STAFF REPORT
CITY OF SOLANA BEACH

TO: Honorable Mayor and City Council Members
FROM: David Ott, Interim City Manager
MEETING DATE: January 14, 2015
ORIGINATING DEPT: Community Development Department
SUBJECT: Request for CUP Time Extension for 249 Pacific Avenue
(Case # 17-11-24 Applicant: Presnell/Graves LLC)

BACKGROUND:
The Applicant, Presnell/Graves LLC, is requesting a 12-month time extension to a Conditional Use Permit (CUP) originally approved on February 22, 2012, for the construction of a 24 foot long, 35 foot high seawall below 249 Pacific Avenue. As designed, the proposed wall, including the color and texture, will blend in with the surrounding natural bluff.

The issue before the Council is whether to approve, approve with conditions, or deny the Applicant's request.

DISCUSSION:
The Applicant received Council approval for CUP Case No. 17-11-24 for a 74 foot long, 35 foot high seawall below 245 and 249 Pacific Avenue on February 22, 2012, however, the California Coastal Commission (CCC) approved a 24 long sea wall below 249 Pacific Avenue only. The history of the project is detailed in the attached Staff Report and signed Resolution No. 2012-023 (Attachment 1).

A time extension was requested because the project approval was set to expire on February 22, 2014, unless the Applicant received building permits and started construction prior to that date. Solana Beach Municipal Code (SBMC) Section 17.72.110 (Lapse of Approval and Extensions) allows the Council to grant one or more extensions with a maximum duration of 12 months not exceeding a cumulative total of 24 months after the date the original approval expires. The Applicant submitted an application (Attachment 2) on December 12, 2013, well before the 60 days prior to the expiration date of February 22, 2014 (SBMC 17.72.110). The Applicant requested a 12-

COUNCIL ACTION:

AGENDA ITEM B.2.
month time extension of the approved project, setting the expiration date of February 22, 2015.

SBMC Section 17.72.110 establishes that Council action is required to review and act on a request for an extension of a DRP when Council was the original approving body. The Council may extend the approval of a project if they are able to make the seven (7) required findings, which are as follows:

1. *The applicant has presented facts which establish that the applicant has timely and diligently pursued issuance of a building permit during the 24 month period following the issuance of the original approval for the project (or the different period set forth as a condition of approval of the project) or during the then current extension period;*

2. *Circumstances beyond the applicant’s control have intervened and prevented the applicant from obtaining the issuance of a building permit for the project prior to expiration of the 24 month period (or the expiration date established as a condition of the approval) or during the then current extension period;*

3. *The application for the extension sets forth a reasonable and substantial factual basis for issuance of the extension;*

4. *There is a substantial factual basis to determine that the applicant will be able to perform the actions necessary to obtain issuance of a building permit prior to expiration of the requested extension;*

5. *The duration of the extension requested by the applicant is not longer than is reasonably necessary to perform the actions necessary to obtain the issuance of a building permit;*

6. *There have not been any significant changes in the general plan, applicable specific plan, if any, zoning, or character of the area within which the project is located that would cause the approved project to become inconsistent, incompatible, or nonconforming therewith; and*

7. *The granting of an extension shall not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.*

Due to protracted negotiations with the California Coastal Commission (CCC) to obtain project approval, the Applicant did not receive a Notice of Intent to issue the Coastal Development Permit (CDP) until July 4, 2014.

The original project was reviewed pursuant to the draft Local Coastal Plan (LCP) Land Use Plan (LUP) policies. After the original approval of the CUP for this project, the City’s LCP/LUP was adopted by the Council on February 27, 2013. The Land Use Plan
Amendment (LUPA) was subsequently adopted by the Council on June 11, 2014 and certified by the CCC on August 13, 2014.

If the proposed modification and time extension is approved, the previously approved plans and the plans approved by the CCC could be found to be in conformance with the LUP as amended by the Council on June 11, 2014. The CCC approved wall is 50 feet less than the City approved 74 foot long wall, and there is no indication that the project would be detrimental to the public health, safety or welfare of the properties within the surrounding area.

If the Council can make the required findings to approve the time extension, the Applicant will be required to comply with the original conditions of approval in Resolution No. 2012-023. The Applicant will also be required to obtain building permits and begin construction of all components of the project prior to the new expiration date of February 22, 2015. Should the request for an extension of the CUP be denied, a new application would then be required for the project.

A draft Resolution of Approval has been prepared by Staff for the consideration of the Council (Attachment 3). The draft Resolution is based upon the information provided in this report. The Council may direct Staff to modify Resolution 2015-005 to reflect the findings and conditions it deems appropriate as a part of the public hearing process. In the alternative, if Council determines the request is to be denied, Staff will prepare a Resolution of Denial for an action to be taken at a subsequent Council meeting.

Notices of a public hearing for this project were mailed to property owners and occupants within 300 feet of the project site more than 10 days prior to the Council date. As of the date of preparation of this Staff Report, no phone calls, letters, or emails have been received by Staff in regard to the extension request.

**CEQA COMPLIANCE STATEMENT:**
Time Extensions are not a project as defined by CEQA. The original project was found exempt pursuant to CEQA Guidelines Section 15359, Emergency.

**FISCAL IMPACT:** N/A

**WORKPLAN:** N/A

**OPTIONS:**
- Approve the request for a 12-month extension for the CUP (Case No. 17-11-24) setting an expiration date of February 22, 2015.
- Deny the request for a time extension.
- Provide direction to Staff.

**DEPARTMENT RECOMMENDATION:**
Staff recommends that the City Council:

2. Adopt Resolution 2015-005, approving the request for a 12-month extension for CUP (Case No. 17-11-24) and setting the expiration date as February 22, 2015.

**CITY MANAGER'S RECOMMENDATION:**
Approve Department Recommendation

David Ott, Interim City Manager

Attachments:
1. February 22, 2012 Staff Report and Resolution
2. Project Time Extension Application
3. Resolution 2015-005
STAFF REPORT
CITY OF SOLANA BEACH

TO: Honorable Mayor and City Councilmembers
FROM: David Ott, City Manager
MEETING DATE: February 22, 2012
ORIGINATING DEPT: Community Development Department
SUBJECT: Request for a Conditional Use Permit for a Bluff Retention Device below 245 and 249 Pacific Avenue, Solana Beach. Case No: CUP 17-11-24; Applicants: Presnell/Graves LLC and Eron Jokipii

BACKGROUND:
Presnell Graves LLC and Eron Jokipii (Applicant’s) have requested the approval of a Conditional Use Permit (CUP) to stabilize the lower, mid- and upper-bluffs at the subject site to protect two bluff top principal structures in imminent danger from a potential bluff failure. This Staff Report addresses the existing conditions of the coastal bluffs below 245 and 249 Pacific Avenue (subject site or Proposed Project site) located in the City of Solana Beach. The subject site consists of two developed parcels each occupied by a single-family residence located on the bluff top. A brief history of each property is provided below and is based on the findings contained within the Coastal Bluff Evaluation and Basis of Design Report (Terra Costa Consulting Group, January 6, 2012 and included as Attachment 1).

It is the task of the City Council to Approve, Approve with Conditions or Deny the Applicant’s request for a Development Review Permit.

245 Pacific Avenue
The original structure at 245 Pacific Avenue was constructed in the mid to late 1950’s. A California Coastal Commission (CCC) permit was issued in 1996 for the construction of a new 3,951 square-foot home in place of the existing 1,135 square-foot home (CCC CDP 6-96-21). A condition of that permit included a deed restriction preventing the owner from obtaining a permit for future shoreline protection measures for portions of the house that are seaward of the 40-foot setback line. In this case, under current conditions, substantial portions of the house at 245 Pacific Avenue are landward of the 40-foot setback line (not subject to the Deed Restriction) and are at significant risk and in need of stabilization. The potential bluff failures at this property pose a risk to the beach below and threaten the bluff top structures at 241 and 249 Pacific Avenue. The Coastal Act, specifically Public Resources Code section 30235, provides for the authority for permitting bluff retention devices “when required to serve coastal-dependent uses or to protect existing structures or public beaches

CITY COUNCIL ACTION:

AGENDA ITEM B.1.
ATTACHMENT 1
in danger from erosion and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply.

The previous homeowner [and the previous homeowner at 249 Pacific Avenue] applied for a permit from the City to construct a concrete notch infill across the base of the bluff. Without repair, the notch threatened to collapse and destabilize the upper-bluff by exposing the clean sand lens. This request was approved by the Council in 2000, but was not approved by the California Coastal Commission (CCC) and the project was not built. The bluff overhang above the notch has since failed, which has resulted in the exposure of the clean sand lens and has decreased the stability of the upper-bluff and the bluff top principal structure. Exposure of the clean sand lens has enabled subaerial erosional processes which have created a hole in the bluff (referred to as a "mole hole") within and above the clean sand layer near the northern property line. This hole has laterally migrated to the north and onto the adjacent property. Terra Costa states that "mole holes" can start off relatively small (the size of a basketball) and quickly enlarge and result in rapid upper-bluff erosion. According to the geotechnical report prepared by Terra Costa, bluff failures at this location pose an immediate risk to the residential structures to this property and 249 Pacific Avenue to the north. The primary structure at 245 Pacific Avenue is a single family residence located 22 feet from the bluff edge.

249 Pacific Avenue
In 1999, a previous owner of this property participated in a project that built a 352-foot long, 35-foot high tied-back shotcrete seawall that extended from the midpoint of this property northward to 311 Pacific Avenue (CCC CDP 6-99-100). This existing seawall is positioned across the northerly 26-feet of the bluff which is about halfway across the coastal frontage of this property. The seawall was constructed in response to the major lower-bluff erosion stemming from the 1997-98 El Niño winter storms.

Since 1999, additional erosion has exposed the clean sand lens across the remaining southerly portion of the property resulting from the lower-bluff notch failure to the south at 245 Pacific Avenue. The existing and ongoing erosion threatens to flank the seawall, possibly resulting in failure of the existing tie-backs and erosion and scouring behind the seawall. Without repair, the principal bluff top structures at 245 and 249 Pacific Avenue remain at risk according to the geotechnical report prepared by Terra Costa. The primary structure at 249 Pacific is a single family residence located 22.5 feet from the bluff edge.

DISCUSSION:
The proposed project addresses both marine and subaerial erosion with an approximately 74-foot-long, 35-foot-high free-form tied-back structural shotcrete wall along the lower-bluff and hydro-seeding on the upper-bluff. In addition to the proposed seawall, the application also seeks to fill in the mole hole located near the property line between 245 and 249 Pacific Avenue to prevent future enlargement.

The project site is located north of Fletcher Cove at the base of, and vertically along, the coastal bluffs below 245 and 249 Pacific Avenue (Attachment 1). This CUP comes before the City Council because the bluff area located below, and along, the project site has been determined to meet the criteria of imminent failure by the City's independent third-party
geotechnical engineer, Geopacifica (Attachment 2). Geopacifica's report concluded that "both parcels are considered in 'imminent' danger of failure" and that "[t]his abatement will remove the danger of lower-bluff failure and the failure of the clean sand lens and upper-bluff in the parcels from 245 to 249 Pacific Avenue". The existing condition is the result of several factors including, but not limited to, recent failures immediately adjacent to these properties and the lack of protective beach sand, which enables waves to break directly onto the coastal bluff. Direct wave attack against these bluffs results in the creation of seacaves, notches in the Torrey sandstone and generalized bluff erosion according to the geotechnical report prepared by Terra Costa.

A series of upper-bluff failures at the property to the south (241 Pacific Avenue) continues to migrate laterally toward 245 Pacific Avenue to the north (subject site) and to 235 Pacific Avenue to the south. Because of the inability of the owner of 241 Pacific Avenue to participate in a bluff stabilization and repair project, this situation can only be partially remedied at this time. Bluff instability has been further exacerbated by the formation of an erosion mole hole in the upper-bluff below the northern portion of 245 Pacific Avenue in 2009 that subsequently collapsed in late 2010. New mole holes are now forming within and above the clean sand layer which will result in additional upper-bluff failures that will likely impact the upper-bluff and residential structures at both 245 and 249 Pacific Avenue. Upper-bluff failures resulting from the growth and collapse of these mole holes result in the lateral and vertical expansion of upper-bluff failures similar in nature to those occurring at 241 Pacific Avenue.

The application states (based on Terra Costa's geotechnical report) that the unstable reach of coastal bluff below the two homes requires both rehabilitation of and support for the sloping upper-bluff terrace deposits and the protection of the lower sea cliff from further marine erosion. The proposed shoreline stabilization project (Proposed Project) consists of a 35-foot high tied-back shotcrete wall designed to protect and stabilize the lower cliffed part of the coastal bluff and upper-bluff reconstruction to mitigate the erosion that threatens the bluff top residential structures. The Proposed Project is proposed to prevent further erosion of the lower-bluff, to prevent further lateral migration of the upper-bluff failure that will occur as a result of the mole hole in front of 245-249 Pacific Avenue, and to protect the existing seawall at 249 Pacific Avenue from being eroded and undermined.

Table 1 below demonstrates the existing factor of safety versus the factor of safety with the Proposed Project improvements under both static and seismic conditions. A factor of safety equal to or less than 1.0 represents a slope that is structurally failing whereby the bluff top principal structures are considered in "imminent danger" from potential bluff collapse and/or failure. Although the property at 245 Pacific Avenue has a calculated factor of safety of less than 1.0 (0.99), it is presumably the absence of saturated soils that results in an increase of soil strength and explains why the slope remains standing when, geotechnically speaking, it should not be standing.
<table>
<thead>
<tr>
<th>Property Address</th>
<th>Existing: Static and Seismic Factors of Safety</th>
<th>With Proposed Project: Static and Seismic Factors of Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>245 Pacific Avenue</td>
<td>0.99 / 0.80</td>
<td>1.44 / 1.12</td>
</tr>
<tr>
<td>249 Pacific Avenue</td>
<td>1.06 / 0.85</td>
<td>1.53 / 1.21</td>
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(Request for Seawall Multiple Residences 245-249 Pacific Avenue, Solana Beach January 30, 2012).

**Shoreline and Coastal Bluff Protection & Local Coastal Program**

A consistency finding with the City’s Shoreline and Coastal Bluff Protection Ordinance (SBMC Chapter 17.62) requires City Council to review and apply the conditions of approval and review requirements established under the proposed Local Coastal Program (LCP) Land Use Plan (LUP).

The City is currently processing the LCP with the California Coastal Commission as part of its goal to obtain approval of a Local Coastal Program for the City of Solana Beach. Because the California Coastal Commission LCP approval process can be lengthy, the City has proceeded with development of an interim strategy for processing bluff retention device applications it receives until such time as the LCP is certified by the Coastal Commission and approved by the City. A key element of the City’s interim bluff retention device application review and processing strategy is ensuring that all relevant policies contained within the LCP are incorporated into bluff retention device permits granted by the City as conditions of approval. The City’s intent regarding the incorporation of LCP policies as project conditions of approval is to ensure application of a consistent policy regarding shoreline management decisions and to ensure that approvals reflect applicable LCP policies and remain consistent with the required nine findings as contained in the City’s Shoreline and Coastal Bluff Protection Ordinance (SBMC Chapter 17.62).

Resolution No. 2012-023 (Attachment 3), which is proposed for this shoreline stabilization Proposed Project, contains relevant policies of the City’s LUP as conditions of approval. Each of these conditions of approval in turn are correlated specifically to one or more of the nine findings that are required to be made by the Shoreline and Coastal Bluff Protection Ordinance (SBMC Chapter 17.62).

Each of the conditions and requirements proposed as part of the approval of this conditional use permit application were evaluated by Council as part of the environmental analysis associated with the adoption of Ordinance No. 351. Ordinance 351 was the regulation that amended “Finding Five”, within the City’s Shoreline and Coastal Bluff Protection Ordinance.

It is important to note that the standard conditions found in the LUP include language that requires a renewal of the permit after a period of twenty years. The twenty-year renewal requirement will allow the City Council to review and determine the continued need for the seawall and any other conditions, based on then existing conditions, which are necessary to further the goals and objectives of the LUP.
Sand Mitigation Fee and Public Recreation Fee Deposit

On June 13, 2007, the City adopted Resolution No. 2007-042 which reiterated the City’s intention of establishing a method for calculating sand mitigation and public recreation fees, and fees applicable to bluff retention device projects, as soon as practicable. Resolution No. 2007-042 establishes an interim process for Council to use to levy sand mitigation and public recreation fees to bluff retention projects.

Because the principal structures have been determined to be in “imminent danger” from bluff failure, the proposed CUP request is being processed by the City as an “emergency” as defined by the California Environmental Quality Act (CEQA). The City included a methodology for calculating a “Sand Mitigation Fee” which is contained in Appendix A of the Draft LUP. At this time, the City is collecting a fee deposit in the amount of $1,000 per linear foot of seawall constructed which will be applied to the future fee when determined. Therefore, the City must process the application in advance of establishing the public recreation fees. The Draft Fee Study was completed in April 2009 but has not been adopted by the City Council. Thus, a condition of approval has been added to the confirming resolution for this Proposed Project, which states that a deposit will be required to be paid by the Applicant at the time of permit issuance and that the appropriate future fees will be applied under the formula ultimately adopted by the City Council. The Applicant will be required to pay the actual costs, which are unknown at this time, and which may be greater than or less than the public recreation fee deposit paid to the City. A provision in the condition of approval has been included, which allows the Applicant the opportunity to challenge the fee, as applied to their project.

FINDINGS:

Staff has evaluated the CUP application, taking into account the following factors: (1) the relevant components of the Solana Beach Municipal Code; (2) the conclusions drawn by the (a) City of Solana Beach’s independent third-party geotechnical consultant and (b) the City of Solana Beach City Engineer; and (3) the Applicant’s geotechnical reports. Staff finds that the Proposed Project can be found consistent with the intent of Solana Beach Municipal Code Section 17.62.080 Issuance and Denial.

After evaluating the geotechnical report prepared by Terra Costa Consulting Group (Applicant’s representative), the third-party review findings provided by the City’s geotechnical engineering consultant, Geopacificca, and the City Engineer, Staff concurs that the Proposed Project has met the standard of imminent danger as required per SBMC 17.62.080. Without the Proposed Project to stabilize the bluffs, the prospect of bluff failure could threaten the bluff top residential structures and is reasonably foreseeable within the next 12 months according to the Terra Costa geotechnical report factor of safety analysis.

In accordance with SBMC 17.62.080, “Issuance and Denial - Permits for Seawalls, Revetments and Bluff Retaining Walls”, a conditional use permit for a seawall, bluff retaining wall, armor or revetment may be issued only if the City Council finds all of the following:

1(a). FINDING SBMC 17.62.080 (A) (1) (a)

An existing significant structure is threatened with imminent danger or destruction because of bluff erosion which occurs naturally, or which results or arises from circumstances which
are not within the control of the property owner, and it is reasonably foreseeable that without the shoreline defense structure the threatened structure on the site will suffer structural damage¹.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A)(1)(a)"

The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(1)(a) shall include, but not be limited to, Policy 3.37 and Policy 3.38.

**Policy 3.37:** Utilize the Hillside/Coastal Bluff Overlay (HOZ) requirements to restrict the grading of natural non-coastal bluff slopes with an inclination of 25% or greater in order to preserve the natural topography and scenic qualities of the City; protect native coastal sage/chaparral and grassland habitat; preserve existing watersheds and reduce the potential for environmental hazards including soil erosion and siltation of coastal wetlands; landslides; adverse impacts due to runoff; and other impacts which could affect public health, safety, and welfare. None of the above shall restrict the ability to construct a bluff retention device which meets the criteria set forth in this LCP.

**Policy 3.38:** Require a permit for developments proposed on property within hillside/coastal bluff overlay areas, and where site-specific analysis indicates that the parcel contains natural slopes exceeding 25 percent grade, as a method to review and mitigate potential impacts. Submittal requirements for the permit shall include:

- A slope analysis prepared by a certified civil, soils or geotechnical engineer describing and graphically depicting areas of less than 25 percent slope, 25 to 40 percent slope and greater than 40 percent slope.
- A geological reconnaissance report where structures or improvements are proposed within any areas of greater than 25 percent slope, as such development is strongly discouraged and traditionally denied approval.
- Slopes of 25 percent and over shall be preserved in natural state unless the application of this policy would preclude any reasonable use of the property, in which case an encroachment (including grading) not to exceed ten percent of the steep slope area over 25 percent slope may be permitted.
- For existing legal parcels with all or nearly all of their area consisting of slopes over 25 percent, encroachment may be permitted; however, any such encroachment shall be limited so that at no time is more than 20 percent of the entire parcel (including the areas under 25 percent slope) permitted to be disturbed from its natural state. Use of slopes over 25 percent may be made in order to provide access to flatter areas if there is no less environmentally damaging alternative available.
- Grading and/or development-related vegetation clearance shall be prohibited where the slope exceeds 40 percent (2.5:1), except that driveways and/or utilities may be located on such slopes, where there is no less environmentally damaging feasible

¹ For the purposes of subparagraph (1)(a), structural damage means a noticeable or measurable amount of structural damage directly related to the bluff condition to be mitigated but does not include construction defects or damage to a structure caused by weather or earthquake.
alternative means of providing access to a building site, provided that the building site is determined to be the preferred alternative and consistent with all other policies of the LCP.

- Where unstable geological conditions are indicated by the reconnaissance report, a preliminary engineering geology report is also required to identify the nature and magnitude of unstable conditions, and alternative mitigation measures that can be applied.
- An assessment of the impact(s) of the proposed development on biological habitat and sand supply.

**DISCUSSION REGARDING FINDING "SBMC 17.62.080 (A) (1) (a)"**

Consistent with LCP Policy’s 3.39 and 3.40, a slope stability analysis was performed by a certified geotechnical engineer describing and geographically depicting areas with a range of 32-35 degrees; thereby indicating an imminent threat of failure (Terra Costa, 2011).

The geotechnical report submitted indicates where unstable geological conditions are located and proposed solutions are applied to remedy the nature and magnitude of the unstable conditions. An assessment has been performed to determine the impact of the Bluff Retention Device (seawall) on biological habitat and sand supply and conditions of approval are included to address those impacts where applicable.

“Imminent” failure based upon factors of safety, presence of the clean sand layer and historical failures, along with documented history of several parcels, have been demonstrated. Both parcels contain the clean sand layer and stabilizing this sand lens is integral to a comprehensive bluff repair. Both parcels are considered in “imminent” danger of failure.

**CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (1) (a)"**

This finding can be made. The existing significant structures are threatened with imminent danger or destruction because of bluff erosion which occurs naturally, or which results or arises from circumstances which are not within the control of the property owner(s), and it is reasonably foreseeable that without the shoreline defense structure, the threatened structures on the site will suffer structural damage including the possible collapse of the structures onto the public beach below.

**1(b). FINDING SBMC 17.62.080 (A) (1) (b)**
The shoreline defense structure is necessary to abate a public nuisance existing on the property that cannot be reasonably abated in another manner.

**DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A) (1) (b)"**
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(1)(b) shall include, but not be limited to, Policy 2.1.
Policy 2.1: Acknowledge the public interest in eliminating nuisances that affect public and private property and public recreational areas. For example, bluff retention devices are permitted, and must be adequately maintained and kept in good repair.

DISCUSSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (b)”
The public interest in eliminating and abating private and public nuisances (that affect public and private property and public recreation areas) is protected by the approval of a Bluff Retention Device (seawall) which can prevent an imminent bluff failure. The conditions of approval would implement key provisions in the City’s draft LUP.

The shoreline defense structure is necessary to abate a public nuisance existing on the site that cannot reasonable be abated in another manner. If left untreated, the existing conditions combined with the continued erosion activities could have an immediate impact on users of the public beach below. These actions could have a near-immediate impact on adjoining properties, possibly triggering bluff failures on these properties that could extend to adjacent residences.

CONCLUSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (b)”
This finding can be made. This abatement will remove the danger of lower-bluff failures in both of the properties and the failure of the clean sand lens and upper-bluff failure in the parcels at 245-249 Pacific Avenue. The shoreline defense structure is necessary to abate a public nuisance existing on the properties (project site) that cannot be reasonably abated in another manner.

1(c). FINDING SBMC 17.62.080 (A) (1) (c)
Unless the shoreline defense structure is permitted, the property will be unable to be used for any economically viable use permitted by the City’s General Plan and applicable zoning.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (1) (c)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(1)(c) shall include, but not be limited to, Policy 4.32, Policy 4.34, and Policy 4.41.

Policy 4.32: Limit buildings and structures on the sloped face and toe of the bluff to lifeguard towers, subsurface public utility drainage pipes or lines, bluff retention devices, public stairs and related public infrastructure which satisfy the criteria established in the LCP. No other permanent structures shall be permitted on a bluff face. Such structures shall be maintained so that they do not contribute to further erosion of the bluff face and are to be visually compatible with the surrounding area to the maximum extent feasible.

Policy 4.34: Encourage applicants to pursue preferred bluff retention designs as depicted in Appendix 2 of the LUP when required to protect a principal structure. All future bluff retention device applications should utilize these designs as the basis of site-specific engineering drawings to ensure consistency with the LUP.
**Policy 4.41**: Maximize the natural, aesthetic appeal and scenic beauty of the beaches and bluffs by attempting to avoid or minimize the size of bluff retention devices, to the extent feasible, while ensuring that any such bluff retention device accomplishes its intended purpose of protecting bluff homes in danger from erosion. The following attributes of a bluff retention device may also be considered: protecting public beaches or public beach access in danger from erosion; enhancing public safety; and preserving public infrastructure while attempting to preserve the maximum amount of unaltered or natural bluff face and minimizing encroachment of the bluff retention device on the beach to the extent feasible.

**DISCUSSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (c)”**
The approval herein does not allow for new construction to occur or to increase the degree of non-conformity of an existing Bluff Home, if such condition exists. Nothing herein prevents the Property Owner(s) from having the right to repair and maintain a non-conforming Bluff Home if the Home becomes non-conforming over time, as long as any future remodel does not amount to an Extensive Remodel as defined by the City of Solana Beach.

**CONCLUSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (c)”**
This finding can be made. Unless the shoreline defense structure is permitted there is a substantial likelihood of a major bluff failure and loss of one or more residences could occur; and the subject properties could be unable to be used for any economically viable use permitted by the City’s General Plan and applicable zoning.

2. **FINDING SBMC 17.62.080 (A) (2)**
No other reasonably feasible method of stabilizing the coastal bluff will protect the existing structure, abate the nuisance or preserve the economically viable use of the property.

**DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (2)”**
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(2) shall include, but not be limited to, Policy 4.34, Policy 4.41, Policy 4.42, Policy 4.46, Policy 4.49 and Policy 4.53.

**Policy 4.34**: Encourage applicants to pursue preferred bluff retention designs as depicted in Appendix 2 of the LUP when required to protect a principal structure. All future bluff retention device applications should utilize these designs as the basis of site-specific engineering drawings to ensure consistency with the LUP.

**Policy 4.41**: Maximize the natural, aesthetic appeal and scenic beauty of the beaches and bluffs by attempting to avoid or minimize the size of bluff retention devices, to the extent feasible, while ensuring that any such bluff retention device accomplishes its intended purpose of protecting bluff homes in danger from erosion. The following attributes of a bluff retention device may also be considered: protecting public beaches or public beach access in danger from erosion; enhancing public safety; and preserving public infrastructure while attempting to preserve the maximum amount of unaltered or natural bluff face and minimizing encroachment of the bluff retention device on the beach to the extent feasible.
**Policy 4.42:** Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

**Policy 4.46:** The City, and in cases of original jurisdiction the CCC, shall regulate every bluff retention device including initial approval, construction, maintenance and repair activities for the life of the device.

**Policy 4.49:** The City has adopted preferred bluff retention solutions (see Appendix B) to streamline and expedite the City permit process for bluff retention devices. The preferred bluff retention solutions are designed to meet the following goals and objectives:

1. Locate bluff retention devices as far landward as feasible;  
2. Minimize alteration of the bluff face;  
3. Minimize visual impacts from public viewing areas; and,  
4. Minimize impacts to adjacent properties.  
5. Conduct annual visual inspection and maintenance as needed;

The bluff property owner's licensed Geotechnical Engineer must examine the device for use in the specific location and take responsibility for the design as the Engineer of Record.

Applicants who seek permits to install a preferred bluff retention solution can do so on a streamlined basis, relying on previously approved standards and designs, and shall receive expedited processing from the City. As technology develops, the City will consider other preferred bluff retention solutions that meet the goals and policies of the LCP, as an amendment to the LUP or within the LIP.

Applications for all bluff retention devices where any portion of which will be sited seaward of the MHTL, as shown on the MHTL Survey, shall be submitted first to the City for approval and then to the CCC, which has original jurisdiction for the portion of the bluff retention device that will be sited seaward of the MHTL. Such developments shall be subject to this LCP. For beachfront development that will be subject to wave action periodically, unless the State Lands Commission determines that there is no evidence that the proposed development will encroach on tidelands or other public trust interests. The City shall reject the application on the grounds that it is within the original permit jurisdiction of the CCC and shall direct the applicant to file his or her application with the CCC.

**Policy 4.53:** Coastal structures shall be approved by the City only if all the following applicable findings can be made and the stated criteria satisfied. The permit shall be valid for a period of 20 years commencing with the completion of construction.

A. Based upon the advice and recommendation of a licensed Geotechnical Engineer and licensed certified Engineering Geologist selected by the applicant, the City makes the findings set forth below.
1. A slope stability analysis accepted by the City demonstrates a factor of safety less than 1.5 (static) and that a bluff failure is imminent that would threaten a bluff home, city facility, city infrastructure, and/or other principal structure.

