



Fw: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Board of Supervisors to: cr_board_clerk Clerk Recorder
Sent by: **Jocelyn Brennan**

12/08/2014 01:05 PM

----- Forwarded by Jocelyn Brennan/BOS/COSLO on 12/08/2014 01:05 PM -----

From: Gail Floyd <GFloyd@SJMSLaw.com>
To: "boardofsups@co.slo.ca.us" <boardofsups@co.slo.ca.us>
Cc: Kevin Elder <KElder@SJMSLaw.com>
Date: 12/08/2014 12:09 PM
Subject: FW: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Dear Satacha,
Thank you for taking my call this morning.
Please forward the attached letter to each of the Board of Supervisors.
Thank you,

Gail G. Floyd | Secretary to Kevin D. Elder, Esq.
Sinsheimer Juhnke Mclvor & Stroh, LLP

gffloyd@sjmslaw.com | www.sjmslaw.com

From: Gail Floyd
Sent: Wednesday, December 03, 2014 11:29 AM
To: 'Bruce Gibson'; 'Debbie Arnold'; 'Adam Hill'; 'Frank Mecham'; 'Caren Ray'
Cc: Kevin Elder (KElder@SJMSLaw.com)
Subject: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Dear Supervisors,
Please find the attached correspondence of today's date from Kevin Elder.
Thank you,

Gail G. Floyd | Secretary to Kevin D. Elder, Esq.
Sinsheimer Juhnke Mclvor & Stroh, LLP

gffloyd@sjmslaw.com | www.sjmslaw.com

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Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Gail Floyd
Rec'd prior to the meeting & posted on: December 8, 2014



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WARREN A. SINSHEIMER III
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December 3, 2014

Client: 3203.003

San Luis Obispo County Board of Supervisors
Bruce Gibson
Debbie Arnold
Adam Hill
Frank Mecham
Caren Ray
County Government Center, Room D-430
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VIA E-MAIL
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Re: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Dear Supervisors Gibson, Arnold, Hill, Mecham and Ray:

On behalf of Ethel M. Pludow and Cynthia R. Sugimoto, this letter provides supplemental comments regarding the Project, including comments regarding a new study that was prepared on behalf of Jack Loperena (the "Applicant"). This letter is supplemental to all letters and material previously submitted to the County relating to the Project, including but not limited to the April 24, 2014 letter submitted by Sinsheimer Juhnke McIvor & Stroh, LLP.

Haro, Kasunich and Associates, Inc., ("HKA") reviewed the "Evaluation of Bluff Geometry Adjacent to Loperena Property" prepared by Shoreline Engineering ("Shoreline") on behalf of the Applicant and dated September 28, 2014, and associated Caltrans photographs from 1953 and 1965. The results of HKA's analysis of the Shoreline Engineering Study ("Shoreline Study") are set forth in HKA's letter to Ryan Hostetter, Senior County Planner, dated December 2, 2014, and attached as Attachment A.

The Shoreline Study included figures illustrating topographic mapping and cross sections from 2014 and 1953, based on analysis of the photographs. Shoreline concludes that the Loperena property is not located on a coastal bluff and no portion of the pre-development coastal bluff or the fluvial bluff is more than ten feet in height. Based on this novel theory, Shoreline promulgates the unprecedented position that the property is "exempt" from coastal setback requirements.

HKA disagrees with the Shoreline Study conclusions. In fact, HKA finds the study's profiles and cross sections prove that the Project is on a bluff and most of the Project is located below the top of the bluff and on the bluff face, in direct contravention of the County LCP¹.

HKA further explains how to properly determine the vertical elevation difference of the slope and concludes that Shoreline misinterpreted the bluff definition and the results of their analysis. In sum, Shoreline's conclusion is wrong, because it is based on a flawed methodology.

Moreover, HKA indicates that the Caltrans photographs provide additional evidence of marine erosion at the toe of this bluff and therefore, by definition the bluff is a coastal bluff. HKA also found inconsistencies between the Shoreline Study and the EIR Geologic analysis, which raises questions about the accuracy of the Shoreline Study.

The 1953 cross sections in the Shoreline Study show the pre-fill conditions and are useful to determine the amount of natural vertical relief to confirm whether the slope is a bluff or not. They are also helpful in determining the location of the natural bluff top edge, upon which the appropriate setback can be applied. Based on HKA's review, it is apparent that Shoreline misinterpreted the definition of a "bluff²", and their results are based on a flawed methodology, which lead to the wrong conclusion that the bluff is not a coastal bluff.

HKA's letter explains that bluff height must include the entire slope, not just the portion within the Loperena property boundaries, which is Shoreline's methodology. The bluff height measurements on the 1953 profiles should include the height between the step-like features indicating the bluff base up to the "Coastal Bluff Top Zone". The 1953 cross sections show the base of bluff elevations varying from elevation 7 to 12 and the top edge of bluff at an elevation between 20 and 21. The resulting difference indicates 8 to 14 feet of vertical relief, depending on the cross section. Therefore, the slope meets the definition of Bluff, because it has a vertical relief of ten (10) feet or more; and the cross sections prove that the entire 1953 slope is in fact a bluff.

Additionally, the definition states that "The cliff or bluff may be simple planar or curved surface or it may be step-like in section." Therefore, a bluff may have some areas that are flatter and some that are steeper. Just because the Loperena property happens to cover a small portion of bluff, which has slightly less than 10 feet of vertical relief, does not change the classification of the geological feature; it is still a bluff. There is nothing in the definition that indicates that a bluff is determined based on the amount of vertical relief on a limited or piecemeal or parcel by parcel basis.

¹ SLO County Coastal Plan Policies, Policies for Visual and Scenic Resources, Policy 11: Development on Coastal Bluffs: "New development on bluff faces shall be limited to public access stairways and shoreline protection structures."

² Per the Coastal Commission Resources for Local Governments glossary, "*Bluff (or cliff) - A scarp or steep face of rock, weathered rock, sediment or soil resulting from erosion, faulting, folding, or excavation of the land mass. The cliff or bluff may be simple planar or curved surface or it may be step-like in section. For purposes of (the Statewide Interpretive Guidelines), cliff or bluff is limited to those features having vertical relief of ten feet or more and seacliff is a cliff whose toe is or may be subject to marine erosion.*"

The Shoreline Study cross sections also indicate that most of the Loperena property is located below the top of the bluff and on the bluff face. Since SLO Coastal Plan Policy 11 limits new development on bluff faces to public access stairways and shoreline protection structures, the Project on its face clearly violates the LCP.

The Caltrans photographs used in the Shoreline Study provide additional evidence that the toe of the bluff has historically been subject to marine erosion; and therefore in accordance with 14 CCR § 13577 this bluff is a coastal bluff.

HKA found inconsistencies between the 1953 profile and the EIR Geologic Cross Section 1-1', which raises questions about the accuracy of their Study. If we are debating about a couple of feet of vertical relief, it is important to remember that the level of accuracy of Shoreline's analysis has not been established. Also note that the amount of vertical relief has varied over the past 200 years and could have been even greater at some time prior to or after this single 1953 data point. Generally, the Shoreline Study uses data selectively and in a piecemeal fashion, resulting in an erroneous conclusion.

Unfortunately, the Board and your staff has not been provided the topographic surveys prepared by Central Coast Aerial Mapping and/or ATGeoMapping that Shoreline used to prepare their report. In order to ascertain the validity of the Shoreline Study, your staff must obtain a copy of the Central Coast Aerial Mapping work products for public review and scrutiny. We also recommend an additional profile be prepared for the area not analyzed, and that erosion and wave run-up analysis be conducted using this new profile.

Because the property is clearly on a coastal bluff, all coastal bluff requirements must be applied including: appropriate set-backs (75 or 100 years of erosion and a minimum of 25 feet) from the natural (pre-fill) top of the bluff, including compliance with LCP limits regarding development on bluff faces, limitations on cantilevering of development beyond set-back areas, and prohibitions on seawalls and residential development masquerading as seawalls.

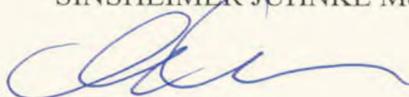
If for some reason it is determined that any portion of the property is not a coastal bluff, but instead is a "low laying coastal adjacent property" then the Applicant's unprecedented position exempting itself from any set-back whatsoever does not logically follow. Instead, a reasonable and safe set-back must still be applied to this portion of the property by this Board. In order to determine a safe set-back, the Board must require a wave run-up analysis using profiles that account for projected future erosion of the fill on that portion of the property to show where wave run-up will reach during the life of the development. However, in no case should development occur seaward of the 25 foot contour line on the property as it currently exists, based on the Applicant's most recent wave run-up study. In addition, if part of the property is determined to be a fluvial bluff, instead of a coastal bluff, then an additional 50 foot riparian setback must be applied where appropriate along the fluvial bluff.

San Luis Obispo County Board of Supervisors
December 3, 2014
Page 4 of 5

In conclusion, it is clear the Applicant's oceanfront property is on a coastal bluff. Yet even if it weren't, that does not support the Applicant's illogical position that no set-back is appropriate and that a home cantilevered out over the sandy beach is somehow allowable. Instead, some reasonable set-back is mandated to protect the public beach as well as the future residents of any development on the site. At a minimum, a 25-ft set-back is required from the top of the bluff, which has yet to be established. We look forward to working with your Board to resolve these important questions.

Sincerely,

SINSHEIMER JUHNKE McIVOR & STROH, LLP



KEVIN D. ELDER

KDE:ggf
K:\PludowE\003 Loperena\Ltr\17BOSLtr-120314.doc
Enclosure

cc: Ms. Ryan Hostetter, Senior County Planner (via e-mail)

Attachment A

Letter from Haro, Kasunich and Associates, Inc.
"Review of Shoreline Engineering Bluff Study dated 9/28/14", dated December 2, 2014

2 December 2014
Project No. SLO9515

To: Ms. Ryan Hostetter
County of San Luis Obispo
Department of Planning and Building
County Government Center Room 200
San Luis Obispo, CA 93408-2040

From: Mark Foxx, CEG 1493 John E. Kasunich, GE 455

Subject: Review of "Evaluation of Bluff Geometry Adjacent to Loperena Property"
prepared by Shoreline Engineering dated 9/28/14

Reference: Loperena Minor Use Permit/Coastal Development Permit DRC 2005-00216
SCH No. 2007081044

Dear Ms. Hostetter:

We are in receipt of an "Evaluation of Bluff Geometry Adjacent to Loperena Property" prepared by Shoreline Engineering dated 9/28/14; as well as aerial photography obtained from Caltrans dated December 2, 1953 and 1965 that Shoreline Engineering subsequently provided.

Based on our review, we believe Shoreline Engineering misinterpreted the bluff definition contained in the Glossary on the California Coastal Commission Resources for Local Governments webpage (<http://www.coastal.ca.gov/la/glossary.html>) which contains the following definition: "Bluff (or cliff) - A scarp or steep face of rock, weathered rock, sediment or soil resulting from erosion, faulting, folding or excavation of the land mass. The cliff or bluff may be simple planar or curved surface or it may be steplike in section. For purposes of (the Statewide Interpretive Guidelines), cliff or bluff is limited to those features having vertical relief of ten feet or more and seacliff is a cliff whose toe is or may be subject to marine erosion.", and the results of their own analysis. We conclude that the cross sections prove that the entire 1953 slope below elevation 20 to 21 is in fact a bluff. The 1953 cross sections indicate this slope meets the definition of Bluff, because it has a vertical relief of ten (10) feet or more.

In fact, the bluffs on the Loperena property are contoured just like classic coastal bluffs are, as defined by the Glossary on the California Coastal Commission Resources for Local Governments webpage which states that "The cliff or bluff may be simple planar or curved surface or it may be steplike in section." Therefore, by definition a bluff may have some areas that are flatter and some that are steeper. Just because the Loperena property happens to cover a small portion of bluff, which has slightly less than 10 feet of vertical relief, does not change the geomorphic classification of the area; it is still a bluff. Even if Shoreline Engineering were correct that an insignificant portion of the bluff has a total height less than 10 feet, nothing in the definition indicates that a bluff is determined based on the portion of it's height within the boundaries of the parcel proposed for development.

