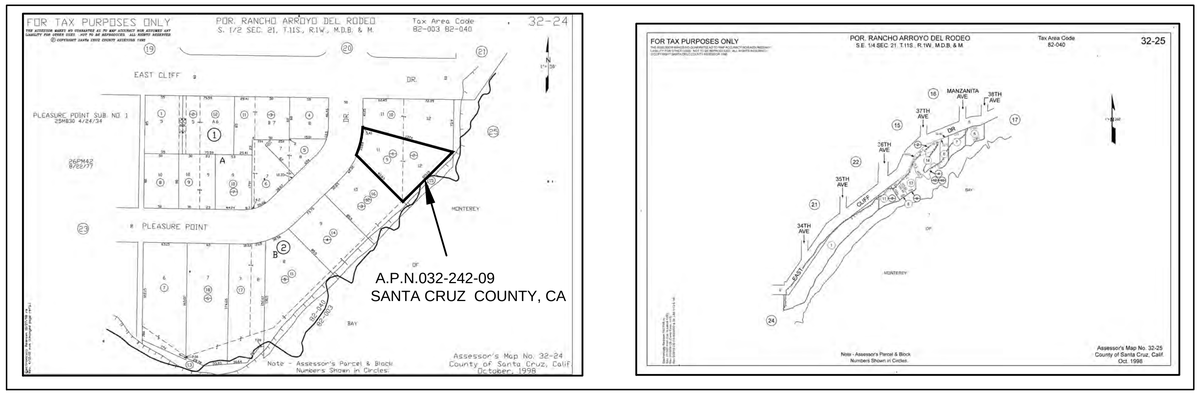


Exhibit 1
3-14-0488
1 of 1

PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062
A.P.N. 032-242-09



APN MAPS

SHEET INDEX

PROPERTY OWNER:

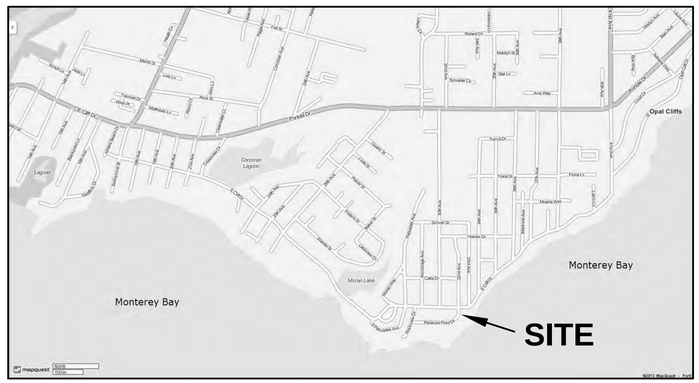
ICEPLANT LLC
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

PLAN PREPARERS:

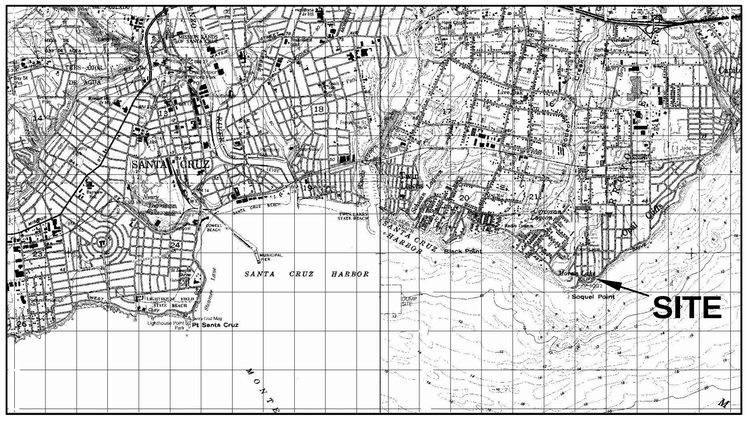
John Kasunich, G.E. 455
Mark Foxx, C.E.G. 1493
HARO, KASUNICH & ASSOCIATES, INC.
116 East Lake
Watsonville, CA 95076
(831)722-4175
(831)722-3202 FAX

PROJECT SURVEYOR:

Matthew Ward, P.L.S. 6325
WARD SURVEYING
622 7th Avenue
Santa Cruz, CA. 95062
(831) 425-5005



VICINITY MAP



TOPOGRAPHIC MAP

Exhibit 2
3-14-0488
1 of 7

NOT FOR CONSTRUCTION
COASTAL DEVELOPMENT PERMIT SUBMITTAL

REVISIONS	BY
12/2/2014	MF

TITLE SHEET
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	9-26-2013
Scale	AS SHOWN
Drawn	MF
Job	
Sheet	1 OF 7 SHEETS

D:\FOX\Olivan Pleasure Point\2013-10-31 Olivan Rev 12-2-2014.dwg, 12/6/2014 12:45:40 PM

EXISTING SINGLE FAMILY RESIDENCE

A.P.N. 032-242-09
3054 PLEASURE POINT DRIVE
ICEPLANT LLC

A.P.N. 032-242-16
3052 PLEASURE POINT DRIVE
DONALD & LISETTE DARST, TRUSTEES

DECK
@ ELEV 33.4

BUILDING FOOTPRINT

FENCE LOCATED ON APN 032-242-09 PER RECORD OF SURVEY 119-M-25 RECORDED 7/24/2012 DOCUMENT NO. 2012-0035090

EXISTING DECK
@ ELEV 35.2

PROPOSED UPPER SHOTCRETE SEAWALL

PROPOSED SHOTCRETE SEAWALL

PROPOSED UPPER SHOTCRETE SEAWALL

PROPOSED UPPER SHOTCRETE SEAWALL

PROPOSED PUBLIC ACCESS STAIRS

PROPOSED PUBLIC ACCESS PATH

PROPOSED LOWER SHOTCRETE SEAWALL

PROPOSED LOWER SHOTCRETE SEAWALL

PROPOSED PUBLIC ACCESS PATH

PROPOSED PUBLIC OVERLOOK AREA

A.P.N. 032-242-10
COUNTY OF SANTA CRUZ

A.P.N. 032-251-01
COUNTY OF SANTA CRUZ

A.P.N. 032-242-15
COUNTY OF SANTA CRUZ

EXISTING COUNTY SEAWALL

LOWEST RISER OF EXISTING PUBLIC ACCESS STAIRS

TOP OF BLUFF (CONCRETE)

TOP OF BLUFF UNDER DECK (EDGE OF CONCRETE)

NEIGHBOR'S WALL

ELEVATION 4.63 FT NAVD88
MEAN HIGH TIDE LINE
FIELD WORK WAS COMPLETED ON OCTOBER 18, 2012 BY MATTHEW WARD OF WARD SURVEYING SANTA CRUZ, CALIFORNIA

APN 032-242-15 PER 1818 O.R.467 EXTENDS TO MEAN HIGH TIDE LINE

MAKE NON-CLIMBABLE

EXPOSED BEDROCK ON 10/12/12

SAND MAPPED 10/12/12

ELEVATION 4.63 FT NAVD88
MEAN HIGH TIDE LINE

APN 032-242-15 PER 1818 O.R.467 EXTENDS TO MEAN HIGH TIDE LINE

MONTEREY BAY

UPDATED SURVEY OF THE ORDINARY HIGH WATER MARK (OHWM) OF THE PACIFIC OCEAN
ELEV.= 4.77' (NAVD 88)
AS SURVEYED ON 8-15-2014
BY ROBERT L. DEWITT & ASSOCIATES, INC.
(ROBERT L. DEWITT, P.E. 20919)
PROJECT R11102

FEET
1 inch = 5 ft.

NOT FOR CONSTRUCTION
COASTAL DEVELOPMENT PERMIT SUBMITTAL

Exhibit 2
3-14-0488
2 of 7

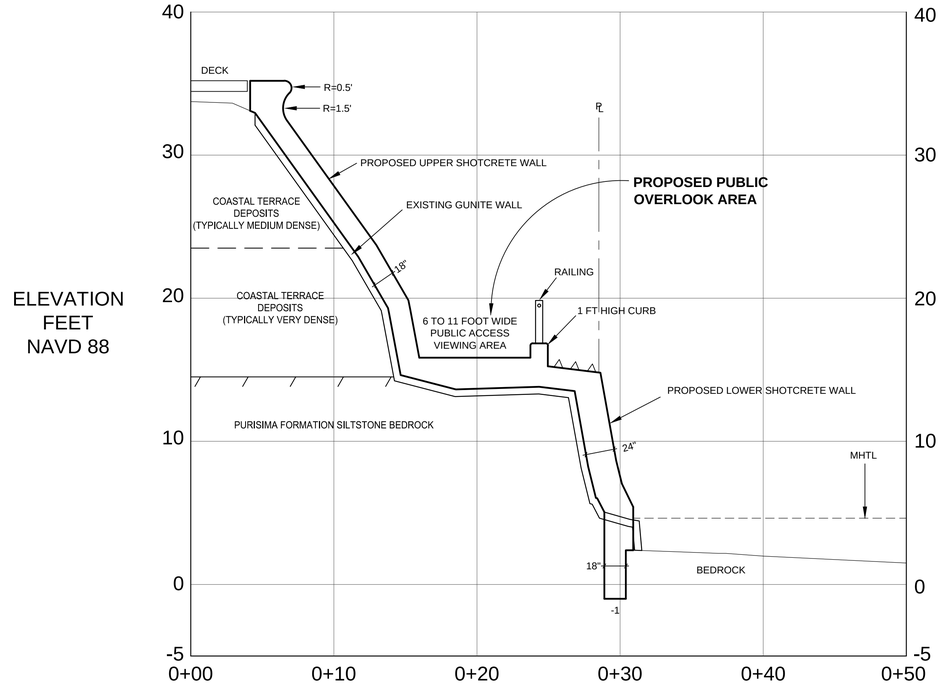
REVISIONS	BY
9/22/2014	MF

PLAN VIEW
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	9-26-2013
Scale	1"= 5 FT
Drawn	MF
Job	
Sheet	2 OF 7 SHEETS