2. The coastal structure is more likely than not to preclude the need for a larger coastal structure.

   Subject to the bluff property owner being entitled to reasonable use of the bluff property and having the right to protect the bluff home, city facility and/or city infrastructure, respectively, a determination must be made based on a detailed alternatives analysis that none of the following alternatives to the coastal structure are then currently feasible, including:
   
   - No coastal structure;
   - A Seacave/Notch Infill;
   - A smaller coastal structure;
   - Other remedial measures capable of protecting the bluff home, city facility, non-city-owned utilities, and/or city infrastructure, which might include tie-backs, underpinning (which shall not be exposed in the future), or other non-beach and bluff face stabilizing measures, taking into account impacts on the near and long term integrity and appearance of the natural bluff face, and contiguous bluff properties;
   - Removal and relocation of all, or portions, of the affected bluff home, city facilities or city infrastructure.

3. The bluff property owner did not create the necessity for the coastal structure by unreasonably failing to implement generally accepted erosion and drainage control measures, such as reasonable management of surface drainage, plantings and irrigation, or by otherwise unreasonably acting or failing to act with respect to the bluff property. In determining whether or not the bluff property owner's actions were reasonable, the City shall take into account whether or not the bluff property owner acted intentionally, with or without knowledge, and shall consider all other relevant credible scientific evidence, as well as, relevant facts and circumstances.

4. The location, size, design and operational characteristics of the proposed coastal structure will not create a significant adverse effect on adjacent public or private property, natural resources, or public use of, or access to, the beach, beyond the environmental impact typically associated with a similar coastal structure and the coastal structure is the minimum size necessary to protect the principal structure, has been designed to minimize all environmental impacts, and provides mitigation for all coastal and environmental impacts, as provided for in this LCP.

B. The coastal structure shall meet City Design Standards, which shall include the following criteria to ensure the coastal structure will be:

   1. Constructed to resemble as closely as possible the natural color, texture and form of the adjacent bluffs;
2. Landscaped, contoured, maintained and repaired to blend in with the existing environment;

3. Designed so that it will serve its primary purpose of protecting the bluff home or other principal structure, provided all other requirements under the implementing ordinances are satisfied, with minimal adverse impacts to the bluff face;

4. Reduced in size and scope, to the extent feasible, without adversely impacting the applicant's bluff property and other properties; and

5. Placed at the most feasible landward location considering the importance of preserving the maximum amount of natural bluff and ensuring adequate bluff stability to protect the bluff home, City facility, City infrastructure, or non-City owned utilities.

C. Any pre-existing deed and/or permit restrictions applicable to the bluff property or bluff home shall be reviewed and, where legally enforceable and logistically appropriate, enforced by the City to bring any such pre-existing conditions into conformance with the LCP, subject to any requirements of the CCC, and to the vested rights of the bluff property owner.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (2)”

Implementation of the Proposed Project is necessary to prevent the imminent danger of bluff collapse. The Proposed Project is the only feasible alternative considering the pre-existing bluff erosion, mole hole, and existing seawall (across the northern half of 249 Pacific Avenue). Ongoing erosion threatens the existing bluff top residences and adjacent seawall and other measures are not able to adequately secure the bluff. The Proposed Project can only be permitted to the extent that it is necessary to secure the unstable portions of the bluff.

The Proposed Project will be constructed such that it reflects the color of the existing seawall and the surrounding face of the bluff. Given the necessity of securing the unstable areas, the Proposed Project maximizes the natural-appearing aesthetic and scenic beauty of the beaches and bluffs by minimizing the size of Bluff Retention Devices to the extent feasible while ensuring that each Bluff Retention Device accomplishes its intended dual purpose of protecting Bluff Properties and preserving the maximum amount of bluff face.

This Bluff Retention Device (proposed seawall) is designed to prevent future instability and is the only reasonable alternative to stabilize the bluff. Other alternatives would not provide the stabilization of the bluff in a manner that would protect the bluff face from eroding and falling due to the unstable nature of the immediate bluff area. The Applicant's geotechnical engineer (Terra Costa, 2012) and the City's independent geotechnical consultant have verified that no other reasonable and feasible method of stabilizing the coastal bluff would protect the existing structure, abate the nuisance, or preserve the economically viable use of the property (Geopacificca, 2012). Alternatives considered and rejected include: rip rap, notch infill, groundwater and irrigation controls, underpinning, chemical grouting, and no action. Available alternatives could, at best, provide some measure of protection to the primary residential structures; although it would be difficult to guarantee mid- or upper-bluff retention
systems could extend protection through the life of the structures. At worst, considered
alternatives would allow for devastating consequences to the primary residential structures
on the subject properties or to the existing/approved coastal bluff protective structures and
residential structures on neighboring properties. Further, there is no alternative to the
Proposed Project that would remove the existing threat to public safety on the public beach
below the site.

Bluff Retention Devices may be allowed to encroach onto public bluffs and beaches only
under certain conditions and for certain limited periods of time. Such Bluff Retention Devices
must ultimately be re-permitted and are subject to the City of Solana Beach making certain
findings as outlined in the LUP.

Although 245 Pacific Avenue has a deed restriction on the property, the bluff top principal
structure has been determined to be in imminent danger of failure, due in part to bluff failures
onsite as well as to the north and south adjacent properties, thus necessitating bluff
stabilizing measures as allowed by LUP Policy 4.53.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (2)"
This finding can be made. No other reasonably feasible method of stabilizing the coastal
bluff will protect the existing structures, abate the nuisance, or preserve the economically
viable use of the properties.

3. FINDING SBMC 17.62.080 (A) (3)
The property owner has taken reasonable steps to protect the property and significant
structures by other means.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080
(A) (3)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(3) shall
include, but not be limited to, Policy 4.14.

Policy 4.14: The remediation or stabilization of landslides that affect existing
structures or that threaten public health or safety shall be encouraged. Alternative
remediation or stabilization techniques shall be analyzed to determine the least
environmentally damaging alternative. Maximum feasible mitigation shall be
incorporated into the project in order to minimize adverse impacts to resources and to
preclude the need for future mitigation.

DISCUSSION REGARDING FINDING "SBMC 17.62.080 (A) (3)"
The property owners have taken reasonable steps to protect the property and significant
structures by other means. These properties have undergone various levels of rehabilitation
in the past including erodible concrete in-fills and construction of a partial seawall along the
bluffs below 249 Pacific Avenue. These repairs have demonstrated that they have a limited
life without a more comprehensive repair. Ideally, the neighbor to the south (241 Pacific
Avenue) would either have participated in the project or would conduct an independent bluff
repair project to stop the lateral migration of bluff failures onto the site at 245 Pacific Avenue.
245 Pacific Avenue was denied an infill in the past by the CCC and has had lower-bluff
collapses and recently a collapse of the mid- to upper-bluff. Both properties have documented histories of bluff erosion and failures (Geopacifica, 2012).

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A)(3)”
This finding can be made. The previous and current property owners have taken reasonable steps to protect the property and significant structures by other means. Further, the Applicants are now processing the preferred solution that assures effective and comprehensive protection of the bluff top principal structures.

4. FINDING SBMC 17.62.080 (A)(4)
The owner or prior owners did not create the necessity for the shoreline defense structure by unreasonably failing to implement generally accepted erosion and drainage control measures or by otherwise unreasonably acting or failing to act with respect to the property.

The provisions of this subsection (A)(4) shall not apply to a bonafide purchaser who acquired the property without knowledge of the condition resulting in the necessity for construction of the shoreline protection device.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A)(4)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(4) shall include, but not be limited to, Policy 4.28 and Policy 4.32.

Policy 4.28: With respect to bluff properties only, the City will require the removal or capping of any permanent irrigation system within 100 feet of the bluff edge in connection with issuance of discretionary permits for new development, redevelopment, or shoreline protection, or bluff erosion, unless the bluff property owner demonstrates to the satisfaction of the Public Works Director that such irrigation has no material impact on bluff erosion (e.g., watering hanging plants over hardscape which drains to the street).

Policy 4.32: Limit buildings and structures on the sloped face and toe of the bluff to lifeguard towers, subsurface public utility drainage pipes or lines, bluff retention devices, public stairs and related public infrastructure which satisfy the criteria established in the LCP. No other permanent structures shall be permitted on a bluff face. Such structures shall be maintained so that they do not contribute to further erosion of the bluff face and are to be visually compatible with the surrounding area to the maximum extent feasible.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A)(4)”
The Applicants or prior property owners did not create the necessity for the shoreline defense structure by unreasonably failing to implement generally accepted erosion and drainage control measures or by otherwise unreasonably acting or failing to act with respect to the property.
The Geopacifica report concluded that the only reasonable means by which to stop the migration of these upper bluff failures is to reconstruct the slope. Through the proposal to "...protect and stabilize the lower cliffed part of the coastal bluff [via] supporting the subject residential properties with a reinforced shotcrete tied-back structure, designed to conform to the existing vertical lower-bluff." Additionally, the Applicant is proposing to reconstruct the failed portions of the upper-bluff that have resulted in the undermining and subsequent failure of portions of bluff-top improvements at 245 and 249 Pacific Avenue.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (4)"
This finding can be made. It appears that the property owners have made all reasonable attempts to protect their property and have performed all reasonable erosion and drainage control within their properties.

5. FINDING SBMC 17.62.080 (A) (5)
To the extent the location, size, design and operation characteristics of the proposed shoreline defense structure adversely affect adjacent public or private property, natural resources, or public use of the beach, mitigation shall be provided to the extent deemed feasible with a statement of overriding considerations issued to the extent said impacts are not fully mitigated.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A) (5)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(5) shall include, but not be limited to Policy 2.1, Policy 2.62, Policy 2.63, 2.64, Policy 4.42, Policy 4.54

Policy 2.1: Acknowledge the public interest in eliminating nuisances that affect public and private property and public recreational areas. For example, bluff retention devices are permitted, and must be adequately maintained and kept in good repair.

Policy 2.62: To the extent feasible, provide continuous safe public lateral access along the beach.

Policy 2.63: To the extent feasible, encourage the removal of existing impediments to public lateral access along the beach.

Policy 2.64: Minimize the placement of bluff retention devices seaward of the bluff drip line to help maintain public lateral access along the beach.

Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

Policy 4.54: The bluff property owner shall pay for the cost of the coastal structure or Infill and pay a Sand Mitigation Fee and a Public Recreation Fee per Policy 4.42. These mitigation fees are not intended to be duplicative with fees assessed by other agencies.
Sand Mitigation Fee - to mitigate for actual loss of beach quality sand which would otherwise have been deposited on the beach. For all development involving the construction of a bluff retention device, a Sand Mitigation Fee shall be collected by the City which shall be used for beach sand replenishment and/or retention purposes. The mitigation fee shall be deposited in an interest-bearing account designated by the City Manager of Solana Beach in lieu of providing sand to replace the sand that would be lost due to the impacts of any proposed protective structure. The methodology used to determine the appropriate mitigation fee has been approved by the CCC and is contained in LUP Appendix A. The funds shall solely be used to implement projects which provide sand to the City’s beaches, not to fund other public operations, maintenance, or planning studies.

Public Recreation Fee – Similar to the methodology established by the CCC for the sand mitigation fee, the City and the CCC are jointly developing a methodology for calculating a statewide public recreation fee. To assist in the effort, the City has shared the results of their draft study with the CCC to support their development of a uniform statewide Public Recreation Fee. Until such time as an approved methodology for determining this fee has been established, and the methodology and payment program has been incorporated into the LCP through an LCP amendment, the City will collect a $1,000 per linear foot interim fee deposit. In the interim period, CCC will evaluate each project on a site-specific basis to determine impacts to public access and recreation, and additional mitigation may be required.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A)(5)”

The location, size, design, and operation characteristics of the proposed shoreline defense structure will not adversely affect adjacent public or private property, natural resources, or public use of the beach. The resulting bluff stabilization may benefit adjacent properties as well. The Proposed Project includes a number of conditions of approval established by Regulations (SBMC) and Policy to incorporate an earth-like appearance to conform to the natural form of the bluff and seawall and to minimally encroach onto public use areas, both temporally and spatially. The findings and declarations contained in the ordinance specifically state the City’s desire to balance the public interest with private property rights and to apply its ordinances in a manner consistent with the Coastal Act and other state laws. SBMC 17.62.010(B) specifically states, in part:

“Unless properly regulated, seawalls, revetments, bluff retaining walls, erosion control devices, rip rap, cave filling or plugging, and other similar shoreline and coastal bluff protection measures individually and cumulatively may adversely impact the shoreline. When permitted, such devices should be designed, constructed and maintained in a manner that has the least impact on the shoreline and public use of the beach while providing adequate protection to the bluff top structures and uses.”

“In adopting this chapter the City Council, in a manner consistent with the policies and goals of the Coastal Act, has attempted to balance the rights and privileges of private property owners to preserve, protect, develop and use property with the rights of the public to assure protection of important public resources and the
need to assure that development designed to preserve or enhance one property does not adversely affect another property.”

Without a coastal bluff protection structure, additional and/or ongoing beach use may be restricted to the public, given the higher risk of bluffs and buildings in imminent danger of falling on the beach; as is the case with the current project.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A)(5)”
This finding can be made. The Proposed Project has been designed to have minimal impact/intrusion onto the public beach, consistent with other seawall projects to the north and south of the subject property. The location, size, design and operation characteristics of the proposed shoreline defense structure will not adversely affect adjacent public or private property, natural resources, or public use of the beach, and mitigation shall be provided, where necessary, to the extent deemed feasible with a statement of overriding considerations issued to the extent said impacts are not fully mitigated.

6. FINDING SBMC 17.62.080 (A)(6)
The proposed shoreline defense structure will be:

(a) The minimum measure necessary to provide a reasonable level of protection;
(b) Constructed and maintained to incorporate an earth-like appearance which will resemble, as closely as possible, the natural color and texture of the adjacent bluffs;
(c) Constructed and maintained to reasonably conform to the natural form of the bluff;
(d) Placed at the most feasible landward location; and
(e) Appropriately landscaped and maintained to blend in with the existing environment.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A)(6)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(6) shall include, but not be limited to, Policy 2.64, Policy 4.28, Policy 4.29, Policy 4.42, Policy 4.53 and Policy 6.1.

Policy 2.64: Minimize the placement of bluff retention devices seaward of the bluff drip line to help maintain public lateral access along the beach.

Policy 4.28: With respect to bluff properties only, the City will require the removal or capping of any permanent irrigation system within 100 feet of the bluff edge in connection with issuance of discretionary permits for new development, redevelopment, or shoreline protection, or bluff erosion, unless the bluff property owner demonstrates to the satisfaction of the Public Works Director that such irrigation has no material impact on bluff erosion (e.g., watering hanging plants over hardscape which drains to the street).
Policy 4.29: Require all bluff property landscaping for new development to consist of native, non-invasive, drought-tolerant, fire-resistant, and salt-tolerant species.

Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

Policy 4.53: Coastal structures shall be approved by the City only if all the following applicable findings can be made and the stated criteria satisfied. The permit shall be valid for a period of 20 years commencing with the date of CDP approval.

A. Based upon the advice and recommendation of a licensed Geotechnical or Civil Engineer, the City makes the findings set forth below.

1. A bluff failure is imminent that would threaten a bluff home, city facility, city infrastructure, and/or other principal structure.

2. The coastal structure is more likely than not to preclude the need for a larger coastal structure or upper-bluff retention structure.

Subject to the bluff property owner being entitled to reasonable use of the bluff property and having the right to protect an existing principal structure in danger from erosion, including city facility and/or city infrastructure, respectively, and taking into consideration any applicable conditions of previous permit approval for development at the subject site, this determination has been made based on a detailed alternatives analysis that none of the following alternatives to the coastal structure are currently feasible, including:

- A Seacave/Notch Infill;
- A smaller coastal structure;
- Other remedial measures capable of protecting the bluff home, city facility, non-city-owned utilities, and/or city infrastructure, which might include tie-backs, underpinning (which shall not be exposed in the future), or other non-beach and bluff face stabilizing measures, taking into account impacts on the near and long term integrity and appearance of the natural bluff face, and contiguous bluff properties;
- Removal and relocation of all, or portions, of the affected bluff home, city facilities or city infrastructure.

3. The bluff property owner did not create the necessity for the coastal structure by unreasonably failing to implement generally accepted erosion and drainage control measures, such as reasonable management of surface drainage, plantings and irrigation, or by otherwise unreasonably acting or failing to act with respect to the bluff property. In determining whether or not the bluff property owner's actions were reasonable, the City shall take into account whether or not the bluff property owner acted intentionally, with or without knowledge, and shall consider all other relevant credible scientific evidence, as well as, relevant facts and circumstances.
The location, size, design and operational characteristics of the proposed coastal structure will not create a significant adverse effect on adjacent public or private property, natural resources, or public use of, or access to, the beach, beyond the environmental impact typically associated with a similar coastal structure and the coastal structure is the minimum size necessary to protect the principal structure, has been designed to minimize all environmental impacts, and provides mitigation for all coastal and environmental impacts, as provided for in this LCP.

B. The coastal structure shall meet City Design Standards, which shall include the following criteria to ensure the coastal structure will be:

1. Constructed to resemble as closely as possible the natural color, texture and form of the adjacent bluffs;

2. Landscaped, contoured, maintained and repaired to blend in with the existing environment;

3. Designed so that it will serve its primary purpose of protecting the bluff home or other principal structure, provided all other requirements under the implementing ordinances are satisfied, with minimal adverse impacts to the bluff face;

4. Reduced in size and scope, to the extent feasible, without adversely impacting the applicant’s bluff property and other properties; and

5. Placed at the most feasible landward location considering the importance of preserving the maximum amount of natural bluff and ensuring adequate bluff stability to protect the bluff home, City facility, or City infrastructure.

**Policy 6.1:** To protect the scenic and visual qualities of Solana Beach, including the unique character of the Highway 101 Corridor, the Cedros Design district, and the coastal bluffs.

**DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (6)”**

(a)(c) The proposed project is considered the minimum measure necessary to provide a reasonable level of protection. The properties are not adjacent to a wetland, and the project does not involve diking, filling or dredging of open coastal waters, lagoons, and other wetlands. Aesthetically, the Proposed Project will be conditioned to appear visually similar to adjacent bluffs and seawalls.

(b)(d)(e) The shoreline protection device will be constructed and maintained to incorporate an earth-like appearance which will resemble, as closely as possible, the color and texture of the surrounding seawall and bluffs. The shoreline protection device is proposed to be located at the most feasible landward location, following the existing curves and contours of the existing bluff. A hydroseed treatment, consisting of native seed materials found acceptable and desirable by the City of Solana Beach and the California Coastal Commission, will be applied to the reconstructed sloping upper-bluff in an effort to establish drought-tolerant coastal plant species.

The Proposed Project plans included in Attachment 1 illustrate a lower- and upper-bluff
structure that is the minimum necessary in height to encapsulate the exposed clean sand lens and provide adequate assurance against future bluff failure caused by failure of the clean sand lens. For this same reason, the proposed structure is the minimum necessary in height to provide a reasonable level of protection. The Proposed Project will also be sculpted and color-treated to match the existing bluff and other structures as closely as possible. The Applicant's contractor has confirmed that the structure will conform to the natural form of the bluff and blend in comfortably with its surrounding environment.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (6)"
This finding can be made. The Proposed Project will be the minimum measure necessary to provide a reasonable level of protection and will be constructed and maintained to incorporate an earth-like appearance, which will closely resemble the natural color and texture of the adjacent seawalls that it will tie into. It will also tie into the adjacent bluffs; will be constructed and maintained to reasonably conform to the remaining natural form of the bluff; placed at the most feasible landward location; and appropriately landscaped and maintained to blend in with the existing environment.

7. FINDING SBMC 17.62.080 (A) (7)
The shoreline defense structure will be located entirely on private property or, if the structure will be located partially or entirely on public property or property subject to a public trust all required permits for construction or real property interests have been obtained, or will be obtained, from the appropriate public agency or agencies with jurisdiction and/or ownership.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A) (7)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(7) shall include, but not be limited to, Policy 4.42, Policy 4.49, and Policy 4.51.

Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

Policy 4.49: The City has adopted preferred bluff retention solutions (see Appendix B) to streamline and expedite the City permit process for bluff retention devices. The preferred bluff retention solutions are designed to meet the following goals and objectives:
1. Locate bluff retention devices as far landward as feasible;
2. Minimize alteration of the bluff face;
3. Minimize visual impacts from public viewing areas; and,
4. Minimize impacts to adjacent properties.
5. Conduct annual visual inspection and maintenance as needed;

The bluff property owner's licensed Geotechnical Engineer must examine the device for use in the specific location and take responsibility for the design as the Engineer of Record.
Applicants who seek permits to install a preferred bluff retention solution can do so on a streamlined basis, relying on previously approved standards and designs, and shall receive expedited processing from the City. As technology develops, the City will consider other preferred bluff retention solutions that meet the goals and policies of the LCP, as an amendment to the LUP or within the LIP.

Applications for all bluff retention devices where any portion of which will be sited seaward of the MHTL, as shown on the MHTL Survey, shall be submitted first to the City for approval and then to the CCC, which has original jurisdiction for the portion of the bluff retention device that will be sited seaward of the MHTL. Such developments shall be subject to this LCP. For beachfront development that will be subject to wave action periodically, unless the State Lands Commission determines that there is no evidence that the proposed development will encroach on tidelands or other public trust interests. The City shall reject the application on the grounds that it is within the original permit jurisdiction of the CCC and shall direct the applicant to file his or her application with the CCC.

Policy 4.51: All proposed development on a beach or along the shoreline, including a shoreline protection structure located within the jurisdiction of the State Lands Commission: (1) must be reviewed and evaluated in writing by the State Lands Commission and (2) may not be permitted if the State Lands Commission determines that the proposed development is located on public tidelands or would adversely impact tidelands unless State Lands Commission approval is given in writing.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (7)”
This Proposed Project would protect and stabilize the lower cliffed part of the coastal bluff supporting the subject residential properties with a reinforced shotcrete tied-back structure, designed to conform to the existing vertical lower-bluff. Additional improvements include the reconstruction of the failed portions of the upper-bluff that have resulted in the undermining and subsequent failure of portions of bluff-top improvements at 245 and 249 Pacific Avenue.

Previous Coastal Commission permits at the properties includes:

- **245 Pacific Avenue**: CCC CDP-6-96-21 residential replacement; CCC CDP 6-00-35 lower-bluff infill.
- **249 Pacific Avenue**: CCC CDP 6-00-35 lower-bluff infill.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (7)"
This finding can be made. If the structure will be located partially or entirely on public property or property subject to a public trust all required permits for construction or real property interests will have been obtained, or will be obtained, from the appropriate public agency or agencies with jurisdiction and/or ownership.

8. FINDING SBMC 17.62.080 (A) (8)
The construction of the structure and reconstruction of the bluff face, if any, will not result in a usable area at the top of the bluff larger than existed on January 3, 1991. It will not extend the bluff-top edge seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991 and as shown on the orthophoto map of the City dated January 3, 1991, which is on file in the Community Development Department.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A) (8)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(8) shall include, but not be limited to, Policy 4.44.

**Policy 4.44:** Ensure the private and public interest in protecting and preserving private property rights under the state and federal Constitutions, the Coastal Act, and local ordinances, such that regulations are not overreaching and no private owner is denied reasonable use of his, her or its bluff property. In accordance with Public Resources Code Section 30010, this Policy is not intended to increase or decrease the rights of any owner of property under the Constitution of the State of California or the United States.

DISCUSSION REGARDING FINDING "SBMC 17.62.080 (A) (8)"
The Proposed Project would construct a 74-foot-long, 35-foot-high tiedback shotcrete wall with upper-bluff reconstruction to mitigate coastal erosion that threatens the subject homes and public beach below. However, the project will not result in a usable area at the top of the bluff larger than existed on January 3, 1991, or extend the bluff seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (8)"
This finding can be made. The construction of the structure and reconstruction of the bluff face will not result in a usable area at the top of the bluff larger than existed on January 3, 1991 or extend the bluff-top edge seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991 and is shown on the orthophoto map of the City dated January 3, 1991, which is on file in the planning department.

**9. FINDING SBMC 17.62.080 (A) (9)**
The project as approved or conditionally approved will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach. Encroachments into the public beach shall be mitigated to the satisfaction of the City Council.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A) (9)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(9) shall include, but not be limited to Policy 2.62, Policy 2.64 and Policy 4.42,

**Policy 2.62:** To the extent feasible, provide continuous safe public lateral access along the beach.

**Policy 2.64:** Minimize the placement of bluff retention devices seaward of the bluff drip line to help maintain public lateral access along the beach.
Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

DISCUSSION REGARDING FINDING "SBMC 17.62.080 (A)(9)"
The Proposed Project, as conditionally approved, will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach. Encroachments into the beach shall be mitigated to the satisfaction of the City Council. At present, the subject bluffs are projected to fail imminently. Such failure could extend onto the public beach. The Proposed Project will abate that threat and the project itself is anticipated to physically impact only a small area of public beach.

The potential loss of beach that exists from the presence of the Proposed Project already exists at the subject site due to the presence of seawalls to the north and south within the City, where periodic tides ultimately block the public from traversing the beach adjacent to the bluffs.

The Proposed Project will not affect handicapped access, public access ways, public parking, and is not located within a 100-year flood hazard area. The project does not involve new development and is not located near a coastal lagoon wetland area.

To encourage an expeditious completion of the work, the requirement that Marine Safety lifeguards monitor construction activities and the Applicant pay ramp fees and usage fees will be adhered to. In addition, other City Departments, including Engineering, Public Works and Code Enforcement, will be required to insure City standards are adhered to relative to health, safety and welfare. In addition, the Proposed Project may increase public safety by reducing the potential hazards of a major bluff failure. Further, the Proposed Project has been, and/or will be, subject to payment of sand mitigation and public recreation impact fees.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A)(9)"
This finding can be made. The Proposed Project, as approved or conditionally approved, will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach. Encroachments into the public beach shall be mitigated to the satisfaction of the City Council by payment of a public recreation fee deposit.

CEQA COMPLIANCE STATEMENT:
The Proposed Project qualifies as an emergency repair pursuant to the California Environmental Quality Act (CEQA) Public Resources Code §§21060(b)(4) and 21060.3, as evidenced by a licensed geotechnical engineer. Thus, this project is exempt from CEQA per 2012 State CEQA Guidelines §15268(b).

FISCAL IMPACT:
No direct fiscal impacts identified with this action.

WORKPLAN:
N/A
OPTIONS:
- Approve the Proposed Project and Adopt Resolution 2012-023.
- Provide Staff with alternative direction.

DEPARTMENT RECOMMENDATION:
Staff recommends that the City Council:

1. Conduct the Public Hearing: Open the public hearing, Report Council disclosures, receive public testimony, and close the public hearing.

2. Find the Proposed Project exempt from the requirements of CEQA pursuant to 2012 State California CEQA Guidelines §15269 as emergency conditions exist onsite.

3. Adopt Resolution 2012-023 conditionally approving a Conditional Use Permit to construct a seawall to support the lower-bluff and reconstruction of an existing upper-bluff device fronting approximately one-half of the project site against significant bluff failure along the properties located at 245 and 249 Pacific Avenue, Solana Beach.

CITY MANAGER'S RECOMMENDATION:
Approve Department Recommendation.

签字：
David Ott, City Manager

Attachment 1:
- Conditional Use Permit Application (September 20, 2011)
- Terra Costa Consulting Group. 245-249 Pacific Avenue Shoreline Stabilization Project Site Plans (September 2011)

Attachment 2:
- Geopacifica Geotechnical Consultants, Review of Emergency Request for Seawall 245-249 Pacific Avenue, Solana Beach (January 30, 2012)

Attachment 3:
- Resolution 2012-023
CONDITIONAL USE PERMIT APPLICATION
FOR A
BLUFF RETENTION DEVICE PERMIT

The City of Solana Beach has prepared this informational handout to assist the applicant in the process of preparing a bluff retention device permit application. Please review the application carefully. Depending on the scope of the proposed bluff retention device, the applicant may wish to make an appointment with a member of the Planning Department staff to discuss the process and specific procedures prior to submitting a formal application.

A complete application will include a completed application form plus all of the required attachments which are listed below. The following checklist is provided for the convenience of the applicant in gathering necessary application materials. It is not a complete statement of filing requirements. Please refer to the Planning Department for any specific questions or concerns.

- Incomplete Applications will not be accepted for filing.
- Answer all questions. If a question is not applicable to your project, indicate Not Applicable or N/A.
- All maps and exhibits must be legible.
- List of Required Attachments (also listed on page 10 of the Application):
  - Assessor's Parcel Map(s);
  - Vicinity Map;
  - Electronic and three sets of hard copies of all plans, drawings and technical reports prepared for the project;
  - Digital photographs of the site taken within the last month;
  - Two sets of stamped and addressed envelopes for all properties within a 300-foot radius of the project site; and,
  - Copy of all other permits, approvals, and permissions.

Please be aware that the review and processing of this application may take several months and that "emergency" projects will necessarily take precedence over non-emergency projects.

Community Development Department
Conditional Use Permit Application - Bluff Retention Device
Page 1 of 14
EXPEDITING
An applicant may choose to expedite a project (either emergency or non-emergency) by paying additional expediting fees to the City. These additional fees will be used by the City to retain supplemental staff/consulting services to facilitate the review and processing of the application and will generally result in the shortening of the overall processing time by several months over regular processing time. The fee schedule, including regular fees and expedite fees, is provided in Appendix A of this permit application.

USE OF PRE-QUALIFIED GEOTECHNICAL CONSULTANTS
For convenience, the City has developed an approved list of pre-qualified geotechnical consultants for use by applicants. This list is included as Appendix B to this permit application package.

PREFERRED BLUFF RETENTION DEVICE DESIGNS
Projects that conform to the City's Preferred Bluff Retention Solutions, which were approved by the City Council on May 27, 2009 and are included as Appendix C to this permit application package. Applications reliant upon these preferred solutions will be processed more expeditiously than applications that rely upon non-preferred bluff retention devices.