The cross sections also indicate that most of the Loperena property is located below the top of the bluff and on the bluff face. The Visual and Scenic Resources section of the County of San Luis Obispo Local Coastal Program Policy Document entitled "Coastal Plan Policies" states that: "New development on bluff faces shall be limited to public access stairways and shoreline protection structures", neither of which are applicable to the proposed development on the Loperena property.

The Caltrans photographs used in the Shoreline Engineering study provide additional evidence that the toe of the bluff has historically been subject to marine erosion; and therefore this bluff is a coastal bluff. Figures 5 and 6 (attached) are the Caltrans photographs, which show evidence of recent erosion on both the Sugimoto and Loperena properties. The evidence of erosion includes areas of barren rock and areas stripped of vegetation. Evidence of ocean wave runup onto the Loperena property is visible in both Figures 5 and 6, and on Figure 8 (taken before the construction of Highway 1) and Figure 9 (taken after the construction of Highway 1 which involved placement of fill on the Loperena property). Our submittal "Review of Draft EIR Comments" dated 1 August 2013 photographically documents wave runup reaching and impacting the bluff face on the Loperena property during the last few years.

We request a copy of the Central Coast Aerial Mapping work products that are signed and stamped by the preparer. We recommend an additional profile be prepared for the area not analyzed, and that erosion and wave run-up analysis be conducted using this new profile. San Luis Obispo County staff and the EIR consultants must have a copy of this information to verify the position of the top edge of the bluff and the bluff face on the Loperena property relative to the position of the proposed development and the geologic and coastal hazards it is exposed to; including coastal erosion and wave runup.

The following comments provide more detail on these issues:

1. The Bluff Geometry document included figures illustrating topographic mapping and cross sections from 2014, as well as topographic mapping and cross sections from 1953. We have not seen complete copies of the 1953 and 2014 topographic surveys prepared by Central Coast Aerial Mapping that Shoreline Engineering used to prepare these figures.

The Shoreline figure depicting 2014 topography has a one foot contour interval and the Shoreline figure depicting 1953 topography has a three foot contour interval. The nine accompanying cross sections suggest that the photogrammetrist at Central Coast Aerial Mapping had sufficient photogrammetric detail to illustrate one foot contours on the 1953 topography. We request the opportunity to review the complete set of work products prepared by Central Coast Aerial Mapping. We anticipate that one foot contours on the 1953 topographic map will make the bluff face position more apparent on that map.

2. The cross sections associated with the 1953 and 2014 Topographic Surveys reveal approximately 7 feet of fill blanketing the upper portion of the cross sections in 2014, as shown on attached Figure 1. The 1953 cross sections show the pre-fill conditions and may be useful to determine the amount of natural vertical relief to confirm that the slope is a bluff. It is also helpful in determining the location of the natural bluff top edge, upon which the appropriate setback can be applied.
3. Shoreline states "No portion of the pre-development coastal bluff or the fluvial bluff is more than ten feet in height." We disagree.

The bluff height must include the entire slope, not just the portion within the Loperena property boundaries. The bluff height measurements on the 1953 profiles should include the height of the steplike features shown on Sections N-S 0+50.00 and 60.00, and up to the "Coastal Bluff Top Zone", see attached Figure 1. The 1953 cross sections show the top edge of bluff at elevation 20 to 21 NAVD88; and the base of bluff elevations varying from elevation 7 to 12 NAVD88. The units of measurement were not indicated on the Shoreline cross sections, but are presumably in feet. The resulting difference indicates 8 to 14 feet of vertical relief, depending on the cross section.

4. Bluff faces are frequently stepped or benched as shown in cross section. The position of the bluff edge may be changed by a variety of processes. Most obvious is the landward retreat of the bluff edge through coastal erosion. Changes in beach elevation also result in changes in bluff height. The location of the base of the bluff in 1953 is determined by the step in elevation on the cross sections near elevation 7 as shown in Figure 1, and comparison to the 1953 photo showing the edge of the sandy beach at that point. The height of "steps" in the cross section should be included in the total bluff height. Although the back edge of the beach sand is now (2014) at approximately elevation 12, as shown on the 1953 cross sections, the base of the bluff varied between elevation 7 and 12 depending on cross section.

The step-like feature may be a bedrock outcrop or may consist of accumulated beach sand. If the step is bedrock, it is the lower portion of the coastal bluff and its height should be included in the measurement of total bluff height; using the elevation of the "Bottom of 1953 Bluff" and the elevation of the "Top Edge of 1953 Bluff" where indicated on Figure 1. If it is accumulated beach sand, then when the sand is naturally removed at the back edge of the beach, the buried lower portion of the bluff is exposed and the total bluff height can be measured. If the step is not bedrock, then historical erosion (scour) at the toe of the coastal bluff should be included in the measurement of total bluff height; using the elevation of the "Bottom of Bluff with erosion" and the elevation of the "Top Edge of 1953 Bluff" where indicated on Figure 1. In either case, there was ten feet or greater of vertical relief in 1953, substantiating that the area is a bluff.

Sandy back beach areas typically vary seasonally and sometimes dramatically from year to year and periodically erode until the full bluff height consists of a slope that is similar in gradient. It is our opinion that:

- a) scour sometimes historically has reached the back of the beach; thus increasing or decreasing the visible bluff height.
- b) at such low elevations, ocean wave impact likely acted on all of the 1953 bluff faces on the Loperena property, thereby causing "marine erosion" as defined in 14 CCR section 13577 (h) (2).

The Shoreline Engineering study developed cross sections based on a detailed and complicated analysis of 1953 photographs and estimated the elevation of the bluffs. Based on our interpretation of the cross sections, as provided by the Shoreline Engineering analysis, there was ten feet or greater of vertical relief in 1953, substantiating that the area is a bluff. If Shoreline Engineering wants to debate over a couple of feet of vertical relief, it is important to remember 1) that their analysis is subject to error and the level of accuracy of their analysis has not been established, and 2) the amount of vertical relief has varied over the past 200 years and could have been even greater at some time prior to or after this single 1953 data point, since beach scour and accretion naturally exposes greater or lesser amounts of bluff face height year to year and season to season.

We ask that you consider that the present 2014 bluff top area is at an elevation of +27 feet NAVD88, as shown on Figure 1. Using the current beach sand elevation of +12 feet NAVD88, that makes the current 2014 bluff face 15 feet high. In their analysis of wave runup, Geosoils Inc. projects that vertical erosion (beach scour) at the base of the present bluffs fronting the Loperena property will occur down to an elevation of + 3 feet NAVD88, approximately 9 feet below the existing elevation of the surface of the landward edge of the beach. Accounting for this scour and erosion, that makes the bluff face 24 feet high.

5. A large gap exists in the array of cross sections provided in the Shoreline Engineering Study; between N-S 0+70.00 and S PL 0+50.00. Figures 2 and 3 shows the

recommended location for an additional cross section, highlighted in pink, on the 2014 and 1953 Topographic Surveys from pages 4 and 5 of the Shoreline Engineering study, respectively. This is the area of the Loperena Property most exposed to future erosion and bluff recession and where the EIR geologist (Cotton Shires) has indicated that beach sand underlies a portion of the proposed building area footprint (see Cotton Shires Geologic Cross Section 1-1'). We recommend Shoreline Engineering prepare another profile in this area, where shown on attached Figures 2 and 3. Additionally we recommend erosion and wave run-up analysis be conducted using that profile as well as 2014 Profile N-S 0+70.00.

6. Comparison of the 2014 Sections and the 1953 Sections S PL 0+20.00, 30.00, 40.00, and 50.00 indicate that fill exists down to elevation 12 on the Loperena property. This material was placed on the Loperena property between 1953 and 2014 and is subject to future erosion. Because of rising sea level, future erosion at the elevation where this fill is located is a significant hazard. Blufftop setbacks should be determined using this anticipated future erosion of this fill and the resultant bluff recession. Wave run-up analysis should be conducted using profiles that account for projected future erosion of this fill, which extends out to the back edge of the beach.
7. The N-S profiles are incompatible with the geology previously mapped by Cotton Shires. Cotton Shires mapped bedrock exposed in the bluff face adjacent to the back edge of the beach sand (see Cotton Shires Geologic Cross Section 1-1'). Where the ground surface on the 2014 profile is higher in elevation or further seaward than the position of the 1953 profile that should be because there is fill or beach sand that has been placed or accumulated there. There is bedrock presently exposed on portions of the bluff face in areas where the 1953 profile is shown at lower elevation or landward position, see attached Figure 2. That casts doubt on the accuracy of the 1953 profiles, because bedrock has only eroded since 1953, not accreted.
8. California Coastal Commission (CCC) Engineering Geologist Dr. Mark Johnsson indicated that if a portion of the bluffs on the upcoast area of the Loperena property were classified as fluvial bluffs where bluff edge setbacks do not apply, then minimum coastal development setbacks should be determined and applied based on the inland extent of wave run-up that may occur during the expected life of the development. Based on the March 12, 2014 wave runup study by the applicant's consultant (GeoSoils Inc.) using 5.5 feet of sea level rise, this indicates that development must be located inland from the 25 foot contour line on the property. This is calculated as follows: Scoured beach elevation of +3.1 feet NAVD88 plus D_s of 9 feet plus R of 12.95 feet = Runup Elevation of 25.05 Feet NAVD88. An analysis of wave run-up using profiles that account for projected future erosion of the fill on the property, which extends out to the back edge of the beach, may result in higher run-up elevations and further landward setbacks. Riparian setbacks may also apply along a fluvial bluff.
9. Based on the 1953 cross sections provided in the Shoreline Engineering study, we have mapped the top edge of the natural 1953 bluff on the 1953 and 2014 topographic maps provided Shoreline Engineering, see attached Figures 2 and 3. Most of the proposed development on the Loperena property is located below the top of the bluff and on the bluff face. SLO Coastal Plan Policies page 10-10, Policy 11 Development on Coastal Bluffs states "New development on bluff faces shall be limited to public access stairways and shoreline protection structures." Our understanding of Policy 11 is that a residential development is not allowed on the bluff face.
10. We have put the approximate property boundaries on a 2013 Google Earth image, 1965 Caltrans aerial photo and on a 1953 Caltrans aerial photo and have made prints at

approximately 1 inch = 50 feet (Figures 4, 5 and 6) and 1 inch = 200 feet (Figures 7, 8 and 9). See attached.

These photos clearly depict the Loperena property being subject to marine erosion (from ocean wave impact) in both 1953 and 1965. It is apparent on the 1953 Caltrans photo (Figures 6 and 9) that the Loperena property was being bombarded by ocean wave impact and subject to marine erosion. On the 1953 photograph, darker colored sand that appears to be wet from wave run-up exists close to the base of the bluff and little if any dry beach area exists seaward of the Loperena lot. Erosion has exposed barren bedrock just downcoast of the Loperena lot and has resulted in an erosional scarp extending across the Loperena lot and the area immediately upcoast.

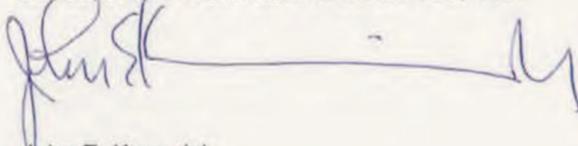
Based on the conditions depicted on the geologic maps and cross sections we have previously submitted, the new 1953 and 2014 topographic information and cross sections submitted by Shoreline Engineering, and the photographs in this letter, we continue to believe the bluff on the Loperena property is a coastal bluff. We believe that current geologic and oceanographic conditions must be considered, in order to accurately define the existence of coastal bluffs. California Code of Regulations, Title 14, Section 13577(h)(1) defines coastal bluffs as those where the toe of which is now or was historically (generally within the last 200 years) subject to marine erosion. That includes the bluffs that had marine erosion at their toe, as shown on the attached 1953 Caltrans photographs and 2014 Google Earth Images.

If it is determined that a portion of the property lacks a coastal bluff, then an analysis of wave run-up using profiles that account for projected future erosion of the fill on the property, which extends out to the back edge of the beach, must be completed to see where wave run-up will reach during the life of the development; but in no case should development occur seaward of the 25 foot contour line on the property, since the applicant's March 2014 wave runup study indicates wave runup to an elevation of +25 Feet NAVD88.