SECTION 1



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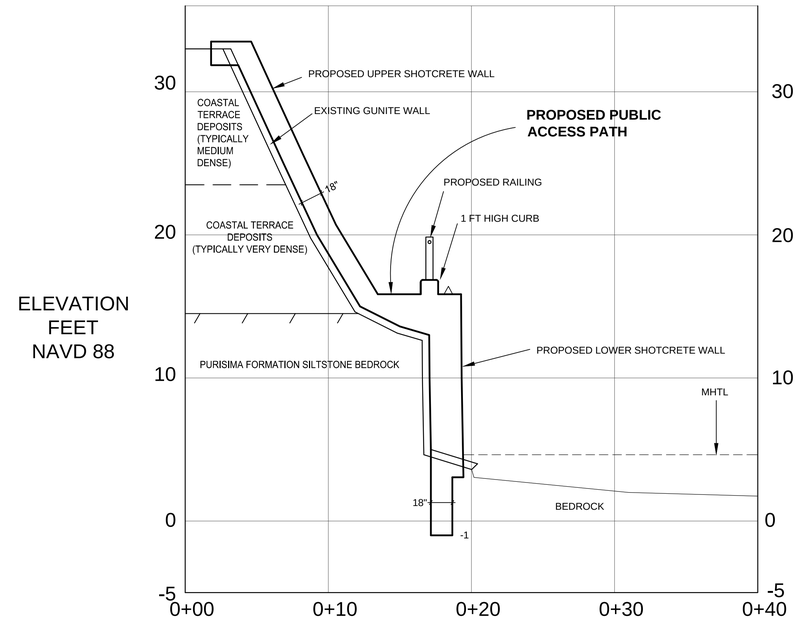

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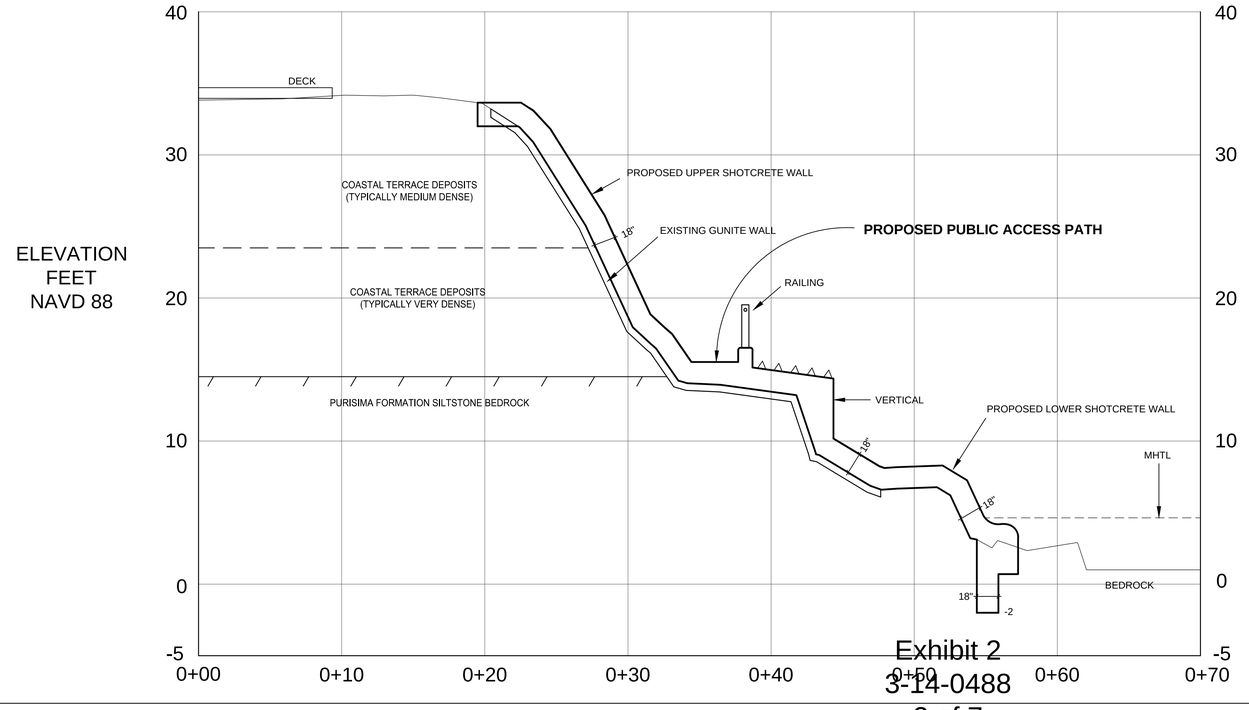

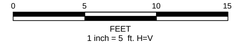

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Exhibit 2
3-14-0488
3 of 7

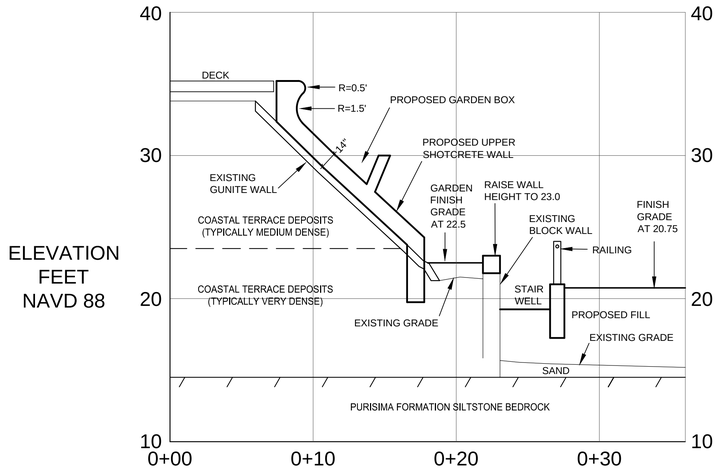
REVISIONS	BY
12/2/2014	MF

CROSS SECTIONS 1, 2 & 3
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	9-26-2013
Scale	1"= 5 FT
Drawn	MF
Job	
Sheet	3 OF 7 SHEETS

SECTION 4



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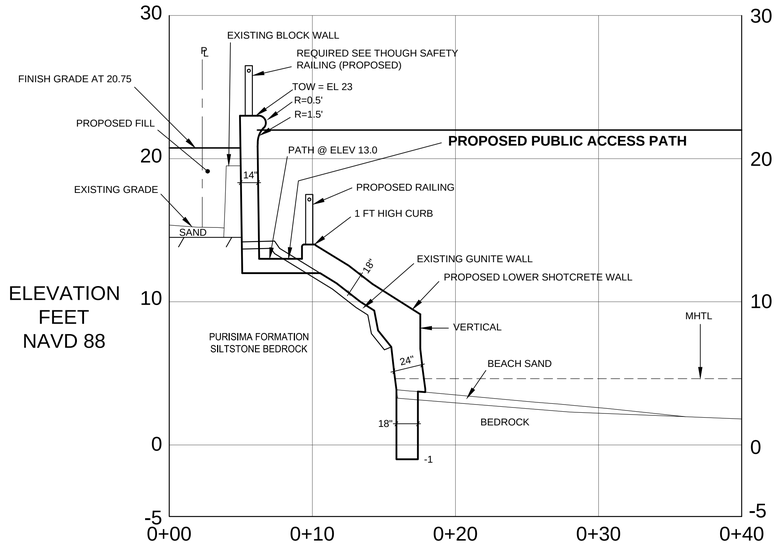