LANDSCAPE AND IRRIGATION
Please note that City policy is to promote only native, non-invasive, salt and drought tolerant hydrosed mixes on the bluff face, where necessary or desired. No permanent irrigation is allowed. Any permanent irrigation within 100' of the bluff edge will be required to be removed as a condition of project approval.

IMPACT MITIGATION FEES
On June 13, 2007 the City adopted a Resolution (Resolution #2007-042) which reiterated the City's intention of establishing a method for calculating land lease/recreation fees and sand mitigation fees applicable to bluff retention device projects, as soon as practicable. The current deposit for bluff retention devices is $1,000.00 per linear foot of the device that is constructed. All bluff retention device projects are subject to this fee deposit at this time.

SHORELINE AND COASTAL BLUFF REGULATION CONSISTENCY
The proposed conditional use application must be consistent with the City's Shoreline & Coastal Bluff regulations, which are contained in the Solana Beach Municipal Code, Chapter 17.62. Generally, this chapter defines the procedures
and circumstances for the construction, as well as the standards for coastal bluff protection structures. To assist you in determining whether the proposal is consistent with the City's Shoreline and Coastal Bluff regulations, it is appropriate to review the following key definitions as contained in SBMC17.62.040:

"Emergency" means a sudden, unexpected occurrence requiring a quick response to prevent or mitigate imminent loss or damage to life, health, property or essential public services.

"Imminent" means an occurrence that is reasonably foreseeable within 12 months from the time the determination of imminence is made.

"Significant Structure" includes, without limitation, legally existing principal structures, community clubhouses, public coastal access structures, and swimming pools that are structurally integrated with another significant structure, and excludes, without limitation, gazebos, patio decks, fences, landscaping features, and playhouses. (Ord. 195 § 1, 1994).

In accordance with SBMC 17.62.080, "Issuance and Denial - Permits for Seawalls, Revetments and Bluff Retaining Walls", a special use permit for a seawall, bluff retaining wall, armoring or revetment may be issued only if the City Council can make all nine findings as required by the ordinance.

LOCAL COASTAL PROGRAM (LCP) / LAND USE PLAN (LUP) - JUNE 2009
In June 2009, the City completed a revised draft Local Coastal Program (LCP) Draft Land Use Plan (LUP) in an effort to advance the City's goal of obtaining approval of an LCP. This document is available for review on the City's website. Because the Coastal Commission LCP approval process can be lengthy, the City has proceeded with development of an interim strategy for processing bluff retention device applications it receives until such time as the LCP is certified by the Coastal Commission and approved by the City. A key element of the City's interim bluff retention device application review and processing strategy is ensuring that all relevant policies contained within the June 2009 Draft LUP are incorporated into bluff retention device permits granted by the City as conditions of approval. The City's intent regarding the incorporation of LCP policies as project conditions of approval is to ensure application of a consistent policy regarding shoreline management decisions and to ensure that approvals reflect applicable LCP policies and remain consistent with the required nine findings as contained in the City's Shoreline and Coastal Bluff Protection Ordinance (Solana Beach Municipal Code, Section 17.62).

Community Development Department
Conditional Use Permit Application - Bluff Retention Device
Page 3 of 14

June 2009
SECTION I. APPLICANT and/or PROPERTY OWNER

1. Name, mailing address, contact telephone numbers and email address for all applicants and representatives, if any.
   (249 Pacific Ave.) Presnell/Graves LLC - 372 S. Eagle Road, #389, Eagle, ID 83616
   (245 Pacific Ave.) Brien Jokihi, 140 Alley Way, Mountain View, CA 94040
   (Applicant's Rep) Walter F. Crampton, Terracosta Consulting Group, 3890 Murphy Canyon Rd, #200, San Diego, CA 92123, Tel: 858-573-6900, Email: wcrampton@terracosta.com

2. Name, mailing address, contact telephone number and email address for property owner and representatives; if different from applicant.

SECTION II. PROPOSED BLUFF RETENTION DEVICE

Please answer all questions. Where questions do not apply to your project, write Not Applicable or N/A.

1. Project Location/Street Address and Assessor's parcel Number(s)
   249 Pacific Avenue, APN 263-312-10-00
   245 Pacific Avenue, APN 263-312-11-00

2. Is this project an Emergency? If so, Please describe any known causative factor in the creation of this emergency (erosion, and/or bluff failure, etc.).
   No

3. Describe the proposed bluff retention device permit in detail. Include length, height and note whether this application is for a lower, mid or upper bluff retention device. Also list proposed secondary improvements such as grading and landscaping. (See Section II, Items 1-4 for other required information)

Community Development Department
Conditional Use Permit Application - Bluff Retention Device
Page 4 of 14

June 2009
The project consists of an approximately 74-foot-long by 35-foot-high tied-back textured shotcrete seawall.

4. Is grading proposed?  YES ☐  NO ☒  (If yes, complete the following)

a) Amount of cut: __________________________ cubic yards

b) Amount of fill: __________________________ cubic yards

c) Amount of import or export (circle which) ______________________ cubic yards

5. Please provide the title and date of the geotechnical report prepared for this bluff retention device project. (See Section IV, item 5, for required information). Is the report signed and stamped by both a Registered Civil Engineer (RCE) and Certified Engineering Geologist (CEG)? Are you aware if this report was prepared to meet the requirements of the City of Solana Beach and the California Coastal Commission?

A report titled "Coastal Bluff Evaluation and Basis of Design Report, 235-249 Pacific Avenue, Solana Beach, California," dated November 4, 2010, has been signed and stamped by a registered engineer and geologist, and meets the requirements of the City of Solana Beach and the California Coastal Commission.

6. Does this project conform to the City's Preferred Bluff Retention Device Standards as shown in Appendix B of this application? Consistent with SBMC 17.62 and the City's Draft LCP LUP, bluff retention devices are required to abate the eroding condition and the solution must be comprehensive and capable of lasting 75-years with ongoing maintenance. The preferred bluff retention solution for lower and mid-bluff
protection is a 35' high seawall that encapsulates the clean sand lens and is colored and hand sculpted to match the native bluff. The preferred upper bluff retention device consists of a restored bluff held in place by geofabric and landscaped with native species. If you are proposing a device that is other than a preferred solution, please clearly explain why. Please also note if this project as designed conforms to the requirements of the California Coastal Commission.

The project conforms to the City's preferred bluff retention standards Figure 42, with the exception that reconstruction of the upper bluff with geofabric reinforced fill is not necessary or proposed at this time.

7. How far is the primary structure/residence from the bluff edge?

Approximately 22.5 feet at the northwest corner of the residence at 249 Pacific Avenue. The residence at 245 Pacific Avenue is located approximately 25 feet back from the bluff edge.

8. What does the Factor of Safety analysis indicate for this site? Please include a copy of this analysis with this submittal. (If included in the Geotechnical Report, please indicate).

Slope stability analyses indicate very low factors of safety and marginal stability. The factor of safety for 245 Pacific Avenue is 1.0; the factor of safety for 249 Pacific Avenue is 1.06. Slope stability analysis is included in the geotechnical report.

9. Will the bluff retention device development involve any construction, filling, draining, dredging, or placing structures in open coastal waters? Will the construction of the structure result in unusable area at the top of the bluff or extend the bluff-top edge seaward larger than existed on January 3, 1991 as shown on the orthophoto map of the City dated January 3, 1991? (Pursuant to SBMC 17.62.080 (A)(8))

YES ☐ NO ☒ (If yes, describe the amount and location, in detail)

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Conditional Use Permit Application - Bluff Retention Device
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June 2009
10. Is the proposed development located in or near any:

   a. Sensitive habitat areas? No.
   b. Area of state or federally listed rare, threatened, or endangered species? No.
   c. Public property or property subject to a public trust? No.
   d. Adjoining private property?

   YES ☒ NO ☐ (If yes, please explain)
   (Pursuant to SBMC 17.62.080 (A)(7))

c. Public sandy beach fronts the project.

d. Adjoining bluff-top private properties exist both to the south and north of the proposed seawall.

11. Has the property owner taken reasonable steps to protect the property and significant structures by other means? (Pursuant to SBMC 17.62.080 (A)(3))

   YES ☒ NO ☐ (If yes, please explain)
   - Runoff is controlled on the rear of each lot and collected or directed landward toward Pacific Ave.
   - A 35-foot-high tied-back seawall exists across the northerly 26 feet of 249 Pacific Avenue. This wall was constructed in 2000 as part of the 352-foot-long 249 through 311 Pacific Avenue seawall.
   - California Coastal Commission CDP #6-99-100.

12. Has the current or previous property owner created a necessity for the bluff retention device by reasonably failing to implement erosion and drainage control measures or by otherwise unreasonably acts with respect to the property? (Pursuant to SBMC 17.62.080 (A)(4))

   YES ☐ NO ☒ (If yes, please explain)
13. Does the project location, size, design, or operation characteristic have the potential to adversely affect adjacent public or private property, natural resources, or public use of the beach? (Pursuant to SBMC 17.62.080 (A)(5))

YES ☐ NO ☒ (If yes, please explain)

14. Does the project provide a reasonable level of protection and be placed:

   a. In a manner constructed and maintained to incorporate an earth-like appearance which will resemble the natural color, texture, and form of the adjacent bluffs?
   b. At the most feasible landward location?
   c. Appropriately landscaped and maintained to blend in with the existing environment?

(Pursuant to SBMC 17.62.080 (A)(5))

YES ☐ NO ☒ (If no, please explain)

15. Is an existing significant structure threatened with imminent danger or destruction which occurs naturally, or which results or arises from circumstances which are not within the control of the property owner? Is it foreseeable that structure on the property (if any) would suffer structural
damage, if the project is not approved? (Pursuant to SBMC 17.62.080 (A)(1))

YES ☑ NO ☐ (If yes, please explain)

The subject single-family residential structures are situated on an unstable coastal bluff. Future anticipated failures are expected due to the exposure of clean sands in the upper bluff, the failure of which threatens to damage the existing residential structures. The exposure of the clean sands was not caused by, and are beyond the control of, the homeowners.

16. List the alternative methods of stabilizing the coastal bluff which have been considered to abate the nuisance or preserve the economically viable use of the property. Explain why these alternatives to the project have been rejected. (Pursuant to SBMC 17.62.080 (A)(2))

Considered alternatives include rock riprap, notch infills, groundwater controls, underpinning and chemical grouting. None of these alternatives stabilizes the upper bluff.

17. Would the project adversely affect the health, safety, or welfare of the public or affect the public use of the beach? (Pursuant to SBMC 17.62.080 (A)(9))

YES ☑ NO ☐ (If yes, please explain)

The project stabilizes a currently failing and unstable coastal bluff, thereby protecting the public beachgoer from potential injury or death caused by failure of the existing unstable bluff.

SECTION III. ADDITIONAL INFORMATION

The relationship of the proposed development to the applicable items below must be explained fully. (Attach additional sheets as necessary.)
1. Describe the present use of property.

   a) Are there existing structures on the property?

      YES ☒  NO ☐ (If yes, please describe)

      A single-family residence exists on each lot.

   b) Will any existing structures be demolished or removed including patios?

      YES ☐  NO ☒ (If yes, please describe)

2. Has a bluff retention device permit application for development on this site been submitted previously to the City, California Coastal Commission or any other state agency? Have these bluff retention devices if any, been built and are now in need of additional repair/replacement? Include previous application number(s), if applicable.

   YES ☒  NO ☐ (If yes, list all previous applications)

- A 35-foot-high tied-back seawall exists across the northerly 26 feet of 249 Pacific Ave. This wall was constructed in 2000 as part of the 352-foot-long 249 through 311 Pacific Ave. Seawall. California Coastal Commission CDP #6-99-100.

- A CCC CDP application for a concrete infill was denied (CDP 6-00-35).

SECTION IV. REQUIRED ATTACHMENTS

The following items must be submitted with this form as part of the application.

   1. Assessor's Parcel Map(s) showing the page number, the applicant/property owner's property, and properties within 300 feet (excluding roads) of the proposed development property lines.
2. A vicinity or location map with the proposed development clearly marked.

3. Three sets of stamped envelopes for all property owners/tenants within 300 feet of the project site.

4. Three folded sets of plans drawn to scale, including (as applicable):
   - Site plans
   - Grading plans depicting the limits of construction

5. Site photographs in hard copy and digital/electronic copies. Please provide historical photos if available.


7. Verification of all other permits, permission or approvals applied for or granted by public agencies are currently/concurrently being obtained.

I certify that I have read the Application for Bluff Retention Device Permit and state the above information is correct. I agree to comply with all City of Solana Beach Municipal code, ordinances, and State laws relating to building construction. I hereby authorize officials from the City of Solana Beach to enter upon such mentioned property for inspection, as required.

REQUIRED SIGNATURES for Application:

Applicant

[Signature]

Date 8/31/11

Property Owner

[Signature]

Date 8/31/11
2. A vicinity or location map with the proposed development clearly marked.

3. Three sets of stamped envelopes for all property owners/tenants within 300 feet of the project site.

4. Three folded sets of plans drawn to scale, including (as applicable):
   - Site plans
   - Grading plans depicting the limits of construction

5. Site photographs in hard copy and digital/electronic copies. Please provide historical photos if available.


7. Verification of all other permits, permission or approvals applied for or granted by public agencies are currently/concurrently being obtained.

---

I certify that I have read the Application for Bluff Retention Device Permit and state the above information is correct. I agree to comply with all City of Solana Beach Municipal code, ordinances, and State laws relating to building construction. I hereby authorize officials from the City of Solana Beach to enter upon such mentioned property for inspection, as required.

REQUIRED SIGNATURES for Application:

[Signature]
Applicant

2011 Aug 31
Date

[Signature]
Property Owner

2011 Aug 31
Date

APPENDIX A

Community Development Department
Conditional Use Permit Application - Bluff Retention Device
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Project No. 2530-01
January 6, 2012

Mr. Chad Graves
PRESNELL GRAVES LLC
372 South Eagle Road, Suite 389
Eagle, Idaho 83616

COASTAL BLUFF EVALUATION AND
GEOTECHNICAL BASIS OF DESIGN REPORT
245-249 PACIFIC AVENUE
SOLANA BEACH, CALIFORNIA

Dear Mr. Graves:

In accordance with our Proposal No. 09097, TerraCosta Consulting Group, Inc. (TCG) is pleased to submit the accompanying report, which describes our geotechnical and geologic evaluation of coastal bluff erosion and instability affecting the subject properties, and presents recommendations for mitigation of these conditions, including the technical basis for our proposed design, consistent with Chapter 17.62 of the Solana Beach Municipal Code.

We appreciate the opportunity to be of service and trust this information meets your needs. If you have any questions or require additional information, please give us a call.

Very truly yours,

TERRACOSTA CONSULTING GROUP, INC.

David B. Nevius, R.C.E. Project Engineer
R.C.E. 65015, R.G.E. 2789

Brazen R. Smillie, Principal Geologist
C.E.G. 207, P.G. 402

Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

Attachments
(1) Address
(3) City of Solana Beach
(1) Mr. Eron Jokipiit
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APPENDIX C - DSI PRODUCT LITERATURE
1 INTRODUCTION

This report addresses the processes of marine and subaerial erosion and the conditions of instability affecting the approximately 74-foot-long reach of exposed coastal bluff between 245 and 249 Pacific Avenue in the City of Solana Beach, California. Please refer to the Vicinity Map (Figure 1), the Site Plan (Figure 2), and the Existing Bluff Condition (Figure 3).

This report also provides the geotechnical basis of design for a proposed 35-foot-high tied-back shotcrete wall to mitigate coastal erosion that threatens the subject homes.

1.1 Report Organization

This report describes existing site conditions and permitting history, followed by a discussion of site physiography and geology, a summary of the recent site-area history, and a description of the coastal processes environment. This report describes current erosion processes and the geotechnically related condition of bluff instability affecting the subject properties.

Discussions of geotechnical engineering design considerations support the recommendation for a tied-back shotcrete structure as the best design solution to mitigating the encroaching threat to residential structures by erosion and bluff instability.

Finally, in accordance with the Solana Beach Municipal Code requirement for Use Permit submittal, this report is concluded with a discussion of alternatives to the proposed tied-back shotcrete structure.
2 EXISTING CONDITIONS AND RECENT SITE HISTORY

A series of upper bluff failures at 241 Pacific Avenue continues to migrate laterally toward 235 Pacific Avenue to the south and 245 Pacific Avenue to the north. This particular stretch of coastline is among the most dangerous reaches in Solana Beach due to the unpredictable, but imminent, bluff failures that will continue to occur and endanger the public. Unfortunately, because of the inability of the owner of 241 Pacific Avenue to participate, this dangerous situation can only be partially remedied. Bluff instability has been further exacerbated by the formation of an erosion mole hole in the upper bluff below the northern portion of 245 Pacific Avenue in 2009 (Photos 1 and 2) that subsequently collapsed in late 2010 (Photo 3). New mole holes are now forming within and above the clean sand layer (Photos 4 and 5), which will result in additional upper-bluff failures that will likely impact the upper bluff and residential structures at both 245 and 249 Pacific Avenue. Upper bluff failures resulting from the growth and collapse of these mole holes result in the lateral and vertical expansion of upper bluff failures similar in nature to those occurring at 241 Pacific Avenue.

A brief history of each property with applicable prior permits is provided below.

2.1 245 Pacific Avenue

The original structure at 245 Pacific Avenue was likely constructed in the mid to late 1950's. A California Coastal Commission (CCC) permit was issued in 1996 for the construction of a new 3,951 square-foot home in place of the existing 1,135 square-foot home (CCC CDP 6-96-21). It is our understanding that a condition of that permit included a deed restriction preventing the owner from obtaining a permit for future shoreline protection measures for portions of the house that are seaward of the 40-foot setback line. In this case, under current conditions, substantial portions of the house at 245 Pacific Avenue that are landward of the 40-foot setback line (and are not subject to the Deed Restriction) are at significant risk and are in need of stabilization. Regardless of the deed restriction, potential bluff failures at this property pose an enormous safety risk to the beach going public, and will also threaten the bluff top structures at 241 and 249 Pacific Avenue.

Now that the clean sand layer has been exposed, subaerial erosional processes have created a series of "mole holes" within and above the clean sand layer near the northern property line. Past experience has shown that these mole holes, which may start out as small as the size of a
basketball, can quickly enlarge and result in rapid and dramatic upper bluff loss. An upper bluff failure in this location would immediately put the residential structures at 245 and 249 Pacific Avenue at risk. Furthermore, bluff failures at 245 Pacific Avenue would immediately undermine and compromise any shoreline protective measures installed at 241 and 249 Pacific Avenue. The location of the original mole hole that has since collapsed is shown in Figure 3.

2.2 249 Pacific Avenue

The residential property at 249 Pacific Avenue has a single-family residence constructed in 1958. In the late 1990s, the previous homeowner participated in the permitting and construction of a 352-foot-long tied-back seawall that extends from the north end of 311 Pacific Avenue to approximately halfway across 249 Pacific Avenue. When originally constructed, the seawall fronted and encapsulated the clean sand lens layer that was exposed along the northerly half of 249 Pacific Avenue. Since the construction of the existing seawall, significant erosion of the still unprotected southerly portion of the lower bluff has occurred, resulting in the exposure of clean sands below all four southerly properties from 245 down to 235 Pacific Avenue. This erosion and exposure of clean sands has put the bluff-top residential structures at both 245 and 249 Pacific Avenue at great risk of damage or loss from a bluff failure, which we feel is imminent. The aforementioned mole holes that have formed and collapsed in the upper bluff below these properties will accelerate these upper-bluff failures, along with the continued threat to the beach-going public. Photo 6 also shows the unstable nature of these clean sands, with ongoing erosion continuing to threaten these bluff-top properties.

3 PROPOSED IMPROVEMENTS

We are proposing to protect and stabilize the lower cliffed part of the coastal bluff supporting the subject residential properties with a reinforced shotcrete tied-back structure, designed to conform to the existing vertical lower bluff.

The proposed wall would be colored and textured to be compatible with the adjacent seawall to the north and the recently constructed 211-231 Pacific Avenue seawall south of the subject properties. Figure 4 presents cross-sections through two bluff geometries at the subject site.
and depicts the proposed design solution. Additionally, the sloping upper bluff would be hydrosseeded in an effort to establish drought-tolerant coastal plant species.

4 PHYSIOGRAPHY AND GEOLOGY

The Solana Beach coastline extends approximately 1.4 miles from the south side of San Elijo Lagoon to the westerly projection of Via De La Valle, the southerly City limits. This reach of coastline is characterized by steep coastal bluffs ranging in height from approximately 65 to 90 feet, and which (with the exception of Fletcher Cove) extend along the entire City shoreline length and southerly an additional 0.3 mile to the San Dieguito River valley. As indicated on the Site Plan, Figure 2, top-of-bluff elevations on the subject residential parcels range from approximately 86 to 88 feet (MSLD).

Geologic units present in the site vicinity include the older Eocene “bedrock” geologic unit that forms the lower cliffed portion of the bluffs, and the late Pleistocene marine terrace deposits that form the sloping upper coastal bluffs above the sea cliffs (Kennedy and Peterson, 1975).

4.1 Geologic Units

Torrey Sandstone

The Eocene-age bedrock unit that comprises the lower cliffed portion of the bluffs consists of the Torrey Sandstone, a well-indurated (cemented), light gray to light yellow-brown, medium- to coarse-grained sandstone. The lower portions of the Torrey Sandstone contain bioturbated beds and concretions, while the upper portions typically exhibit high-angle cross-bedding (Kennedy and Peterson, 1975).

Bay Point Formation

The sloping upper portion of the Solana Beach coastal bluffs is comprised of late Pleistocene, moderately consolidated, poorly indurated, light reddish-brown, silty fine sands that include both nearshore marine and beach sands lithologically characteristic of the Bay Point Formation (approximately 120,000 years old). The terrace deposits are capped by an approximately 10-foot-thick iron oxide-cemented “beach ridge” type residual clayey sand
deposit. This erosion-resistant capping material, formed by the concentration of clayey weathering products, secondary oxides of iron and aluminum, and leached and re-precipitated salts, is the result of long exposure to the elements during a period of tropical to temperate climate. The lower 10 feet of the terrace deposits, typically from elevation 25 to 35 feet, consist of cohesionless sands that are weak and highly susceptible to erosion, and responsible for the many upper bluff failures that have occurred in Solana Beach in the past decade.

The marine terrace deposits overlie a wave-cut abrasion platform, abraded on the Eocene bedrock approximately 120,000 years ago when sea level was 20 feet higher (Lajoie and others, 1992). At the time, the sea was at a high eustatic level due to substantial melting of the ice caps during an interglacial period. Today, the abrasion platform is at approximate elevation 25 feet at the site. The difference in elevation is a result of variable regional uplift associated with gentle tectonic folding during the last 120,000 years.

Two test borings were drilled by Group Delta Consultants, Inc. and Soil Engineering Construction, Inc. in the site vicinity during previous investigations for Coastal Development Permits at 325-327 Pacific Avenue and at 249-311 Pacific Avenue. These test borings were drilled at the request of CCC Staff to address the areal extent of a layer of clean and very friable sands exposed by the respective upper bluff failures at the project locations. This clean sand layer is known to be responsible for the significant upper bluff collapses affecting the subject and neighboring sites, as well as 255-265 Pacific Avenue, 325-333 Pacific Avenue, 347-355 Pacific Avenue, and 365-367 Pacific Avenue. Elsewhere where these clean sands are exposed, ongoing and progressive upper bluff failures continue to this day along the northerly portion of the Solana Beach coastline. This clean sand layer is a horizontally-bedded beach deposit formed by retreat of the beach over the ancient shore platform at the beginning of the last ice age. The overlying sand dune deposits, which comprise much of the Bay Point Formation in this area, were likely part of a dune field that overran the beach deposits after the sea retreated.

As indicated in the attached Boring Log and Soil Boring Summary Report for 249–311 Pacific Avenue (Appendix A), a through-going, 10-foot-thick clean sand layer was encountered immediately overlying the relic abrasion surface defining the top of the Torrey Sandstone and extending at least 80 feet landward of the face of the existing sea cliff. There is no question that these clean sands underlie the subject properties and are responsible for
the many progressive upper bluff failures that have occurred at the site and elsewhere in Solana Beach.

4.2 Groundwater

Unlike the other north San Diego County Eocene formations (the Santiago and Delmar Formations), the Torrey Sandstone does not create an impermeable perching horizon, which would encourage groundwater to exit the bluff face along the contact between the coastal terrace deposits and the underlying cliff-forming Eocene-age Torrey Sandstone Formation. Although groundwater surfacing at the face of the bluff causing sloughing and spring sapping is often a problem within other North County coastal areas, the Solana Beach coastline, and this site in particular, appears to be relatively less susceptible to this type of subaerial process.

4.3 Seismicity

The project area is located in a moderately-active seismic region of Southern California that is subject to moderate to strong shaking from nearby and distant earthquakes. Ground shaking from earthquakes on six major active fault zones could affect the site. These include the Rose Canyon, Coronado Bank, San Diego Trough, San Clemente, Elsinore, and San Jacinto/Superstition Hills fault zones. The nearest of these, the Rose Canyon Fault, parallels the shoreline and is located approximately 3.5 kilometers (about 2.2 miles) southwest of the site. The maximum credible earthquake for the Rose Canyon Fault is considered to be Magnitude 7.2. The maximum probable earthquake for this fault has been estimated at Magnitude 6½.

4.4 Geologic Structure

Movement along the Rose Canyon fault zone has resulted in gentle folding, thus exposing progressively older Eocene-age formations to the north along the coast. The Torrey Sandstone, exposed in the lower cliffed part of the bluff, is relatively horizontally stratified at the site, and, as described below in Section 5, marine erosion has accelerated along a few zones of jointing, and even expanded into small sea caves (repaired by infilling and permitted maintenance programs since 1998).
5 EXISTING COASTAL PROCESS ENVIRONMENT

The site is located within the southern portion of the Oceanside Littoral Cell. The littoral cell is an area of sand movement along the coast bounded by the Dana Point Headland to the north and the La Jolla Submarine Canyon to the south, a distance of approximately 52 miles. Under natural conditions, a littoral cell is supplied with sediment by rivers and streams that empty into the ocean within its limits. The sandy material brought to the coast by fluvial action is then incorporated into the beach sands and transported south (in most areas) along the coast by wave action. This longshore transport of sand is ultimately intercepted by a submarine canyon or other sink, where it is diverted offshore and lost to the nearshore environment.

The Oceanside Littoral Cell is supplied with sediment by San Juan Creek in Orange County, the Santa Margarita, San Luis Rey and San Dieguito Rivers, and the San Onofre, Las Pulgas, Buena Vista, Agua Hedionda, San Marcos, Escondido and Los Penasquitos Creeks in San Diego County. Presently, over 40 percent of these rivers are controlled by dams and flood control facilities. However, more importantly, significant sand mining activities within the upland watershed have robbed the majority of this beach-building material before it can reach the coastline. The sediment budget within the entire Oceanside Littoral Cell and in Solana Beach is presently in a significant deficit, with sand loss exceeding supply. Consequently, the shoreline is gradually retreating at a rate of up to 1 foot per year (USACE, 1991; SANDAG, 1993).

5.1 Short-Term Sea Level Change

The effect of waves on the coast is highly dependent on the sea level during the wave episode. Large waves at low sea level cause limited erosion, since they break well offshore. When episodes of large waves combine with short-term high sea level from tides and other factors, rapid retreat may occur along vulnerable coastlines.

5.1.1 Tides

Tides are caused by the gravitational pull of astronomical bodies; primarily the moon, sun, and planets. Tides along the San Diego coast have a semi-diurnal inequality. On an annual average basis, the lowest tide is about -1.6 feet (MLLW datum) and the highest tide is about 7.1 feet, MLLW datum.
5.1.2 Storm Surge

Storm surge represents the increase in sea level above the astronomical tides due to the combination of low barometric pressure and strong storms pushing sea water against the coast. Storm surge is relatively small along the Southern California coast when compared with tidal fluctuations. Excluding the effects of waves, storm surges in Southern California rarely exceed 3 feet in amplitude, with average heights below 1 foot for two to six days (USCOE, 1991).

5.1.3 Wave Setup

Wave setup results from superelevation of the water surface over the normal surge elevation due to onshore mass transport of the water by wave action alone. Wave setup is a function of both the stillwater level, and the elevation and slope of the shore platform. For the San Diego area, the typical maximum range in wave setup would likely vary from 1/2 to 1 foot, which would be added to the extreme water elevation resulting from storm surge and astronomical tide.

5.1.4 El Niño

Large-scale, Pacific Ocean-wide warming periods occur episodically and are related to the El Niño phenomenon. These meteorological anomalies are characterized by low atmospheric pressures and persistent onshore winds. During these events, average sea levels in southern California can rise up to 0.5 foot above normal. Tidal data indicates that six episodes (1914, 1930 through 1931, 1941, 1957 through 1959, and 1982 through 1983, and 1997 through 1998 - mild El Niño-type conditions were also reported in 1988 and 1992) have occurred since 1905. Further analysis suggests that these events have an average return period of 14 years, with 0.2-foot tidal departures lasting for two to three years.

The added probability of experiencing more severe winter storms during El Niño periods increases the likelihood of coincident storm waves and higher storm surge. The record water level of 8.35 feet, MLLW, observed in San Diego Bay in January 1983, includes an estimated 0.8 foot of surge and seasonal level rise (Flick and Cayan, 1984), which set the stage for the wave-induced flooding and erosion that marked that winter season.
5.2 Long-Term Sea Level Rise

Changes in sea level result in significant changes in the shoreline location. Three general sea level conditions are recognized: rising, falling, and stationary. The rising and falling stages result in massive sediment release and transport, while the stationary stage allows time for adjustment and reorganization toward equilibrium. Major changes in sea level during the Quaternary period were caused by worldwide climate fluctuation, resulting in at least 17 glacial and interglacial stages in the last 800,000 years and many before then (Shackleton and Opdyke, 1976). Worldwide sea level rise associated with the melting of glaciers is commonly referred to as "glacio-eustatic" or "true" sea level rise. During the past 200,000 years, eustatic sea level has ranged from about 150 meters below the present, to possibly as high as about 10 meters above. If all of the ice presently on earth were to melt, sea level would rise about 78 meters above the present level (Barry, 1981).