Please call us to discuss this project if you have any questions.

Very truly yours,

HARO, KASUNICH AND ASSOCIATES, INC.



John E. Kasunich
G.E. 455



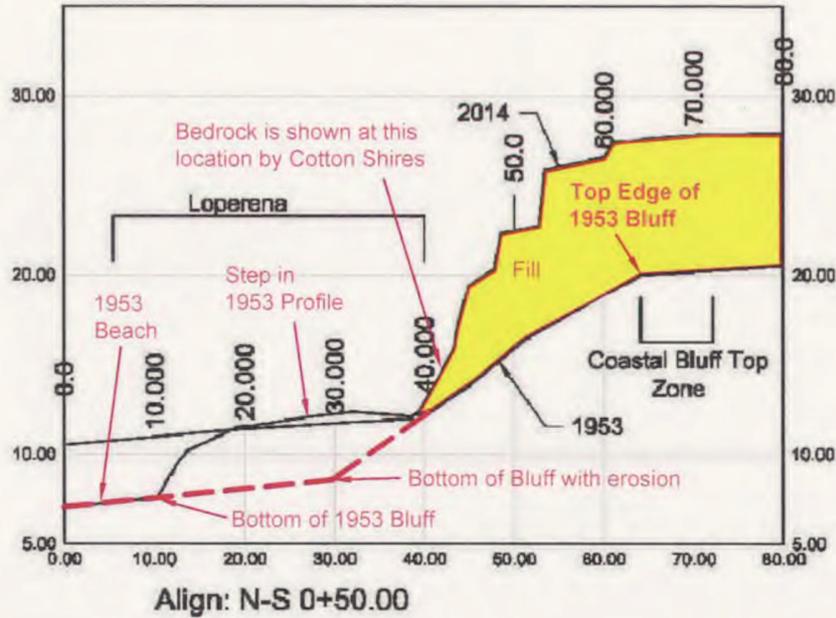
Mark Foxx
C. E. G. 1493

List of Figures:

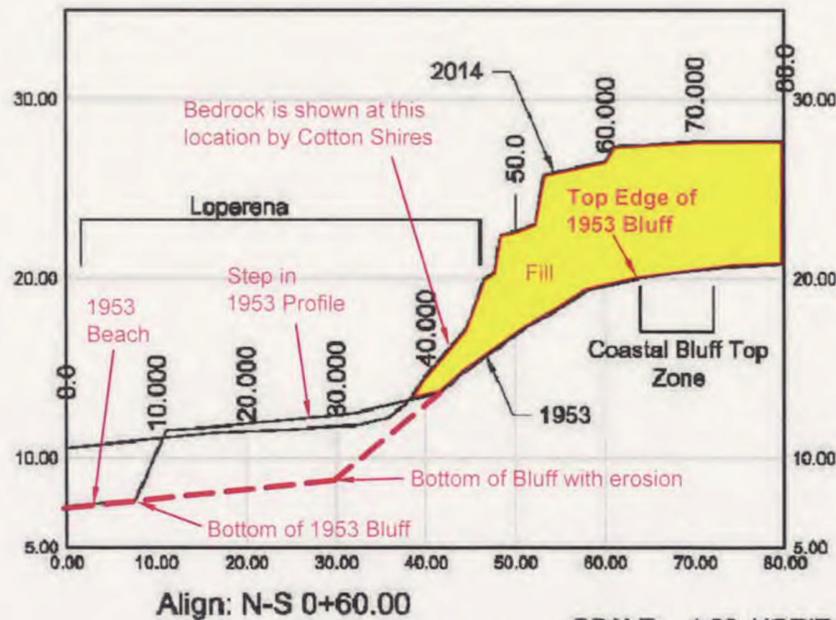
- Figure 1: Cross Sections Showing 1953 and 2014 Topographic Profiles & Locations of Fill, 1953 Beach, Bottom of Bluff and Top Edge of Bluff by Haro Kasunich and Associates, Inc.
- Figure 2: 2014 Topographic Map by Shoreline Engineering, Inc. showing 1953 Top Edge of Bluff As Depicted on Cross Sections by Shoreline Engineering, Inc.

- Figure 3: 1953 Topographic Map by Shoreline Engineering, Inc. showing 1953 Top Edge of Bluff As Depicted on Cross Sections by Shoreline Engineering, Inc.
- Figure 4: 8-20-2013 Google Earth Image (Approximate Scale 1 inch = 50 feet)
- Figure 5: 1965 Caltrans Aerial Photograph (Approximate Scale 1 inch = 50 feet)
- Figure 6: 12-2-1953 Caltrans Aerial Photograph (Approximate Scale 1 inch = 50 feet)
- Figure 7: 8-20-2013 Google Earth Image (Approximate Scale 1 inch = 200 feet)
- Figure 8: 1965 Caltrans Aerial Photograph (Approximate Scale 1 inch = 200 feet)
- Figure 9: 12-2-1953 Caltrans Aerial Photograph (Approximate Scale 1 inch = 200 feet)

FIGURE 1: CROSS SECTIONS SHOWING 1953 AND 2014 TOPOGRAPHIC PROFILES BY SHORELINE ENGINEERING, INC., & LOCATIONS OF FILL, 1953 BEACH, BOTTOM OF BLUFF AND TOP EDGE OF BLUFF BY HARO KASUNICH & ASSOCIATES, INC.



Coastal Bluff Sections
N-S Line Alignment



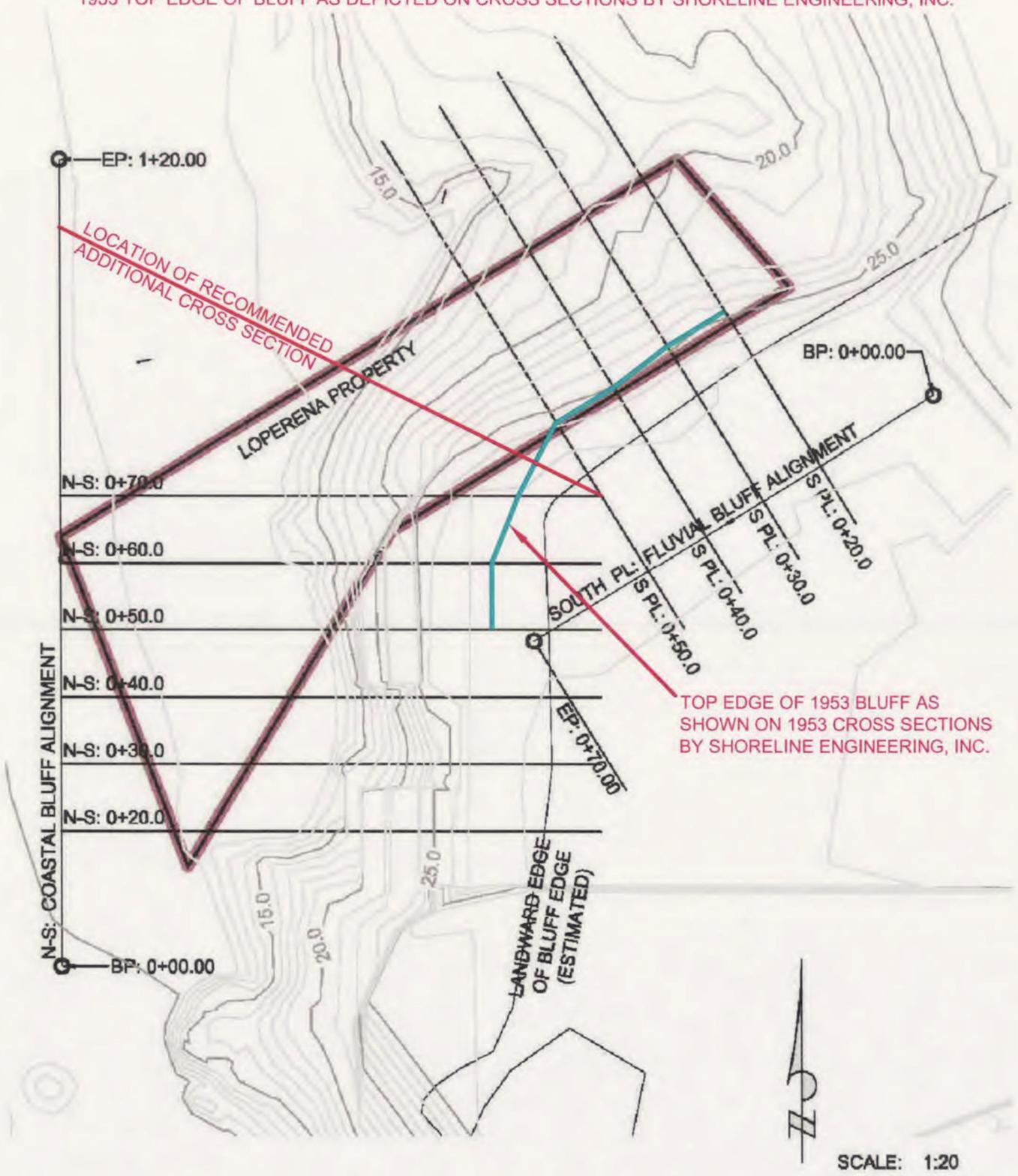
SCALE: 1:20, HORIZ; 1:10, VERT
SECTIONS LOOKING NORTHERLY

Loperena: Studio Drive, Cayucos 2014 Topographic Survey

HARO KASUNICH & ASSOCIATES, INC.

Agenda Item No: 23 Meeting Date: December 9, 2014
Presented By: Gail Floyd
Rec'd prior to the meeting & posted on: December 8, 2014

FIGURE 2: 2014 TOPOGRAPHIC MAP BY SHORELINE ENGINEERING, INC. SHOWING 1953 TOP EDGE OF BLUFF AS DEPICTED ON CROSS SECTIONS BY SHORELINE ENGINEERING, INC.