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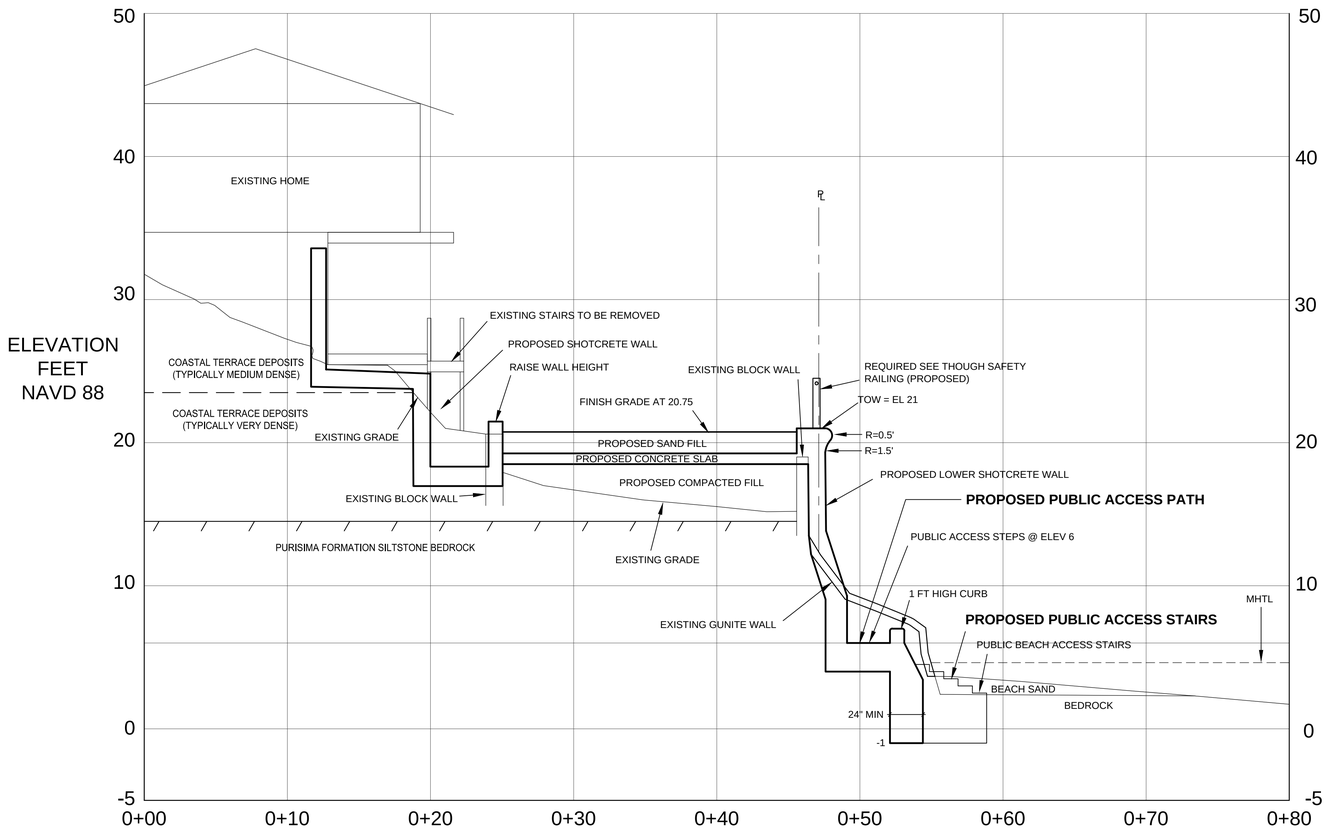

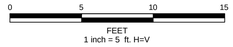

Exhibit 2
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NOT FOR CONSTRUCTION
COASTAL DEVELOPMENT PERMIT SUBMITTAL

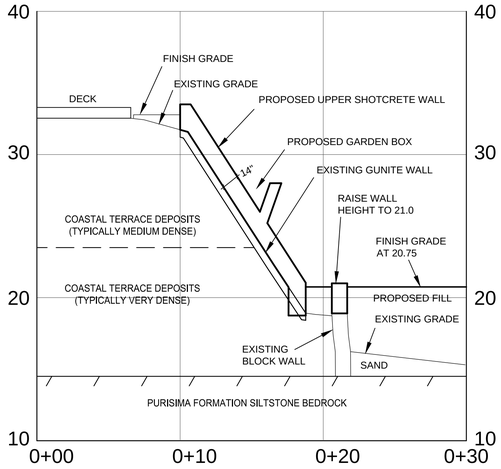
REVISIONS	BY
12/2/2014	MF

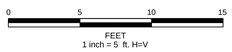
CROSS SECTIONS 4, 5 & 6
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	10-31-2013
Scale	1"= 5 FT
Drawn	MF
Job	
Sheet	4 OF 7 SHEETS

SECTION 7





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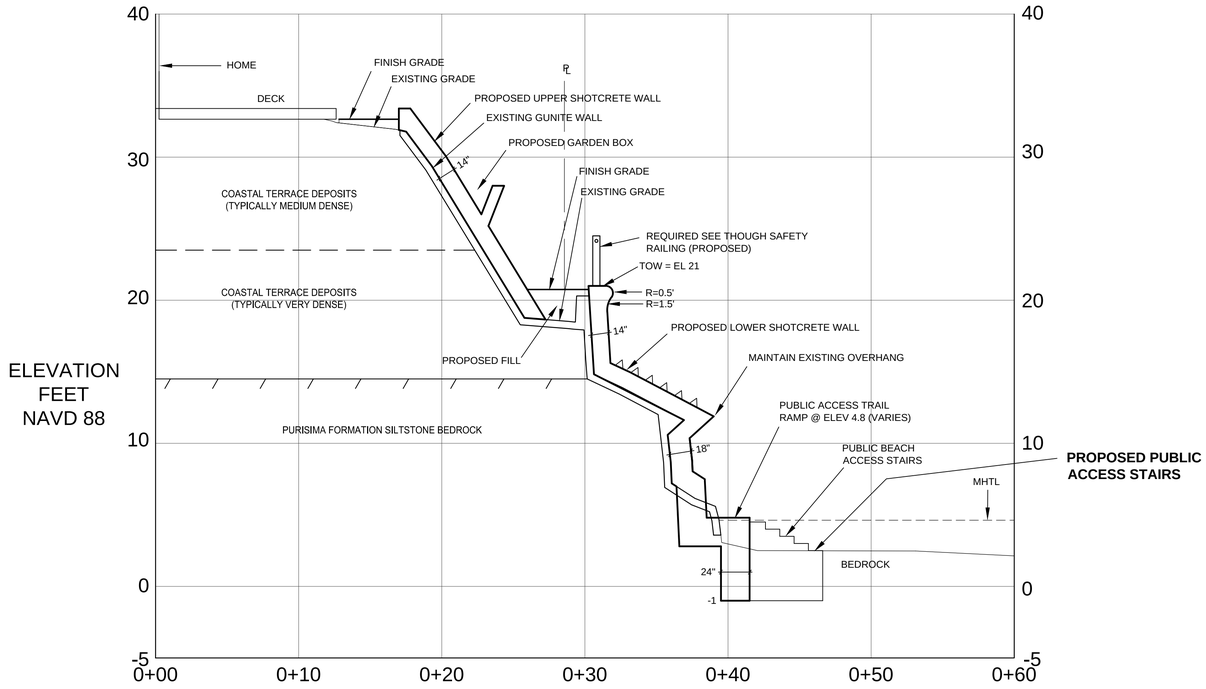

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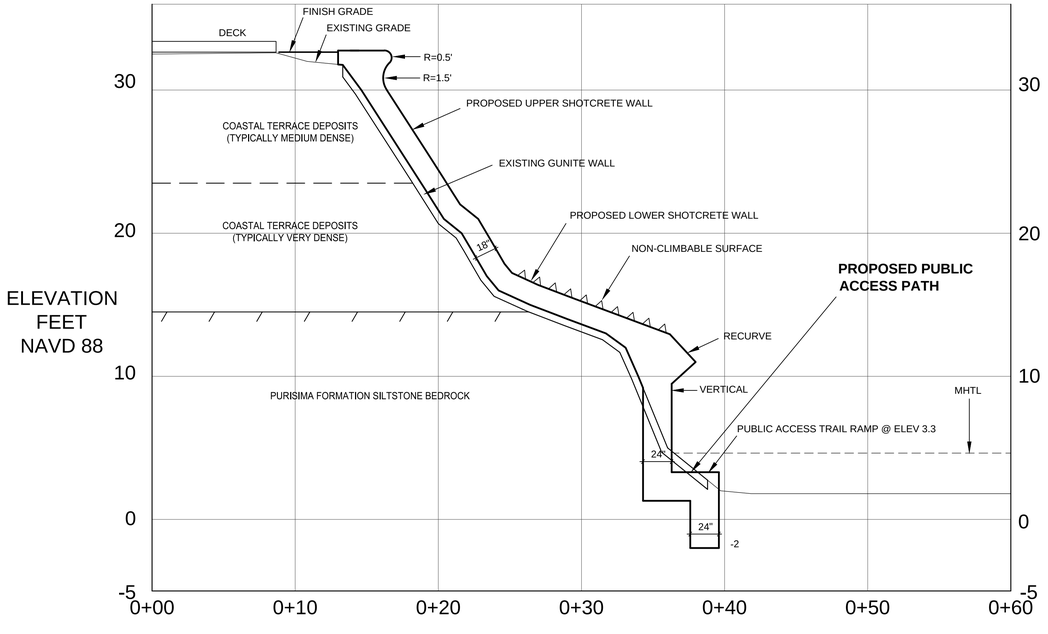