Sea level changes during the last 18,000 years have resulted in an approximately 400-foot rise in sea level, when relatively cold global climates of the Wisconsin ice age started to become warmer, melting a substantial portion of the continental ice caps (Curray, 1960; 1961). Sea level curves show a relatively rapid rise of about 1 meter per century, from about 18,000 years before present to about 8,000 years ago, as indicated in Masters and Fleming (1983). About 8,000 years ago, the rate of sea level rise slowed, ultimately to a relatively constant rate of about 10 centimeters per century since about 6,000 years ago (Curray, 1960; 1961; 1965). Most researchers agree that, along the southern California coastline, the sea level approximately 6,000 years ago was 12 to 16 feet below its current elevation (Curray, 1960; 1965; Inman and Veeh, 1966). More importantly, the world's coastlines, including that of California, have been shaped largely within this 6,000-year period, with the sea at, or within 16 feet of, its present level (Bird, 1985).

Continuous sea level records exist from a tide gauge in San Diego Bay beginning in 1906, and from a gauge at La Jolla beginning in 1924. Figure 5 shows a plot of yearly mean sea level at La Jolla based on data published by the National Ocean Service (NOS). The straight line represents a least-squares fit of the data and indicates a mean rate of sea level rise of 0.64 feet per century. The shaded areas above the trend line correspond to above-average sea level episodes corresponding to major El Niño events (Quinn, et al., 1978). The highest sea levels in La Jolla were observed on January 29, 1983 (7.71 feet MLLW), and August 8, 1983, (7.81 feet MLLW). These episodes were part of a run of El Niño and storm-influenced extreme events that occurred during the 1982-1983 storm season. [The 8.35-foot extreme
tidal level recorded in San Diego Bay during this same period is due to the tidal amplification that occurs within the sheltered bay location."

Considerable effort has gone into estimating future sea level rise, as this has a significant impact on coastal erosion. Given a known rate of sea level rise, in its simplest form, the amount of erosion in a given time is equal to the amount of sea level rise divided by the shore platform slope. This sea level model takes the following form (Marine Board, 1987):

$$\frac{dx}{dt} = \frac{(L + E)}{\text{platform gradient}}$$

where $\frac{dx}{dt}$ is the horizontal rate of erosion, $L$ is the local tectonic rate of subsidence or uplift, and $E$ is the eustatic sea level rise. With an average platform gradient of 40:1 and a future sea level rise of 0.64 feet per century, sea level rise alone would result in a retreat of the average coastal bluff of approximately 25 feet in the next century. This model further assumes uniform lithology and a uniform elevation of the cliff-platform junction. Future eustatic trends are also difficult to predict. Acknowledging that certain scenarios address global warming, the most conservative scenario predicts 1.5 meters (4.92 feet) of sea level rise by the year 2100 (Marine Board, 1987). A more contemporary assessment of future sea-level rise, at least for the near-term possibly 50 to 100 years out into the future, is a continuation of its current trend of approximately 1.9 millimeters per year, or 0.62 foot per century (Douglas, et al., 2001). Based on personal discussions with Dr. Robert Dean, Professor Emeritus of Civil and Coastal Engineering at the University of Florida, a contemporary conservative estimate of sea-level rise over the next century would be approximately 30 centimeters or slightly less than 1 foot.

### 5.3 Design Stillwater

For design of coastal structures, a conservative high sea level is determined that accounts for all of the factors that may increase sea level during the design life of the structure. This should include tides, storm surge, wave setup, and the increase in sea level that may occur during the design life of the structure. For the Solana Beach area, assuming a design long-term sea level rise of 1.0 foot, the likely maximum design stillwater elevation would be 7.5 feet (MSL).
5.4 Design Wave Height and Runup

Wave conditions at the site depend on the water level and corresponding beach elevation at the base of the structure. Consequently, a design still water level (SWL) or a range of SWLs must be established in determining wave forces on a structure, such as a rigid seawall.

The foreshore slope also affects the height of a particular design wave approaching the structure. For a given beach elevation at the base of a structure, a steeper foreshore slope allows a larger wave to break upon the structure.

Our evaluation of the maximum design wave for the subject structure is based on criteria set forth in the U.S. Army Corps of Engineers Shore Protection Manual (1984 Edition) and the 1980 NOAA published data for combined maximum astronomical tide plus storm surge for a 100-year return period. A maximum still water level of 7.5 feet (MSL) was selected for design, which includes both the maximum high yearly tide, combined with a statistical 100-year storm surge, 1½ feet of wave setup, and 1 foot of additional height to account for long-term rise in sea level. For purposes of computing the maximum wave height, we have assumed a design scour elevation in front of the structure of -2.0 feet (MSL), and a foreshore slope of 1 on 40. To account for local variations in scour potential, we have provided a design bottom-of-wall elevation of -2.0 feet, or 2 feet below the shore platform elevation, whichever is deeper.

The maximum wave height that can reach the structure occurs during the period when the maximum depth of standing water exists in front of the structure, which includes both the maximum still water level (SWL), combined with the maximum scour at the base of the structure. The maximum water depth at the base of the structure, $d_s$, has been assigned a worst-case design condition of 9.5 feet. The resultant maximum breaking wave height occurs when a specific deep-water wave is allowed to shoal and break directly upon the structure. Using the design criteria set forth in the Army Corps of Engineers Shore Protection Manual, the design breaking wave height, $H_b$, is approximately equal to $d_s$ or 9.5 feet.

Based on these design criteria, the maximum design breaker height is on the order of 9.5 feet, and maximum dynamic wave pressures would be upwards of 11,000 psf, centered around the SWL, which may range from the base of the wall up to elevation +7.5 feet. These impact, or shock, pressures result in relatively high pressure fields that last a few thousandths to a few
hundredths of a second. These short-duration impact pressures have little effect on reinforced concrete structures (and should not be included in design). However, these pressures may have a significant adverse impact on the geologic formation where joints or fractures are exposed in the base of the sea cliff.

Runup calculations, assuming the worst-case design scenario, may create over 25 feet of runup above the still water elevation on the vertical face of the structure, as well as the adjacent unprotected sea cliff. However, under these conditions, runup, and hence overwash (overtopping), will occur elsewhere throughout this stretch of coastline, likely causing erosion of the more friable Bay Point sands. The proposed improvements at 245-249 Pacific Avenue should protect the entire bluff from runup-induced wave erosion.

6 EROSION AND BLUFF STABILITY

Loss of the sandy beach is the primary factor causing the current accelerated erosion of the Solana Beach coastal bluffs. The sea cliff is subject to direct wave attack, with surf zone abrasion notching the base of the sea cliffs and the overhang eventually collapsing when the weight of the overhang exceeds the strength of the sandstone supporting it. Failure of the sea cliff undermines the sloping upper bluff terrace deposits. In particular, where clean sands exist, accelerated sloughing of the clean sands in turn undermine the upper terrace deposits, which triggers the progressive failures extending up the face of the coastal bluff, as has occurred at the subject site.

Over thirty separate coastal bluff failures have occurred in Solana Beach since the 1997-98 El Niño storm season, each one resulting from the collapse of a notch or sea cave at the base of the sea cliff. Failures typically occur once the notch depth extends beyond bluff-parallel fractures in the Torrey Sandstone, typically on the order of 6 to 10 feet back from the face of the cliff. The notch, without the benefit of any subadjacent lateral support, shears off as a large slab, as illustrated in Photo 7.

Human activities in the last 50 years have resulted in progressive loss of the transient sand beach, primarily from the cumulative effects of sand removal in the urbanizing watershed. This has caused a dramatic increase in the rate of marine erosion not previously observed during man's early habitation of the North County coastal area, or more specifically within the last century.
The 1997-98 El Niño storm season caused significant erosion of the coastal bluff throughout the northern portion of the City’s coastline, with much of the coastal bluff experiencing upwards of 8 to 10 feet of marine erosion, typically manifesting itself in the formation of sea caves and/or notches, where the notch or overhang eventually collapses, undermining the upper terrace deposits and triggering upper bluff failures.

6.1 Soil Conditions

In order to assess the stability of the upper bluff, slope stability analyses were performed using soil strengths for the upper terrace deposits and Eocene-age Torrey Sandstone as follows:

Upper Beach Ridge Deposits: \( \phi = 33 \) degrees
\[ c = 600 \text{ psf} \]
\[ \gamma_t = 120 \text{ pcf} \]

Mid-Bluff Terrace Deposits: \( \phi = 33 \) degrees
\[ c = 370 \text{ psf} \]
\[ \gamma_t = 120 \text{ pcf} \]

Lower Clean Sand Layer: \( \phi = 32 \) degrees
\[ c = 0 \text{ psf} \]
\[ \gamma_t = 120 \text{ pcf} \]

Torrey Sandstone: \( \phi = 35 \) degrees
\[ c = 3,500 \text{ psf} \]
\[ \gamma_t = 120 \text{ pcf} \]

6.2 Upper Bluff Stability

The stability of the upper portion of the coastal bluff was evaluated with the computer software GSTABL7, which is a two-dimensional limit equilibrium slope stability program based upon the PCSTABL program developed by Purdue University. Summary results of the coastal stability analyses are tabulated below and included in Appendix B. Factors of safety range from 0.99 at 245 Pacific Avenue (Figure B-5), to 1.06 at 245 Pacific Avenue (Figure B-1). The existing upper bluff slopes are only marginally stable at best, due primarily to the
presence of the 10-foot-thick clean sand layer situated above the more resistant Torrey Sandstone. Without appropriate measures, these clean sands, which are exposed across the entire 74-foot-long section of coastline, will continue to cause progressive upper bluff failures.

With regard to the factor of safety, it is important to note that the slope stability analyses were performed using saturated soil strengths described in Section 5.1. Absent moisture, these soils exhibit greater strength as a result of capillary tension and, as a result, will have a slightly greater factor of safety than that determined by our analysis. Any factor of safety equal to or less than 1.0 represents a slope that is failing. 245 Pacific Avenue has a calculated factor of safety of 0.99. It is the absence of saturated soils that results in an increase in soil strength, which explains why this slope remains standing. Although we believe the slope to be only marginally stable, the non-saturated capillary tension in the upper bluff sands results in a factor of safety slightly greater than 1.0 for 245 Pacific Avenue.

Additional analyses have been performed incorporating the proposed improvements to confine the clean sand layer. Pseudostatic analyses using a horizontal seismic coefficient of 0.15g have also been performed. These analyses are also included in Appendix B, and summary results are tabulated below.

<table>
<thead>
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<th>Section</th>
<th>Existing Factor of Safety</th>
<th>Factor of Safety with Project</th>
<th>Existing Seismic Factor of Safety</th>
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<td>1.06</td>
<td>1.53</td>
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7 DESIGN CONSIDERATIONS

The proposed shoreline stabilization project is necessary to prevent the continued erosion of the lower bluff, to prevent the imminent upper bluff failure that will occur as a result of the recently formed mole hole in front of 245/249 Pacific Avenue, and to protect the existing 249-311 Pacific Avenue seawall from flanking.

Stabilization of the coastal bluff requires both rehabilitation and support for the toe of the sloping upper bluff terrace deposits and the protection of the lower sea cliff from any further
marine erosion. Geotechnical stability analyses indicate an unstable upper sloping coastal bluff with factors of safety at or below 1.06, necessitating considerable lateral restraint to stabilize the upper sloping portion of the coastal bluff. The proposed shoreline stabilization project addresses both marine and subaerial erosion, with an approximately 74-foot-long tied-back wall system consisting of a 35-foot-high tied-back structural shotcrete wall along the lower bluff.

Our design consists of a free-form, structural shotcrete, tied-back wall with a natural-appearing, colored and textured surface that replicates the coastal bluff, adding somewhat more relief than that which exists today and reestablishing the visual geologic contact supporting the upper sloping terrace deposits where necessary.

The tied-back wall design incorporates an 18-inch minimum thickness, structurally reinforced shotcrete skin with an additional 12-inch sacrificial concrete covering, the outer 4 inches of which includes a sculptor coat to be both textured and colored to blend in with that of the adjacent coastal bluffs. Lateral restraint is provided by three rows of tied-back anchors consisting of 3- to 8-strand, 0.6-inch-diameter, 270 ksi prestressing tendons. Design loads range from 70 to 230 kips per anchor, resisting the soil-induced design lateral load.

In addition to the proposed seawall, we recommend that the mole hole described in Section 2.1 be filled after construction of the lower seawall. As indicated on Figure 3, the mole hole is located near the property line between 245 and 249 Pacific Avenue. Depending upon the expansion of this mole hole in the months leading up to construction, we recommend that this hole be filled with concrete or compacted soil to prevent future enlargement.

8 TIED-BACK SHOTCRETE WALL

A critical factor in any geotechnical evaluation is the selection of design parameters. Our selection of design parameters was based on our site reconnaissance, review of available geotechnical and geological data, correlations in published literature, and data in our own files pertaining to the same geologic environment.

The geotechnical factors influencing the design of a tied-back wall system include the stability of the slope, the strength of the anchor zone, the type of anchor system, and the forces acting on the tied-back wall system. Discounting the potential for collapse of the
existing overhang, the results of our analyses indicate that the lower sea cliffs are stable with respect to deep-seated rotational-type failures. However, the upper sloping bluffs are susceptible to local instabilities associated with undermining and erosion due to wave action. The undermining appears to produce a series of block-type failures (blockfall) resulting in bluff retreat (Group Delta, 1998). The presence of localized jointed material within the sea cliff, both perpendicular and parallel to the cliff face, suggests the possibility of limited hydrostatic pressures developing within jointed zones of the bedrock face. For this geologic environment, we believe that a relatively conservative design criteria would include full hydrostatic wall pressures extending from the base of the wall up to elevation +10 feet (MSL datum), where a series of weep holes would be installed, and thereafter subjected to a lateral earth pressure equivalent to a uniform pressure of 250 pounds per square foot. A weep hole design elevation of +10 feet was selected, as this is above the maximum elevation of breaking wave impact, where instantaneous hydrodynamic pressures could compromise the integrity of the wall drainage system.

8.1 Tieback Design Requirements

Post-grouted tiebacks are to be used for all lateral restraint. A horizontal tieback spacing of 10 feet has been selected to optimize anchor loading and wall reinforcing requirements. Maximum anchor design loads were based on our geotechnical stability analyses. For the upper, middle, and lower rows, the maximum anchor design loads will be on the order of 230 kips, 70 kips, and 110 kips, respectively. The anchors will be installed at a 1 to 4 batter from horizontal to the wall face.

All tiebacks will consist of DYWIDAG Systems International (DSI) anchors, with Type C double-corrosion protection. DSI product literature is included in Appendix C.

8.2 Wall Drainage

Provisions for the structural tied-back wall drainage will consist of 2-foot-wide geocomposite drainboards, centered between adjacent anchors. J-Drain 302, a high-quality geocomposite drainboard, shall be used for all vertical chimney drains. All chimney drains will then be manifolded into a horizontal wall drain, exiting the wall face via 1-inch Schedule 40 PVC drain pipes at elevation 10 feet and at 10 feet on center.
8.3 **Groundwater Considerations**

Groundwater is not included in any of the analyses. As indicated in Section 4.2, groundwater seeps along the bedrock contact of the Torrey Sandstone were not observed in the site vicinity. However, the tied-back wall will be designed with extensive internal drainage to allow for the possibility of some future rise in the groundwater.

9 **ALTERNATIVES TO THE PROPOSED STRUCTURE**

As part of the Municipal Code requirement for Use Permit submittal, we are providing an analysis of alternatives to the currently proposed coastal bluff stabilization and consideration of how those alternatives would impact the need for the proposed wall. It must first be recognized that without the proposed wall, the existing upper bluff will continue to fail. Future enlargement of failures will result in more bluff-top loss and could be catastrophic to the bluff-top residences. Additionally, as previously mentioned, the proposed wall is needed to provide protection to improvements at the subject properties. Beach users continue to be imperiled. Given the above, we have considered the following.

9.1 **Rock Riprap**

Protective rock lowers the rate of erosion at the base of the bluffs by dissipating wave energy and shielding the base of the bluff from the grinding action of wave-driven cobbles. Riprap unfortunately cannot provide the necessary support for the lower portion of the sloping upper bluffs and therefore will not eliminate the need for the wall. Additionally, the base of the riprap would have to be many feet wide, encroaching many feet beyond the base of the existing bluff and reducing the already small useable beach area.

9.2 **Notch Infill at Base of Existing Bluff**

For the same reasons detailed above for rock riprap, a notch infill only solves part of the problem, namely reducing the rate of erosion of the lower sandstone sea cliff, while doing nothing to provide support for the unstable upper bluff. A notch infill would only be effective in areas where the clean sand layer is not exposed. Unfortunately, this sand layer is exposed across the entire site. It is the ongoing sloughing of the clean sands in the upper
bluff that constitutes the immediate threat to the bluff-top structures and adjacent shoreline improvements, and any solution that does not address this mechanism is inadequate.

9.3 Groundwater Controls, Irrigation Restrictions, and Drought-Tolerant Planting

We unhesitatingly support the strict control of plantings, and irrigation in sensitive areas of bluff-top lots in order to control excess moisture from triggering failures of bluff-top sediments. The geologic conditions along Pacific Avenue are such that the natural drainage divide of the coastal terrace is located near the existing bluff top, and the entire coastal terrace surface drains easterly toward Pacific Avenue, essentially precluding any over-bluff discharge. The subject properties affected by this bluff erosion and instability have already taken measures to eliminate any irrigation water from penetrating into the bluff-top sediments.

It must be emphasized that excess irrigation water is not the cause of the current situation. The instability that we are addressing is the result of ongoing marine erosion eroding the lower sea cliff. While strict irrigation and runoff control is a valuable preventative strategy in general, nothing about the drainage configuration of any of these lots contributes to the ongoing wave attack at the base of the sea cliffs or to the ongoing sloughing of the upper bluff sediments. Likewise, instituting stricter landscaping and irrigation controls at this point in time would not mitigate the continuing enlargement of these failures. These measures would not affect the current need for the proposed project.

Given the preceding discussion, limited slope planting should be implemented with a native seed mix in strict compliance with the City's Coastal Bluff Vicinity Landscape Guidelines. A bonded fiber matrix should also be used to help stabilize the soil surface and help promote seed germination.

9.4 Underpinning

Underpinning as a standalone project without the benefit of a lower seawall or notch infill enables notches to continually reform and collapse, creating significant negative visual impacts and a progressively failing upper bluff, thus continuing to result in the loss of upper bluff, as has been the case in front of 241 Pacific Avenue just to the south of the proposed project. It is for these reasons that underpinning the buildings without the proposed lower bluff stabilization would be an incomplete treatment in our view.
Additionally, the safety of the beach-going public is not addressed by a standalone underpinning alternative. The recent ongoing failures throughout this section of coastline have sensitized us to the very real danger of personal injury as a result of a coastal bluff failure. As licensed design professionals in the State of California, it is incumbent on us to consider public safety as one of our primary responsibilities in the practice of our profession.

9.5 Chemical Grouting

The use of chemicals in grouting has become relatively popular in recent years and has evolved from cement grouting practice where considerable work has been done primarily for densification of loose, compressible soils. Cement grouting is most frequently used as a remedial measure beneath or adjacent to an existing structure. The need for cement grouting usually arises from the following conditions:

- Loose or deteriorating natural soil conditions
- Loose or voided fills, either improperly placed at the time of construction or placed in an uncontrolled manner before construction was anticipated
- Loose soils caused by adjacent excavation activity
- Loose or voided soils caused by sinkhole activity
- Loose or voided soils caused by improper dewatering
- Loose or voided soils caused by broken utility lines or the like

A secondary use of compaction grouting is to re-level structures that have experienced settlement.

In its simplest form, the process of cement grouting initially includes the installation of a series of grout pipes down to the bottom of the zone to be remediated, and then the injection under relatively high pressure of a variable viscosity cement and water mixture. By controlling the injection rate, the grout mix can be injected until unacceptable pressures develop, at which point the grout tube is partially extracted and the process repeated. At the conclusion of grouting operations, and depending upon the viscosity of the grout, a highly-variable shaped columnar structure is formed within the soil mass, with its variability a
function of both soil density, which limits the amount of grout take, associated with physical compaction of the cylindrical soil annulus around the grout tube and the viscosity of the grout mix, and permeability of the soil, enabling a limited amount of penetration into the soil adjacent to the grout tube. This whole process, although highly effective in densifying loose soils and filling voids, results in a series of isolated variable-shaped cylindrical grout columns adjacent to untreated or, at best, less densified, soils. Chemical grouts have gained popularity due to their much lower viscosity and ability to permeate into the pore space of the soil to provide a more homogeneous soil medium.

The concept of ground improvement along coastal bluffs works well in theory, assuming that the entire soil mass can be permeated with an extremely low viscosity chemical to essentially glue the soil mass together. The instability of the upper coastal bluffs in this location is associated with both inadequate soil strength along a given hypothetical failure geometry, and the potential presence of a lens of clean sands. Once the support of the Torrey Sandstone is removed from beneath these clean sands, it is the continued sloughing of these clean sands that, in turn, undermines the upper terrace deposits that triggers the progressive failures extending up the face of the coastal bluffs.

Cementitious grouts are not capable of achieving any degree of uniform soil-mass penetration, and although they are capable of significantly increasing soil strengths, at least locally, they provide essentially no benefit in solidifying clean sands. Chemical grouts, however, can provide more effective permeation, increasing both cohesion and soil strength. The reality is that for chemical grouting to be effective in stabilizing coastal bluffs, one must essentially permeate the outer 5 to 10 feet of the slope face; a difficult, if not impossible, challenge. Like cementitious grouts, chemical grouts are injected under pressure and, when confined with adequate overburden, can effectively permeate relatively large areas. However, adjacent the face of the slope, no effective confinement exists, and even controlled grouting can blow out portions of the slope face if any excessive pressure buildup occurs.

A constructability challenge then exists, necessitating men and equipment at the geologic contact near elevation 25 feet, with the requirement of injecting a chemical into the clean sands under pressure utilizing a series of grout tubes in an attempt to develop homogenous penetration. The reality is that this becomes a very dangerous construction technique, with the risk of additional construction failures occurring during the grouting process, placing the construction crew in great physical danger. More importantly, without solidifying the entire
clean sand layer, those unsolidified zones will continue to erode, triggering yet additional upper bluff failures. Such erosion is visible on two properties located to the north (325 and 327 Pacific Avenue), where this technique has been attempted. Also apparent on the northerly properties is additional upper bluff sloughing above the zone of grouting. The geologic formation itself is also quite dense, making the installation of grout tubes a difficult process, likely increasing the risk of construction-period failures.

In summary, in-situ ground modification is an attractive, relatively economical, concept that if effectual could be a highly desirable solution to a challenging problem. However, we know of no products and/or methods that can uniformly permeate the near-surface sloping terrace deposits with a chemical stabilizer, essentially solidifying the entire mass, and thereby improving its in-place stability. Again, this concept works well in theory and a market clearly exists. However, at this time, we believe the technology does not exist for chemical grouts to stabilize the subject slopes.

9.6 No Project

If the coastal bluff is left in its current condition, a series of progressive upper bluff failures will result in the loss of upper bluff, ultimately leading to the loss of bluff-top residences and flanking of the existing shoreline improvements at 249 through 311 Pacific Avenue. Upper bluff failures will imperil the beach going public and bluff top inhabitants alike. The proposed measures represent the minimum necessary effort to repair this section of coastline.

10 LIMITATIONS

Coastal engineering and the earth sciences are characterized by uncertainty. Professional judgments represented herein are based partly on our evaluation of the technical information gathered, partly on our understanding of the proposed construction, and partly on our general experience. Our engineering work and judgments rendered meet the current professional standards; we do not guarantee the performance of the project in any respect. This warranty is in lieu of all other warranties, expressed or implied.

We have observed only a small portion of the pertinent soil and groundwater conditions at the proposed project site. The recommendations made herein are based on the assumption that soil conditions do not deviate appreciably from those found during our field
investment. If the plans for site development are changed, or if variations or undesirable geotechnical conditions are encountered during construction, TerraCosta Consulting Group, Inc. should be consulted for further recommendations.
REFERENCES


Curry, J.R., 1965, Late Quaternary History; Continental Shelves of the United States, p. 723-735 in H.E. Wright, Jr. and D.G. Frey (eds), The Quaternary of the United States, Princeton Univ. Press, 922 p.


REFERENCES (continued)


PCSTABL: Purdue University, West Lafayette, Indiana.


REFERENCES
(continued)


Photo taken in late January 1998 showing an extensive blockfall below 371 - 403 Pacific Ave. Subsequent marine erosion continued to enlarge the sea caves and reinitiate notching until stabilized by sea cave infills (Felger collection).
Yearly mean sea level observed at La Jolla, 1925-1986. Shaded areas indicate periods of major El Niño episodes associated with heightened sea levels persisting for years. Straight line shows least-square-fit of trend with a slope of 0.54 ft./century.
APPENDIX A

BORING LOG AND SOIL BORING SUMMARY REPORT
Ms. Diana Lilly
CALIFORNIA COASTAL COMMISSION
3111 Camino Del Rio North, Suite 200
San Diego, California 92108

SOIL BORING AND GEOLOGIC INTERPRETATION
COASTAL BLUFF STABILIZATION
249 - 311 PACIFIC AVENUE
SOLANA BEACH, CALIFORNIA

CDP NO. 6-98-134

Dear Ms. Lilly:

In accordance with your request, we have completed a soil boring between the residential structure at 261 Pacific Avenue and the top-of-bluff to assist in our evaluation of geologic conditions at the site of the proposed 352-foot-long seawall.

The location of the soil boring was selected to be representative of subsurface conditions beneath 249 - 311 Pacific Avenue, based on fresh exposures of geologic units in the upper bluff created by sea-cliff retreat during the El Niño of 1997-98. The erosion exposed a 10-foot-thick lens of delicate clean sand at the base of the coastal terrace sediments forming the upper bluffs beneath all of the properties included in CDP No. 6-98-134. Erosion of the clean sand has caused collapse of the overlying sediments. The boring was located near the northwest corner of the house at 261 Pacific Avenue at elevation 83.5 feet. In addition to results of the boring, we have incorporated observation of the sediments exposed in the upper bluff failure at 261 Pacific Avenue and adjacent properties.
In the boring (Figures 1 and 2), we found approximately 9½ feet of beach-ridge deposits and 39 feet of sand-dune deposits consisting of fine sand with a trace of clay or silt. Exposures of this depth interval in the bluff failure at 261 Pacific Avenue reveal high-angle, large-scale cross bedding dipping into the bluff perpendicular to coast. The entire 39-foot thickness between elevation 35 and 74 feet appears to have been formed as the slip face of a large sand dune receiving sand supplied by strong onshore winds. At a depth of approximately 48½ feet (elevation 35 feet), we encountered the clean sand (Figure 3) exposed at the bluff face above the sea cliff. This clean sand deposit is a flat-beded beach deposit formed by retreat of the beach over the ancient shore platform at the beginning of the last ice age. The sand-dune deposits encountered in our boring were part of a dune field that overran the beach deposits as the sea retreated.

The results of our boring and geologic interpretation confirm that the soil-strength model we have used in design of repairs at 261 Pacific Avenue and the 352-foot-long seawall is correct. The relatively strong beach ridge deposits at the top of the bluff are weakly cemented by traces of clay and iron minerals, causing them to be relatively resistant to erosion and to form a cap that affords some protection to the underlying dune and beach deposits in the upper bluff. The dune deposits are of intermediate strength derived from traces of silt. Additional soil strength is derived from capillary tension associated with the moisture content of the soil. The clean sand beach deposits immediately above the Torrey Sandstone sea cliff are weak because they lack fines, and failure surfaces affecting the upper bluff are parallel to the flat bedding.

The crust on the sloping surface of the upper bluff is an important contributor to surficial stability. The crust forms by downward migration of the clay and iron-mineral cement from the beach ridge deposits at the top of the bluff. The crust provides some protection from erosion by rilling, and helps stabilize the moisture content of the dune and beach deposits. Removal of the crust over large areas of the lower part of the gently-sloping upper bluff, initiated by the sea-cliff retreat in the El Niño of 1997-98, caused the sand to dry out and lose the associated component of soil strength, leading to the upper-bluff failures experienced to date and threatening the remaining properties in CDP No. 6-98-134 with similar failures.
If you have any additional questions, please feel free to give us a call.

Very truly yours,

GROUP DELTA CONSULTANTS, INC.

Walter F. Crampton, Principal Engineer
R.C.E. 23792, R.G.E. 245

Phillip C. Birkahn, Principal Geologist
R.G. 3493, C.E.G. 1243
**Key to Excavation Logs**

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<td>Medium dense, moist, brown SILTY FINE SAND (SM)</td>
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**Unified Soil Classification**

- Water Table Measured At Time of Drilling
- Number of Blows Required to Advance Sampler One Foot
- Sample Type:
  - CA California Sampler
  - PB Plastic Bag
- Sample Location
- Depth Below Surface Elevation

Indicates Samples Tested for Other Properties:
- SA Sieve Analysis

**Notes on Field Investigation**

1. Borings were advanced using a track-mounted limited access drill rig with a 6-inch solid-stem auger.

2. California Samplers were used to obtain soil samples. The California Samplers were driven into the soil at the bottom of the borings with a 140-pound hammer falling 36 inches. When the samplers were withdrawn from the boring, the samples were removed, visually classified, sealed in plastic containers, and taken to the laboratory for detailed inspection.