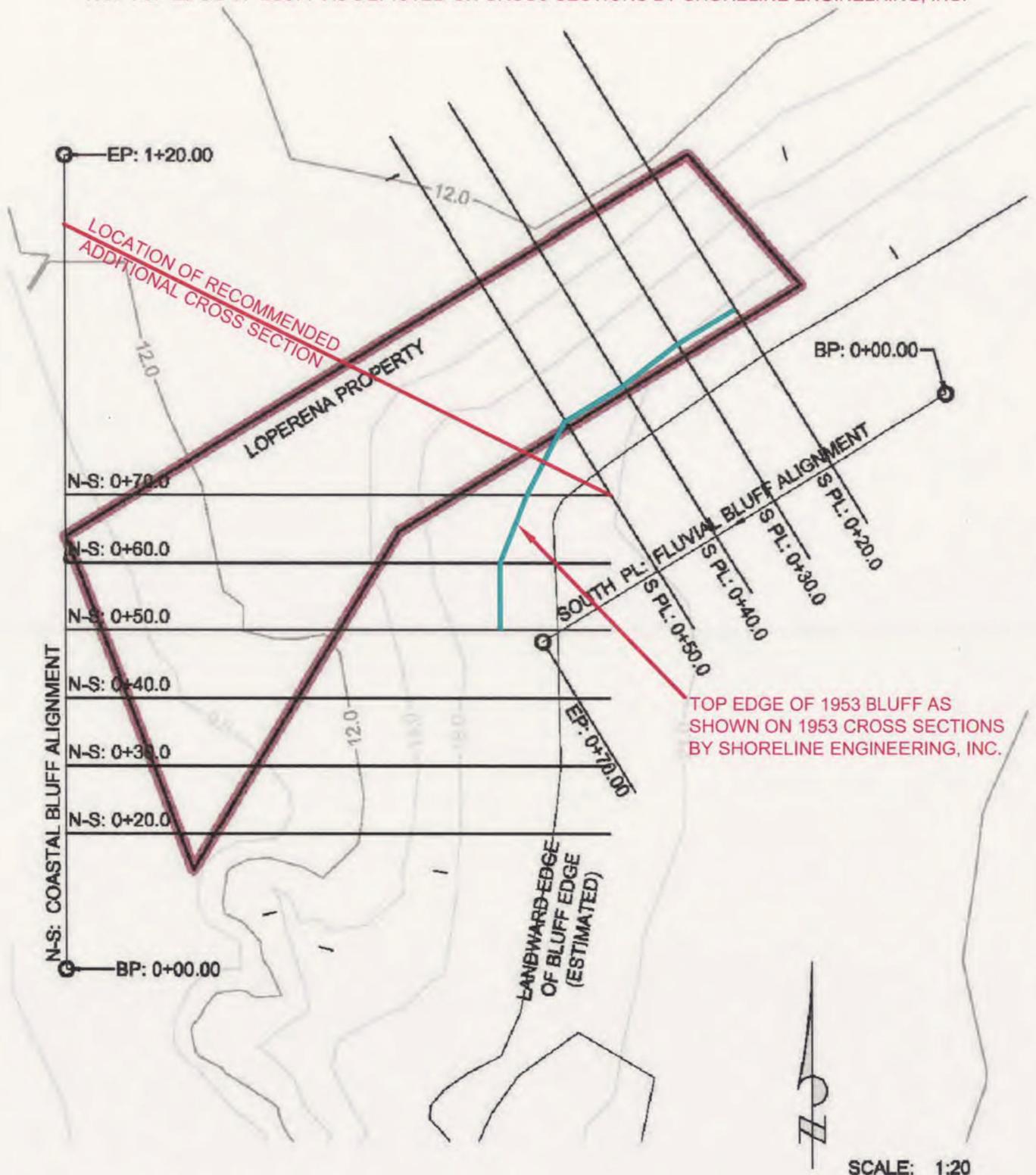


Loperena: Studio Drive, Cayucos
 2014 Topographic Survey

NOTE: TOP EDGE OF 1953 BLUFF AND LOCATION OF RECOMMENDED ADDITIONAL CROSS SECTION BY HARO KASUNICH & ASSOCIATES, INC. Agenda Item No: 23 - Meeting Date: December 9, 2014 Presented By: Gail Floyd 11/25/2014

Rec'd prior to the meeting & posted on: December 8, 2014

FIGURE 3: 1953 TOPOGRAPHIC MAP BY SHORELINE ENGINEERING, INC. SHOWING 1953 TOP EDGE OF BLUFF AS DEPICTED ON CROSS SECTIONS BY SHORELINE ENGINEERING, INC.



Loperena: Studio Drive, Cayucos

1953 Topographic Survey

NOTE: TOP EDGE OF 1953 BLUFF AND LOCATION OF RECOMMENDED ADDITIONAL CROSS SECTION BY HARO KASUNICH & ASSOCIATES, INC.

Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Gail Floyd

Rec'd prior to the meeting & posted on: December 8, 2014

PACIFIC OCEAN



FIGURE 4 - 2013 GOOGLE EARTH IMAGE (APPROXIMATE SCALE: 1 INCH = 50 FEET)

8-20-2013 GOOGLE EARTH IMAGE
Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Gail Floyd
(Prepared for the meeting & posted on December 8, 2014)

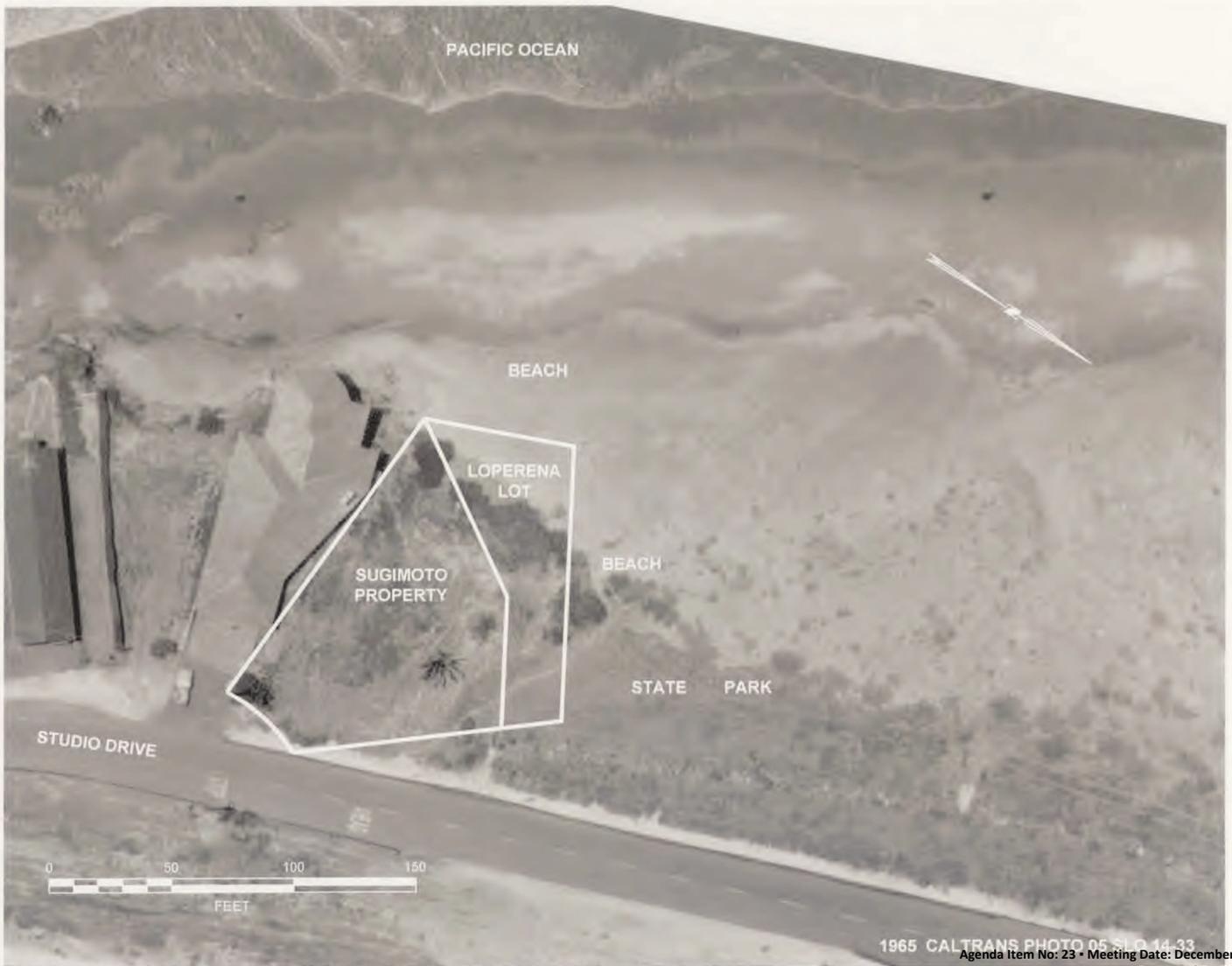


FIGURE 5 - 1965 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 50 FEET)

Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Gail Floyd
Rec'd prior to the meeting & posted on: December 8, 2014
(PROPERTY BOUNDARIES ARE APPROXIMATE)



FIGURE 6 - 1953 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 50 FEET)

12-2-1953 © Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Gail Floyd
(Filed prior to the meeting & posted on December 8, 2014)



FIGURE 7 - 2013 GOOGLE EARTH IMAGE (APPROXIMATE SCALE: 1 INCH = 200 FEET)

8-20-2013 GOOGLE EARTH IMAGE
 Agenda Item No: 23 • Meeting Date: December 9, 2014
 Presented By: Gail Floyd
 Rec'd prior to the meeting & posted on: December 8, 2014
 (PROPERTY BOUNDARIES ARE APPROXIMATE)

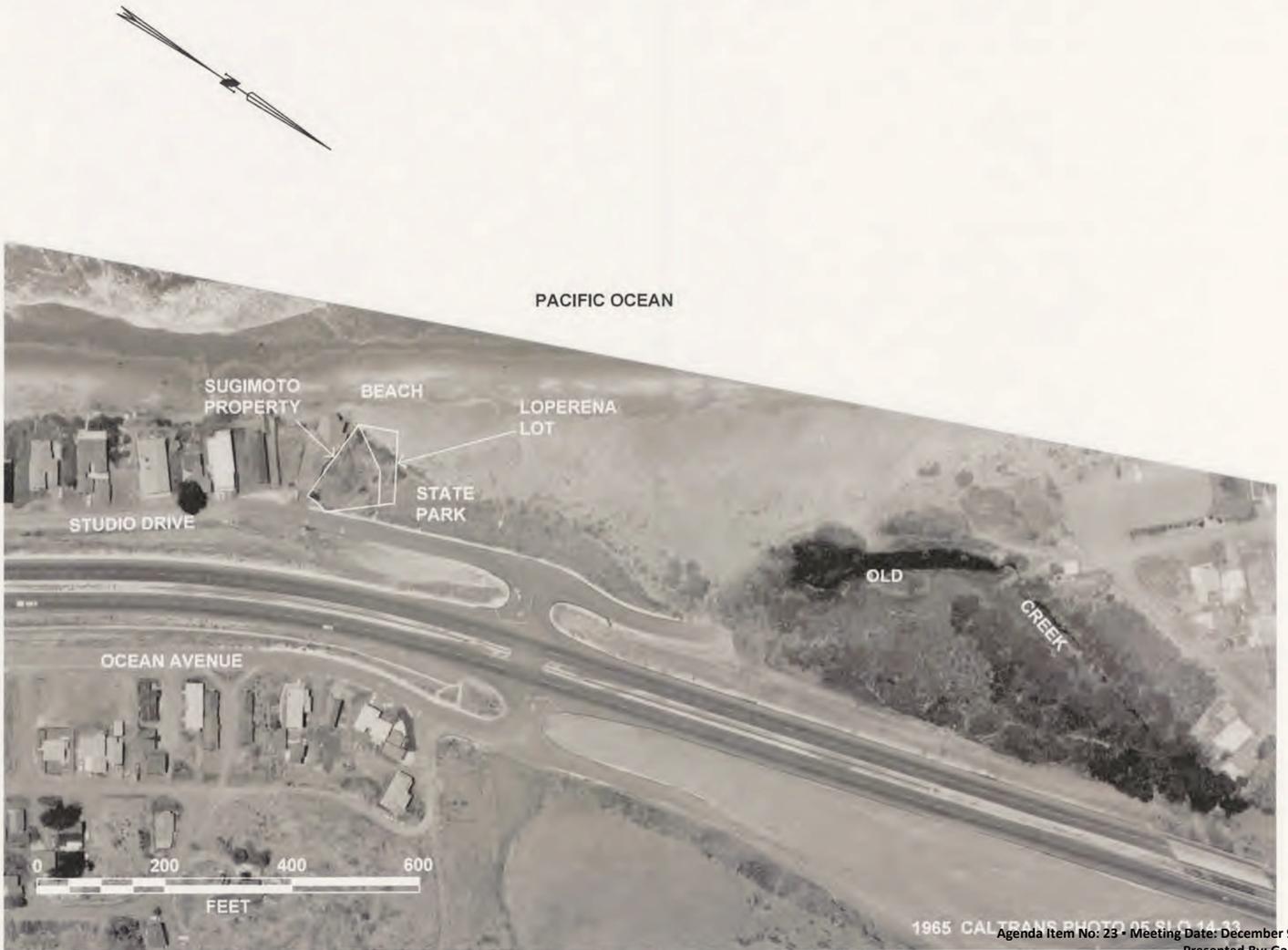


FIGURE 8 - 1965 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 200 FEET)

Agenda Item No: 23 • Meeting Date: December 9, 2014
 Presented By: Gail Floyd
 (Received prior to the meeting & posted on) December 8, 2014



FIGURE 9 - 1953 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 200 FEET)

12-2-1953 CALTRANS PHOTO V SLO 4-22
 Agenda Item No. 23 - Meeting Date: December 9, 2014
 Presented By: Gail Floyd
 Rec'd prior to the meeting & posted on: December 8, 2014
 (PROPERTY BOUNDARIES ARE APPROXIMATE)



Fw: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Board of Supervisors to: BOS_Legislative Assistants,
cr_board_clerk Clerk Recorder
Sent by: **Cytasha Campa**

12/08/2014 01:09 PM

----- Forwarded by Cytasha Campa/BOS/COSLO on 12/08/2014 01:09 PM -----

From: Kevin Elder <KElder@SJMSLaw.com>
To: Gail Floyd <GFloyd@SJMSLaw.com>, "boardofsups@co.slo.ca.us" <boardofsups@co.slo.ca.us>,
Date: 12/08/2014 12:14 PM
Subject: RE: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Dear Satacha, please note that the letter was originally emailed to each supervisor on December 3rd, as indicated in the first email below. It was transmitted that way at the instruction of the clerk of the board. I hope that the original delivery date is relayed to the supervisors.