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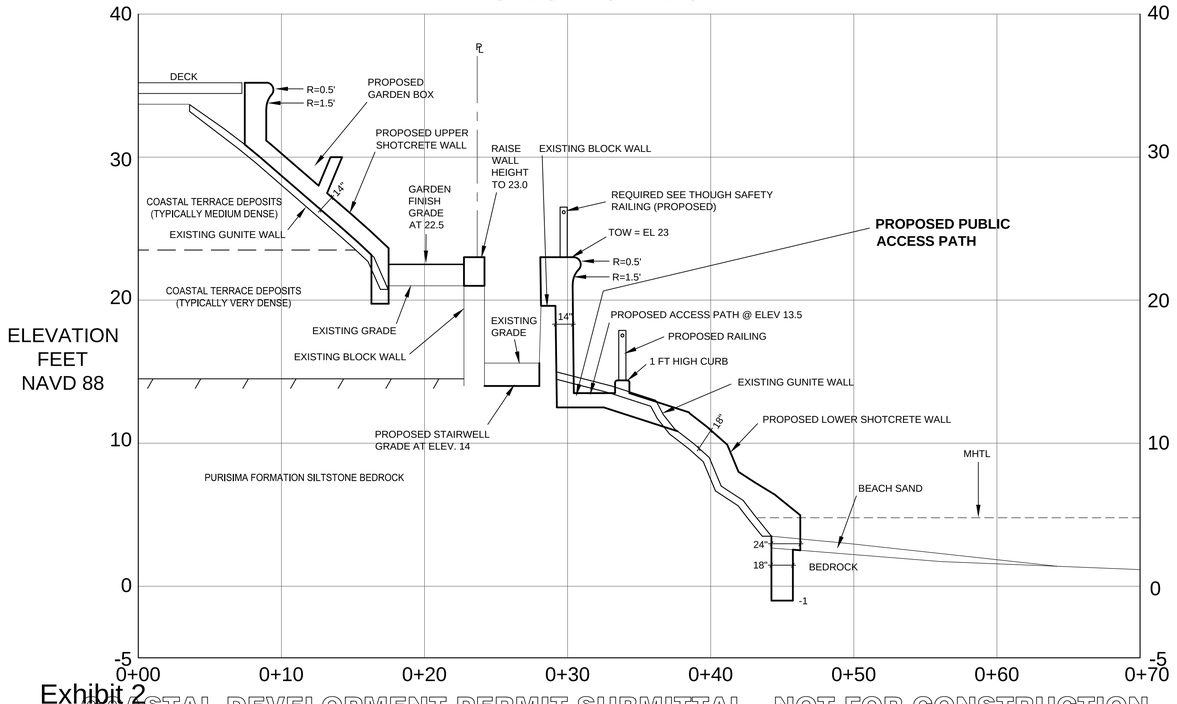


REVISIONS	BY
12/2/2014	MF

CROSS SECTIONS 7, 8, 9 & 10
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	10-31-2013
Scale	1"= 5 FT
Drawn	MF
Job	
Sheet	5 OF 7 SHEETS

CONSTRUCTION MANAGEMENT PLAN PROVISIONS

Construction access shall be as directed by owner. Impacts to the access route must be minimized and disturbance along the access route must be restored to pre-construction conditions upon project completion. The following provisions shall apply to the work.

Any debris generated during construction shall be removed from the beach and either used as fill landward of the proposed seawall or hauled offsite to an approved dumpsite.

All work shall take place during daylight hours and lighting of the beach area is prohibited unless, due to extenuating circumstances, the Santa Cruz County Planning Director or Executive Director of the California Coastal Commission authorizes non-daylight work and/or beach area lighting.

Construction work and equipment operations shall not be conducted seaward of the mean high water line.

All construction equipment shall remain as far landward as possible, and avoid contact with ocean waters and intertidal areas.

All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each work day. Silt fences, or equivalent apparatus, may be installed at the perimeter of the construction site to prevent construction related runoff and/or sediment from entering into the Pacific Ocean. Fencing may be used on the beach for erosion and sediment controls as necessary to contain rock and/or sediments at the project site.

All construction materials and equipment placed on the beach shall be stored beyond the reach of waves and extreme tides, and shall be removed from the beach if necessary to avoid inundation. Materials that remain on the beach overnight must be located on the dry sand back beach area, as close to the toe of the bluff as possible. The extent of overnight storage areas shall be kept the minimum necessary, No fueling, or fuel storage shall be allowed on the beach at any time.

The Contractor (and Permitee) shall monitor weather forecasts and move all construction equipment and materials off of the beach in advance of storm or extreme tidal events.

Construction (including but not limited to construction activities, and materials and/or equipment storage) is prohibited outside of the defined construction, staging, and storage areas shown hereon.

No work shall occur on the beach during Sundays or Holidays unless, due to extenuating circumstances (such as tidal issues or other environmental concerns), and the Santa Cruz County Planning Director or Executive Director of the California Coastal Commission authorizes such work.

All heavy equipment used for concrete pouring shall be set at least 25 feet landward of the blufftop and shall use flexible hoses or articulated booms to deliver concrete to the project site. Other heavy equipment may be used periodically atop the coastal bluff, but shall be removed from the bluff-top when not in use. All heavy equipment and project construction materials shall be stored on dry land along the road or driveway areas adjacent to the project site.

Equipment washing, refueling, and/or servicing shall not take place on the beach, or within 100 feet of the shoreline.

Petroleum products and other hazardous materials will be kept on public roads or a distance of at least 100 feet from the shoreline and shall be stored offsite.

The construction site shall maintain good construction site housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain (including covering exposed piles of soil and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, cover open trash receptacles during wet weather, remove any construction debris from the beach).

All areas of beach disturbed by construction activities shall be restored to their original pre-construction condition. Upon completion of construction of the seawall, the access route and staging area shall be restored to their original condition.

At all times during project construction activities, copies of each of the following shall be maintained in a conspicuous location at the construction job site (where such copies shall be available for public review) and all persons involved with the construction shall be briefed on the content and meaning of each prior to commencement of construction: (a) the signed coastal development permit; (b) the approved final plans; and (c) the approved construction management plan.

MARINE PROTECTION

To prevent any impacts upon the marine habitat, no overburden or wet cement may be allowed to adversely impact the beach or enter the tidal zone. Under no circumstances shall use of equipment be allowed seaward of the mean high tide line when seawater is present. Any areas of loose or unstable soil must be stabilized immediately after other portions of the project are finished. Any heavy equipment operation must be conducted with care near the edge of the bluff to prevent the destabilization of the substrate and additional erosion. Care must be taken so the coastal bluffs outside the work area are not damaged during construction.

CONSTRUCTION COORDINATOR

Contractor shall provide a construction coordinator that can be contacted during construction, should questions arise during construction. (in case of both regular inquiries and in emergencies). Their contact information (including their address and 24 hour phone numbers) shall be conspicuously posted at the job site in a manner so that the contact information is readily visible from public viewing areas. The posting shall indicate that the construction coordinator should be contacted to answer questions that arise during construction. (in case of both regular inquiries and in emergencies). The construction coordinator shall record the name, phone number and nature of all complaints (if any) received during construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

1:32 PM SEPTEMBER 25, 2010 AERIAL PHOTO
COURTESY OF CALIFORNIACOASTLINE.ORG

REVISIONS	BY

CONSTRUCTION MANAGEMENT NOTES & AERIAL PHOTO
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date 9-26-2013
Scale AS SHOWN
Drawn MF
Job
Sheet 6 OF 7 SHEETS

NOT FOR CONSTRUCTION
COASTAL DEVELOPMENT PERMIT SUBMITTAL

GENERAL NOTES

PURPOSE AND OVERVIEW

The purpose of these coastal bluff stabilization plans is to improve coastal access and repair and reconstruct the existing seawalls seaward of the residence at 3054 Pleasure Point Drive, which is the residence immediately upcoast from the Santa Cruz County Seawall and Coastal Access Stairway, The existing seawall at 3054 Pleasure Point Drive needs repair. It is subject to potential undermining since it is founded on beach sand rather than on bedrock.

Surfers presently cross the property at 3054 Pleasure Point Drive to reach a better entry point to paddle out into the surf from than exists at the Santa Cruz County stairway. By constructing a new coastal access path and a new set of stairs in front of 3054 Pleasure Point Drive, public access will be made safer.

The proposed project also includes covering the existing seawall with a structural tied back shotcrete facing that is keyed into bedrock. About 50 cubic yards of excavation will be required to create the keyway for the shotcrete and expose the existing wall surface so it can safely be refaced with shotcrete that is sculpted, textured and colored to resemble natural rock.

There are existing gunite and concrete seawalls along the entire length of coastal bluff where coastal protection work is proposed. The total length of the proposed seawall work is about 155 feet. The proposed seawall work is required to maintain protection of the residence. The proposed coastal protection alternative was selected because it is structurally beneficial, minimizes wall thickness and beach coverage, and allows aesthetic surface treatment of the wall.

MARINE PROTECTION

To prevent any impacts upon the marine habitat, no non-native spoils or debris shall be allowed to enter these areas or shall be allowed to adversely impact the beach or enter the tidal zone. Under no circumstances shall use of equipment be allowed seaward of the Mean High Tide Line in areas where water is present . Equipment and vehicle use on the beach during construction shall be minimized. Contractor employee parking shall be permitted in designated parking areas only. Although construction activity will occur on the beach and near ocean areas, such activity must be strictly confined to the area where work is required. Any areas of loose or unstable soil must be stabilized immediately. Any heavy equipment operation must be conducted with care near the edge of the water to prevent damage to the habitat. Care must be taken so the inland and beach areas outside the work area are not damaged during construction. If a fuel or lubricant spill occurs, immediate notification of the Engineer and appropriate authorities shall be made. Any equipment driven onto the beach should be well maintained and inspected daily to verify that there are no fuel, hydraulic fluid or lubricant leaks.