   The California Sampler is a 16-inch-long, 2N-inch I.D., 3-inch O.D., thick-walled sampler. The sampler is lined with eighteen 2-3/8-inch I.D. brass rings. Relatively undisturbed, intact soil samples are retained in the brass rings.

3. Classifications are based upon the Unified Soil Classification System and include color, moisture, and consistency. Field descriptions have been modified to reflect results of laboratory inspection where deemed appropriate.

---

**Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.**

**PROJECT NO.**: 1831-3R

**GROUP DELTA CONSULTANTS, INC.**

Engineers and Geologists
# Boring Log

**Date Drilled:** 7/9/99  
**Boring Elevation:** 83.5 ft  
**Boring No.:** B-1  
**Drill Rig:** Pacific Super Services  
**Boring Diameter:** 6"  
**Hammer WT.:** 340 lbs  
**Drop:** 20"  

## Description

### 261 Pacific Avenue

- Location: 2 ft west & 3 ft north of northwest corner of house

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Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.

**Project No.:** 1831-38  
**261 Pacific Avenue**  
**Figure No.:** 2a

GROUP DELTA CONSULTANTS, INC.  
Engineers and Geologists
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**DESCRIPTION**

261 Pacific Avenue

Location: 2 ft west & 3 ft north of northwest corner of house

Dense, damp, light brownish-gray SILTY FINE SAND (SP-SP)

with trace of silt

NON-MARINE

SAND DUNE DEPOSIT

Sampler packed precluding sample recovery

---

**NOTES:**

Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.
**Boring Log**

**LOGGED BY:** PCB  **DATE DRILLED:** 7/3/59  **BORING ELEVATION:** 83.5 ft  **BORING NO.:**  H - I

**DRILL RIG:** Pacific Super Beaver  **BORING DIAMETER:** 6"  **HANGER WT.:** 140 lbs  **DROP:** 30°

**DESCRIPTION**

261 Pacific Avenue  
Location: 2 ft west & 3 ft north of 
northwest corner of house

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Descriptions on this boring log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.

**PROJECT NO.:** 1831-3A  **261 Pacific Avenue**  **FIGURE NO.:** 24

GROUP DELTA CONSULTANTS, INC.  
Engineers and Geologists
**BOURING LOG**

**LOGGED BY:** PCB  
**DATE DRILLED:** 7/9/99  
**BORING ELEVATION:** 63.5 ft  
**BORING NO.:** B-2

**DRILL RIG:** Pacific Super Beamer  
**BORING DIAMETER:** 6"  
**HAMMER WT.:** 140 lbs  
**DROP:** 35"  

**DESCRIPTION**

361 Pacific Avenue  
Location: 2 ft west & 3 ft north of northwest corner of house

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Very dense, damp, olive-yellow MEDIUM SAND (SM-SP)  
TURKEY SANDSTONE

**BOTTOM OF BORING at 63.5 feet**

No refusal  
No groundwater encountered at time of drilling  
Backfilled with drill spoil 6/9/99  
*From inner wedge of auger flights

**Descriptions on this boursing log apply only at the specific boring location and at the time the boring was made. The descriptions on this log are not warranted to be representative of subsurface conditions at other locations or times.**

**PROJECT NO.:** 1831-3A  
**261 Pacific Avenue**  
**FIGURE NO.:** 24

GROUP DELTA CONSULTANTS, INC.  
Engineers and Geologists
<table>
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<tr>
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GRAN SIZE DISTRIBUTION CURVE
APPENDIX B

SUMMARY STABILITY ANALYSES RESULTS
### Table: 245 Pacific Avenue Existing Condition

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<tr>
<th>#</th>
<th>FS</th>
<th>Soil Type</th>
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**GSTABL7 v.2 FSmin=0.992**

Safety Factors are Calculated by the Modified Bishop Method
245 Pacific Avenue Proposed Condition

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Safety Factors Are Calculated By The Modified Bishop Method
245 Pacific Avenue Proposed Condition

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Safety Factors Are Calculated By The Modified Bishop Method
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**249 Pacific Avenue Existing Condition**

*GSTABL7 v.2, FSmin=1.057*

Safety Factors Are Calculated By The Modified Bishop Method
### 249 Pacific Avenue Existing Condition

![Graph of soil properties](c:/project files/2500-2599/2530 255-249 paci...249seq.png)

**Safety Factors Are Calculated By The Modified Bishop Method**

---

#### Soil Properties Table

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249 Pacific Avenue Proposed Condition

GSTABL7 v.2  FSmin=1.526
Safety Factors Are Calculated By The Modified Bishop Method
APPENDIX C

DSI PRODUCT LITERATURE
DYWIDAG Rock and Soil Anchors

Rogers Pass Slope Stabilization, British Columbia, Canada
DYWIDAG-SYSTEMS INTERNATIONAL

DYWIDAG Threadbar Rock and Soil Anchors

Dywidag Systems International was a pioneer in the development of rock and soil anchor systems and technology. Today DSI is a world leader in this field with an outstanding reputation of product quality and customer service. The double corrosion protected THREADBAR® anchor is universally recognized as the “standard” for anchor performance and corrosion protection. DSI is dedicated to the advancement of the “State-of-the-Art” for rock and soil anchors and stands ready to support you during the design, planning and construction of your project. When questions arise, contact your nearest DSI representative.

One Source for Bar and Strand Anchors

DSI offers a complete line of THREADBAR® and multistrand anchors designed for both temporary or permanent use, manufactured from materials best suited to meet the needs of your project. THREADBAR® Anchors are available in 1” (26mm), 1-1/4” (32 mm), and 1-3/8” (36mm) nominal diameter, in lengths up to 60 feet (18.3m) without couplers, with a guaranteed minimum ultimate tensile stress of 150 or 160 ksl (1034 or 1103 MPa).

Multistrand Anchors manufactured from 0.6” dia. (15.2 mm) 270k (1,861 MPa) strand are available in sizes up to 61 strands. Larger anchors are available but system components are not stocked.

Rock Bolts and Soil Nails manufactured from ASTM A615 grade 60 are produced in sizes ranging from #6 up to, and including, #11 grade 75 bars. Special steels for high impact, seismic and low temperature applications can be made available on special order.

The DSI Advantage

As a full service organization, DSI is prepared to supply design assistance and practical field know-how. This service can also be used to optimize the design process by helping to select the anchor system best suited to meet specific project requirements.

The regional warehouse and fabricating centers strategically located throughout North America, coupled with an extensive network of local sales/service centers, provide prompt, reliable response to customer needs. Most orders can be supplied from inventory with short lead time.

To minimize site labor and to optimize quality control, a variety of shop prefabricating services are available for both bar and strand anchors. In many cases the anchors can be delivered to the site ready for immediate installation without the need for site assembly. The application of corrosion protection grouting at the job site can also be minimized and, in many cases, completely eliminated, saving time and money.

In some locations both supply and installation, including drilling services, are available for any size project.

Whatever your needs you can count on DSI for quality from start to finish. The dedication of our staff to quality and service will help you complete your project successfully and on time.
Applications

Prestressed rock and soil anchors have become an important tool for the geotechnical engineer. Their safe and reliable use in both permanent and temporary applications is accepted throughout the world.

Soil Anchors are pressure grouted anchors installed in either cohesive or non-cohesive soil or loose rock. The anchors transfer forces into the ground by means of a steel tendon and a well-defined grout body. In the free stressing length, the anchor remains free to move.

Soil anchors are generally used to:
- anchor support structures for excavations such as sheet pile walls, soldier piles and lagging, drilled piles and slurry walls,
- counteract uplift forces in structures subjected to buoyancy and lateral loads,
- transfer external forces to the ground; e.g., wind, earthquake,
- stabilize eccentrically loaded foundations,
- stabilize material or excavated slopes.

Rock Anchors are post-tensioned tendons installed in drilled holes for which at least the entire bond length is located in rock. The anchor force is transmitted to the rock by bond between the grout body and the rock. Rock anchors can remain unbonded in the free stressing length allowing the anchor to be checked and retensioned at any time. In such cases, adequate corrosion protection for the stressing anchorage and the free stressing length must be provided. On the other hand, the free stressing length can also be fully grouted after the anchor has been stressed, in which case force adjustment is no longer possible.

Rock anchors are generally used to:
- anchor external forces and uplift forces,
- anchor retaining walls,
- stabilize eccentrically loaded foundations, slopes, rock walls and cuts,
- stabilize underground excavations and mines,
- increase the stability of dams.
Threadbar® Anchors

The Dywidag Threadbar Rock and Soil Anchor System is manufactured in the United States and Canada exclusively by Dywidag Systems International.

Simple and Rugged
The threadbar has a continuous rolled-on pattern of deformations along its entire length which allows anchorage hardware or couplers to thread onto the bar at any point. The coarse thread is almost indestructible under normal job site conditions.

Positive Anchorage
The bar is anchored using a threaded nut which, unlike a wedge type anchorage, is not liable to be loosened when the anchor force is reduced due to possible ground movements. In addition, the threaded nut anchorage has a known overload capacity which cannot be duplicated by a wedge type anchorage without the utilization of elaborate and expensive details.

Easy to Stress
The reliable and compact threaded nut anchorage has almost no anchor set. Its hemispherical shape easily accommodates the small angular misalignments between bar and anchorage due to construction tolerances. Lightweight, durable equipment makes stressing, restressing and adjusting the anchor load up or down easy to do.

Easy to Check Actual Prestress Load and Restress
The threaded design makes it possible to make a lift off test and/or adjust the anchor load at any time during the service life of the anchor. Corrosion protection can be maintained at all times.

Easy to Splice
The continuous thread makes it possible to extend the threadbar to any length, simplifying transportation and installation. Extending the bar beyond the stressing end to connect to another structural member is also a simple operation.

High Bond Strength
The deformation pattern provides excellent bond between the bar and cement grout making it possible to reliably transfer anchor prestress load into the grout without the need for additional mechanical devices. The narrow spacing of the deformations assures close crack spacing in the surrounding grout and therefore smaller crack widths which will not degrade the corrosion protection.

Removable
The threadbar can be removed after distressing the anchor by unscrewing the unbonded portion of the bar from a coupler or out of an embedded end anchorage. Bars with end anchors and sleeved within the bond length can be completely removed. This is especially important where temporary anchors are installed below adjacent properties and must be removed after use.

Easy to Install
Because of their inherent stiffness and ruggedness, threadbar anchors can be easily installed in any position, including upward. It is particularly easy to install a bar anchor in a pre-grouted hole.
Insurance Against Anchor Failure
In cohesive and other poor soils, a proven and reliable DSI post-grouting system can be used to increase the capacity of an anchor. The use of this system can make the difference between an anchor that works and one that does not.

Corrosion Protection Options
A wide variety of corrosion protection options are available to choose from depending upon the expected length of service and the aggressiveness of the environment.

Unprotected Anchors
Unprotected anchors are used for temporary applications. The free stressing length is unprotected while the bond length is embedded in the cement grout body. Unprotected anchors may be subject to corrosion. However, the relatively large diameter and solid cross section of the Dywidag threadbar offers more corrosion resistance than smaller diameter high strength, prestressing steel elements with a larger surface area.

Single Corrosion Protected Anchors SCP
Single corrosion protected anchors are used for temporary anchors and sometimes for permanent anchors in non-aggressive rock or soil. A polyethylene sheathing covers the free stressing length. The threadbar is coated with a corrosion inhibitor before the polyethylene sheathing is installed. The bond length is covered with cement grout.

Double Corrosion Protected Anchors DCP
Double corrosion protected anchors are recommended for anchors with a long service life and for an environment where aggressive materials or stray electrical currents are expected.

A corrugated high strength PVC sheathing with plastic end caps is installed over the full length of the anchor. The annular space between threadbar and PVC is fully grouted before the anchor is installed. To accommodate the bar elongation during stressing, a short length of threadbar is left free of the corrugated sheathing under the stressing anchorage. A steel pipe welded to the anchor plate and filled with corrosion preventative compound or grout protects the free end of the bar against corrosion.

A smooth plastic sheathing is installed over the corrugated sheathing in the stressing length. This allows the tendon to elongate during stressing.

The corrugated plastic sheathing acts as a protective membrane preventing intrusion of any corrosive substances. The cement grout around the threadbar provides corrosion protection by embedding the bar in an alkaline environment. The threadbar deformations minimize the width and control the distribution of any cracks that develop in the free stressing length, fully maintaining the protective action of the grout cover.

A protective plastic or steel cap filled with a corrosion preventative compound is installed over the anchor nut after stressing, completing the full encapsulation of the anchor tendon. The cap is removable for checking and/or adjusting the force level in the anchor tendon at any time in the future.

Some important notes about the safe handling of high strength steel for prestressing:
1. Do not damage surface of steel.
2. Do not weld or burn so that sparks or hot slag will touch any particle of steel which will be under stress.
3. Do not use any part of steel as a ground connection for welding.
4. Do not use steel that has been kinked or contains a sharp bend.

Disregarding these instructions may cause failure of steel during stressing.
DYWIDAG Threadbar Anchors with Single Corrosion Protection

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<th>VARIATIONS</th>
<th>GROUTING</th>
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<td>COMPENSATING BENDING AND WEDGE WASHER</td>
<td>FIXED COUPLER FOR DIFFICULT INSTALLATION CONDITIONS</td>
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<td>PLASTIC OR STEEL CAP</td>
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<td>FLUSH TUBE FOR SOIL ANCHORS</td>
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FREE DRILLING LENGTH
## DYWIDAG Threadbar Anchors with Double Corrosion Protection

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DYWIDAG Bar Rock and Soil Anchors

Prestressing Steel Properties - ASTM A722

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<td>108.6 485</td>
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<td>400 1779</td>
<td>320 1423</td>
<td>280 1245</td>
<td>240 1068</td>
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</table>

Steel Stress Levels

DYWIDAG Bars may be stressed to the allowable limits of ACI 318. The maximum jacking stress (temporary) may not exceed 0.60 $f_y$, and the transfer stress (lock-off) may not exceed 0.70 $f_y$.

The final effective (working) prestress level depends on the specific application, installation procedure, stressing sequence and the rigidity of the structural system. In the absence of a detailed analysis of the structural system, 0.60 $f_y$ may be used as an approximation of the effective (working) prestress level.

DYWIDAG Bars may be used individually or in multiples depending upon the magnitude of force requirements or upon drilling considerations.

Actual loss calculations require structural design information not normally present on contract documents.

Hardware Dimensions

<table>
<thead>
<tr>
<th>Bar Diameter</th>
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<th>mm</th>
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<td>Min. Bar Projection</td>
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Minimum Anchor Diameter

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<tr>
<td></td>
<td>Single</td>
</tr>
<tr>
<td></td>
<td>Without Coupler</td>
</tr>
<tr>
<td></td>
<td>in</td>
</tr>
<tr>
<td>1 26</td>
<td>1.20</td>
</tr>
<tr>
<td>1 1/4 32</td>
<td>1.16</td>
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<td>1 1/4 46</td>
<td>2</td>
</tr>
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DYWIDAG Anchor Design

The spacing, inclination, length and the load applied of each anchor depend on the local soil or rock conditions. The available drilling equipment and the structural capacity of the other support elements, such as wales, lagging or a concrete retaining wall, may dictate the capacity and configuration of anchors. A factor of safety of 1.5 to 2.5 should be utilized in anchor design.

For rock anchors, the shear stress on the rock socket perimeter is used to size the bond length. For soil anchors, the bond length is generally assumed on the basis of experience and site testing. Field testing should always be conducted to verify design assumptions.

Pull out tests verify that the bond capacity of the threaded bar in grout exceeds the recommendations of ACI 318. The threaded bar-grout interface does not control the bond length. Bond in cohesive soils can be considerably increased using the Dywidag Postgrouting System.

The stressing length depends on the assumed failure plane and/or the size of the rock or soil mass necessary to resist the anchor force. A minimum stressing length of 15 ft. is recommended, so that small movements in the retaining system will not result in a major loss of prestress force.

Dywidad Anchor Installation

Selection of the drilling method depends on the number of anchors, the composition of the soil or rock, availability of equipment and the required diameter of the hole. The selection of the tools and techniques should be left to the discretion of the drilling contractor where practical. The depth of the bore hole should be based on site tests.

The diameter of the bore hole should exceed the maximum diameter of the anchor by at least 1". If centering devices are used, larger holes are required.

Grouting

For rock anchors, bore holes should be pressure tested to determine water leakage before the anchors are installed. Consolidation grouting, redrilling and retesting are required where water seepage is excessive.

After the anchor is installed in the bore hole, the bond length is grouted. Rock anchors and anchors in cohesive soils are generally grouted without pressure. Soil anchors in loose granular material are pressure grouted while the drill casing or auger is withdrawn.

Dywidad Postgrouting may be used for the installation of anchors in cohesive soils and non-cohesive soils. This technique permits additional grouting operations after the primary grout has cured. Using a series of valves in a preplaced grout pipe, grout can repeatedly be injected under high pressure. Regrouting displaces the previously injected grout and increases the anchor capacity.

Stressing

In stressing, an electrically powered hydraulic jack with built-in socket wrench tightens the anchor nut. The jack fits over a pull rod designed to thread onto the threaded extension protruding from the anchor nut. Elasticity of the anchor can be measured directly or can be monitored by a counter on the jack. Hydraulic pressure is measured by a gauge on the hydraulic pump. Discrepancies of more than 10% between elongation and gauge reading should be investigated. Lift off readings should be taken to determine the applied prestress force. Movement of the structural system must be considered.

Testing

Prior to the installation of any production anchors, test anchors should be installed to verify all design assumptions, including anchor length. Test anchors should be proof stressed to 80% of the guaranteed ultimate strength of the Dywidag Threadbar. After 24 or more hours, readings may be required on selected anchors to determine creep behavior.

All production anchors should also be proof stressed but the load need not be held for an extended period.
DYWIDAG Multistrand Anchors

DSI's Multistrand Rock and Soil Anchor System is based on the proven prestressing technology of the Dywidag Post-Tensioning System and decades of experience in anchor technology. The system is extremely versatile and can be adapted to meet almost any project requirement.

Large Forces
Although there is no theoretical limit to the capacity of a multistrand anchor, practical considerations such as drill hole size and the availability of material handling equipment limit the size of an anchor to 61.06" (152 mm) dia. strands. Larger anchors can be manufactured but the practicality and economics of their use should be thoroughly evaluated before they are incorporated into a design. Very large anchors should be avoided in order to assure a satisfactory force redistribution in case of an anchor failure.

Long Lengths
No theoretical length limit exists, however, practical drilling and material handling considerations must be considered. For shop fabrication, the practical limit is dictated by total anchor weight.

Small Bending Radius
Strand anchors can easily be coiled to fit on a flat bed truck and are well suited for installation where work space is limited.

Corrosion Protection Options
A wide variety of corrosion protection options are available to choose from, depending upon the expected length of service and the aggressiveness of the environment.

Single Corrosion Protection (SCP) (Type A)
SCP Anchors are used for temporary applications and sometimes for permanent applications in non-aggressive environments. In the bond length, cement grout covers the bare strand. The protection in the free stressing length depends upon whether single stage or two stage grouting is used. For single stage grouting, the free stressing length of each strand is coated with a layer of corrosion preventative grease over which is extruded a tough seamless layer of polyethylene. Grease never comes in contact with the grout in the free stressing length so the bond strength is not affected. For two stage grouting, the grease and PE coating can be omitted. DSI does not recommend the use of bare strand in the free stressing length where the free stressing length remains ungrouted.

Double Corrosion Protection DCP (Type B)
DCP Anchors are used for permanent applications in aggressive or uncertain environments. The strand bundle in the bond length is grouted into a corrugated PE or PVC duct while the individual strands in the free stressing length are greased and sheathed in polyethylene. Quality control may be enhanced by pregrouting the bond length under factory conditions. Drill hole size and cost are significantly influenced by the clearance required by the outer PE duct.

Stewart Mountain Dam, U.S. Bureau of Reclamation. Permanent anchors consisting of 22 and 28 epoxy coated strands.
Double Corrosion Protection DCP (Type C)
Corrosion protection for the anchor tendon can be improved by extending the outer corrugated PE or PVC duct over the free stressing length. In this case, pregrouting of the anchor inside the plastic duct is not recommended because of difficulties which might be encountered during transportation and placing.

Double Corrosion Protection DCP (Type D)
The ideal protection for strand anchors is one in which the strand is totally and permanently protected from the time of manufacture throughout its life. Such protection is provided by epoxy coating the individual strands both externally and internally. Flo-bond Flo-ill® is a rugged, thermally bonded polymer coating that offers maximum corrosion protection, with a bond strength that exceeds that of bare strand. When two stage grouting is used, no additional corrosion protection is required even in applications where the free stressing length will remain ungrouted for an extended period of time.

The Dywidag wedge anchor for epoxy coated strand bites through the coating into the strand, developing 100% of its nominal ultimate tensile strength. Corrosion protection provided by the epoxy is not compromised by the wedge.

Although the cost of epoxy coated strand is higher than bare strand, the total cost of the installed anchor is reduced by eliminating the outer corrugated plastic duct. This makes it possible to minimize the drill hole size, thereby reducing the cost of drilling and grouting.

Double Corrosion Protection DCP (Type E)
For anchors in which single stage grouting is desirable, the free stressing length of epoxy coated strand anchors can be coated with a lubricating grease and encased in a seamless extruded PE sheath.

### Multistrand Prestressing Steel Properties — ASTM A416

<table>
<thead>
<tr>
<th>Anchor Size</th>
<th>Nominal Cross Section Area</th>
<th>Nominal Weight (bare strand)</th>
<th>Ultimate Strength (F_{pu} A_{ps})</th>
<th>Prestressing Force</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>kips</td>
<td>kips</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>kN</td>
<td>kips</td>
</tr>
<tr>
<td>0.60 F_{pu} A_{ps}</td>
<td>0.70 F_{pu} A_{ps}</td>
<td>0.50 F_{pu} A_{ps}</td>
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DYWIDAG Multistrand Anchors Types (Corrosion Protection Options)

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<th>C</th>
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<td>DCP</td>
<td>DCP</td>
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<tr>
<td>SINGLE STAGE</td>
<td>SINGLE STAGE</td>
<td>SINGLE STAGE</td>
</tr>
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</table>
**Diagram Description**

- **Corrugated PE or PVC Duct** (Pre-grouting Optional)
- **Grease & PE Sheathing**
- **1st Stage Grout Tube**
- **Epoxy Coated Strand**
- **2nd Stage Grout Tube**
- **Epoxy Coated Strand**
- **Centralizing Spacers Provide 1/2" of Grout Cover**
- **Centralizing Spacers Provide 1/2" of Grout Cover**

---

<table>
<thead>
<tr>
<th>D</th>
<th>E</th>
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</tr>
<tr>
<td>Two Stage</td>
<td>Single Stage</td>
<td>Grouting</td>
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---

*13*
Spacers

The purpose of a spacer is to help ensure that grout surrounds each strand for corrosion protection and for bond strength development. Designers should specify the desired distance between spacers (typically 7' – 10').

Centralizers

Centralizers are placed over the assembled strand bundle in order to maintain the required spacing between the anchor and the bore hole so that an adequate thickness of grout (minimum 0.5") surrounds the anchor. A wide variety of centralizers are available depending upon the anchor type.

Typical spacers and centralizers.

Los Angeles Public Library. Permanent tie backs using epoxy coated strand.
Uncoiler

For projects where anchor placement by overhead crane is impractical, DSI can provide a hydraulic powered uncoiler. A unique feature of the Dywidag Uncoiler is the adjustable hub which simplifies the process of placing the anchor in the uncoiler. If necessary, the uncoiler can be used to remove the anchor from the drill hole. Use of the uncoiler, both in installation and/or removal, will reduce the risk of damage to the tendon.

DSI 7.5 Ton Uncoiler

NOTE: REQUIRES AN R35.3 OR EQUAL PUMP TO DRIVE THE UNIT.

Restressable Systems

Threaded Coupler for:
37-0.6" Strand Anchor
14-0.6" Strand Anchor

Stressing

For installation and stressing efficiency, most DYWIDAG jacks for multi-strand anchors are equipped with internal strand guide tubes with automatic strand gripping and releasing devices. These features make jack installation a fast, one-step operation with small wedge seating loss.

For safety, all jacks feature a check valve which holds the pressure in the unlikely event of hydraulic failure. For reliability, the jacks are equipped with special devices for power seating all wedges simultaneously. Jacks also allow bleed-back to achieve full utilization of the maximum allowable stresses in the anchor.

A hydraulic connection and a pressure gauge are provided for all tensioning jacks.

The hydraulic pumps used in conjunction with the jacks can be operated by remote control.

Jack chairs are provided where wedge plate lift off during anchor testing is anticipated.

Rams for Anchor Stressing

NOTE: Detailed operating and safety instructions are provided with all stressing units. Read and understand these instructions before operating equipment.
Stressing Anchorages

The prestressing force in each strand is maintained by individual 3-part wedges. The wedge segments grip the strand by means of tooth shaped threads which are forced into the surface of the strand wires as the wedge is drawn into the wedge hole.

Unless provisions are made to allow the wedge to move further into the wedge hole (reduced friction force F) in response to increases in the strand force V, the wedge teeth will fail in bending and shear resulting in strand slips and anchor failure. For this reason DSI recommends that wedges for strand anchors, in which the free stressing length remains unbounded, be seated at the highest possible force (0.8fpu). Subsequent adjustment in anchor force should be made by adding or removing shims. Using this technique the wedge teeth will remain securely embedded in the strand. This is particularly important in applications where anchor load is likely to increase with time due to superposition of external loads or seismic activity.

![Diagram of anchorages]

### Table: Anchorages

<table>
<thead>
<tr>
<th>ANCHORAGE SIZE</th>
<th>4 – 0.5&quot;</th>
<th>6 – 0.5&quot;</th>
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<th>12 – 0.5&quot;</th>
<th>16 – 0.5&quot;</th>
<th>20 – 0.5&quot;</th>
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<td>ØB</td>
<td>C x C</td>
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<td>ØE</td>
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<tr>
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### Systems A, B & C

### Systems D & E

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<th>8 – 0.5&quot;</th>
<th>10 – 0.5&quot;</th>
<th>12 – 0.5&quot;</th>
<th>16 – 0.5&quot;</th>
<th>20 – 0.5&quot;</th>
<th>24 – 0.6&quot;</th>
<th>32 – 0.6&quot;</th>
<th>44 – 0.6&quot;</th>
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</thead>
<tbody>
<tr>
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<td>ØB</td>
<td>C x C</td>
<td>D</td>
<td>ØE</td>
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<td></td>
<td></td>
<td></td>
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<tr>
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<td>1.25/31.8</td>
<td>4.0/101.6</td>
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<td></td>
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<td>2.38/60.5</td>
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<td>5.0/127.0</td>
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<td>17.0/431.8</td>
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</tbody>
</table>

**NOTE:** Bearing plate design based on A38 steel loaded to 95% of gus

**DIMENSIONS:** Inch/mm
GRADING NOTES

1. THE CONTRACTOR IS REQUIRED TO EXCAVATE AS NECESSARY TO THE LINES AND GRADES SHOWN TO CONSTRUCT THE RETAINING STRUCTURES AND THE REINFORCED EARTH SLOPE.

2. THE CONTRACTOR SHALL LIMIT THE AMOUNT OF OVEREXCAVATION REQUIRED FOR CONSTRUCTION OF THE REINFORCED EARTH WALL AND THE PLACEMENT OF FOSSO SO AS TO MINIMIZE THE AMOUNT OF EXCAVATION ALONG THE TEMPORARY CONSTRUCTION BACKDITCH.

3. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AND PREVENT FLOODING OF WATER. HE SHALL CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJACENT PROPERTIES OR TO FINISHED WORK ON THE SITE. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

4. ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 300-302 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (2009 EDITION) UNLESS OTHERWISE NOTED.

5. ALL STONES, ROOTS AND OTHER WASTE MATERIAL EXPOSED ON EXCAVATION OR EMBANKMENT SLOPES WHICH ARE LIKELY TO BECOME LOOSELY SHOULDERED WILL BE REMOVED AND DISPOSED OF.

6. ALL TREES, BRUSH, GRASS AND OTHER QUESTIONABLE MATERIAL SHALL BE COLLECTED AND DISPOSED OF ON SITE BY THE CONTRACTOR SO AS TO LEAVE THE AREAS THAT HAVE BEEN CLEARED WITH A NEAT AND FINISHED APPEARANCE FROM UNSEENLY DISSUASION.

PART 1 - SPECIAL PROVISIONS

1.01 STANDARDS AND PERMIT REQUIREMENTS

A. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS SHOWN UNDER "STANDARID SPECIFICATIONS" ON SHEET 1 OF THE PLANS, EXCEPT AS SPECIFICALLY MODIFIED BY THE SPECIAL PROVISIONS HERETO. THE SPECIFICATIONS CONTAINED IN THESE SPECIAL PROVISIONS TAKE PRECEDENCE OVER THE COLLECTIVE REQUIREMENTS OF SSPWC AND RSA. WHEREVER THESE SPECIAL PROVISIONS REFER TO THE TERMINOLOGY "SSPWC" IT SHALL BE UNDERSTOOD THAT THE SPECIFICATION REFERS TO THE COLLECTIVE REQUIREMENTS OF THE SSPWC AND RSA.

B. THE OWNER HAS OBTAINED THE NECESSARY PERMITS FROM THE CITY OF SOLANA BEACH AND THE CALIFORNIA COASTAL COMMISSION. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH ALL CONDITONS IMPOSED BY THE PERMITS. ALL CONFLICTS WITH THESE SPECIFICATIONS AND THE PERMITS, NOTICED BY THE CONTRACTOR, SHALL BE Brought TO THE IMMEDIATE ATTENTION OF THE ENGINEER. NOTHINGS CONTAINED IN THE SPECIAL PROVISIONS SHALL BE DEEMED TO AUTHORIZE VIOLATION OF THE PERMITS.