Thank you for your assistance.

Kevin

Kevin D. Elder | Associate
Sinsheimer Juhnke Mclvor & Stroh, LLP

kelder@sjmslaw.com | www.sjmslaw.com

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Please consider the environment before printing this e-mail. Thank you.

From: Gail Floyd
Sent: Monday, December 08, 2014 12:07 PM
To: boardofsups@co.slo.ca.us
Cc: Kevin Elder
Subject: FW: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Kevin Elder
Rec'd prior to the meeting & posted on: December 8, 2014

Dear Satacha,
Thank you for taking my call this morning.
Please forward the attached letter to each of the Board of Supervisors.
Thank you,

Gail G. Floyd | Secretary to Kevin D. Elder, Esq.
Sinsheimer Juhnke Mclvor & Stroh, LLP

gffloyd@sjmslaw.com | www.sjmslaw.com

From: Gail Floyd
Sent: Wednesday, December 03, 2014 11:29 AM
To: 'Bruce Gibson'; 'Debbie Arnold'; 'Adam Hill'; 'Frank Mecham'; 'Caren Ray'
Cc: Kevin Elder (KElder@SJMSLaw.com)
Subject: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Dear Supervisors,
Please find the attached correspondence of today's date from Kevin Elder.
Thank you,

Gail G. Floyd | Secretary to Kevin D. Elder, Esq.
Sinsheimer Juhnke Mclvor & Stroh, LLP

PRIVILEGED AND CONFIDENTIAL: ATTORNEY/CLIENT COMMUNICATION

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**Fw: Appeal of San Luis Obispo County Planning Commission Decision
Certifying Final Environmental Impact Report for Loperena Minor Use
Permit/Coastal Development Permit (DRC2005-00216) and Approval of
Project**

Cytasha Campa to: BOS_Legislative Assistants, cr_board_clerk
Clerk Recorder

12/08/2014 01:23 PM

Kindest regards,

Cytasha Campa

Board Secretary

Board of Supervisors

San Luis Obispo County

805-781-4335

----- Forwarded by Cytasha Campa/BOS/COSLO on 12/08/2014 01:22 PM -----

From: Ryan Hostetter/Planning/COSLO
To: Cytasha Campa/BOS/COSLO@Wings,
Date: 12/08/2014 11:45 AM
Subject: Fw: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final
Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit
(DRC2005-00216) and Approval of Project

Hi Cytasha,

After meeting with Supervisor Mecham this morning I found out that the Board may not have received the correspondence below. They wanted to send directly to the Board so I am hoping you can help? This is for an agenda item on tomorrows Board hearing (agenda item no. 23) Thanks so much!

Ryan Hostetter, LEED AP
County of San Luis Obispo
Current Planning and Permitting
(805) 788-2351



Dec 3 letter from neighbor 17BOSLtr-120314.pdf

----- Forwarded by Ryan Hostetter/Planning/COSLO on 12/08/2014 11:38 AM -----

From: Annette Ramirez/ClerkRec/COSLO
To: Ryan Hostetter/Planning/COSLO@Wings
Cc: Catrina Christensen/ClerkRec/COSLO@Wings
Date: 12/08/2014 11:38 AM
Subject: Re: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final
Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit
(DRC2005-00216) and Approval of Project

Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Planning and Building Staff
Rec'd prior to the meeting & posted on: December 8, 2014

Hi Ryan,

This email doesn't look like it ever was sent to the Clerk of the Board. So unless the Board or the Board's secretary forwards them to us, we are unaware of the emails that they receive.

You may want to check with Cytasha in the Board of Supervisors Office since I believe she assists with the emails the Board receives.

Annette Ramirez | Deputy Clerk-Recorder | San Luis Obispo County Clerk-Recorder
1055 Monterey Street, Suite D120 | San Luis Obispo, CA 93408
Telephone: (805) 781-5145 | Fax: (805) 781-1111 | Website: www.SLOvote.com
www.facebook.com/slocountyclerkrec | www.twitter.com/slocountyclerk

Ryan Hostetter | Hi Catrina and/or Annette, I just met with Supervi... | 12/08/2014 10:31:43 AM

From: Ryan Hostetter/Planning/COSLO
To: Catrina Christensen/ClerkRec/COSLO@Wings, Annette Ramirez/ClerkRec/COSLO@Wings
Cc: Kevin Elder <KElder@SJMSLaw.com>, Gail Floyd <GFloyd@SJMSLaw.com>
Date: 12/08/2014 10:31 AM
Subject: Re: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Hi Catrina and/or Annette,

I just met with Supervisor Mecham and I mentioned that a packet was sent to them from Kevin Elder (see email below) and he had not received it. Can you check for me to make sure that all the Board members are receiving the information in the email below with the attachment?

Thank You,

Ryan Hostetter, LEED AP
County of San Luis Obispo
Current Planning and Permitting
(805) 788-2351

Gail Floyd | Dear Ms. Hostetter, Please find the attached cor... | 12/03/2014 11:34:16 AM



WARREN A. SINSHEIMER III
DAVID A. JUHNKE
JUNE R. McIVOR
HERBERT A. STROH
DAVID S. HAMILTON
KEVIN D. ELDER
N. ELLEN DREWS
W. MARTIN BEHN

SINSHEIMER JUHNKE McIVOR & STROH, LLP
ATTORNEYS AT LAW

Of Counsel:
ROBERT K. SCHIEBELHUT
K. ROBIN BAGGETT

E-Mail:
KElder@sjmslaw.com

December 3, 2014

Client: 3203.003

San Luis Obispo County Board of Supervisors
Bruce Gibson
Debbie Arnold
Adam Hill
Frank Mecham
Caren Ray
County Government Center, Room D-430
San Luis Obispo, California 93408

VIA E-MAIL
bgibson@co.slo.ca.us
darnold@co.slo.ca.us
ahill@co.slo.ca.us
fmecham@co.slo.ca.us
cray@co.slo.ca.us

Re: Appeal of San Luis Obispo County Planning Commission Decision Certifying Final Environmental Impact Report for Loperena Minor Use Permit/Coastal Development Permit (DRC2005-00216) and Approval of Project

Dear Supervisors Gibson, Arnold, Hill, Mecham and Ray:

On behalf of Ethel M. Pludow and Cynthia R. Sugimoto, this letter provides supplemental comments regarding the Project, including comments regarding a new study that was prepared on behalf of Jack Loperena (the "Applicant"). This letter is supplemental to all letters and material previously submitted to the County relating to the Project, including but not limited to the April 24, 2014 letter submitted by Sinsheimer Juhnke McIvor & Stroh, LLP.

Haro, Kasunich and Associates, Inc., ("HKA") reviewed the "Evaluation of Bluff Geometry Adjacent to Loperena Property" prepared by Shoreline Engineering ("Shoreline") on behalf of the Applicant and dated September 28, 2014, and associated Caltrans photographs from 1953 and 1965. The results of HKA's analysis of the Shoreline Engineering Study ("Shoreline Study") are set forth in HKA's letter to Ryan Hostetter, Senior County Planner, dated December 2, 2014, and attached as Attachment A.

The Shoreline Study included figures illustrating topographic mapping and cross sections from 2014 and 1953, based on analysis of the photographs. Shoreline concludes that the Loperena property is not located on a coastal bluff and no portion of the pre-development coastal bluff or the fluvial bluff is more than ten feet in height. Based on this novel theory, Shoreline promulgates the unprecedented position that the property is "exempt" from coastal setback requirements.

HKA disagrees with the Shoreline Study conclusions. In fact, HKA finds the study's profiles and cross sections prove that the Project is on a bluff and most of the Project is located below the top of the bluff and on the bluff face, in direct contravention of the County LCP¹.

HKA further explains how to properly determine the vertical elevation difference of the slope and concludes that Shoreline misinterpreted the bluff definition and the results of their analysis. In sum, Shoreline's conclusion is wrong, because it is based on a flawed methodology.

Moreover, HKA indicates that the Caltrans photographs provide additional evidence of marine erosion at the toe of this bluff and therefore, by definition the bluff is a coastal bluff. HKA also found inconsistencies between the Shoreline Study and the EIR Geologic analysis, which raises questions about the accuracy of the Shoreline Study.

The 1953 cross sections in the Shoreline Study show the pre-fill conditions and are useful to determine the amount of natural vertical relief to confirm whether the slope is a bluff or not. They are also helpful in determining the location of the natural bluff top edge, upon which the appropriate setback can be applied. Based on HKA's review, it is apparent that Shoreline misinterpreted the definition of a "bluff²", and their results are based on a flawed methodology, which lead to the wrong conclusion that the bluff is not a coastal bluff.

HKA's letter explains that bluff height must include the entire slope, not just the portion within the Loperena property boundaries, which is Shoreline's methodology. The bluff height measurements on the 1953 profiles should include the height between the step-like features indicating the bluff base up to the "Coastal Bluff Top Zone". The 1953 cross sections show the base of bluff elevations varying from elevation 7 to 12 and the top edge of bluff at an elevation between 20 and 21. The resulting difference indicates 8 to 14 feet of vertical relief, depending on the cross section. Therefore, the slope meets the definition of Bluff, because it has a vertical relief of ten (10) feet or more; and the cross sections prove that the entire 1953 slope is in fact a bluff.

Additionally, the definition states that "The cliff or bluff may be simple planar or curved surface or it may be step-like in section." Therefore, a bluff may have some areas that are flatter and some that are steeper. Just because the Loperena property happens to cover a small portion of bluff, which has slightly less than 10 feet of vertical relief, does not change the classification of the geological feature; it is still a bluff. There is nothing in the definition that indicates that a bluff is determined based on the amount of vertical relief on a limited or piecemeal or parcel by parcel basis.

¹ SLO County Coastal Plan Policies, Policies for Visual and Scenic Resources, Policy 11: Development on Coastal Bluffs: "New development on bluff faces shall be limited to public access stairways and shoreline protection structures."

² Per the Coastal Commission Resources for Local Governments glossary, "*Bluff (or cliff) - A scarp or steep face of rock, weathered rock, sediment or soil resulting from erosion, faulting, folding, or excavation of the land mass. The cliff or bluff may be simple planar or curved surface or it may be steplike in section. For purposes of (the Statewide Interpretive Guidelines), cliff or bluff is limited to those features having vertical relief of ten feet or more and seacliff is a cliff whose toe is or may be subject to marine erosion.*"

The Shoreline Study cross sections also indicate that most of the Loperena property is located below the top of the bluff and on the bluff face. Since SLO Coastal Plan Policy 11 limits new development on bluff faces to public access stairways and shoreline protection structures, the Project on its face clearly violates the LCP.

The Caltrans photographs used in the Shoreline Study provide additional evidence that the toe of the bluff has historically been subject to marine erosion; and therefore in accordance with 14 CCR § 13577 this bluff is a coastal bluff.

HKA found inconsistencies between the 1953 profile and the EIR Geologic Cross Section 1-1', which raises questions about the accuracy of their Study. If we are debating about a couple of feet of vertical relief, it is important to remember that the level of accuracy of Shoreline's analysis has not been established. Also note that the amount of vertical relief has varied over the past 200 years and could have been even greater at some time prior to or after this single 1953 data point. Generally, the Shoreline Study uses data selectively and in a piecemeal fashion, resulting in an erroneous conclusion.

Unfortunately, the Board and your staff has not been provided the topographic surveys prepared by Central Coast Aerial Mapping and/or ATGeoMapping that Shoreline used to prepare their report. In order to ascertain the validity of the Shoreline Study, your staff must obtain a copy of the Central Coast Aerial Mapping work products for public review and scrutiny. We also recommend an additional profile be prepared for the area not analyzed, and that erosion and wave run-up analysis be conducted using this new profile.