RESIDENTIAL ACCESS PROTECTION

The proposed work is partly on Santa Cruz County property. The proposed construction access route is from Pleasure Point Drive down the public access stairs to the back edge of the beach to the work area. Impacts to the access route must be minimized. The impacts to beach access and residential access must be minimized. Appropriate signage shall be used to make sure that beach users know what to do as they approach the work sites. The contractor shall be responsible for the restoration of the access route and staging area to its original condition.

EXAMINATION OF JOB SITE, PLANS AND SPECIFICATIONS

A. The Contractor shall examine carefully the site of work and the Plans and Specifications. The submission of a bid shall be conclusive evidence that the Contractor has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the Geotechnical and Coastal Engineering Investigation and Plans and these Specifications. The plans consist of 5 sheets.

B. Iceplant LLC is the Owner of 3054 Pleasure Point Drive. Haro, Kasunich and Associates, Consulting Geotechnical, Coastal and Civil Engineers is the Engineer for the project and will represent the Owner during design and construction of the project. Haro, Kasunich and Associates, Consulting Geotechnical, Coastal and Civil Engineers are the Engineers for the project and represent the project applicant during design and construction of the project.

C. The contractor shall recognize that the plans used for the drawings of the Seawall Structures may differ from the actual physical site. Dimensions are approximate. Before proceeding with the work, it shall be the Contractor's responsibility to check the site in relation to the drawings and specifications. Report any discrepancies to the Owner and the Engineer.

D. The Contractor must attend a pre-bid meeting with the Engineer prior to submitting a proposal to complete the proposed work. The Contractor may be required to attend a pre-construction meeting with the Engineer prior to the commencement of construction. The purpose of these meetings is so the Contractor may ask questions concerning the work and to make sure the Contractor understands the permit conditions and environmental constraints.

COMPLIANCE WITH CODES:

A. All construction and materials shall be as specified and as required by the 2010 California Building Code, the Building Code Standards, locally enforced codes and authorities. All articles, materials and equipment shall be installed, applied and connected as directed by the manufacturer's latest written specifications except where otherwise noted.

B. The Contractor shall keep himself fully informed of all applicable codes, laws, ordinances and regulations of any jurisdiction or authority, and shall adhere strictly thereto. Compliance with all laws, ordinances and regulations of Federal, State, County and Local agencies shall take precedence over all other Contract documents.

TIMETABLE

These plans show the proposed structural work, grading, drainage and general erosion control measures to be implemented as soon as possible.

INSPECTIONS AND MAINTENANCE

The Owner and his representatives shall have the right to inspect any material brought to the job site and shall have the right to reject any materials deemed defective or not conforming to the specifications. The Registered Geotechnical Engineer and/or his representative shall be called to perform construction observation and to make a final inspection of the drainage and erosion control facilities to assure that the work is completed according to plan. Winter storm inspections shall be conducted to identify problem areas and assess the need for corrective actions. Written documentation should be maintained that notes inspection dates, corrective actions needed and corrective actions taken.

NOTIFICATION OF ENGINEER

The 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 surveying, testing and observation can be made.

WORK HOUR RESTRICTIONS

Tidal conditions may restrict the available work hours. Wave runup related flood conditions may restrict the available work time.

Hours of operation or movement of heavy construction equipment shall be limited to between 8:00 a.m. and 6:00 p.m., Monday through Saturday. Such operations shall not occur on Sundays or holidays.

NOISE

All equipment that will operate for extended periods of time at the project site shall be equipped with residential type mufflers.

ACCESS

The Contractor shall use access routes and staging areas as directed by the Owner and shall repair access routes and staging areas to pre-project condition or better as directed by the Owner. The Contractor shall not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner. Underground utilities are located under the access route and shall be protected from damage.

SITE DISTURBANCE

Disturbance of the property beyond the limits of the necessary work area shall be avoided. Sensitive habitat exists immediately adjacent to the work area. The Contractor should expect regulatory agencies to be particularly concerned about any impacts outside the work area.

STAKING AND LOCATION

1. The engineer shall locate the wall locations and mark with stakes prior to construction, for review and construction by contractor. The contractor shall pay for staking.

2. Reference points will be established by the Engineer or by the Surveyor. These reference points will be used to control placement of the structures relative to cultural features and to elevation. It shall be the Contractor's responsibility to furnish and set such additional marks and stakes as is determined necessary to establish lines and grades required for the completion of the work specified, as shown on the plans. The contractor shall have a grade checker on site to check elevations and control the position of the work.

3. Locations of existing drain facilities are approximate. The contractor shall verify locations and protect in place, if within the limits of work. The contractor shall plug, cap, or reconnect /reinstall existing drainage facilities damaged during construction, as directed by engineer.

4. Local survey control: Spikes will be set for use as elevation control points. Do not disturb spikes. The vertical elevation datum is NAVD1988.

DRAINPIPES AND UNDERGROUND UTILITIES

Existing drainpipes and underground utilities within the work area shall be located by the Contractor and avoided and/or protected during construction.

A. The Contractor shall locate, identify, and protect utilities from damage. Location of existing utilities shown on plans is approximate. The existing underground utility locations are not shown on the plans. The Contractor is responsible for locating all existing utilities prior to starting work and protecting utilities throughout course of work.

B. The Contractor shall not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.

C. The Contractor shall notify the Owner prior to shut-off of existing utilities.

GRADING, DRAINAGE, AND EROSION CONTROL NOTES

TIMETABLE

This plan shows the proposed grading, drainage and general erosion control measures to be implemented. The Owner shall be responsible for establishing the measures shown hereon and other measures as required by the grading and erosion control inspector. Between October 15 and April 15, exposed soil shall be protected from erosion at all times. Such protection may consist of mulching, planting of vegetation of adequate density, or covering soils with plastic. Exposed soils on disturbed slopes shall be protected from erosion prior to October 15.

GRADING

Excavation: Sandy materials excavated on the beach shall be left on the beach. If any debris is encountered, it shall be disposed of where directed by Owner or Engineer at an approved dumpsite. Mudstone soils from the keyway shall be placed against the base of the bluff, or where directed by the Engineer.

Sand Fill Placement: Sands excavated to construct the keyway shall be replaced on the beach as directed by the Engineer. The placement and spreading of sand fill materials shall be approved of by the Geotechnical Engineer.

Protection of Improvements: Improvements on site shall be protected from damage. Where improvements (such as fences, railings, paving, or signage) need to be removed to allow access or construction, they shall be removed and replaced with improvements of equal quality.

Fill Placement: The placement and spreading of fill materials and the processing and compaction of fill materials by flooding, ponding, or jetting shall not be permitted without the prior approval of the Geotechnical Engineer. Fills should be keyed and benched into fir soil. The fill shall be placed in 8 inch lifts (compacted layers), moisture conditioned as required and compacted to at least 90 percent relative compaction as per ASTM Test Procedure D1557. Field density tests shall be made by the Geotechnical Engineer to ensure proper compaction. Field density tests will be performed in accordance with ASTM D1557. The number of tests and their location shall be at the sole discretion of the Geotechnical Engineer.

Weather: No fill material shall be placed, spread or compacted during unfavorable weather conditions. When work is interrupted by heavy rains, fill operations shall not resume until field density tests taken by the Geotechnical Engineer indicate that the moisture content and density of the fill meet the specified requirements.

EROSION CONTROL

During construction, erosion control measures shall be in place .These construction measures shall be in the form of dust control, straw mulch, straw bales and wattles placed at the appropriate areas of work as directed by the Engineer.

SUPPLEMENTAL RECOMMENDATIONS

If undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at this time, Haro, Kasunich and Associates, Inc., shall be notified so that supplemental recommendations can be given.

INSPECTIONS AND MAINTENENCE

The Registered Geotechnical and Civil Engineer and/or his representative shall be called to perform construction observation and to make a final inspection of the site to assure that the work is completed according to plan. Winter storm inspections shall be conducted to identify problem areas and assess the need for corrective actions. Written documentation should be maintained that notes inspection dates, corrective actions needed and corrective actions taken.

Wall Backfill: Retaining walls shall be backfilled with gravel where indicated by the Engineer. Gravel shall be Caltrans permeable material Class I, Type A (Caltrans specification 68-1.025) or ¾ inch angular gravel, as selected by the Engineer. Gravel backfill shall be completed in lifts not exceeding two feet thick. Gravel shall be placed to within two vertical feet of finish grade. Drainpipes to allow seepage that accumulates in the gravel to pass through the wall shall be installed as directed by the Engineer.

Deleterious Materials: The Contractor shall carefully excavate all materials necessary, of whatever nature, for construction of the work. Any material of an unsuitable or deleterious nature discovered below the footing of the proposed retaining walls shall be brought to the attention of the Geotechnical Engineer before proceeding with the work.

Voids: Any voids exposed during excavation work shall be backfilled as directed by the Engineer.