1.02 SHOP DRAWINGS

A. IN ADDITION TO THE ITEMS DESCRIBED IN THE SSPWC SHOP DRAWINGS, SPECIFICATIONS, AND/OR BID SPECIFICATIONS, CURS SHALL BE SUBMITTED FOR THE FOLLOWING:

1. Tie-Dow WALL SYSTEM(S) COMPONENTS

COMPONENT CERTIFICATES AND WHICH SUPPS SHALL BE PROVIDED FOR ALL PORTLAND CEMENT CONCRETE PRODUCTS, REINFORCING STEEL, ETC.

2. MIX DESIGNS SHALL BE SUBMITTED FOR ALL PORTLAND CEMENT CONCRETE MIXES.

3. COLOR SAMPLES SHALL BE SUBMITTED FOR COLORED CONCRETE.

B. ALL SUBMITS SHALL BE MADE IN 2 COPIES, ONE OF WHICH WILL BE RETURNED TO THE CONTRACTOR.

PART 2 - CONSTRUCTION MATERIALS

2.01 AIR-PLACED CONCRETE (E.H. SHORTCUT)

A. EXCEPT AS OTHERWISE INDICATED BELOW SHORTCUTTING MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF SSPWC 201-1 PORTLAND CEMENT CONCRETE.

1. CEMENT SHALL CONFORM TO ASTM C150, TYPE V.

2. SAND SHALL BE WASHED AND MEET THE FOLLOWING GRADING LIMITS:

<table>
<thead>
<tr>
<th>SIEVE SIZE</th>
<th>% PASSING</th>
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<tr>
<td>3/8</td>
<td>100</td>
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<td>3/4</td>
<td>95 - 100</td>
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ADDITIVES AND ADHESIVES MAY BE USED EXCEPT CALCIUM CHLORIDE AND ANY ADHESIVES CONTAINING CHLORIDE IONS IN EXCESS OF 0.01% BY WEIGHT. MORE THAN ONE ADHESIVE IS USED, THEN ALL ADHESIVES USED MUST BE COMPATIBLE WITH EACH OTHER. THE DESIRABLE EFFECTS OF PO. ADHESIVES USED WILL BE REALIZED. ADHESIVES SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM DESTINATIONS LISTED BELOW:

- CHLORIDE ADHESIVES - ASTM C164
- MINERAL ADHESIVES - ASTM C598

B. SHORTCUT MIXTURES: CONFORM TO ASTM A155. GRADE 80 AND MEET THE REQUIREMENTS OF SSPWC 201-2. WHERE INDICATED ON THE DRAWINGS, SHORTCUT MIXTURES SHALL BE EPOXY-CAOED.

C. CONCRETE SHALL BE PRODUCED IN A READY MIX PLANT IN ACCORDANCE WITH ASTM C94.

2.02 EPSOY-CAOED REINFORCEMENT

A. ALL STEEL REINFORCING USED ON THIS PROJECT SHALL BE EPOXY-CAOED.

B. SHORTCUT MIXTURES SHALL BE SHIPFABRICATED PRIOR TO COATING AND SHALL CONFORM TO THE REQUIREMENTS OF ASTHMG 284.

C. VISIBLE Voids IN THE COATING, REGARDLESS OF CAUSE, SHALL BE PATCHED IF THE TOTAL AREA OF Voids EXCEEDS 0.025% OF THE SURFACE AREA OF THE BAR. ANY SURFACE PATCHING LESS THAN 5% OF THE TOTAL SURFACE AREA OF THE BAR IS NOT FIELD COATED WITH AN APPROVED PATCH MATERIAL SUPPLIED BY THE EPOXY CATHODIZER. BARS WHICH REQUIRE SURFACE PATCHING IN EXCESS OF 5% OF THE TOTAL SURFACE AREA OF THE BAR WILL BE REJECTED.

D. ALL SYSTEMS HANDLING COATED BARS SHALL HAVE PADDED CONTACT AREAS FOR THE BARS WHEREVER POSSIBLE. ALL RUBBER BANDS SHALL BE PADDED AND ALL BUNDLES SHALL BE TIED WITH STRONG BACK. MULTIPLE SUPPORTS ON A PLATFORM BRIDGE SO AS TO PREVENT BAR-TO-BAR ABRASION FROM SAGS IN THE BAR BUNDLES.

E. COMPLIENCE FOR REINFORCING AND EPOXY-CAOED REINFORCEMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR VARIOUS CONCRETE AND(Web SCA RECOMMENDED.)

2.03 MULTI-STRAND EARTH ANCHORS

A. ANCHORS RODS

1) ANCHORS, INCLUDING ANCHOR WEDGES AND WEDGE PLATES, SHALL BE "DYING-SYSTEMS INTERMATIONAL," COMPLETE WITH DOBLE CORROSION PROTECTION SYSTEM AS INDICATED ON THE DRAWINGS.

2) ANCHORAGE SYSTEMS, INCLUDING TENDONS NOT SPECIFICALLY REMARKED IN ASTM A16 MAY BE USED PROVIDE SUCH TENDONS HAVE A DEMONSTRABLE, PROVEN RECORD OF SERVICE AND ARE EQUIVALENT IN TERMS OF LOAD CAPACIT, SERVICEABILITY AND CORROSION RESISTANCE TO THAT SPECIFIED HERETO.

B. ANCHOR BEARING PLATES AND ASSEMBLIES

1) ALL BEARING PLATE ASSEMBLIES INCLUDING TRUMPETS SHALL BE NOTched AND GROOVED IN ACCORDANCE WITH THE REQUIREMENTS OF SSPWC 210-3. MINIMUM WEIGHT OF COATING SHALL BE 2.0 oz/SQ FT.

C. ANCHORAGE & SHEATHING ENCAPSULATION GROUT

1) GROUT SHALL CONFORM TO SECTION 201-1 OF THE SSPWC EXCEPT AS SHOWN BELOW.

2) GROUT SHALL CONSIST OF A CEMENT-WATER MIXTURE OR SAND-CEMENT-WATER MIXTURE AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI. CONTRACTOR SHALL SELECT MIXTURES SUITABLE FOR EACH ANCHOR ROD, SHEATHING, AND GRouting INSTALLATION EQUIPMENT AND PROCEDURES TO BE USED. PROPORTIONS SHALL BE BASED ON TESTS MADE ON THE GROUT BEFORE GRouting IS TO BEGIN, OR MAY BE SELECTED BASED ON PRIOR DOCUMENTED EXPERIENCE WITH SIMILAR MATERIALS AND EQUIPMENT AND OTHER COMPATIBLE FIELD CONDITIONS (WEATHER, TEMPERATURE, ETC.).

3) CEMENT SHALL CONFORM TO ASTM C150 TYPE V.

4) WATER CONTENT SHALL BE THE MINIMUM NECESSARY FOR PROPER PLACEMENT BUT THE WATER-CEMENT RATIO SHALL NOT EXCEED 0.5.

5) A NONSHIRRING OR EXPANSIVE ADHESIVE MAY BE USED TO ELIMINATE SHRINKAGE OF THE ANCHORAGE ZONE GROUT. OTHER ADHESIVES, CONFORMING TO ASTM C150, MAY BE USED TO REDUCE THE WATER CONTENT, IMPROVE THE PUMPABILITY, OR ACCELERATE THE STRENGTH DEVELOPMENT. CEMENT AND ADHESIVES CONTAIN CHLORIDE IONS IN EXCESS OF 0.01% BY WEIGHT SHALL NOT BE USED. IF MORE THAN ONE ADHESIVE IS USED, ALL ADHESIVES USED MUST BE COMPATIBLE WITH EACH OTHER SO THAT THE DESIRABLE EFFECTS OF ANY ADHESIVES USED WILL BE REALIZED. ADHESIVES SHALL NOT BE USED IN GREATER DOSAGES THAN THOSE RECOMMENDED BY THE MANUFACTURER.
January 30, 2012

City of Solana Beach
635 South Highway 101
Solana Beach, California 92075-2215

Attention: Ms. Corey Johnson
Project Planner

Subject: Review of Request for Seawall Repairs
Two Residences
245-249 Pacific Avenue
Solana Beach, California

References:

1. 245 & 249 Pacific Avenue Shoreline Stabilization Project Plans, Sheets 1-12, by Terra Costa Consulting Group, undated

Dear Ms. Johnson:

In response to your request I have reviewed the proposed request for repairs presented by Terra Costa Consultants, along with geotechnical evaluation report and Grading and Construction Plan prepared by Terra Costa Consultants and a Conditional Use Application Permit Application for a Bluff Retention Device prepared by the representative of the applicants. The proposed repairs are to approximately 74 feet of coastal bluff and encompassing a total of two (2) parcels in the City of Solana Beach, California. As part of this review I visited the subject sites and viewed them from both the upper bluff area and from the beach.

The project proposes one type of lower bluff stabilization, a 35-foot high reinforced high-strength shotcrete tied-back wall from 249 Pacific Avenue to 245 Pacific Avenue. The 2 parcels have varying existing factor of safety, but both have the clean sand layer. The properties have had erodible concrete in-fills and/or sea-cave in-fills in the past. These in-fills, although encouraged by both the City and Coastal Commission at the time of construction, have demonstrated that they have a limited life expectancy and did not live up to their anticipated performance or appearance. 249 Pacific Avenue presently has about half of its bluff face covered by an existing seawall. Both have had upper bluff erosion and failures. An adjacent property, 241 Pacific Avenue, has had significant upper bluff failures and erosion over the last 2 years and is threatening adjacent properties.
The present proposal is to repair 2 individual parcels under one permit. This application is encouraged by the City of Solana Beach and allows a larger section of bluff area to be repaired at one time with a uniformity of design and continuity of color, texture and size, rather than being done one at a time with different contractors and engineers. In the past the Coastal Commission staff has been supportive when this idea is proposed.

Based upon my review of the geotechnical report, structural design plans and a site visit it is my opinion that there are no additional items that need to be clarified and that the report and plans meet the requirements of the City of Solana Beach Municipal Code 17.62.80. The Geotechnical Evaluation Report and construction plans are approved with the following comments:

To qualify for a permit a project must meet the nine requirements listed in the Solana Beach Municipal Code Section 17.62.80. Detailed below are my responses to the nine conditions based upon the submitted information:

1. (a) "Imminent" failure based upon factors of safety, presence of the clean sand layer and historical failures along with documented history of several parcels have been demonstrated. Both parcels, 245 and 249 Pacific Avenue are considered in "imminent" danger of failure.

1. (b) A shoreline defense structure is necessary to abate a public nuisance existing on the site that cannot be abated in another matter. This abatement will remove the danger of lower bluff failure in both of the properties and the failure of the clean sand lens.

1. (c) Unless the shoreline defense structure is permitted by the property will be unable to be used for any economically viable use permitted by the city’s general plan and applicable zoning. Not allowing the defense structure to be constructed will result in failure of the bluff and slope and ultimately, the structure, which will result in the loss of the economic viability of the property.

2. No other reasonable feasible method of stabilizing the coastal bluff will protect the existing structure, abate the nuisance or preserve the economically viable use of the property. No other feasible method would protect the existing structures for the required 75 year lifespan.

3. The owner and prior owners have taken reasonable steps to protect the property and significant structures by other means. The applicants are now processing the preferred solution that assures Protection of the subject residences for an approximately 75-year period.

4. The owner or prior owners of all of the properties did not create the necessity for a shoreline defense structure by unreasonably failing to implement generally accepted erosion and drainage control measures or by otherwise unreasonably acting or failing to act with respect to the property.
It appears that all of the property owners have made all reasonable attempts to protect their property and have performed all reasonable erosion and drainage control within their properties.

5. To the extent the location, size, design and operation characteristics of the proposed shoreline defense structure adversely affects adjacent public or private property, natural resources, or public use of the beach, mitigation shall be provided to the extent deemed feasible with a statement of overriding considerations issued to the extent said impacts are not fully mitigated. The project has been designed to have minimal impact/intrusion onto the public beach, consistent with other projects to the north and south of the subject property. The present design of the proposed project meets all of the intent of item #5.

6. (a) The proposed shoreline defense structure will be the minimum measure necessary to provide a reasonable level of protection, and (b) The proposed shoreline defense structure will be constructed and maintained to incorporate an earth-like appearance which will resemble as closely as possible the natural color and texture of the adjacent bluffs, and (c) the proposed shoreline defense structure will be constructed and maintained to reasonably conform to the natural form of the bluff; and (d) the proposed shoreline defense structure will be placed at the most feasible landward location; and (e) the proposed shoreline defense structure will be appropriately landscaped and maintained to blend in with the existing environment.

All of the requirements of Item #6 will be required as part of the permit issued by the City of Solana Beach to perform the work. Item #6b is not applicable unless the applicant will be required to landscape the existing upper bluff. Hydroseeding of the slope is shown on the construction plans.

7. The shoreline defense structure will be located entirely on public property or, if portions or all of the structure will be located on public lands, all required permits for construction or real property interests will be obtained from the appropriate public agency or agencies with jurisdiction or ownership. Based upon a review of the submitted plans for the defense structures will be located on public property. As part of the permitting process all required permits will be part of the permit approval process with the City of Solana Beach.

8. The construction of the structure, as currently proposed, will not result in reconstruction of the upper bluff face on the subject properties. The project will not result in a usable area at the top of the bluff larger than existed on January 3, 1991 or extend the bluff seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991.

As part of the permitting process the City will check to make sure that the plans are in conformance with Item #8. Based upon our review of the current plans Item #8 is being adhered to.
9. The project as approved or conditionally approved will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach. Encroachments into the beach shall be mitigated to the satisfaction of the City Council.

Based upon the current plans the proposed work and construction will not affect the public use of the beach or adversely affect the public health, safety or welfare.

The proposed bluff retention devices are in accordance with the preferred bluff retention systems approved and recommended by the City of Solana Beach in their draft LCP/LUP.

If you have any questions, please call 760-721-5488

Sincerely,

James F. Knowlton

RCE 55754  CEG 1045
RESOLUTION 2012-023

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOLANA BEACH, CALIFORNIA, APPROVING A REQUEST FOR A CONDITIONAL USE PERMIT TO CONSTRUCT A SEAWALL TO SUPPORT THE LOWER-BLUFF AND UPPER-BLUFF RECONSTRUCTION TO PREVENT SIGNIFICANT BLUFF FAILURE ALONG THE PROPERTIES LOCATED AT 245 AND 249 PACIFIC AVENUE, SOLANA BEACH

APPLICANTS: Presnell/Graves LLC and; Eron Jokipii;

CASE NO.: CUP 17-11-24

WHEREAS, Presnell/Graves LLC and Eron Jokipii (hereinafter referred to as "Applicants") have requested the issuance of a Conditional Use Permit for a seawall project ("Coastal Structure") at the properties located at 245 and 249 Pacific Avenue (the "Property") in the City of Solana Beach ("City") pursuant to Title 17 of the Solana Beach Municipal Code ("SBMC"); Section 17.62.080; and

WHEREAS, the Applicants have submitted a geotechnical report entitled Coastal Bluff Evaluation and Basis of Design Report and site plans prepared by Terra Costa Consulting Group [Terra Costa] (dated September 20, 2011 and January 6, 2012), which have been reviewed and confirmed by Geopacifica Geotechnical Consultants [Geopacifica], the City's third-party independent geotechnical engineering consultant; and

WHEREAS, an "imminent" danger threat to the two primary bluff top structures exists based on the above referenced report by Terra Costa and has been confirmed by Geopacifica in a letter to the City dated January 16, 2012; and

WHEREAS, the Terra Costa geotechnical evaluation indicates where unstable geological conditions exist and proposed solutions are applied to remedy the nature and magnitude of the unstable conditions; and

WHEREAS, on February 22, 2012, the City Council of the City of Solana Beach ("City Council") held a duly noticed public hearing on the Applicant's request for a Coastal Structure ("Public Hearing"); and

WHEREAS, the City submitted their most recent Draft Local Coastal Program (LCP) Land Use Plan (LUP) (Draft LCP) to the California Coastal Commission in October 2011 where it is currently pending review and comment and is expected to be scheduled for a hearing before the full Commission in March 2012; and

WHEREAS, the City Council has resolved to include applicable policies from the LUP in all approvals of Bluff Retention Devices, as defined in the LCP, which includes the
analyses of the Applicant's Coastal Structure where appropriate under the Chapter 17.62 of the Solana Beach Municipal Code; and

WHEREAS, this decision is based upon the evidence presented at the Public Hearing including, without limitation, oral communications and written information including testimony of expert witnesses, the Terra Costa geotechnical evaluation, the Geopacifica third-party geotechnical review, and information the City Council gathered by viewing the site and the surrounding area as disclosed at the Public Hearing; and

WHEREAS, the City’s third-party independent geotechnical expert consultant (Geopacifica) testified at the Public Hearing as to the emergency conditions that exists at the Properties as defined in Section 15359 of the California Environmental Quality Act Guidelines ("CEQA Guidelines") (an "Emergency"). 'Emergency', as defined in this Resolution and the CEQA Guidelines, means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. 'Emergency' includes such occurrences as soil or geologic movements. In the opinion of the City's third-party independent geotechnical consultant, the occurrence in question involving the bluff area involved a clear and imminent danger, demanding immediate action; and

WHEREAS, the Terra Costa geotechnical evaluation states that in order to protect the primary residential structures at 245 and 249 Pacific Avenue from imminent failure, the immediate construction of a coastal bluff stabilization device is required; and

WHEREAS, the Applicants have agreed to maintain and repair the Coastal Structure on an “as needed” basis at the Applicant’s expense; and

WHEREAS, the Coastal Structure (lower-bluff seawall and upper-bluff repair) proposed by the Applicants shall be subject to all conditions stated herein; and

WHEREAS, the City Council of the City of Solana Beach found the application request exempt from CEQA pursuant to Section 15269(b) of the 2012 State CEQA Guidelines, in part based on the testimony of the third party technical expert consultant retained by the City; and

WHEREAS, the formula for establishing the Sand Mitigation Fee is contained in Appendix A of the draft LUP and the interim formula for assessing the Public Recreation Fee is based on a $1,000 per linear foot fee deposit. Both the fee and the fee deposit are collected by the City at the time of final permit issuance; and

WHEREAS, the approval herein is contingent upon the Applicant’s agreement to pay these fees and fee deposits as established by the City as part of its LCP, which is in the process of being reviewed by the CCC. The interim payment of a “good faith” public recreation fee deposit and the ultimate payment of the fees established under the process in Resolution No. 2007-42 dated June 13, 2007 are necessary for the City
Council to make the findings required for approval of this Conditional Use Permit under Chapter 17.62 of the SBMC; and

WHEREAS, the Sand Mitigation and Public Recreation Fees will mitigate the impacts of the proposed Coastal Structure and will assist in providing continuous safe, public lateral access along the beach by funding sand replenishment, retention, and maintenance programs to create a wider beach; and

WHEREAS, to the extent feasible, the proposed Coastal Structure minimizes encroachment on the beach to help maintain lateral access along the beach; and

WHEREAS, the proposed Coastal Structure will be designed, constructed and maintained to maximize the natural, aesthetic appeal and scenic beauty of the beach and bluff by minimizing the size of the Coastal Structure to the extent feasible, while ensuring that the Coastal Structure accomplishes its intended purpose of protecting the subject Bluff Properties and preserving the maximum amount of bluff face; and

WHEREAS, the conditions contained herein, to the extent feasible, ensure the approved Coastal Structure shall be preventative in nature to forestall and minimize the size of any future Bluff Retention Device; and

WHEREAS, the conditions contained herein require that the Coastal Structure shall be allowed for a period of 20 years commencing with the completion of constructions since there is no reasonably feasible alternative which exists; and

WHEREAS, after the period of 20 years ends, the Applicants shall come back to the City to obtain a new permit if conditions still warrant the need for the coastal structure; and

WHEREAS, capitalized terms not defined in this Resolution are defined in either the Solana Beach Municipal Code ("SBMC") or the LCP.

NOW THEREFORE, the City Council of the City of Solana Beach does resolve as follows:

1. That the foregoing recitations are true and correct and are incorporated herein by reference.

2. That the site plan drawings entitled 245-249 Pacific Avenue Shoreline Stabilization Project included in Terra Costa's geotechnical evaluation project materials dated September 20, 2011 and January 6, 2012 and included as Attachment 1 to the Staff Report are approved based upon the following Findings (Section 1) and subject to the following Conditions (Section 2).

3. The approval of Case No. CUP 17-11-24 is consistent with the requirements of SBMC Section 17.62.080 and the applicable Policies of the draft LUP, in
accordance with the following Findings and subject to the following Conditions:

4. FINDINGS UNDER SBMC 17.62.080:

Staff has evaluated the CUP application, taking into account the following factors: (1) the relevant components of the Solana Beach Municipal Code, (2) the conclusions drawn by the (a) City of Solana Beach’s independent third-party geotechnical consultant and (b) the City of Solana Beach City Engineer; and (3) the Applicant’s geotechnical reports. Staff finds that the Proposed Project can be found consistent with the intent of Solana Beach Municipal Code Section 17.62.080 Issuance and Denial.

After evaluating the geotechnical report prepared by Terra Costa Consulting Group (Applicant’s Representative), the third-party review findings provided by the City’s geotechnical engineering consultant Geopacifica, and the City Engineer, Staff concurs that the Proposed Project has met the standard of imminent danger as required per SBMC 17.62.080. Further, without the Proposed Project, the prospect of bluff failure could threaten the four occupied bluff top residential structures and is reasonably foreseeable within the next 12 months.

In accordance with SBMC 17.62.080 “Issuance and Denial – Permits for Seawalls, Revetments and Bluff Retaining Walls,” a Conditional Use Permit for a seawall, bluff retaining wall, armoring or revetment may be issued only if the City Council finds all of the following:

1(a). FINDING SBMC 17.62.080 (A) (1) (a)
An existing significant structure is threatened with imminent danger or destruction because of bluff erosion which occurs naturally, or which results or arises from circumstances which are not within the control of the property owner, and it is reasonably foreseeable that without the shoreline defense structure the threatened structure on the site will suffer structural damage1.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (1) (a)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(1)(a) shall include, but not be limited to, Policy 3.37 and Policy 3.38.

Policy 3.37: Utilize the Hillside/Coastal Bluff Overlay (HOZ) requirements to restrict the grading of natural non-coastal bluff slopes with an inclination of 25% or greater in order to preserve the natural topography and scenic qualities of the City; protect native coastal sage/chaparral and grassland habitat; preserve existing watersheds

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1 For the purposes of subparagraph (1)(a), structural damage means a noticeable or measurable amount of structural damage directly related to the bluff condition to be mitigated but does not include construction defects or damage to a structure caused by weather or earthquake.
and reduce the potential for environmental hazards including soil erosion and siltation of coastal wetlands; landslides; adverse impacts due to runoff; and other impacts which could affect public health, safety, and welfare. None of the above shall restrict the ability to construct a bluff retention device which meets the criteria set forth in this LCP.

**Policy 3.38:** Require a permit for developments proposed on property within hillside/coastal bluff overlay areas, and where site-specific analysis indicates that the parcel contains natural slopes exceeding 25 percent grade, as a method to review and mitigate potential impacts. Submittal requirements for the permit shall include:

- A slope analysis prepared by a certified civil, soils or geotechnical engineer describing and graphically depicting areas of less than 25 percent slope, 25 to 40 percent slope and greater than 40 percent slope.
- A geological reconnaissance report where structures or improvements are proposed within any areas of greater than 25 percent slope, as such development is strongly discouraged and traditionally denied approval.
- Slopes of 25 percent and over shall be preserved in natural state unless the application of this policy would preclude any reasonable use of the property, in which case an encroachment (including grading) not to exceed ten percent of the steep slope area over 25 percent slope may be permitted.
- For existing legal parcels with all or nearly all of their area consisting of slopes over 25 percent, encroachment may be permitted; however, any such encroachment shall be limited so that at no time is more than 20 percent of the entire parcel (including the areas under 25 percent slope) permitted to be disturbed from its natural state. Use of slopes over 25 percent may be made in order to provide access to flatter areas if there is no less environmentally damaging alternative available.
- Grading and/or development-related vegetation clearance shall be prohibited where the slope exceeds 40 percent (2.5:1), except that driveways and/or utilities may be located on such slopes, where there is no less environmentally damaging feasible alternative means of providing access to a building site, provided that the building site is determined to be the preferred alternative and consistent with all other policies of the LCP.
- Where unstable geological conditions are indicated by the reconnaissance report, a preliminary engineering geology report is also required to identify the nature and magnitude of unstable conditions, and alternative mitigation measures that can be applied.
- An assessment of the impact(s) of the proposed development on biological habitat and sand supply.

**DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (1) (a)”**

Consistent with LCP Policy’s 3.39 and 3.40, a slope stability analysis was performed by a certified geotechnical engineer describing and geographically depicting areas with a range of 32-35 degrees; thereby indicating an imminent threat of failure (Terra Costa, 2011).
The geotechnical report submitted indicates where unstable geological conditions are located and proposed, solutions are applied to remedy the nature and magnitude of the unstable conditions. An assessment has been performed to determine the impact of the Bluff Retention Device (seawall) on biological habitat and sand supply and conditions of approval are included to address those impacts where applicable.

"Imminent" failure based upon factors of safety, presence of the clean sand layer and historical failures along with documented history of several parcels have been demonstrated. Both parcels contain the clean sand layer and stabilizing this sand lens is integral to a comprehensive bluff repair. Both parcels are considered in "imminent" danger of failure.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (1) (a)"
This finding can be made. The existing significant structures are threatened with imminent danger or destruction because of bluff erosion which occurs naturally, or which results or arises from circumstances which are not within the control of the property owner(s), and it is reasonably foreseeable that without the shoreline defense structure the threatened structures on the site will suffer structural damage including the possible collapse of the structures onto the public beach below.

1(b), FINDING SBMC 17.62.080 (A) (1) (b)
The shoreline defense structure is necessary to abate a public nuisance existing on the property that cannot be reasonably abated in another manner.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING "SBMC 17.62.080 (A) (1) (b)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(1)(b) shall include, but not be limited to, Policy 2.1.

Policy 2.1: Acknowledge the public interest in eliminating nuisances that affect public and private property and public recreational areas. For example, bluff retention devices are permitted, and must be adequately maintained and kept in good repair.

DISCUSSION REQUIRED REGARDING FINDING "SBMC 17.62.080 (A) (1) (b)"
The public interest in eliminating and abating private and public nuisances (that affect public and private property and public recreation areas) is protected by the approval of a Bluff Retention Device (seawall) which can prevent an imminent bluff failure. The conditions of approval would implement key provisions in the City's draft LUP.

The shoreline defense structure is necessary to abate a public nuisance existing on the site that cannot reasonable be abated in another manner. If left untreated, the existing conditions combined with the continued erosion activities could have an immediate impact on users of the public beach below. These actions could have a near-
immediate impact on adjoining properties, possibly triggering bluff failures on these properties that could extend to adjacent residences.

CONCLUSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (b)”
This finding can be made. This abatement will remove the danger of lower-bluff failures in both of the properties and the failure of the clean sand lens and upper-bluff failure in the parcels at 245-249 Pacific Avenue. The shoreline defense structure is necessary to abate a public nuisance existing on the properties (project site) that cannot be reasonably abated in another manner.

1(c). FINDING SBMC 17.62.080 (A) (1) (c)
Unless the shoreline defense structure is permitted, the property will be unable to be used for any economically viable use permitted by the City’s General Plan and applicable zoning.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (1) (c)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(1)(c) shall include, but not be limited to, Policy 4.32, Policy 4.34, and Policy 4.41.

Policy 4.32: Limit buildings and structures on the sloped face and toe of the bluff to lifeguard towers, subsurface public utility drainage pipes or lines, bluff retention devices, public stairs and related public infrastructure which satisfy the criteria established in the LCP. No other permanent structures shall be permitted on a bluff face. Such structures shall be maintained so that they do not contribute to further erosion of the bluff face and are to be visually compatible with the surrounding area to the maximum extent feasible.

Policy 4.34: Encourage applicants to pursue preferred bluff retention designs as depicted in Appendix 2 of the LUP when required to protect a principal structure. All future bluff retention device applications should utilize these designs as the basis of site-specific engineering drawings to ensure consistency with the LUP.

Policy 4.41: Maximize the natural, aesthetic appeal and scenic beauty of the beaches and bluffs by attempting to avoid or minimize the size of bluff retention devices, to the extent feasible, while ensuring that any such bluff retention device accomplishes its intended purpose of protecting bluff homes in danger from erosion. The following attributes of a bluff retention device may also be considered: protecting public beaches or public beach access in danger from erosion; enhancing public safety; and preserving public infrastructure while attempting to preserve the maximum amount of unaltered or natural bluff face and minimizing encroachment of the bluff retention device on the beach to the extent feasible.

DISCUSSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (c)”
The approval herein does not allow for new construction to occur or to increase the degree of non-conformity of an existing Bluff Home, if such condition exists. Nothing herein prevents the Property Owner(s) from having the right to repair and maintain a non-conforming Bluff Home if the Home becomes non-conforming over time, as long as any future remodel does not amount to an Extensive Remodel as defined by the City of Solana Beach.

CONCLUSION REQUIRED REGARDING FINDING “SBMC 17.62.080 (A) (1) (e)”
This finding can be made. Unless the shoreline defense structure is permitted there is a substantial likelihood of a major bluff failure and loss of one or more residences could occur; and, the subject properties could be unable to be used for any economically viable use permitted by the City’s General Plan and applicable zoning.