Because the property is clearly on a coastal bluff, all coastal bluff requirements must be applied including: appropriate set-backs (75 or 100 years of erosion and a minimum of 25 feet) from the natural (pre-fill) top of the bluff, including compliance with LCP limits regarding development on bluff faces, limitations on cantilevering of development beyond set-back areas, and prohibitions on seawalls and residential development masquerading as seawalls.

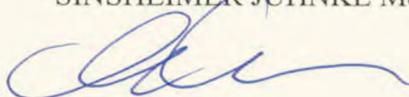
If for some reason it is determined that any portion of the property is not a coastal bluff, but instead is a "low laying coastal adjacent property" then the Applicant's unprecedented position exempting itself from any set-back whatsoever does not logically follow. Instead, a reasonable and safe set-back must still be applied to this portion of the property by this Board. In order to determine a safe set-back, the Board must require a wave run-up analysis using profiles that account for projected future erosion of the fill on that portion of the property to show where wave run-up will reach during the life of the development. However, in no case should development occur seaward of the 25 foot contour line on the property as it currently exists, based on the Applicant's most recent wave run-up study. In addition, if part of the property is determined to be a fluvial bluff, instead of a coastal bluff, then an additional 50 foot riparian setback must be applied where appropriate along the fluvial bluff.

San Luis Obispo County Board of Supervisors
December 3, 2014
Page 4 of 5

In conclusion, it is clear the Applicant's oceanfront property is on a coastal bluff. Yet even if it weren't, that does not support the Applicant's illogical position that no set-back is appropriate and that a home cantilevered out over the sandy beach is somehow allowable. Instead, some reasonable set-back is mandated to protect the public beach as well as the future residents of any development on the site. At a minimum, a 25-ft set-back is required from the top of the bluff, which has yet to be established. We look forward to working with your Board to resolve these important questions.

Sincerely,

SINSHEIMER JUHNKE McIVOR & STROH, LLP



KEVIN D. ELDER

KDE:ggf
K:\PludowE\003 Loperena\Ltr\17BOSLtr-120314.doc
Enclosure

cc: Ms. Ryan Hostetter, Senior County Planner (via e-mail)

Attachment A

Letter from Haro, Kasunich and Associates, Inc.
"Review of Shoreline Engineering Bluff Study dated 9/28/14", dated December 2, 2014

2 December 2014
Project No. SLO9515

To: Ms. Ryan Hostetter
County of San Luis Obispo
Department of Planning and Building
County Government Center Room 200
San Luis Obispo, CA 93408-2040

From: Mark Foxx, CEG 1493 John E. Kasunich, GE 455

Subject: Review of "Evaluation of Bluff Geometry Adjacent to Loperena Property"
prepared by Shoreline Engineering dated 9/28/14

Reference: Loperena Minor Use Permit/Coastal Development Permit DRC 2005-00216
SCH No. 2007081044

Dear Ms. Hostetter:

We are in receipt of an "Evaluation of Bluff Geometry Adjacent to Loperena Property" prepared by Shoreline Engineering dated 9/28/14; as well as aerial photography obtained from Caltrans dated December 2, 1953 and 1965 that Shoreline Engineering subsequently provided.

Based on our review, we believe Shoreline Engineering misinterpreted the bluff definition contained in the Glossary on the California Coastal Commission Resources for Local Governments webpage (<http://www.coastal.ca.gov/la/glossary.html>) which contains the following definition: "Bluff (or cliff) - A scarp or steep face of rock, weathered rock, sediment or soil resulting from erosion, faulting, folding or excavation of the land mass. The cliff or bluff may be simple planar or curved surface or it may be steplike in section. For purposes of (the Statewide Interpretive Guidelines), cliff or bluff is limited to those features having vertical relief of ten feet or more and seacliff is a cliff whose toe is or may be subject to marine erosion.", and the results of their own analysis. We conclude that the cross sections prove that the entire 1953 slope below elevation 20 to 21 is in fact a bluff. The 1953 cross sections indicate this slope meets the definition of Bluff, because it has a vertical relief of ten (10) feet or more.

In fact, the bluffs on the Loperena property are contoured just like classic coastal bluffs are, as defined by the Glossary on the California Coastal Commission Resources for Local Governments webpage which states that "The cliff or bluff may be simple planar or curved surface or it may be steplike in section." Therefore, by definition a bluff may have some areas that are flatter and some that are steeper. Just because the Loperena property happens to cover a small portion of bluff, which has slightly less than 10 feet of vertical relief, does not change the geomorphic classification of the area; it is still a bluff. Even if Shoreline Engineering were correct that an insignificant portion of the bluff has a total height less than 10 feet, nothing in the definition indicates that a bluff is determined based on the portion of it's height within the boundaries of the parcel proposed for development.

The cross sections also indicate that most of the Loperena property is located below the top of the bluff and on the bluff face. The Visual and Scenic Resources section of the County of San Luis Obispo Local Coastal Program Policy Document entitled "Coastal Plan Policies" states that: "New development on bluff faces shall be limited to public access stairways and shoreline protection structures", neither of which are applicable to the proposed development on the Loperena property.

The Caltrans photographs used in the Shoreline Engineering study provide additional evidence that the toe of the bluff has historically been subject to marine erosion; and therefore this bluff is a coastal bluff. Figures 5 and 6 (attached) are the Caltrans photographs, which show evidence of recent erosion on both the Sugimoto and Loperena properties. The evidence of erosion includes areas of barren rock and areas stripped of vegetation. Evidence of ocean wave runup onto the Loperena property is visible in both Figures 5 and 6, and on Figure 8 (taken before the construction of Highway 1) and Figure 9 (taken after the construction of Highway 1 which involved placement of fill on the Loperena property). Our submittal "Review of Draft EIR Comments" dated 1 August 2013 photographically documents wave runup reaching and impacting the bluff face on the Loperena property during the last few years.

We request a copy of the Central Coast Aerial Mapping work products that are signed and stamped by the preparer. We recommend an additional profile be prepared for the area not analyzed, and that erosion and wave run-up analysis be conducted using this new profile. San Luis Obispo County staff and the EIR consultants must have a copy of this information to verify the position of the top edge of the bluff and the bluff face on the Loperena property relative to the position of the proposed development and the geologic and coastal hazards it is exposed to; including coastal erosion and wave runup.

The following comments provide more detail on these issues:

1. The Bluff Geometry document included figures illustrating topographic mapping and cross sections from 2014, as well as topographic mapping and cross sections from 1953. We have not seen complete copies of the 1953 and 2014 topographic surveys prepared by Central Coast Aerial Mapping that Shoreline Engineering used to prepare these figures.

The Shoreline figure depicting 2014 topography has a one foot contour interval and the Shoreline figure depicting 1953 topography has a three foot contour interval. The nine accompanying cross sections suggest that the photogrammetrist at Central Coast Aerial Mapping had sufficient photogrammetric detail to illustrate one foot contours on the 1953 topography. We request the opportunity to review the complete set of work products prepared by Central Coast Aerial Mapping. We anticipate that one foot contours on the 1953 topographic map will make the bluff face position more apparent on that map.

2. The cross sections associated with the 1953 and 2014 Topographic Surveys reveal approximately 7 feet of fill blanketing the upper portion of the cross sections in 2014, as shown on attached Figure 1. The 1953 cross sections show the pre-fill conditions and may be useful to determine the amount of natural vertical relief to confirm that the slope is a bluff. It is also helpful in determining the location of the natural bluff top edge, upon which the appropriate setback can be applied.
3. Shoreline states "No portion of the pre-development coastal bluff or the fluvial bluff is more than ten feet in height." We disagree.

The bluff height must include the entire slope, not just the portion within the Loperena property boundaries. The bluff height measurements on the 1953 profiles should include the height of the steplike features shown on Sections N-S 0+50.00 and 60.00, and up to the "Coastal Bluff Top Zone", see attached Figure 1. The 1953 cross sections show the top edge of bluff at elevation 20 to 21 NAVD88; and the base of bluff elevations varying from elevation 7 to 12 NAVD88. The units of measurement were not indicated on the Shoreline cross sections, but are presumably in feet. The resulting difference indicates 8 to 14 feet of vertical relief, depending on the cross section.

4. Bluff faces are frequently stepped or benched as shown in cross section. The position of the bluff edge may be changed by a variety of processes. Most obvious is the landward retreat of the bluff edge through coastal erosion. Changes in beach elevation also result in changes in bluff height. The location of the base of the bluff in 1953 is determined by the step in elevation on the cross sections near elevation 7 as shown in Figure 1, and comparison to the 1953 photo showing the edge of the sandy beach at that point. The height of "steps" in the cross section should be included in the total bluff height. Although the back edge of the beach sand is now (2014) at approximately elevation 12, as shown on the 1953 cross sections, the base of the bluff varied between elevation 7 and 12 depending on cross section.

The step-like feature may be a bedrock outcrop or may consist of accumulated beach sand. If the step is bedrock, it is the lower portion of the coastal bluff and its height should be included in the measurement of total bluff height; using the elevation of the "Bottom of 1953 Bluff" and the elevation of the "Top Edge of 1953 Bluff" where indicated on Figure 1. If it is accumulated beach sand, then when the sand is naturally removed at the back edge of the beach, the buried lower portion of the bluff is exposed and the total bluff height can be measured. If the step is not bedrock, then historical erosion (scour) at the toe of the coastal bluff should be included in the measurement of total bluff height; using the elevation of the "Bottom of Bluff with erosion" and the elevation of the "Top Edge of 1953 Bluff" where indicated on Figure 1. In either case, there was ten feet or greater of vertical relief in 1953, substantiating that the area is a bluff.

Sandy back beach areas typically vary seasonally and sometimes dramatically from year to year and periodically erode until the full bluff height consists of a slope that is similar in gradient. It is our opinion that:

- a) scour sometimes historically has reached the back of the beach; thus increasing or decreasing the visible bluff height.
- b) at such low elevations, ocean wave impact likely acted on all of the 1953 bluff faces on the Loperena property, thereby causing "marine erosion" as defined in 14 CCR section 13577 (h) (2).

The Shoreline Engineering study developed cross sections based on a detailed and complicated analysis of 1953 photographs and estimated the elevation of the bluffs. Based on our interpretation of the cross sections, as provided by the Shoreline Engineering analysis, there was ten feet or greater of vertical relief in 1953, substantiating that the area is a bluff. If Shoreline Engineering wants to debate over a couple of feet of vertical relief, it is important to remember 1) that their analysis is subject to error and the level of accuracy of their analysis has not been established, and 2) the amount of vertical relief has varied over the past 200 years and could have been even greater at some time prior to or after this single 1953 data point, since beach scour and accretion naturally exposes greater or lesser amounts of bluff face height year to year and season to season.

We ask that you consider that the present 2014 bluff top area is at an elevation of +27 feet NAVD88, as shown on Figure 1. Using the current beach sand elevation of +12 feet NAVD88, that makes the current 2014 bluff face 15 feet high. In their analysis of wave runup, Geosoils Inc. projects that vertical erosion (beach scour) at the base of the present bluffs fronting the Loperena property will occur down to an elevation of + 3 feet NAVD88, approximately 9 feet below the existing elevation of the surface of the landward edge of the beach. Accounting for this scour and erosion, that makes the bluff face 24 feet high.

5. A large gap exists in the array of cross sections provided in the Shoreline Engineering Study; between N-S 0+70.00 and S PL 0+50.00. Figures 2 and 3 shows the

recommended location for an additional cross section, highlighted in pink, on the 2014 and 1953 Topographic Surveys from pages 4 and 5 of the Shoreline Engineering study, respectively. This is the area of the Loperena Property most exposed to future erosion and bluff recession and where the EIR geologist (Cotton Shires) has indicated that beach sand underlies a portion of the proposed building area footprint (see Cotton Shires Geologic Cross Section 1-1'). We recommend Shoreline Engineering prepare another profile in this area, where shown on attached Figures 2 and 3. Additionally we recommend erosion and wave run-up analysis be conducted using that profile as well as 2014 Profile N-S 0+70.00.