Protection of Improvements: Improvements on site shall be protected from damage. Where improvements (such as fences, railings, paving, or signage) need to be removed to allow access or construction, they shall be removed and replaced with improvements of equal quality.

Excavation: Sands, soils and bedrock materials excavated to construct the keyways shall be contained on the slope and either used as a cap over the granular backfill, or exported to an approved dumpsite, as directed by the Engineer.

Spoils: Excavated spoils shall be disposed of where directed by Owner.

Temporary Cut Slopes: Maximum gradients shall not exceed 1.0:1.0 (H:V), except in hard bedrock. Temporary cut slopes must be inspected by the Engineer during excavation, to determine the need for temporary shoring or temporary underpinning of adjacent retaining structures and/or improvements. The Contractor shall be required to implement shoring as required by the Engineer and as required by OSHA and other regulatory agencies.

Footing Excavations: Must be inspected by Engineer; and approved by Engineer, prior to placement of steel and concrete.

Drainage Pipes: Exposed subgrade under drainage outlet pipes and backfill over and around the pipes shall be compacted to 90 percent relative compaction. All drainage discharge locations shall be approved by the Engineer.

DUST CONTROL

For dust control purposes, watering of exposed surfaces during clearing, excavation, stockpiling and grading, and in the late morning and the end of each workday shall be done. Grading activities shall be prohibited during periods of high winds greater than 30 miles an hour.

EROSION CONTROL

During construction, erosion control measures shall be in place in areas to be graded, as well as around the stockpiled soils. These construction measures shall be in the form of dust control, straw mulch, straw bales and wattles and/or silt fences placed at the appropriate areas of work as directed by the Engineer.

NOISE CONTROL

All equipment that will operate for extended periods of time at the project site shall be equipped with mufflers.

SUPPLEMENTAL RECOMMENDATIONS

If undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at this time, our firm shall be notified so that supplemental recommendations can be given.

NOT FOR CONSTRUCTION
COASTAL DEVELOPMENT PERMIT SUBMITTAL

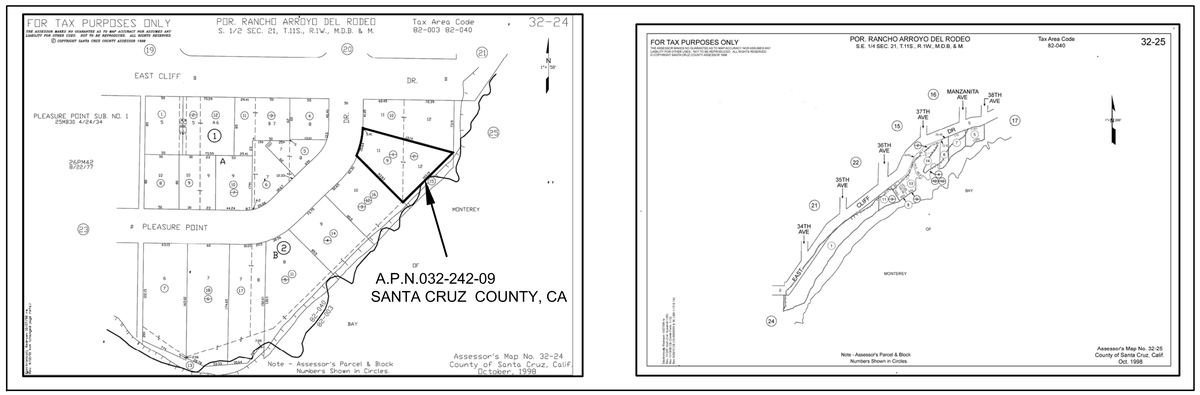
REVISIONS	BY

GENERAL NOTES
PUBLIC ACCESS AND COASTAL PROTECTION PLANS
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

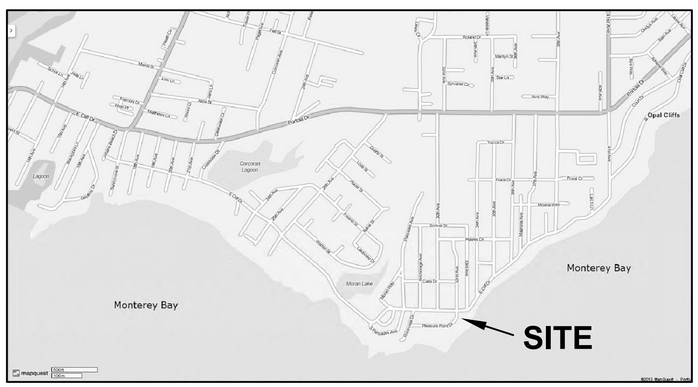
HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date 9-26-2013
Scale AS SHOWN
Drawn MF
Job
Sheet 7
OF 7 SHEETS

PURCHASE AND LEASE AREAS DRAWING
ADJACENT TO 3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062
A.P.N. 032-242-09



APN MAPS



VICINITY MAP

SHEET INDEX

PROPERTY OWNER:

ICEPLANT LLC
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

PLAN PREPARERS:

John Kasunich, G.E. 455
Mark Foxx, C.E.G. 1493
HARO, KASUNICH & ASSOCIATES, INC.
116 East Lake
Watsonville, CA 95076
(831)722-4175
(831)722-3202 FAX

Exhibit 3
3-14-0488
1 of 2

REVISIONS	BY

TITLE SHEET
PURCHASE AND LEASE AREAS DRAWING
ADJACENT TO 3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	9-17-2013
Scale	AS SHOWN
Drawn	MF
Job	
Sheet	1 OF 7 SHEETS

D:\FOX\Olivan Pleasure Point\2013-9-17 Olivan Purchase and Lease Areas.dwg, 9/17/2013 2:45:28 PM

EXISTING SINGLE FAMILY RESIDENCE

A.P.N. 032-242-09
3054 PLEASURE POINT DRIVE
ICEPLANT LLC

BUILDING FOOTPRINT

A.P.N. 032-242-16
3052 PLEASURE POINT DRIVE
DONALD & LISETTE DARST, TRUSTEES

DECK
@ ELEV 33.4

LOWER HOUSE WALL

UPPER HOUSE WALL

UPPER WALKWAY

UPPER WALKWAY

PVC

FENCE LOCATED ON APN 032-242-09 PER RECORD OF SURVEY 119-M-25 RECORDED 7/24/2012 DOCUMENT NO. 2012-0035090. NOTE; WARD SURVEY EDITED BY HKA TO CONFORM WITH 119-M-25

EXISTING DECK
@ ELEV 35.2

YUCCA

NEIGHBOR'S WALL

EXISTING STAIRS TO BE REMOVED

STEP

LEVEL AREA
(SAND)
16

CONCRETE APRON COVERED BY SAND

AREA TO BE PURCHASED FROM COUNTY
1928 SQUARE FEET

APN 032-242-15 PER 1818 O.R.467 EXTENDS TO MEAN HIGH TIDE LINE

ELEVATION 4.63 FT
NAVD88 MEAN
HIGH TIDE LINE

AREA TO BE LEASED FROM THE STATE OF CALIFORNIA
589 SQUARE FEET

EXISTING CONCRETE

LANDING ELEV 5.0

PROPOSED

CURB

DRAIN

SEAWALL

LANDING ELEV 13.5

TRAIL (GROOVED RAMP @ 10% SLOPE)

LOWEST STEP ELEV 2.5

LANDING ELEV 1.5

PROPOSED PUBLIC ACCESS STAIRS

SHOTCRETE

EXISTING COUNTY SEAWALL

A.P.N. 032-242-10
COUNTY OF SANTA CRUZ

N44°30'00"E 103.19'

ACCESS PATH

ELEVATION 4.63 FT
NAVD88 MEAN HIGH
TIDE LINE

A.P.N. 032-242-15
COUNTY OF SANTA CRUZ

OVERLOOK AREA

A.P.N. 032-251-01
COUNTY OF SANTA CRUZ

MONTEREY BAY

BEDROCK

SAND MAPPED 10/12/12

PROPOSED LOWER SHOTCRETE SEAWALL

ROCK

CONCRETE

NATURAL ROCK

PROPOSED LOWER SHOTCRETE SEAWALL

APN 032-242-15 PER 1818 O.R.467
EXTENDS TO MEAN HIGH TIDE LINE

PLASTIC PIPE

FD NAIL

0 5 10 15
FEET
1 inch = 5 ft.

TOPOGRAPHIC BASE MAP BY:
MATTHEW WARD, P.L.S. 6325
WARD SURVEYING 622 7TH AVENUE
SANTA CRUZ, CA. 95062 (831) 425-5005

3054 PLEASURE POINT DRIVE
SANTA CRUZ, CALIFORNIA
A.P.N. 032-242-09

FIELD WORK WAS COMPLETED ON OCTOBER 18, 2012. MAPPING ABOVE THE MHTL WAS DONE IN SEPTEMBER OF 2009. DATA BELOW THE MHTL WAS UPDATED BY THIS SURVEY.

MEASUREMENTS: SHOWN IN FEET AND DECIMALS THEREOF (100.48).

ELEVATIONS FOR THIS SURVEY ARE BASED ON SANTA CRUZ COUNTY BENCHMARK No. 426. NGVD 29 CONVERTED TO NGVD 88.