2. FINDING SBMC 17.62.080 (A) (2)
No other reasonably feasible method of stabilizing the coastal bluff will protect the existing structure, abate the nuisance or preserve the economically viable use of the property.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (2)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(2) shall include, but not be limited to, Policy 4.34, Policy 4.41, Policy 4.42, Policy 4.46, Policy 4.49 and Policy 4.53.

Policy 4.34: Encourage applicants to pursue preferred bluff retention designs as depicted in Appendix 2 of the LUP when required to protect a principal structure. All future bluff retention device applications should utilize these designs as the basis of site-specific engineering drawings to ensure consistency with the LUP.

Policy 4.41: Maximize the natural, aesthetic appeal and scenic beauty of the beaches and bluffs by attempting to avoid or minimize the size of bluff retention devices, to the extent feasible, while ensuring that any such bluff retention device accomplishes its intended purpose of protecting bluff homes in danger from erosion. The following attributes of a bluff retention device may also be considered: protecting public beaches or public beach access in danger from erosion; enhancing public safety; and preserving public infrastructure while attempting to preserve the maximum amount of unaltered or natural bluff face and minimizing encroachment of the bluff retention device on the beach to the extent feasible.

Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.
Policy 4.46: The City, and in cases of original jurisdiction the CCC, shall regulate every bluff retention device including initial approval, construction, maintenance and repair activities for the life of the device.

Policy 4.49: The City has adopted preferred bluff retention solutions (see Appendix B) to streamline and expedite the City permit process for bluff retention devices. The preferred bluff retention solutions are designed to meet the following goals and objectives:

1. Locate bluff retention devices as far landward as feasible;
2. Minimize alteration of the bluff face;
3. Minimize visual impacts from public viewing areas; and,
4. Minimize impacts to adjacent properties.
5. Conduct annual visual inspection and maintenance as needed;

The bluff property owner’s licensed Geotechnical Engineer must examine the device for use in the specific location and take responsibility for the design as the Engineer of Record.

Applicants who seek permits to install a preferred bluff retention solution can do so on a streamlined basis, relying on previously approved standards and designs, and shall receive expedited processing from the City. As technology develops, the City will consider other preferred bluff retention solutions that meet the goals and policies of the LCP, as an amendment to the LUP or within the LIP. Applications for all bluff retention devices where any portion of which will be sited seaward of the MHTL, as shown on the MHTL Survey, shall be submitted first to the City for approval and then to the CCC, which has original jurisdiction for the portion of the bluff retention device that will be sited seaward of the MHTL. Such developments shall be subject to this LCP. For beachfront development that will be subject to wave action periodically, unless the State Lands Commission determines that there is no evidence that the proposed development will encroach on tidelands or other public trust interests. The City shall reject the application on the grounds that it is within the original permit jurisdiction of the CCC and shall direct the applicant to file his or her application with the CCC.

Policy 4.53: Coastal structures shall be approved by the City only if all the following applicable findings can be made and the stated criteria satisfied. The permit shall be valid for a period of 20 years commencing with the completion of construction.

A. Based upon the advice and recommendation of a licensed Geotechnical Engineer and licensed certified Engineering Geologist selected by the applicant, the City makes the findings set forth below.

1. A slope stability analysis accepted by the City demonstrates a factor of safety less than 1.5 (static) and that a bluff failure is imminent that would
threaten a bluff home, city facility, city infrastructure, and/or other principal structure.

2. The coastal structure is more likely than not to preclude the need for a larger coastal structure.

Subject to the bluff property owner being entitled to reasonable use of the bluff property and having the right to protect the bluff home, city facility and/or city infrastructure, respectively, a determination must be made based on a detailed alternatives analysis that none of the following alternatives to the coastal structure are then currently feasible, including:

- No coastal structure;
- A Seacave/Notch Infill;
- A smaller coastal structure;
- Other remedial measures capable of protecting the bluff home, city facility, non-city-owned utilities, and/or city infrastructure, which might include tie-backs, underpinning (which shall not be exposed in the future), or other non-beach and bluff face stabilizing measures, taking into account impacts on the near and long term integrity and appearance of the natural bluff face, and contiguous bluff properties;
- Removal and relocation of all, or portions, of the affected bluff home, city facilities or city infrastructure.

3. The bluff property owner did not create the necessity for the coastal structure by unreasonably failing to implement generally accepted erosion and drainage control measures, such as reasonable management of surface drainage, plantings and irrigation, or by otherwise unreasonably acting or failing to act with respect to the bluff property. In determining whether or not the bluff property owner's actions were reasonable, the City shall take into account whether or not the bluff property owner acted intentionally, with or without knowledge, and shall consider all other relevant credible scientific evidence, as well as, relevant facts and circumstances.

4 The location, size, design and operational characteristics of the proposed coastal structure will not create a significant adverse effect on adjacent public or private property, natural resources, or public use of, or access to, the beach, beyond the environmental impact typically associated with a similar coastal structure and the coastal structure is the minimum size necessary to protect the principal structure, has been designed to minimize all environmental impacts, and provides mitigation for all coastal and environmental impacts, as provided for in this LCP.

B. The coastal structure shall meet City Design Standards, which shall include the following criteria to ensure the coastal structure will be:
1. Constructed to resemble as closely as possible the natural color, texture and form of the adjacent bluffs;

2. Landscaped, contoured, maintained and repaired to blend in with the existing environment;

3. Designed so that it will serve its primary purpose of protecting the bluff home or other principal structure, provided all other requirements under the implementing ordinances are satisfied, with minimal adverse impacts to the bluff face;

4. Reduced in size and scope, to the extent feasible, without adversely impacting the applicant’s bluff property and other properties; and

5. Placed at the most feasible landward location considering the importance of preserving the maximum amount of natural bluff and ensuring adequate bluff stability to protect the bluff home, City facility, City infrastructure, or non-City owned utilities.

C. Any pre-existing deed and/or permit restrictions applicable to the bluff property or bluff home shall be reviewed and, where legally enforceable and logistically appropriate, enforced by the City to bring any such pre-existing conditions into conformance with the LCP, subject to any requirements of the CCC, and to the vested rights of the bluff property owner.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (2)”
Implementation of the Proposed Project is necessary to prevent the imminent danger of bluff collapse. The Proposed Project is the only feasible alternative considering the pre-existing bluff erosion, mole hole, and existing seawall (across the northern half of 249 Pacific Avenue). Ongoing erosion threatens the existing bluff top residences and adjacent seawall and the inability of other measures to adequately secure the bluff. The Proposed Project can only be permitted to the extent that it is necessary to secure the unstable portions of the bluff. The Proposed Project will be constructed such that it reflects the color of the existing seawall and the surrounding face of the bluff. Given the necessity of securing the unstable areas, the Proposed Project maximizes the natural-appearing aesthetic and scenic beauty of the beaches and bluffs by minimizing the size of Bluff Retention Devices to the extent feasible while ensuring that each Bluff Retention Device accomplishes its intended dual purpose of protecting Bluff Properties and preserving the maximum amount of bluff face.

This Bluff Retention Device (proposed seawall) is designed to prevent future instability and is the only reasonable alternative to stabilize the bluff in that other alternatives would not provide the stabilization of the bluff in a manner that would protect the bluff face from eroding and falling due to the unstable nature of the immediate bluff area. The Applicant’s geotechnical engineer (Terra Costa, 2012) and the City’s independent geotechnical consultant have verified that no other reasonable and feasible method of stabilizing the coastal bluff would protect the existing structures, abate the nuisance, or preserve the economically viable use of the properties (Geopacifica, 2012). Alternatives
considered and rejected include: rip rap, notch infill, groundwater and irrigation controls, underpinning, chemical grouting, and no action. Available alternatives could, at best, provide some measure of protection to the primary residential structures; although it would be difficult to guarantee that mid- or upper-bluff retention systems could extend protection through the life of the structures. At worst, considered alternatives would allow for devastating consequences to the primary residential structures on the subject properties or to the existing/approved coastal bluff protective structures and residential structures on neighboring properties. Further, there is no alternative to the Proposed Project that would remove the existing threat to public safety on the public beach below the site.

Bluff Retention Devices may be allowed to encroach onto public bluffs and beaches only under certain conditions and for certain limited periods of time. Such Bluff Retention Devices must ultimately be re-permitted and are subject to the City of Solana Beach making certain findings as outlined in the LUP.

Although 245 Pacific Avenue has a deed restriction on the property, the bluff top principal structure has been determined to be in imminent danger of failure, due in part to bluff failures onsite as well as to the north and south adjacent properties thus necessitating bluff stabilizing measures as allowed by LUP Policy 4.53.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (2)"

This finding can be made. No other reasonably feasible method of stabilizing the coastal bluff will protect the existing structures, abate the nuisance, or preserve the economically viable use of the properties.

3. FINDING SBMC 17.62.080 (A) (3)
The property owner has taken reasonable steps to protect the property and significant structures by other means.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (3)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(3) shall include, but not be limited to, Policy 4.14.

Policy 4.14: The remediation or stabilization of landslides that affect existing structures or that threaten public health or safety shall be encouraged. Alternative remediation or stabilization techniques shall be analyzed to determine the least environmentally damaging alternative. Maximum feasible mitigation shall be incorporated into the project in order to minimize adverse impacts to resources and to preclude the need for future mitigation.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (3)"
The property owners have taken reasonable steps to protect the property and significant structures by other means. These properties have undergone various levels of rehabilitation in the past including erodible concrete in-fills and construction of a partial
seawall along the bluffs below 249 Pacific Avenue. These repairs have demonstrated that they have a limited life without a more comprehensive repair. Ideally, the neighbor to the south (241 Pacific Avenue) would either have participated in the project or would conduct an independent bluff repair project to stop the lateral migration of bluff failures onto the site at 245 Pacific Avenue. 245 Pacific Avenue was denied an infill in the past by the CCC and has had a lower bluff collapse and recently a collapse of the mid-to upper-bluff. Both properties have documented histories of bluff erosion and failures. (Geopacifica, 2012).

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (3)”
This finding can be made. The previous and current property owners have taken reasonable steps to protect the property and significant structures by other means. Further, the Applicants are now processing the preferred solution that assures effective and comprehensive protection of the bluff-top principal structures.

4. FINDING SBMC 17.62.080 (A) (4)
The owner or prior owners did not create the necessity for the shoreline defense structure by unreasonably failing to implement generally accepted erosion and drainage control measures or by otherwise unreasonably acting or failing to act with respect to the property.

The provisions of this subsection (A)(4) shall not apply to a bonafide purchaser who acquired the property without knowledge of the condition resulting in the necessity for construction of the shoreline protection device.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (4)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(4) shall include, but not be limited to, Policy 4.28 and Policy 4.32.

Policy 4.28: With respect to bluff properties only, the City will require the removal or capping of any permanent irrigation system within 100 feet of the bluff edge in connection with issuance of discretionary permits for new development, redevelopment, or shoreline protection, or bluff erosion, unless the bluff property owner demonstrates to the satisfaction of the Public Works Director that such irrigation has no material impact on bluff erosion (e.g., watering hanging plants over hardscape which drains to the street).

Policy 4.32: Limit buildings and structures on the sloped face and toe of the bluff to lifeguard towers, subsurface public utility drainage pipes or lines, bluff retention devices, public stairs and related public infrastructure which satisfy the criteria established in the LCP. No other permanent structures shall be permitted on a bluff face. Such structures shall be maintained so that they do not contribute to further erosion of the bluff face and are to be visually compatible with the surrounding area to the maximum extent feasible.
DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (4)"
The Applicants or prior property owners did not create the necessity for the shoreline
defense structure by unreasonably failing to implement generally accepted erosion and
drainage control measures or by otherwise unreasonably acting or failing to act with
respect to the property.

The Geopacifica report concluded that the only reasonable means by which to stop the
migration of these upper bluff failures is to reconstruct the slope. Through the proposal
to “...protect and stabilize the lower cliffed part of the coastal bluff [via] supporting the
subject residential properties with a reinforced shotcrete tied-back structure, designed to
conform to the existing vertical lower-bluff.” Additionally, the Applicant is proposing to
reconstruct the failed portions of the upper-bluff that have resulted in the undermining
and subsequent failure of portions of bluff-top improvements at 245 and 249 Pacific
Avenue.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (4)”
This finding can be made. It appears that the property owners have made all reasonable
attempts to protect their property and have performed all reasonable erosion and
drainage control within their properties.

5. FINDING SBMC 17.62.080 (A) (5)
To the extent the location, size, design and operation characteristics of the proposed
shoreline defense structure adversely affect adjacent public or private property, natural
resources, or public use of the beach, mitigation shall be provided to the extent
deemed feasible with a statement of overriding considerations issued to the extent said
impacts are not fully mitigated.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC
17.62.080 (A) (5)"
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(5)
shall include, but not be limited to Policy 2.1, Policy 2.62, Policy 2.63, 2.64, Policy 4.42,
Policy 4.54

Policy 2.1: Acknowledge the public interest in eliminating nuisances that affect
public and private property and public recreational areas. For example, bluff
retention devices are permitted, and must be adequately maintained and kept in
good repair.

Policy 2.62: To the extent feasible, provide continuous safe public lateral
access along the beach.

Policy 2.63: To the extent feasible, encourage the removal of existing
impediments to public lateral access along the beach.
Policy 2.64: Minimize the placement of bluff retention devices seaward of the bluff drip line to help maintain public lateral access along the beach.

Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

Policy 4.54: The bluff property owner shall pay for the cost of the coastal structure or infill and pay a Sand Mitigation Fee and a Public Recreation Fee per Policy 4.42. These mitigation fees are not intended to be duplicative with fees assessed by other agencies.

Sand Mitigation Fee - to mitigate for actual loss of beach quality sand which would otherwise have been deposited on the beach. For all development involving the construction of a bluff retention device, a Sand Mitigation Fee shall be collected by the City which shall be used for beach sand replenishment and/or retention purposes. The mitigation fee shall be deposited in an interest-bearing account designated by the City Manager of Solana Beach in lieu of providing sand to replace the sand that would be lost due to the impacts of any proposed protective structure. The methodology used to determine the appropriate mitigation fee has been approved by the CCC and is contained in LUP Appendix A. The funds shall solely be used to implement projects which provide sand to the City’s beaches, not to fund other public operations, maintenance, or planning studies.

Public Recreation Fee – Similar to the methodology established by the CCC for the sand mitigation fee, the City and the CCC are jointly developing a methodology for calculating a statewide public recreation fee. To assist in the effort, the City has shared the results of their draft study with the CCC to support their development of a uniform statewide Public Recreation Fee. Until such time as an approved methodology for determining this fee has been established, and the methodology and payment program has been incorporated into the LCP through an LCP amendment, the City will collect a $1,000 per linear foot interim fee deposit. In the interim period, CCC will evaluate each project on a site-specific basis to determine impacts to public access and recreation, and additional mitigation may be required.

DISCUSSION REGARDING FINDING "SBMC 17.62.080 (A) (5)"
The location, size, design, and operation characteristics of the proposed shoreline defense structure will not adversely affect adjacent public or private property, natural resources, or public use of the beach. The resulting bluff stabilization may benefit adjacent properties as well. The Proposed Project includes a number of conditions of approval established by Regulations (SBMC) and Policy to incorporate an earth-like appearance to conform to the natural form of the bluff and seawall and to minimally encroach onto public use areas, both temporally and spatially. The findings and declarations contained in the ordinance specifically state the City’s desire to balance the
public interest with private property rights and to apply its ordinances in a manner consistent with the Coastal Act and other state laws. SBMC 17.62.010(B) specifically states, in part:

"Unless properly regulated, seawalls, revetments, bluff retaining walls, erosion control devices, rip rap, cave filling or plugging, and other similar shoreline and coastal bluff protection measures individually and cumulatively may adversely impact the shoreline. When permitted, such devices should be designed, constructed and maintained in a manner that has the least impact on the shoreline and public use of the beach while providing adequate protection to the bluff top structures and uses."

"In adopting this chapter the City Council, in a manner consistent with the policies and goals of the Coastal Act, has attempted to balance the rights and privileges of private property owners to preserve, protect, develop and use property with the rights of the public to assure protection of important public resources and the need to assure that development designed to preserve or enhance one property does not adversely affect another property."

Without a coastal bluff protection structure, additional and/or ongoing beach use may be restricted to the public given the higher risk of bluffs and buildings in imminent danger of falling on the beach; as is the case with the current project.

CONCLUSION REGARDING FINDING "SBMC 17.62.080 (A) (5)"
This finding can be made. The Proposed Project has been designed to have minimal impact/intrusion onto the public beach, consistent with other seawall projects to the north and south of the subject property. The location, size, design and operation characteristics of the proposed shoreline defense structure will not adversely affect adjacent public or private property, natural resources, or public use of the beach, and mitigation shall be provided, where necessary, to the extent deemed feasible with a statement of overriding considerations issued to the extent said impacts are not fully mitigated.

6. FINDING SBMC 17.62.080 (A) (6)
The proposed shoreline defense structure will be:

(a) The minimum measure necessary to provide a reasonable level of protection;
(b) Constructed and maintained to incorporate an earth-like appearance which will resemble as closely as possible the natural color and texture of the adjacent bluffs;
(c) Constructed and maintained to reasonably conform to the natural form of the bluff;
(d) Placed at the most feasible landward location; and
(e) Appropriately landscaped and maintained to blend in with the existing environment.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (6)”

The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(6) shall include, but not be limited to, Policy 2.64, Policy 4.28, Policy 4.29, Policy 4.42, Policy 4.53 and Policy 6.1.

**Policy 2.64:** Minimize the placement of bluff retention devices seaward of the bluff drip line to help maintain public lateral access along the beach.

**Policy 4.28:** With respect to bluff properties only, the City will require the removal or capping of any permanent irrigation system within 100 feet of the bluff edge in connection with issuance of discretionary permits for new development, redevelopment, or shoreline protection, or bluff erosion, unless the bluff property owner demonstrates to the satisfaction of the Public Works Director that such irrigation has no material impact on bluff erosion (e.g., watering hanging plants over hardscape which drains to the street).

**Policy 4.29:** Require all bluff property landscaping for new development to consist of native, non-invasive, drought-tolerant, fire-resistant, and salt-tolerant species.

**Policy 4.42:** Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

**Policy 4.53:** Coastal structures shall be approved by the City only if all the following applicable findings can be made and the stated criteria satisfied. The permit shall be valid for a period of 20 years commencing with the date of CDP approval.

A. Based upon the advice and recommendation of a licensed Geotechnical or Civil Engineer, the City makes the findings set forth below.

1. A bluff failure is imminent that would threaten a bluff home, city facility, city infrastructure, and/or other principal structure.

2. The coastal structure is more likely than not to preclude the need for a larger coastal structure or upper-bluff retention structure.

Subject to the bluff property owner being entitled to reasonable use of the bluff property and having the right to protect an existing principal structure in danger from erosion, including city facility and/or city infrastructure, respectively, and taking into consideration any applicable conditions of previous permit approval for development at the subject site, this
determination has been made based on a detailed alternatives analysis that none of the following alternatives to the coastal structure are currently feasible, including:

- A Seacave/Notch Infill;
- A smaller coastal structure;
- Other remedial measures capable of protecting the bluff home, city facility, non-city-owned utilities, and/or city infrastructure, which might include tie-backs, underpinning (which shall not be exposed in the future), or other non-beach and bluff face stabilizing measures, taking into account impacts on the near and long term integrity and appearance of the natural bluff face, and contiguous bluff properties;
- Removal and relocation of all, or portions, of the affected bluff home, city facilities or city infrastructure.

3. The bluff property owner did not create the necessity for the coastal structure by unreasonably failing to implement generally accepted erosion and drainage control measures, such as reasonable management of surface drainage, plantings and irrigation, or by otherwise unreasonably acting or failing to act with respect to the bluff property. In determining whether or not the bluff property owner’s actions were reasonable, the City shall take into account whether or not the bluff property owner acted intentionally, with or without knowledge, and shall consider all other relevant credible scientific evidence, as well as, relevant facts and circumstances.

4. The location, size, design and operational characteristics of the proposed coastal structure will not create a significant adverse effect on adjacent public or private property, natural resources, or public use of, or access to, the beach, beyond the environmental impact typically associated with a similar coastal structure and the coastal structure is the minimum size necessary to protect the principal structure, has been designed to minimize all environmental impacts, and provides mitigation for all coastal and environmental impacts, as provided for in this LCP.

B. The coastal structure shall meet City Design Standards, which shall include the following criteria to ensure the coastal structure will be:

1. Constructed to resemble as closely as possible the natural color, texture and form of the adjacent bluffs;

2. Landscaped, contoured, maintained and repaired to blend in with the existing environment;

3. Designed so that it will serve its primary purpose of protecting the bluff home or other principal structure, provided all other requirements under the implementing ordinances are satisfied, with minimal adverse impacts to the bluff face;

4. Reduced in size and scope, to the extent feasible, without adversely
impacting the applicant's bluff property and other properties; and

5. Placed at the most feasible landward location considering the importance of preserving the maximum amount of natural bluff and ensuring adequate bluff stability to protect the bluff home, City facility, or City infrastructure.

Policy 6.1: To protect the scenic and visual qualities of Solana Beach, including the unique character of the Highway 101 Corridor, the Cedros Design district, and the coastal bluffs.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (6)”

(a)(c) The proposed project is considered the minimum measure necessary to provide a reasonable level of protection. The properties are not adjacent to a wetland, and the project does not involve diking, filling or dredging of open coastal waters, lagoons, and other wetlands. Aesthetically, the Proposed Project will be conditioned to appear visually similar to adjacent bluffs and seawalls.

(b)(d)(e) The shoreline protection device will be constructed and maintained to incorporate an earth-like appearance which will resemble, as closely as possible, the color and texture of the surrounding seawall and bluffs. The shoreline protection device is proposed to be located at the most feasible landward location, following the existing curves and contours of the existing bluff. A hydroseed treatment, consisting of native seed materials found acceptable and desirable by the City of Solana Beach and the California Coastal Commission, will be applied to the reconstructed sloping upper-bluff in an effort to establish drought-tolerant coastal plant species.

The Proposed Project plans included in Attachment 1 illustrate a lower- and upper-bluff structure that is the minimum necessary in height to encapsulate the exposed clean sand lens and provide adequate assurance against future bluff failure caused by failure of the clean sand lens. For this same reason, the proposed structure is the minimum necessary in height to provide a reasonable level of protection. The Proposed Project will also be sculpted and color-treated to match the existing bluff and other structures as closely as possible. The Applicant's contractor has confirmed that the structure will conform to the natural form of the bluff and blend in comfortably with its surrounding environment.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (6)”

This finding can be made. The Proposed Project will be the minimum measure necessary to provide a reasonable level of protection and will be constructed and maintained to incorporate an earth-like appearance, which will closely resemble the natural color and texture of the adjacent seawalls that it will tie into. It will also tie into the adjacent bluffs; will be constructed and maintained to reasonably conform to the remaining natural form of the bluff; placed at the most feasible landward location; and appropriately landscaped and maintained to blend in with the existing environment.

7. FINDING SBMC 17.62.080 (A) (7)
The shoreline defense structure will be located entirely on private property or, if the structure will be located partially or entirely on public property or property subject to a public trust all required permits for construction or real property interests have been obtained, or will be obtained, from the appropriate public agency or agencies with jurisdiction and/or ownership.

**DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (7)”**

The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(7) shall include, but not be limited to, Policy 4.42, Policy 4.49, and Policy 4.51.

**Policy 4.42:** Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

**Policy 4.49:** The City has adopted preferred bluff retention solutions (see Appendix B) to streamline and expedite the City permit process for bluff retention devices. The preferred bluff retention solutions are designed to meet the following goals and objectives:

1. Locate bluff retention devices as far landward as feasible;
2. Minimize alteration of the bluff face;
3. Minimize visual impacts from public viewing areas; and,
4. Minimize impacts to adjacent properties.
5. Conduct annual visual inspection and maintenance as needed;

The bluff property owner's licensed Geotechnical Engineer must examine the device for use in the specific location and take responsibility for the design as the Engineer of Record.

Applicants who seek permits to install a preferred bluff retention solution can do so on a streamlined basis, relying on previously approved standards and designs, and shall receive expedited processing from the City. As technology develops, the City will consider other preferred bluff retention solutions that meet the goals and policies of the LCP, as an amendment to the LUP or within the LIP.

Applications for all bluff retention devices where any portion of which will be sited seaward of the MHTL, as shown on the MHTL Survey, shall be submitted first to the City for approval and then to the CCC, which has original jurisdiction for the portion of the bluff retention device that will be sited seaward of the MHTL. Such developments shall be subject to this LCP. For beachfront development that will be subject to wave action periodically, unless the State Lands Commission determines that there is no evidence that the proposed development will encroach on tidelands or other public trust interests. The City shall reject the
application on the grounds that it is within the original permit jurisdiction of the CCC and shall direct the applicant to file his or her application with the CCC.

**Policy 4.51:** All proposed development on a beach or along the shoreline, including a shoreline protection structure located within the jurisdiction of the State Lands Commission: (1) must be reviewed and evaluated in writing by the State Lands Commission and (2) may not be permitted if the State Lands Commission determines that the proposed development is located on public tidelands or would adversely impact tidelands unless State Lands Commission approval is given in writing.

**DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (7)”**
This Proposed Project would protect and stabilize the lower cliffed part of the coastal bluff supporting the subject residential properties with a reinforced shotcrete tied-back structure, designed to conform to the existing vertical lower-bluff. Additional improvements include the reconstruction of the failed portions of upper-bluff that have resulted in the undermining and subsequent failure of portions of bluff-top improvements at 245 and 249 Pacific Avenue.

Previous Coastal Commission permits at the properties includes:

**245 Pacific Avenue:** CCC CDP-6-96-21 residential replacement; CCC CDP 6-00-35 lower-bluff infill.

**249 Pacific Avenue:** CCC CDP 6-00-35 lower-bluff infill.

**CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (7)”**
This finding can be made. If the structure will be located partially or entirely on public property or property subject to a public trust all required permits for construction or real property interests will have been obtained, or will be obtained, from the appropriate public agency or agencies with jurisdiction and/or ownership.

**8. FINDING SBMC 17.62.080 (A) (8)**
The construction of the structure and reconstruction of the bluff face, if any, will not result in a usable area at the top of the bluff larger than existed on January 3, 1991. It will not extend the bluff-top edge seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991 and as shown on the orthophoto map of the City dated January 3, 1991, which is and on file in the Community Development Department.

**DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (8)”**
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(8) shall include, but not be limited to, Policy 4.44.

**Policy 4.44:** Ensure the private and public interest in protecting and preserving private property rights under the state and federal Constitutions, the Coastal Act,
and local ordinances, such that regulations are not overreaching and no private owner is denied reasonable use of his, her or its bluff property. In accordance with Public Resources Code Section 30010, this Policy is not intended to increase or decrease the rights of any owner of property under the Constitution of the State of California or the United States.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (8)”
The Proposed Project would construct a 74-foot-long, 35-foot-high tiedback shotcrete wall with upper-bluff reconstruction to mitigate coastal erosion that threatens the subject homes and public beach below. However, the project will not result in a usable area at the top of the bluff larger than existed on January 3, 1991 or extend the bluff seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (8)”
This finding can be made. The construction of the structure and reconstruction of the bluff face will not result in a usable area at the top of the bluff larger than existed on January 3, 1991 or extend the bluff-top edge seaward more than 10 feet from the bluff-top edge as it existed on January 3, 1991 and is shown on the orthophoto map of the City dated January 3, 1991, which is on file in the planning department.

9. FINDING SBMC 17.62.080 (A) (9)
The project as approved or conditionally approved will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach. Encroachments into the public beach shall be mitigated to the satisfaction of the City Council.

DRAFT LCP POLICIES TO BE CONSIDERED REGARDING FINDING “SBMC 17.62.080 (A) (9)”
The Policies of the Draft LCP to be considered under Finding SBMC 17.62.080(A)(9) shall include, but not be limited to Policy 2.62, Policy 2.64 and Policy 4.42,

Policy 2.62: To the extent feasible, provide continuous safe public lateral access along the beach.

Policy 2.64: Minimize the placement of bluff retention devices seaward of the bluff drip line to help maintain public lateral access along the beach.

Policy 4.42: Provide for reasonable and feasible mitigation for the impacts of all bluff retention devices which consists of the payment of Sand Mitigation Fees to the City and Public Recreation Fees to the CCC.

DISCUSSION REGARDING FINDING “SBMC 17.62.080 (A) (9)”
The Proposed Project, as conditionally approved, will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach.
Encroachments into the beach shall be mitigated to the satisfaction of the City Council. At present, the subject bluffs are projected to fail imminently. Such failure could extend onto the public beach. The Proposed Project will abate that threat and the project itself is anticipated to physically impact only a small area of public beach.

The potential loss of beach that exists from the presence of the Proposed Project already exists at the subject site due to the presence of seawalls to the north and south within the City, where periodic tides ultimately block the public from traversing the beach adjacent to the bluffs.

The Proposed Project will not affect handicapped access, public access ways, public parking, and is not located within a 100-year flood hazard area. The project does not involve new development and is not located near a coastal lagoon wetland area.

To encourage an expeditious completion of the work, the requirement that Marine Safety lifeguards monitor construction activities and the Applicant pay ramp fees and usage fees will be adhered to. In addition, other City Departments, including Engineering, Public Works and Code Enforcement, will be required to insure City standards are adhered to relative to health, safety and welfare. In addition, the Proposed Project may increase public safety by reducing the potential hazards of a major bluff failure. Further, the Proposed Project has been, and/or will be, subject to payment of sand mitigation and public recreation impact fees.

CONCLUSION REGARDING FINDING “SBMC 17.62.080 (A) (9)”
This finding can be made. The Proposed Project, as approved or conditionally approved, will not adversely affect the public health, safety or welfare and will not unreasonably affect the public use of the beach. Encroachments into the public beach shall be mitigated to the satisfaction of the City Council by payment of a public recreation fee deposit.