6. Comparison of the 2014 Sections and the 1953 Sections S PL 0+20.00, 30.00, 40.00, and 50.00 indicate that fill exists down to elevation 12 on the Loperena property. This material was placed on the Loperena property between 1953 and 2014 and is subject to future erosion. Because of rising sea level, future erosion at the elevation where this fill is located is a significant hazard. Blufftop setbacks should be determined using this anticipated future erosion of this fill and the resultant bluff recession. Wave run-up analysis should be conducted using profiles that account for projected future erosion of this fill, which extends out to the back edge of the beach.
7. The N-S profiles are incompatible with the geology previously mapped by Cotton Shires. Cotton Shires mapped bedrock exposed in the bluff face adjacent to the back edge of the beach sand (see Cotton Shires Geologic Cross Section 1-1'). Where the ground surface on the 2014 profile is higher in elevation or further seaward than the position of the 1953 profile that should be because there is fill or beach sand that has been placed or accumulated there. There is bedrock presently exposed on portions of the bluff face in areas where the 1953 profile is shown at lower elevation or landward position, see attached Figure 2. That casts doubt on the accuracy of the 1953 profiles, because bedrock has only eroded since 1953, not accreted.
8. California Coastal Commission (CCC) Engineering Geologist Dr. Mark Johnsson indicated that if a portion of the bluffs on the upcoast area of the Loperena property were classified as fluvial bluffs where bluff edge setbacks do not apply, then minimum coastal development setbacks should be determined and applied based on the inland extent of wave run-up that may occur during the expected life of the development. Based on the March 12, 2014 wave runup study by the applicant's consultant (GeoSoils Inc.) using 5.5 feet of sea level rise, this indicates that development must be located inland from the 25 foot contour line on the property. This is calculated as follows: Scoured beach elevation of +3.1 feet NAVD88 plus D_s of 9 feet plus R of 12.95 feet = Runup Elevation of 25.05 Feet NAVD88. An analysis of wave run-up using profiles that account for projected future erosion of the fill on the property, which extends out to the back edge of the beach, may result in higher run-up elevations and further landward setbacks. Riparian setbacks may also apply along a fluvial bluff.
9. Based on the 1953 cross sections provided in the Shoreline Engineering study, we have mapped the top edge of the natural 1953 bluff on the 1953 and 2014 topographic maps provided Shoreline Engineering, see attached Figures 2 and 3. Most of the proposed development on the Loperena property is located below the top of the bluff and on the bluff face. SLO Coastal Plan Policies page 10-10, Policy 11 Development on Coastal Bluffs states "New development on bluff faces shall be limited to public access stairways and shoreline protection structures." Our understanding of Policy 11 is that a residential development is not allowed on the bluff face.
10. We have put the approximate property boundaries on a 2013 Google Earth image, 1965 Caltrans aerial photo and on a 1953 Caltrans aerial photo and have made prints at

approximately 1 inch = 50 feet (Figures 4, 5 and 6) and 1 inch = 200 feet (Figures 7, 8 and 9). See attached.

These photos clearly depict the Loperena property being subject to marine erosion (from ocean wave impact) in both 1953 and 1965. It is apparent on the 1953 Caltrans photo (Figures 6 and 9) that the Loperena property was being bombarded by ocean wave impact and subject to marine erosion. On the 1953 photograph, darker colored sand that appears to be wet from wave run-up exists close to the base of the bluff and little if any dry beach area exists seaward of the Loperena lot. Erosion has exposed barren bedrock just downcoast of the Loperena lot and has resulted in an erosional scarp extending across the Loperena lot and the area immediately upcoast.

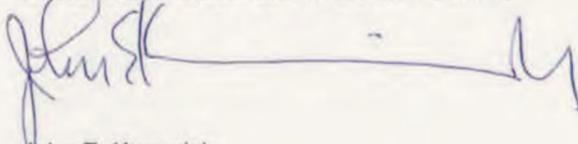
Based on the conditions depicted on the geologic maps and cross sections we have previously submitted, the new 1953 and 2014 topographic information and cross sections submitted by Shoreline Engineering, and the photographs in this letter, we continue to believe the bluff on the Loperena property is a coastal bluff. We believe that current geologic and oceanographic conditions must be considered, in order to accurately define the existence of coastal bluffs. California Code of Regulations, Title 14, Section 13577(h)(1) defines coastal bluffs as those where the toe of which is now or was historically (generally within the last 200 years) subject to marine erosion. That includes the bluffs that had marine erosion at their toe, as shown on the attached 1953 Caltrans photographs and 2014 Google Earth Images.

If it is determined that a portion of the property lacks a coastal bluff, then an analysis of wave run-up using profiles that account for projected future erosion of the fill on the property, which extends out to the back edge of the beach, must be completed to see where wave run-up will reach during the life of the development; but in no case should development occur seaward of the 25 foot contour line on the property, since the applicant's March 2014 wave runup study indicates wave runup to an elevation of +25 Feet NAVD88.

Please call us to discuss this project if you have any questions.

Very truly yours,

HARO, KASUNICH AND ASSOCIATES, INC.



John E. Kasunich
G.E. 455



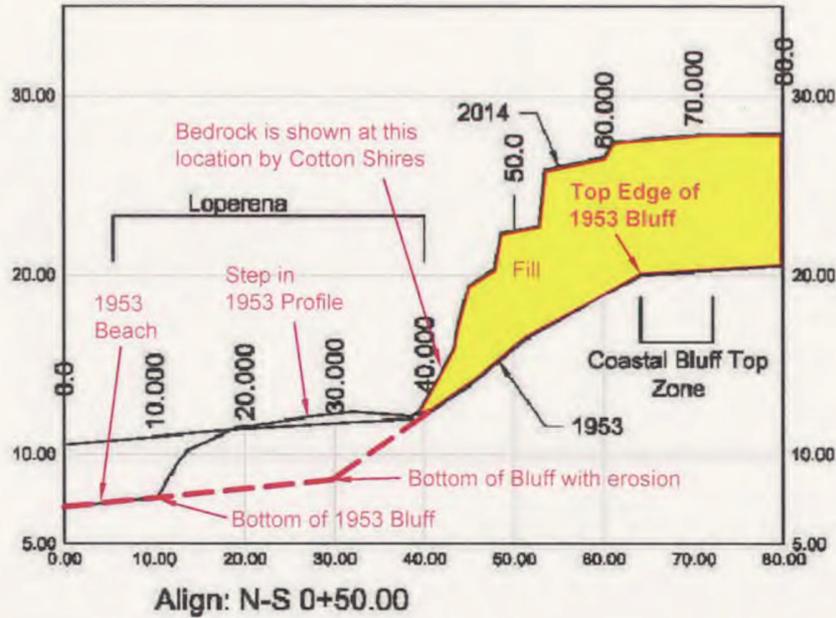
Mark Foxx
C. E. G. 1493

List of Figures:

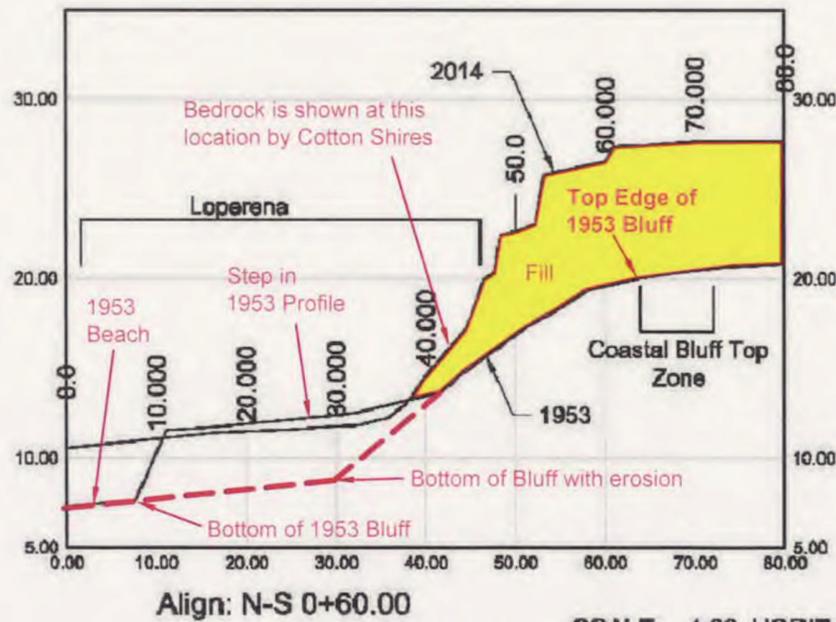
- Figure 1: Cross Sections Showing 1953 and 2014 Topographic Profiles & Locations of Fill, 1953 Beach, Bottom of Bluff and Top Edge of Bluff by Haro Kasunich and Associates, Inc.
- Figure 2: 2014 Topographic Map by Shoreline Engineering, Inc. showing 1953 Top Edge of Bluff As Depicted on Cross Sections by Shoreline Engineering, Inc.

- Figure 3: 1953 Topographic Map by Shoreline Engineering, Inc. showing 1953 Top Edge of Bluff As Depicted on Cross Sections by Shoreline Engineering, Inc.
- Figure 4: 8-20-2013 Google Earth Image (Approximate Scale 1 inch = 50 feet)
- Figure 5: 1965 Caltrans Aerial Photograph (Approximate Scale 1 inch = 50 feet)
- Figure 6: 12-2-1953 Caltrans Aerial Photograph (Approximate Scale 1 inch = 50 feet)
- Figure 7: 8-20-2013 Google Earth Image (Approximate Scale 1 inch = 200 feet)
- Figure 8: 1965 Caltrans Aerial Photograph (Approximate Scale 1 inch = 200 feet)
- Figure 9: 12-2-1953 Caltrans Aerial Photograph (Approximate Scale 1 inch = 200 feet)

FIGURE 1: CROSS SECTIONS SHOWING 1953 AND 2014 TOPOGRAPHIC PROFILES BY SHORELINE ENGINEERING, INC., & LOCATIONS OF FILL, 1953 BEACH, BOTTOM OF BLUFF AND TOP EDGE OF BLUFF BY HARO KASUNICH & ASSOCIATES, INC.



Coastal Bluff Sections
N-S Line Alignment



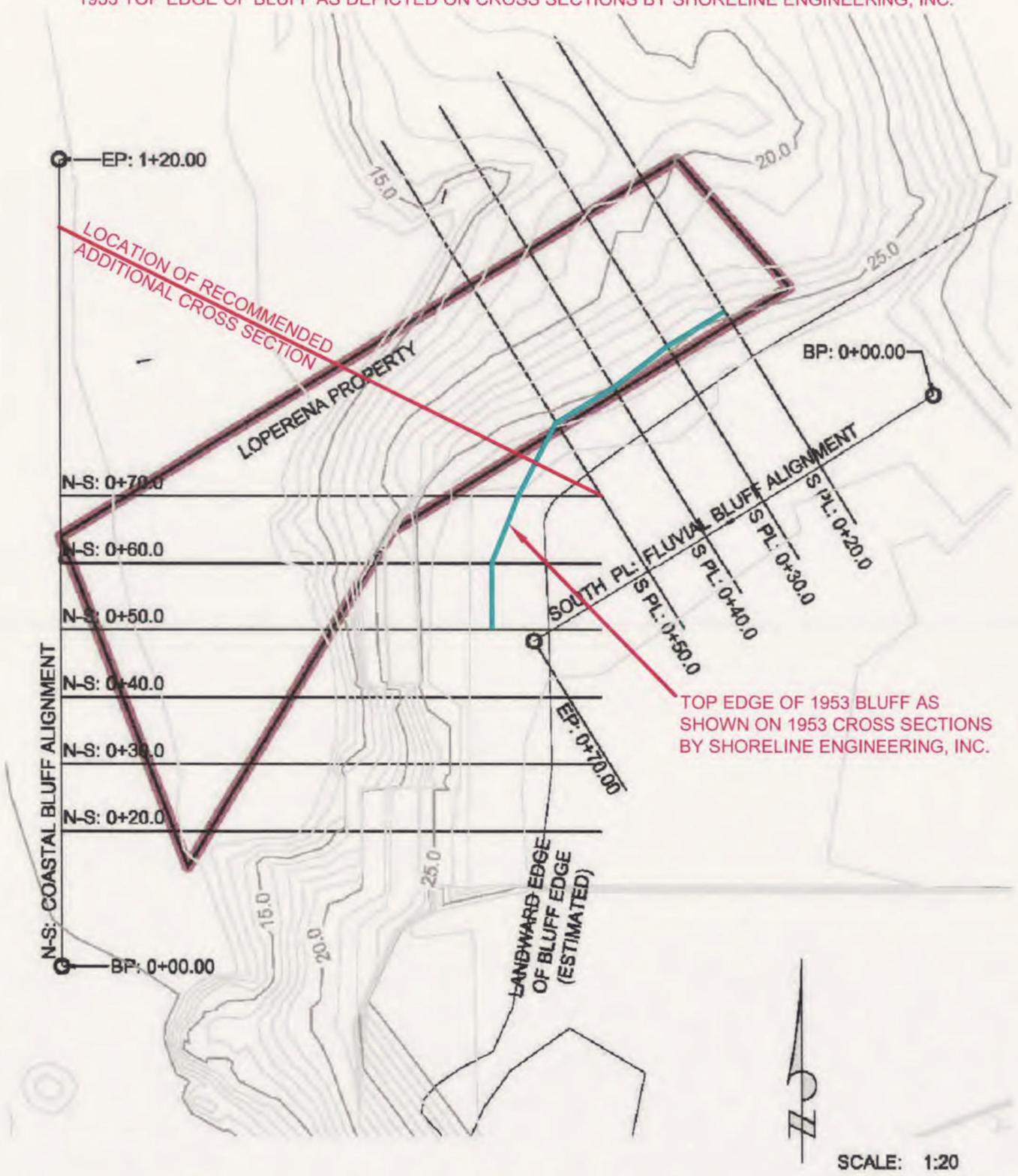
SCALE: 1:20, HORIZ; 1:10, VERT
SECTIONS LOOKING NORTHERLY