USERS OF THIS MAP ARE ADVISED TO CONTACT THE PREPARER TO BE SURE THERE ARE NO PERTINENT REVISIONS TO THE COPY OBTAINED. PLEASE NOTE THAT CERTIFIED ORIGINALS AND/OR PRINTS ARE "WET SIGNED". ANY ORIGINALS AND/OR PRINTS NOT "WET SIGNED" ARE NOT CERTIFIED. DIGITAL COPIES OF THIS MAP ARE NOT CERTIFIED.

THIS MAP WAS PREPARED UNDER MY DIRECTION TO THE NORMAL STANDARDS OF CARE OF PROFESSIONAL LAND SURVEYORS IN THE STATE OF CALIFORNIA:
MATTHEW D. WARD P.L.S. 6235
LICENSE FEE RENEWAL DATE: 03-31-14
JOB # 09158
DATE 11/27/12

Exhibit 3
3-14-0488
2 of 2

REVISIONS	BY

PLAN VIEW
PURCHASE AND LEASE AREAS DRAWING ADJACENT TO 3054 PLEASURE POINT DRIVE SANTA CRUZ, CA 95062

HARO, KASUNICH AND ASSOCIATES, INC.
CONSULTING CIVIL, GEOTECHNICAL & COASTAL ENGINEERS
116 EAST LAKE AVE., WATSONVILLE, CA 95076 (831) 722-4175

Date	9-17-2013
Scale	1"= 5 FT
Drawn	MF
Job	
Sheet	2 OF 2 SHEETS

Aerial Photo 1972

Aerial Photo 2013

Existing Wall – Close up

Pleasure Point Stairway – Close up

Applicant's Visual Simulation

Exhibit 5
3-14-0488
1 of 2


Public Park
3054 Pleasure Point Drive
East Cliff Drive
Existing County Seawall
Proposed Public Overlook Area Behind a Guard Curb
Proposed Public Access Steps Behind Rock Fence
Proposed Public Access Path

EXISTING SINGLE FAMILY RESIDENCE

A.P.N. 032-242-09
ICEPLANT LLC

EXISTING DECK

EXISTING DECK

EXISTING DECK

ARCTIOSTAPHYLOS UVA-URSI
'POINT REYES'

(EX) DECK EDGE

(EX) DECK EDGE

CEANOTHUS GRISEUS
'LOUIS EDMUNDS'

CAREX PANSA

TOP OF BLUFF

TOP OF BLUFF

TOP OF BLUFF

NEIGHBOR'S WALL

30

25

TOE OF SLOPE

Proposed Stairs

Proposed Stairs

CALAMAGROSTIS NUTKAENSIS

ERIGERON GLAUCUS

30

25

(EX) DECK EDGE

CEANOTHUS GRISEUS
HORISONTALIS
'CARMEL CREEPER'

(EX) BLOCK WALL

SEAWALL

Proposed Planter

30

25

SEAWALL

GROOVED RAMP TRAIL

ACCESS PATH

PROPOSED PUBLIC
ACCESS STAIRS

A.P.N. 032-242-15
COUNTY OF SANTA CRUZ

OVERLOOK AREA

CURB AND

SEE-THROUGH GUARDRAIL

N

IRRIGATION NOTES

Install automatic irrigation system with proper backflow preventer

1/2" drip tube to each container plant
1 ea. - 1 GPH Pressure compensating emitter

PLANT NOTES

Botanical Name	Common Name	Count
Arctostaphylos uva-ursi	Point Reyes' Manzanita	12 - 1Gal
Calamagrostis nutkaensis	Calif. Reed Grass	21 - 1Gal
Ceanothus griseus horisontalis	'Carmel Creeper'	15 - 1Gal
Ceanothus griseus	'Louis Edmunds'	5 - 5Gal
Carex pansa	Dune Sedge	24 - 1Gal
Erigeron glaucus	'Seaside Daisy'	19 - 1Gal

PLANTING PLAN

WITH IRRIGATION NOTES

REVISIONS

3635 N. Main Street
Soquel, CA 95073-2532
831-476-5999 Fax: 831-476-0363
www.primelandscape.com
John David
jd@primelandscape.com
Certified Soil & Sediment Control Specialist # 923
Member California Landscape Contractor Association

ICEPLANT LLC
3054 PLEASURE POINT DRIVE
SANTA CRUZ, CA 95062

DRAWN BY
Donna Gallagher

DATE
MARCH 12, 2015

1/4" = 1'- 0"

SHEET NO.
1 of 1

Exhibit 6
3-14-0488
1 of 1

Project No. SC10245
17 July 2015

DATE: 16 JULY 2015

TO: MARK MASSARA

FROM: JOHN KASUNICH, HARO KASUNICH & ASSOCIATES, INC. JK

SUBJECT: OUTLINE OF DESIGN EVALUATION AND CRITERIA USED FOR PROPOSED COASTAL PROTECTION PLANS AND PUBLIC ACCESS IMPROVEMENTS

REFERENCE: 3054 PLEASURE POINT DR.
SANTA CRUZ, CALIFORNIA 95062
HKA PROJECT NO. SC10245

1. Most homes at the top of Pleasure Point have been historically protected from coastal erosion using concrete gunite surfacing to protect against wave runup impact forces. The original protection structures were first placed circa 1940's and 1950's and continued into the 80's.

2. A gunite surface covering wire mesh was originally used at the referenced property. This gunite surface was placed prior to the 1972 Coastal Act and covered the complete bluff as can be seen today.

3. Haro, Kasunich and Associates prepared a Geotechnical and Coastal Engineering Report for the reference project dated 9 December 2014. This site analysis quantified present geologic and coastal hazards at the site. The geotechnical and coastal engineering evaluation of the existing coastal protection surface determined that the structure was in a very deteriorated condition with numerous perforations, severe cracking and a constant need for repair and maintenance.

4. The design criteria developed for the proposed seawall rehabilitation project took into account the following conditions:

    A. At least 15 feet of natural bedrock outcropping seaward of the original gunite wire seawall has been eroded, exposing the point and removing a natural groin that historically contained sand and offered more extended periods of protection during each winter storm season.

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B. The wave climate and runup forces associated with high tide storm waves and increasing sea level has increased over time due to the reduction of beach sand accumulating more often at the top of the point over extended periods of time.

C. The elevation where significant wave forces occur is increasing due to the loss of natural bedrock and beach sand protection and the increase in sea level rise.

D. The need to positively secure the repaired seawall to the bluff face and maintain structural integrity over an extended period of time relative to its' steel reinforcing and concrete cover.

5. Removal of existing concrete and gunite surfacing and replacement with one larger vertical seawall closer to the existing residence was considered. The process of removing gunite and concrete would be very detrimental to the physical and user environment at the top of the point and would accelerate deterioration of the natural bedrock and outcropping that exist; and would require a much larger, higher seawall to maintain adequate protection of the house.

6. Incorporating the cove patio slab as a broad foundation element while maintaining the same geometric configuration and utilizing shorter step benched seawalls as protection allowed us to utilize the existing seawall mass and reduce some of the seawall heights for a more efficient design.

7. Maintaining the existing configuration also allowed for more effective public access improvements that would easily merge with the existing public stairway system and blend in with the other seawall configurations at the top of the point.

8. Covering the existing wall surfaces with shotcrete will allow integration of garden and planter boxes for a more natural landscape softening.

9. Artificial rock fascia is proposed to blend with the existing artificial rock features of the adjacent County seawall. The railings needed at lower elevations to protect public access will also be made of artificial rock to visually blend with the environment. Solid railings along the pedestrian path will maintain safety per building code requirements and offer wave runup protection as well as visual aesthetics matching the existing environment. Railings at higher elevations are designed with see through stainless steel tubing to maximize visibility for the public viewing the ocean and the point from the bluff top.

10. Re-curves were minimized at the top of the existing walls to conform to a more natural look.

11. By maintaining and reducing seawall heights, fewer rows and total number of tiebacks are necessary. Tieback configuration and location was difficult due to cumbersome property lines and the existing tieback soil nail tendons that penetrate into the reference property from the County seawall.

12. A recurve at the most upcoast end of the proposed seawall project is necessary to reduce the amount of concrete that would otherwise be needed to reconfigure a more vertical wall at the existing slope so as not to negatively impact the adjacent neighbor and the reference house. This recurve feature will be minimized and closely monitored during its construction to reflect a wave cut notch mimicking natural bedrock outcrops in the Pleasure Point area.

13. Anti-climb features consisting of small artificial rock outcropping built in irregular, uncomfortable patterns along the surface of the southeastern corner of the repaired seawall will help maintain privacy and protect the public from attempting dangerous activity.

14. The public pedestrian path was designed and located so it could continue upcoast in the future at a convenient elevation.

15. Stairways leading from the path to the backshore were designed to blend in with the environment and to offer recreational and visual usage during medium and low tide conditions.

The decision to recover and repair the existing seawall configuration was based on a reduction of construction activity by reducing thickness, tiebacks and height and eliminating demolition and grading so that the construction project would have the least environmental impact to people using the point. The benched irregular configuration of the existing and therefore proposed seawall protection system will also be more aesthetically pleasing relative to the natural configuration of Pleasure Point and the adjacent retaining wall structures that now exist.