5. CONDITIONS OF APPROVAL UNDER SBMC 17.62.080:

The City Council hereby approves the issuance of a Conditional Use Permit subject to the following conditions:

A. Where applicable, a Permit for a Bluff Retention Device shall be conditioned as follows:

I. The Applicants shall pay the City’s Sand Mitigation Fee based on the methodology contained in LUP Appendix A. The Applicants shall pay a $74,000.00 fee deposit, based on $1,000.00 per linear foot of the primary bluff retention structure, to the City to be applied against the Public Recreation Fee to be assessed by the City following adoption of a formal program for said fees as defined in Resolution No. 2007-042. If the fee deposit exceeds the amount to be paid in Public Recreation
fees, the City shall refund the excess amount, with interest. The interest shall be calculated based on the rate of return received by the City on the deposited funds as determined by the City's Finance Director from the date of receipt of the deposit to the date any such excess is refunded. Since all such fees deposited or paid by Applicant are not to duplicate other similar fees charged by other governmental agencies, the City shall pay from the fees deposited or paid (plus interest) any amounts which are due and payable to any such other governmental agencies. Any shortfall in amounts owed for said Sand Mitigation and Public Recreation Fees shall be paid by the Applicant.

II. Nothing herein is intended to increase or decrease the rights of the Applicant under the Constitution of the State of California or the United States in accordance with Public Resources Code section 30010.

III. The Applicant shall reduce the potential for environmental hazards including soil erosion, siltation of coastal wetlands, land slides, adverse impacts due to run-off, and other adverse effects. Landscaping for the property shall be limited to native, salt-tolerant, non-invasive and drought-tolerant species.

IV. The Coastal Structure shall be maintained and repaired on an ongoing and "as needed" basis to ensure continued compatibility with the color, texture and topography of the contiguous areas, and to ensure that all surrounding areas are kept safe. The Bluff Retention Device shall be subject to periodic inspection by officers or agents of the City to determine compliance with the terms and conditions of this Resolution.

V. The Applicant shall ensure that any Accessory Structure on the Properties shall be constructed in a manner that allows easy relocation landward should they become threatened by coastal erosion. Any coastal development permits authorizing Accessory Structures shall be conditioned with a requirement that the permittee (and all successors in interest) shall remove the Accessory Structure(s) if threatened by shoreline erosion and that no Bluff Retention Device shall be allowed for the sole purpose of protecting an Accessory Structure(s).

VI. The Coastal Structure shall meet City Design Standards, which shall include the following criteria to ensure the Coastal Structure will be:
a. Constructed to resemble as closely as possible the natural color, texture and form of the adjacent bluffs;

b. Hydrosedded using a native, non-invasive, drought-tolerant and salt-tolerant species mix, contoured, maintained and repaired to blend in with the existing environment to the maximum extent feasible;

c. Designed so that it will serve its primary purpose of protecting the Bluff Property;

d. Placed at the most feasible landward location considering the importance of preserving the maximum amount of natural bluff and ensuring adequate bluff stability to protect the Bluff Property.

VII. Any pre-existing deed and/or permit restrictions applicable to the Bluff Property or Bluff Home may be reviewed and enforced by the City to bring any such pre-existing conditions into conformance with the DLUP, subject to any requirements of the CCC and to the vested rights of the Bluff Property Owner.

VIII. Mitigation: The Bluff Property Owner shall pay for the cost of the Coastal Structure and pay to the City a Sand Mitigation Fee and a Public Recreation Fee. It is understood that these fees are in lieu of all Sand Mitigation, Land Lease, Recreation and any other fees paid to any government agency or district, including, without limitation, the CCC, the San Diego Association of Governments (SANDAG) and the State Lands Commission. These fees are to be paid based on the process established in this Resolution and the City Council Resolution No. 2007-042 establishing the fee standards to be applied to this Project.

IX. The Applicant shall reduce the potential for environmental hazards including soil erosion and other adverse impacts due to run-off associated with bluff landscaping.

X. Prior to the issuance of a grading permit, the Applicant shall submit, for the review and written approval of the City Manager, a plan for landscaping the reconstructed coastal bluff. The plan shall be prepared by a licensed landscape architect and shall demonstrate that:

a. All vegetation planted on the face of the bluff will consist of native, non-invasive, drought-tolerant and salt tolerant plants.
b. The majority of the container plants shall be 1-gallon in size.

c. No container plants shall be greater than 5-gallons in size.

d. All planting will be completed within 60 days after construction of the reconstructed bluff area.

e. Temporary irrigation shall be periodically inspected every six months following planting to ensure planting success and to verify that irrigation is still required. At six month intervals, a report prepared by a licensed landscape architect detailing the status of the vegetation, an assessment on the condition of the temporary irrigation system, and provides supporting information on whether the temporary irrigation is still needed shall be provided to the City. The City will issue a determination on the status of the temporary irrigation system upon reviewing the report. The City can require the removal of the temporary irrigation system at anytime. The temporary irrigation system may remain active and in place up to a maximum of 24 months at the approval of the City and must be removed once the plants have become established.

f. All required plantings will be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the landscape plan.

g. The landscape plan shall include, at a minimum, the type, size, and location of all plant materials that will be on the reconstructed bluff area and show any proposed temporary irrigation system.

h. The temporary irrigation system shall include redundant valve control/shut off valves to prevent any irrigation system leaks/failures.

Xi. The Applicant shall undertake planting in accordance with the approved final landscape plan. Any proposed changes to the approved final plan shall be reported to the City Manager. No changes to the approved final plan shall occur without an amendment to the original permit unless the City Manager determines that no amendment is legally required.
6. ENGINEERING DEPARTMENT CONDITIONS OF APPROVAL UNDER SBMC 17.62.080:

A. Prior to obtaining any building or grading permits pursuant to this reinforced concrete return wall/seawall maintenance project, the Applicant shall:

   I. Prepare, execute and record a declaration of restrictions on real property approved by the City Attorney whereby the Applicant or the Applicant's successors in interest to the property will construct and maintain the shoreline defense structure in accordance with Conditions of this approval and in a manner so as to accommodate the continual erosion of the natural cliffs, as necessary, and the eventual removal of the structure.

   II. Execute a waiver of all claims against the City of Solana Beach for future liability or damage resulting from permission to build as granted under this permit. Said waiver shall be acknowledged and recorded in the Office of the County Recorder.

   III. Obtain required California Coastal Commission Permits prior to the issuance of any structure and grading permits or present evidence that an emergency waiver has been granted.

   IV. Obtain any other permits or emergency waivers, which may be required from State and Federal agencies including the State Lands Commission and the U.S. Army Corps of Engineers.

   V. The project shall be designed and shall provide appropriate data to confirm the submitted design to the satisfaction of the City Engineer. This shall include, but is not limited to, a geotechnical report.

   VI. The property owner shall post securities to guarantee proper care and use of the Fletcher Cove Beach Access Ramp. No construction materials to be off-loaded on the ramp or at the end of the ramp. No washing of equipment shall occur unless a containment system is properly utilized.

   VII. For all projects on which equipment is driven on the Fletcher Cove Beach Access Ramp, the access ramp and adjacent parking lot must be swept daily to remove sand that has been tracked onto the ramp and parking lot. At least once a week, the access ramp and parking lot must be swept with a street sweeper that is capable of cleaning the streets and parking lots of paper, glass, dirt, silt, sand, rocks, litter and miscellaneous debris. The Street
Sweeper shall be equipped with dual gutter brooms and vacuum equipment may be used. If any sand is tracked outside the parking lot, these areas (including City streets) must also be cleaned weekly with a street sweeper.

VIII. The property owners shall pay all inspection and plan check fees as required by the City.

IX. Plans and specification for the project shall be approved by the City Engineer in addition to approvals from the Director of Planning as may be required, and shall substantially conform to the plans submitted by the Applicant. Seawall shall produce a natural appearing bluff to the satisfaction of the City Engineer and the Community Development Director. Project implementation shall provide a final product mimicking a naturally appearing bluff in terms of colors, textures, forms and angles.

X. A grading/drainage plan shall be prepared by a registered civil engineer in accordance with the current Grading Ordinance and be submitted to the City Engineer for approval and permit issuance.

XI. Plans and specifications for the project shall be approved by the Planning Department prior to submittal to the Engineering Department.

XII. The Applicant shall post with the City a Performance Bond equal to the full amount of the work to be completed to guarantee that once started, construction will be completed per approved plans.

XIII. The Applicant shall submit a Certificate of Insurance naming the City of Solana Beach as an additional insured in the amount of $1,000,000 on a policy of general liability insurance issued by an insurance company licensed to do a business in California, and meeting the requirements established by City Council Resolution for insurance companies doing business with the City, covering injuries to persons and property during the construction period.

XIV. The Applicant shall obtain a Special Use Permit (Marine Safety) specifying the conditions governing use of vehicles, use of the boat ramp, and entry upon and use of areas of the public beach for construction equipment and vehicles. Evidence of permit issuance shall be submitted to the City Engineer before issuance of the permit for the project.
XV. The Applicant shall have on file evidence from the Captain of Marine Safety and City Engineer, that arrangements have been made to satisfy the following criteria:

a. Prior to usage of the Solana Beach Fletcher Cove Beach Access Ramp or parking lot, a cash deposit, bond or other secured agreement to cover the following impact charges shall be deposited.

i. A five-dollar and thirty-cents ($5.30) per round trip vehicle charge for all construction related vehicles using the ramp.

ii. A two-dollar and seventy cents ($2.70) per ton fee, or less if approved by the City Council, based on the estimated weight of the vehicle and load for all vehicles in excess of ¾ ton capacity, excluding any vehicles solely transporting beach grade replenishment sand.

iii. A twenty-seven dollar ($27) per day charge for the first 30 days escalating to fifty-three ($53) per day for the 31st and subsequent days charge shall be collected to encourage a timely completion of all projects, unless otherwise modified for good cause by the City Council or City Manager.

iv. Any damage caused to the Solana Beach Fletcher Cove Beach Access Ramp and parking lot.

b. At least one City of Solana Beach Lifeguard shall be contracted, at the Applicant’s expense, through the Captain of Marine Safety to monitor all activities in order to insure full compliance with the conditions of this permit. The lifeguard(s) shall be on duty at all times when any construction activity takes place. Additional lifeguards may be required at the discretion of the Captain of Marine Safety. In addition to the lifeguard staffing cost, the Applicant shall also pay an equipment use fee of four-dollars and sixty-four cents ($4.64) per hour, based on the number of the number hours the lifeguards are contracted for the project.

c. If construction access is from Fletcher Cove Park, precautions shall be taken to avoid damage to the beach access ramp during construction and repairs. If damage to the ramp occurs, it shall be repaired to a condition equivalent to the condition at the start of construction activity to the satisfaction of the City of Solana Beach City Engineer. All City owned work areas including Fletcher Cove Park and the access ramp
shall be videotaped prior to the commencement of the project. The videotape shall establish the “as-is” condition. In any areas missed by the videotape, the City Engineer will determine “as-is” condition.

d. The Applicant and/or contractor shall obtain a haul route permit from the City’s Engineering Department.

XVI. Beach quality sand from the excavation for the proposed project shall be deposited and spread on the beach in front of this site unless unique and/or inappropriate conditions are encountered. The Applicant should reference this condition to other permitting agencies.

XVII. An encroachment permit from the Engineering Department is required if a crane, construction materials, etc. are envisioned to be stationed in the public right of way. The City does not guarantee that an encroachment permit will be approved.

XVIII. Any grout mixture used on the project that may be visible from the beach or surrounding areas shall be of similar strength, erosion properties, and color as the surrounding natural bluffs. Color samples shall be submitted and approved by the City prior to placing the grout.

XIX. The structure and any exposed construction shall mimic the natural contours, color and texture to the maximum extent practicable, as determined by the City Engineer and Community Development Director.

XX. A carved, colored and textured façade on the face of the structure matching the adjacent bluff areas shall be constructed. The façade shall match the contours both vertically and horizontally, and the texture of the adjacent natural bluffs. Coastal bluff colored grouting shall be used and shall be considered an erodible mix. An erodible concrete mix design shall be submitted to the City Engineer before approval of the plans. A test prism shall be cast and delivered to a testing lab during construction.

XXI. A qualified, licensed and insured contractor shall perform all required work as outlined by certified/registered engineering geologist or Registered Civil Engineer on the construction plans. Special and general notes on said plans shall be followed to the satisfaction of the City Engineer or his designee.
XXII. Lateral pedestrian and Marine Safety vehicular access through the construction area, shall be provided past the site at all times, subject to high tides and safety issues. A 30-foot wide safety/construction work zone shall be provided during work hours to separate the work zone from the open public beach.

XXIII. No construction activities may occur during the busier recreational season, which is defined as the period between Memorial Day and Labor Day. The contractor shall obtain approval from the City of Solana Beach Engineering and Marine Safety Departments regarding the use and timing of the Fletcher Cove parking lot and beach access ramp for all construction related access, staging and parking issues if such use becomes required.

B. Prior to Final Inspection of the project, the Applicant shall:

I. Submit a certification to the City Engineer from the Geotechnical Engineer and the Civil Engineer of Record for the project that they have inspected the project and certify that it was constructed per the approved plan, specifying the date of the plan.

II. The Applicant and/or contractor shall repair any damage caused to the Solana Beach property and facilities, including but not limited to, Fletcher Cove Beach Access ramp and parking lot to the satisfaction of the City Engineer.

C. The Applicant shall provide for and adhere to the following conditions:

I. All development on the site shall conform to the final Conditional Use Permit Plan approved by the City Council.

II. The property owner shall be responsible to immediately remove, in perpetuity, any graffiti or other markings should they appear on the project exterior face. If erosion exposes the steel rebar, the Applicant or their successor in interest shall arrange to apply a sculptor-coat of concrete over the exposed steel to match the natural bluff. The property owner shall be responsible for the removal of the structure or any portion thereof.

III. If requested by the City Manager or his designee, the property owner or their successor in interest shall install and maintain signage about unstable bluffs fronting their property.
IV. The applicant shall provide “As-Built” plans and all certifications required to the City, before the City will release the performance bond as indicated in condition1.XII.

V. Pursuant to SBMC Section 7.34.100, Construction hours are limited to 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 5:30 p.m. on Saturday. No work is allowed on Sunday or holidays. Engines shall not be started, no construction-related materials shall be moved, or any other construction-related activities occur outside these hours. Work is not permitted on the beach on Saturdays without the written approval of the City Manager.

VI. All owners, their successors, and assigns of the four (4) subject properties are jointly and severally responsible for satisfying any and all conditions enumerated above.

7. ENFORCEMENT: Pursuant to SBMC 17.72.120(B), failure to satisfy any and all of the above-mentioned conditions of approval is subject to the imposition of penalties as set forth in SBMC Chapters 1.1.6 and 1.18 in addition to any applicable revocation proceedings.

8. EXPIRATION: The CUP for the project will expire on February 22, 2014, unless the Applicant has obtained building permits and has commenced construction prior to that date, and diligently pursues construction to completion. Any extension of the application may be granted by the City Council.

9. INDEMNIFICATION AGREEMENT: The Applicant shall defend, indemnify, and hold harmless the City, its agents, officers, and employees from any and all claims, actions, proceedings, damages, judgments, or costs, including attorney’s fees, against the City or its agents, officers, or employees, relating to the issuance of this permit including, but not limited to, any action to attack, set aside, void, challenge, or annul this development approval and any environmental document or decision. The City will promptly notify Applicant of any claim, action, or proceeding. The City may elect to conduct its own defense, participate in its own defense, or obtain independent legal counsel in defense of any claim related to this indemnification. In the event of such election, Applicant shall pay all of the costs related thereto, including without limitation reasonable attorney’s fees and costs. In the event of a disagreement between the City and Applicant regarding litigation issues, the City shall have the authority to control the litigation and make litigation related decisions, including, but not limited to, settlement or other disposition of the matter. However, the Applicant shall
not be required to pay or perform any settlement unless such settlement is approved by Applicant.

10. NOTICE TO APPLICANT: Pursuant to Government Code Section 66020, you are hereby notified that the 90-day period to protest the imposition of the fees, dedications, reservations or other exactions described in this resolution commences on the effective date of this resolution. To protest the imposition of any fee, dedications, reservations or other exactions described in this resolution you must comply with the provisions of Government Code Section 66020. Generally the resolution is effective upon expiration of the tenth day following the date of adoption of this resolution, unless the resolution is appealed or called for review as provided in the Solana Beach Zoning Ordinance.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Solana Beach, California, held on the 22nd day of February, 2012, by the following vote.

AYES: Councilmembers – Kellejian, Roberts, Nichols, Campbell, Heebner
NOES: Councilmembers – None
ABSENT: Councilmembers – None
ABSTAIN: Councilmembers – None

[Signature]
JOE G. KELLEJIAN, Mayor

[Signature]
JOHANNA N. CANLAS, City Attorney

[Signature]
ANGELA IVEY, City Clerk
CERTIFICATION

STATE OF CALIFORNIA
COUNTY OF SAN DIEGO
CITY OF SOLANA BEACH

I, ANGELA IVEY, City Clerk of the City of Solana Beach, California, DO HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution 2012-023 conditionally approving a Conditional Use Permit at 245-249 Pacific Avenue, case 17-11-24 as duly passed and adopted at a Regular Solana Beach City Council meeting held on the 22nd day of February 2012 and the original is on file in the City Clerk's Office.

ANGELA IVEY, CITY CLERK

Date of this Certification: 3-7-2012
CITY OF SOLANA BEACH
635 SOUTH HIGHWAY 101 • SOLANA BEACH • CALIFORNIA 92075 • (858) 720-2400 • FAX (858) 755-1782
PROJECT EXTENSION APPLICATION

A. APPLICANT INFORMATION:

1. Project Address: 245 and 249 Pacific Avenue

2. Applicant's Name: Presnell Graves LLC and Eron Jokipi
   (Last, First & Middle Initial or Company Name)
   (249 Pacific Ave.) Presnell/Graves LLC - 372 S. Eagle Road, #389, Eagle, ID 83616

3. Applicant's Address: (245 Pacific Ave.) Eron Jokipi, 140 Alley Way, Mountain View, CA 94040
   (Street, City, State & ZIP Code)

4. Applicant's Telephone: (208) 939-0069 (Chad Graves) Fax: (208) 272-9333

5. Applicant's Email Address: chad@gravesacquisitions.com Cell Phone: (949) 378-2557

B. PLEASE COMPLETE THE FOLLOWING:

1. Provide a detailed factual description and explanation of the reasons why a building permit was not
   issued prior to the expiration of the original approval or preceding extension and the specific
   reason(s) the extension is necessary; the applicant's request for a specific time period for the
   extension.

As the engineer and agent for both property owners, TerraCosta Consulting Group has judiciously pursued obtaining a
Coastal Development Permit (CDP) from the California Coastal Commission (CCC) for the project, which the City of
Solana Beach approved on February 22, 2012. Unfortunately, we have met with considerable resistance from CCC Staff.
After a year of negotiations, we revised the project as requested by CCC Staff to protect only the southerly half of 249
Pacific Avenue, with a still as yet undefined return wall extending partway onto the 245 Pacific Avenue property. CCC
Staff would simply not support the original 74-foot-long proposed seawall fronting the southerly half of 249 Pacific
Avenue and 245 Pacific Avenue, which was the project that the Solana Beach City Council approved in February 2012.
We have discussed these issues with both Jim Knowlton and Leslea Meyerhoff on several occasions, and on June 14,
2013, revised the project for the CCC to reflect a 49-foot-long seawall protecting the southerly half of 249 Pacific Avenue
with the southerly return extending 25 feet onto the 245 Pacific Avenue property to provide flanking protection for 249
Pacific Avenue. Although we have yet to receive a formal Staff Report approving the revised project, Eric Stevens, the
CCC Staff Analyst, has indicated that CCC Staff can approve the project now before the CCC with the project tentatively
scheduled to be heard before the CCC when they meet in San Diego on January 8-10, 2014, where we hope to receive a
positive vote. We would then anticipate about 2 months to complete the necessary Prior to Issuance requirements in order
to start construction.

The final ministerial permits that will be issued by the City, and necessary for start of construction, still require receipt of
the CDP from the CCC, which we hope to obtain by March or April 2014. We would, however, concurrently process the
ministerial review and approvals from the City after our receipt of the CCC's Notice of Intent (NOI) to issue the CDP.
While we wish to start the project as soon as possible, we are requesting an additional one year extension to allow for any
additional issues that may arise in completing all of the required Prior to Issuance items in the CCC's NOI.

ATTACHMENT 2
2. A detailed description of the actions that will be taken during the specific requested extension period that justify the requested time period of the extension and that will result in the timely issuance of a building permit for the project before the extension expires.

As indicated in response to Question 1, we believe that we have now worked out the previous impasse with CCC Staff and are optimistic that the project will be heard before the CCC at their January 2014 Hearing in San Diego. Assuming we receive approval at the Hearing, we anticipate two months of effort to complete the Prior to Issuance requirements outlined in the Coastal Commission's Notice of Intent to Issue Permit. We would concurrently process the City's Engineering and Public Safety Permits, then enabling construction of the project.

3. A detailed timeline for the actions that will be taken during the requested extension period.

January 2014 - Coastal Commission Hearing
March/April 2014 - Obtain necessary permits
April/May 2014 - Start construction

Recognizing that no construction can occur between Memorial Day and Labor Day, if we could obtain permits by the week of May 5, the contractor would be inclined to work up until Memorial Day, and then return after Labor Day. However, if permits are not issued until the week of May 12, construction would not start until after Labor Day.

(Please attach any additional relevant information supporting the extension)

Applicant Signature: [Signature]
Date: 12-12-13
A. Lapse of Approvals. Unless otherwise specified in this title, approvals for development review permits, structure development permits, conditional use permits, variances, and minor exceptions shall lapse (i.e., expire) and become void 24 months after the date of the approval, unless a different expiration date is specifically established as a condition of the approval or unless the following action occurs:

1. A building permit is issued in accordance with the approval.

B. Extensions. An extension may be issued prior to the lapse (i.e., expiration) of any approval described in subsection A of this section. There is not an absolute right to receive an extension. Approvals originally granted by the director of community development (the “director”) may be extended by the director. Approvals granted by the view assessment committee may only be extended by the city council. Approvals by the city council may only be extended by the city council.

1. One or more (but not more than a total of four) extensions may be granted not exceeding a cumulative total of 24 months after the date the original approval of the project expires. The duration of an extension shall be in an increment of 30 days. The minimum duration of an extension shall be six months. The maximum duration of an extension shall not be more than 12 months. The duration of an extension shall be determined at the discretion of the issuing authority.

2. All applications for extensions shall be filed with the director at least 60 days prior to the expiration date of the approval. Concurrent with the filing of an application for an extension, the applicant shall submit payment of applicable fees and deliver to the director the documents and information required from time-to-time by the city to provide notice of the application to the owners of all properties within a 300 foot radius from the project. An additional 15 days may be provided by the director for supporting documents and information as needed to deem the application complete.

3. An application for an extension shall include the following information and other information reasonably requested by the director or city council:

a. A detailed factual description and explanation of the reasons why a building permit was not issued prior to the expiration of the original approval or preceding extension and the specific reason(s) the extension is necessary; the applicant’s request for a specific time period for the extension;

b. A detailed description of the actions that will be taken during the specific requested extension period that justify the requested time period of the extension and that will result in the timely issuance of a building permit for the project before the extension expires; and

c. A detailed timeline for the actions that will be taken during the requested extension period.

C. The director or city council may issue an extension of the approval of a project in their discretion if they make all of the following findings:

1. The applicant has presented facts which establish that the applicant has timely and diligently pursued issuance of a building permit during the 24 month period following the issuance of the original approval for the project (or the different period set forth as a condition of approval of the project) or during the then current extension period;

2. Circumstances beyond the applicant’s control have intervened and prevented the applicant from obtaining the issuance of a building permit for the project prior to expiration of the 24 month period (or the expiration date established as a condition of the approval) or during the then current extension period;

3. The application for the extension sets forth a reasonable and substantial factual basis for issuance of the extension;

4. There is a substantial factual basis to determine that the applicant will be able to perform the actions necessary to obtain issuance of a building permit prior to expiration of the requested extension;

5. The duration of the extension requested by the applicant is not longer than is reasonably necessary to perform the actions necessary to obtain the issuance of a building permit;

6. There have not been any significant changes in the general plan, applicable specific plan, if any, zoning, or character of the area within which the project is located that would cause the approved project to become inconsistent, incompatible, or nonconforming therewith; and

7. The granting of an extension shall not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.
RESOLUTION 2015-005

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SOLANA BEACH, CALIFORNIA, APPROVING A TIME EXTENSION OF A CONDITIONAL USE PERMIT FOR A SEAWALL TO PREVENT SIGNIFICANT BLUFF FAILURE ALONG 249 PACIFIC AVENUE, SOLANA BEACH

APPLICANT: Presnell /Graves LLC

CASE NO.: 17-11-24 CUP Time Extension

WHEREAS, Presnell /Graves LLC (hereinafter referred to as “Applicant”) submitted an application pursuant to Chapter 17, Zoning, of the Solana Beach Municipal Code (SBMC) to request a Time Extension of the approved project on property at 249 Pacific Avenue; and

WHEREAS, on January 14, 2015, the City Council held a duly noticed public hearing to consider the Time Extension request; and

WHEREAS, the public hearing was conducted pursuant to the provisions of SBMC Section 17.72.030 of the Solana Beach Zoning Ordinance; and

WHEREAS, at the public hearing, the City Council received and considered evidence concerning the proposed application; and

WHEREAS, the California Coastal Commission issued a Notice of Intent to Issue Permit in July of 2014, for 249 Pacific Avenue, but has not yet approved a Coastal Development Permit, and the Applicant is still in the process of completing the Coastal Commission’s and the City’s conditions of approval; and

WHEREAS, the City Council of the City of Solana Beach has determined that Time Extensions are not a project as defined by CEQA; and

WHEREAS, the City Council of the City of Solana Beach found the Applicant’s original request for a CUP exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15359 of the State CEQA Guidelines; and

WHEREAS, this decision is based upon the evidence presented at the hearing, and any information the City Council gathered by viewing the site and the area as disclosed at the hearing.

NOW THEREFORE, the City Council of the City of Solana Beach, California, does resolve as follows:

1. That the foregoing recitations are true and correct.

ATTACHMENT 3
2. That the request for a Time Extension of the Development Review Permit, submitted December 12, 2013, and on file with the Community Development Department, is approved based upon the following Findings, and all terms and conditions of Resolution 2012-023 are in effect along with the Time Extension:

3. FINDINGS

   A. In accordance with Section 17.72.110 (Lapse of Approval and Extensions) of the City of Solana Beach Municipal Code, the City Council finds the following:

      I. The Applicant has presented facts which establish that the Applicant has timely and diligently pursued issuance of a building permit during the current extension period;

      II. Circumstances beyond the Applicant’s control has intervened and prevented the Applicant from obtaining the issuance of a building permit for the project prior to expiration of the current extension period;

      III. The application for the extension sets forth a reasonable and substantial factual basis for issuance of the second extension;

      IV. There is a substantial factual basis to determine that the Applicant will be able to perform the actions necessary to obtain issuance of a building permit prior to expiration of the requested extension;

      V. The duration of the extension requested by the Applicant is not longer than is reasonably necessary to perform the actions necessary to obtain the issuance of a building permit;

      VI. There have not been any significant changes in the general plan, applicable specific plan, if any, zoning, or character of the area within which the project is located that would cause the approved project to become inconsistent, incompatible, or nonconforming therewith; and

      VII. The granting of an extension shall not be detrimental to the public health, safety, or welfare, or materially injurious to properties or improvements in the vicinity.

4. EXPIRATION: The Time Extension for the Development Review Permit will expire on February 22, 2015, unless the Applicant has obtained building permits and has commenced construction prior to that date, and diligently pursues construction to completion.

5. INDEMNIFICATION AGREEMENT: The Applicant shall defend, indemnify, and hold harmless the City, its agents, officers, and employees from any and all
claims, actions, proceedings, damages, judgments, or costs, including attorney's fees, against the City or its agents, officers, or employees, relating to the issuance of this permit including, but not limited to, any action to attack, set aside, void, challenge, or annul this development approval and any environmental document or decision. The City will promptly notify Applicant of any claim, action, or proceeding. The City may elect to conduct its own defense, participate in its own defense, or obtain independent legal counsel in defense of any claim related to this indemnification. In the event of such election, Applicant shall pay all of the costs related thereto, including without limitation reasonable attorney's fees and costs. In the event of a disagreement between the City and Applicant regarding litigation issues, the City shall have the authority to control the litigation and make litigation related decisions, including, but not limited to, settlement or other disposition of the matter. However, the Applicant shall not be required to pay or perform any settlement unless such settlement is approved by Applicant.

6. NOTICE TO APPLICANTS: Pursuant to Government Code Section 66020, you are hereby notified that the 90-day period to protest the imposition of the fees, dedications, reservations or other exactions described in this resolution commences on the effective date of this resolution. To protest the imposition of any fee, dedications, reservations or other exactions described in this resolution you must comply with the provisions of Government Code Section 66020. Generally the resolution is effective upon expiration of the tenth day following the date of adoption of this resolution, unless the resolution is appealed or called for review as provided in the Solana Beach Zoning Ordinance.

PASSED AND ADOPTED this 14th day of January, 2015, at a regular meeting of the City Council of the City of Solana Beach, California by the following vote:

AYES: Councilmembers –
NOES: Councilmembers –
ABSTAIN: Councilmembers –
ABSENT: Councilmembers –

LESA HEEBNER, Mayor

APPROVED AS TO FORM:

JOHANNA N. CANLAS, City Attorney

ATTEST:

ANGELA IVEY, City Clerk