Project No.SC10245
12 August 2015

MR. MARK MASSARA
1642 Great Highway
San Francisco, CA 94122

Subject: Geotechnical and Coastal Engineering Responses to Additional Comments and Questions Regarding Proposed Coastal Protection Structure

Reference: Seawall Maintenance and Repair, Bluff Stabilization and Public Access Improvements
3054 Pleasure Point Drive
APN 032-242-09
Santa Cruz, California

Dear Mr. Massara:

Please find below additional information and responses to comments and questions from Ryan Maroney at the California Coastal Commission regarding maintenance and repair of the existing coastal protection structure at the above referenced property.

1. Will shotcrete simply be added on top of existing gunite structures?

   The repair and maintenance plan created for the existing structure designed to completely cover all existing gunite surfaces with a new reinforced, shotcrete surface that mimics the existing gunite contours. This plan reduces the mass volume of removal concrete, minimizes repair requirements and maintains the same configuration of the existing seawall. Further, in collaboration with the County of Santa Cruz and consistent with the adjacent Pleasure Point Seawall, and in order to conform to recent code requirements and coastal engineering standards, tiebacks were incorporated into the design and are engineered to support and counteract overturning forces related to active earth pressures and seismic surcharges the wall is subjected to without needing to construct a significant footing at the base of each of the walls. "Similarly, the existing block wall is also proposed for repair in place with shotcrete for code conformity and minimizing reconstruction, resulting in additional structural support that eliminates the need for larger base wall footings."

2. Will portions of the existing seawalls be removed and replaced?

   The existing lower walls will not be removed and replaced, they will be completely covered with the tiedbacked reinforced shotcrete. In one area where

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the existing pedestrian path circumvents the downcoast point additional layers of shotcrete will be placed to widen the pedestrian trail into a conforming walkway. In like manner, the block front wall will not be replaced. It will remain in its existing alignment and configuration and will be covered with reinforced shotcrete to blend in with and look like native sandstone. The existing gate will be repositioned on the wall to conform with the repair of the stairway system and the backfill behind the block wall. The existing upper wall will be covered with reinforced shotcrete. Two sections of the upper wall where adverse gunite slopes deflect waves from west and southwest swells onto the residential structure will be excavated into the existing bluff just enough to make the adverse slope near vertical. This will occur in approximately two areas 4x10 feet in width, as shown on the Plans at Sheet 2, 3 and 4, Sections 3 and 6. These areas will be covered with the shotcrete surface that encompasses the upper wall. Some additional shotcrete will be placed where flower beds are planned to allow for growth and covering of the wall to soften its appearance, as shown on Sheets 4 and 5, Sections 4, 6, 7, 8 and 10.

3. Where will tiebacks be used?

Tiebacks are proposed along the lower wall, the block front wall and the upper wall. All tiebacks will be buried behind the shotcrete bedrock fascia and therefore not visible. The tiebacks location will be noted on the structural plans developed for the building permit. They will be spaced 5 to 9 feet on center and will consist of 1 inch high strength steel rods grouted in a 6 inch diameter drilled shaft 20 to 25 feet in length.

4. *What is the nature of the existing block wall? How will it be repaired?*

The existing block wall functions as a necessary component of coastal protection for the existing residential structure and is a boundary between the property and the improved pedestrian walkway proposed for this repair/maintenance development. The top of the existing block wall from the downcoast point to the upcoast point varies in elevation from 21.7 to 19.5 feet. The proposed shotcrete fascia will alter that height higher and lower by a foot and a half. In order to cover the block wall with artificial rock fascia and structurally tie it to the up and down coast seawall wings some areas of the wall height will be slightly increased and some areas will be reduced. To counter wave forces that impact the wall shotcrete reinforcing will be rigorous where it ties to the upcoast and downcoast side of the existing gunite surfaces. Overall, the average height of the wall will remain as it is today. The height variation across the top of the wall will undulate within a 12 inch range to accommodate a more natural rocky fascia appearance.

5. Can we provide additional information regarding the history of ownership of the "platform property".

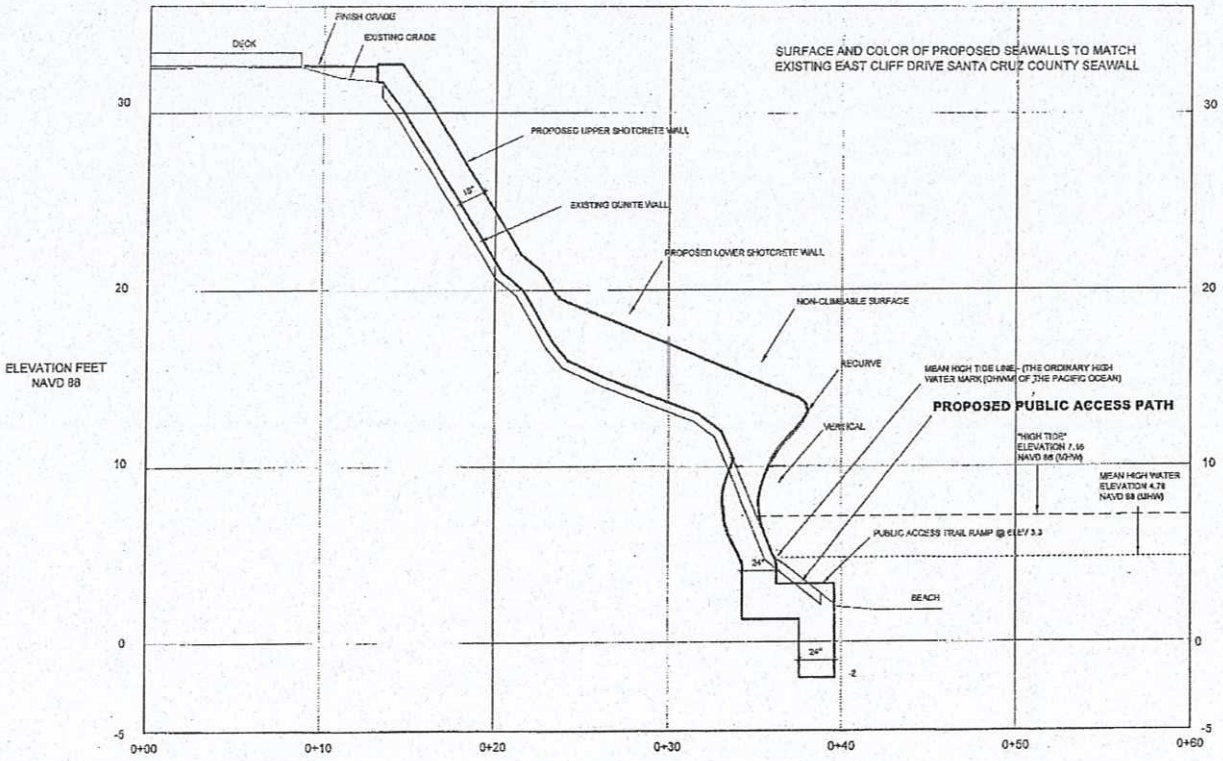
This is the parcel of land (APN 032-242-15) that is seaward of the residential parcel (APN 032-242-09). APN 032-242-15 was acquired by the County of Santa Cruz in 1967 and was recently sold to Iceplant LLC.

Prior to 1967 the parcel was duly sold and conveyed to the State of California for non-payment of taxes which had been legally levied and were a lien upon said property. The State of California sold the property to the County of Santa Cruz on March 12, 1967. We interpret Deed 1818-467 to indicate that prior to 1967, the property was in private ownership, and when the property owner did not pay his property taxes, the property was sold to the State, who subsequently sold it to the County in 1967. We do not know if the property owner who failed to pay their property taxes also owned the home at 3054 Pleasure Point Drive then, but suspect they did. If so, the recent sale of APN 032-242-15 by the County of Santa Cruz merely re-established common ownership of the property to what it was prior to the tax default.

6. Can the "anti-climb" features "mimic" the existing natural topography, and not consist of "pointy" rocks?

Yes they can. There is one slightly sloping platform above the pedestrian path on the upcoast side of the project where members of the public might attempt to climb onto the adjacent private property. To discourage this we considered anti climb pointy rock features. Based on our discussions with coastal staff, we have reconfigured the lower wall in this area with an exaggerated undercut acting as a natural recurve and eliminated the pointy rock anti climb features. We will add a rough surface component to this slightly sloped platform that will be shaped to conform to bedrock outcropping seen throughout the top of Pleasure Point to inhibit pedestrian climbing and/or perching above the pedestrian path. We will use a roughened surface in this area that mimics existing natural topography. All of the proposed shotcrete covering will consist of rock fascia that matches the bedrock at Pleasure Point and coordinates well visually and seamlessly with the adjacent County seawall surface.

Below is a revised Section 9 from Plan Sheet 5 showing a typical exaggerated undercut below the non-climbable surface. No "pointy" rockwork will be used on the project.



If you, or Coastal Commission staff have additional questions, please discuss them with us and we will endeavor to modify the wall as much as structurally possible to conform to their environmental concerns.

Respectfully Submitted,

HARO, KASUNICH AND ASSOCIATES, INC.

John E. Kasunich
G.E. 455

JEK/sr
Copies: 1 to Addressee by e-mail
1 to Javier Olivan by e-mail