Loperena: Studio Drive, Cayucos 2014 Topographic Survey

HARO KASUNICH & ASSOCIATES, INC.

Agenda Item No: 23 + Meeting Date: December 9, 2014
Presented By: Planning and Building Staff
Rec'd prior to the meeting & posted on: December 8, 2014

FIGURE 2: 2014 TOPOGRAPHIC MAP BY SHORELINE ENGINEERING, INC. SHOWING 1953 TOP EDGE OF BLUFF AS DEPICTED ON CROSS SECTIONS BY SHORELINE ENGINEERING, INC.

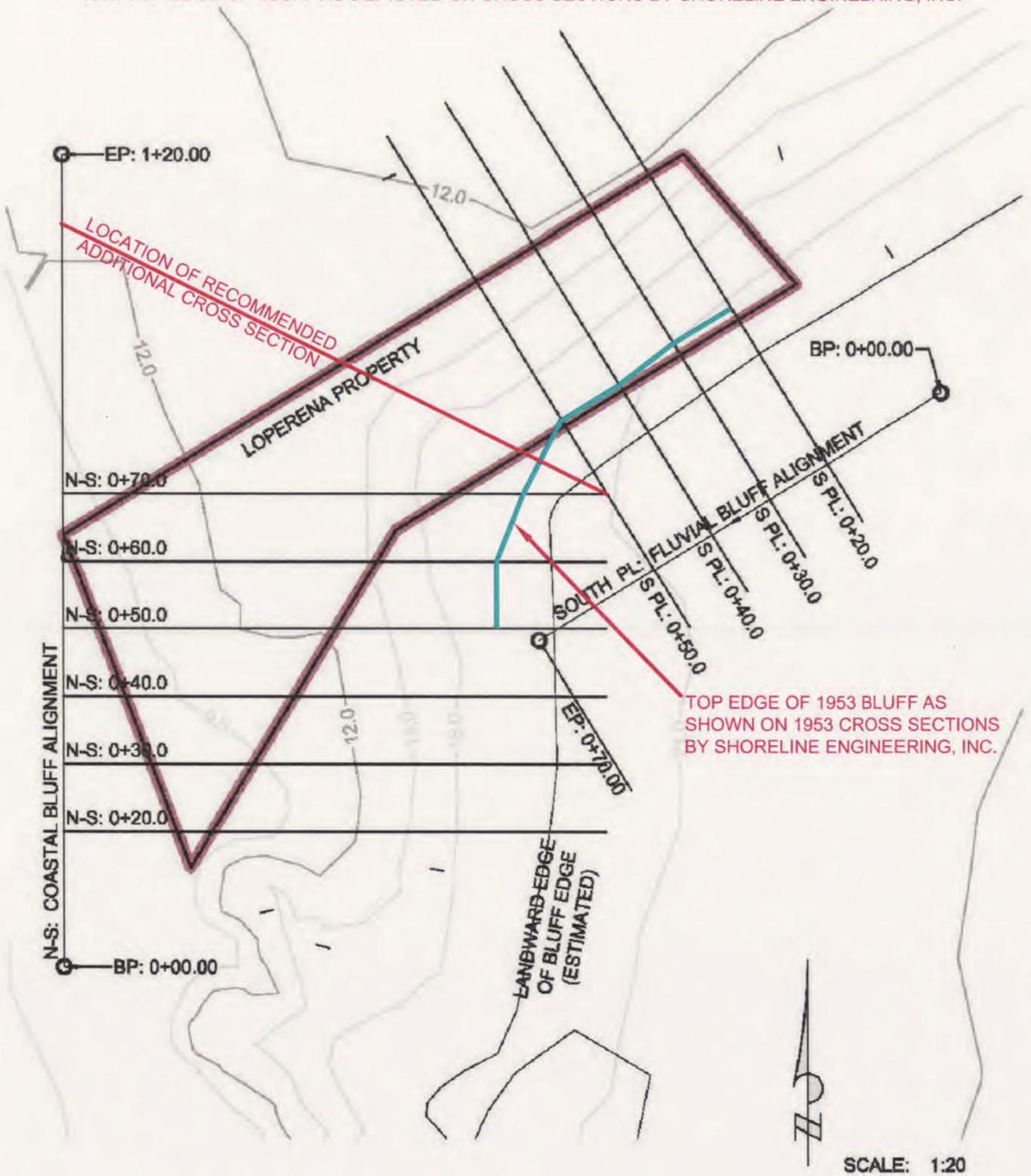


Loperena: Studio Drive, Cayucos
 2014 Topographic Survey

NOTE: TOP EDGE OF 1953 BLUFF AND LOCATION OF RECOMMENDED ADDITIONAL CROSS SECTION BY HARO KASUNICH & ASSOCIATES, INC.

Agenda Item No: 23 - Meeting Date: December 9, 2014
 Presented By: Planning and Building Staff
 Rec'd prior to the meeting & posted on: December 8, 2014

FIGURE 3: 1953 TOPOGRAPHIC MAP BY SHORELINE ENGINEERING, INC. SHOWING 1953 TOP EDGE OF BLUFF AS DEPICTED ON CROSS SECTIONS BY SHORELINE ENGINEERING, INC.



Loperena: Studio Drive, Cayucos
 1953 Topographic Survey

NOTE: TOP EDGE OF 1953 BLUFF AND LOCATION OF RECOMMENDED ADDITIONAL CROSS SECTION BY HARO KASUNICH & ASSOCIATES, INC.

Agenda Item No: 23 • Meeting Date: December 9, 2014
 Presented By: Planning and Building Staff
 Rec'd prior to the meeting & posted on: December 8, 2014

PACIFIC OCEAN



FIGURE 4 - 2013 GOOGLE EARTH IMAGE (APPROXIMATE SCALE: 1 INCH = 50 FEET)

8-20-2013 GOOGLE EARTH IMAGE
Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Planning and Building Staff
(Prepared for the meeting & posted on December 8, 2014)

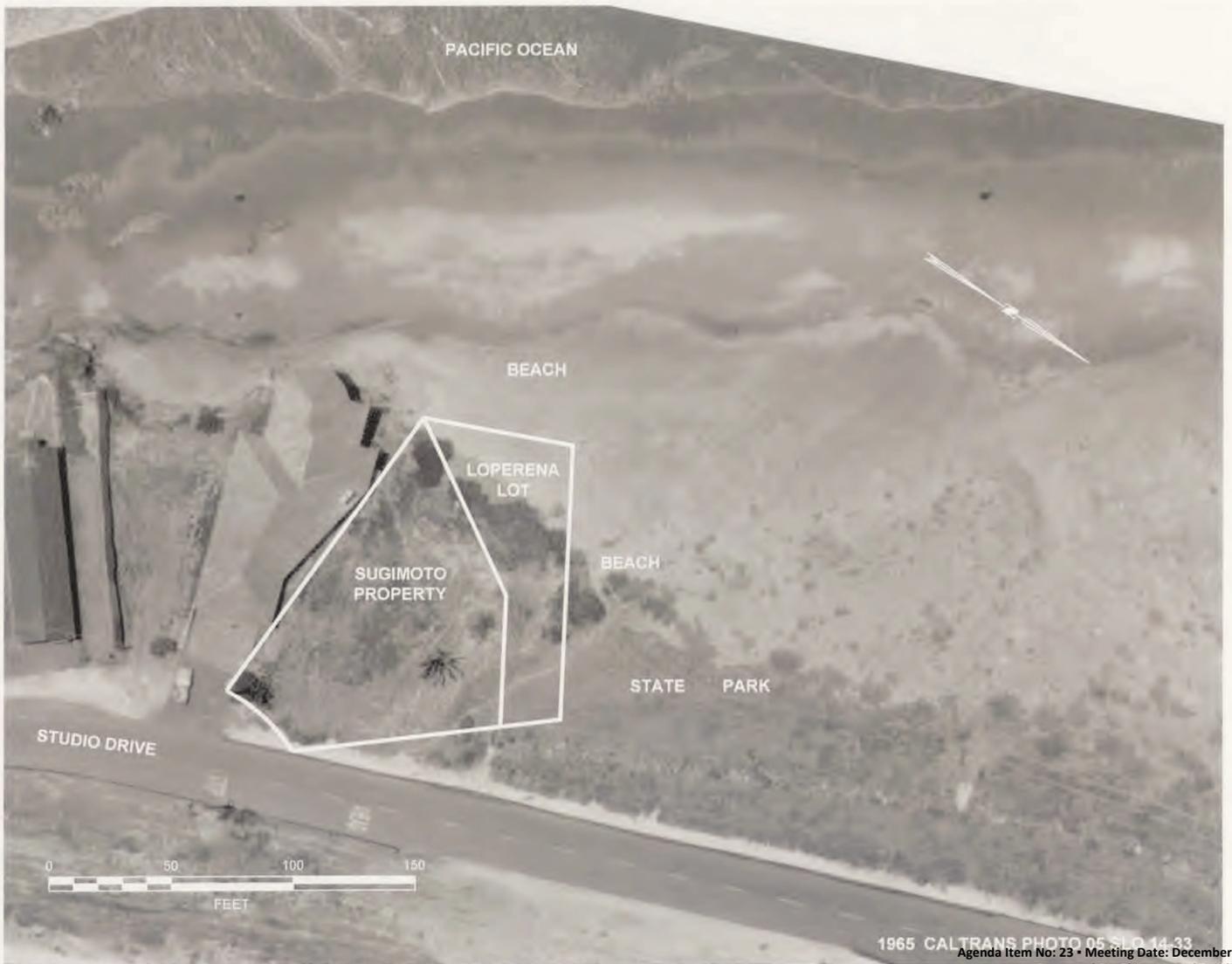


FIGURE 5 - 1965 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 50 FEET)

Agenda Item No: 23 • Meeting Date: December 9, 2014
 Presented By: Planning and Building Staff
 Rec'd prior to the meeting & posted on: December 8, 2014
 (PROPERTY BOUNDARIES ARE APPROXIMATE)



FIGURE 6 - 1953 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 50 FEET)

12-2-1953 © Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Planning and Building Staff
(Filed prior to the meeting & posted on December 8, 2014)



FIGURE 7 - 2013 GOOGLE EARTH IMAGE (APPROXIMATE SCALE: 1 INCH = 200 FEET)

8-20-2013 GOOGLE EARTH IMAGE
Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Planning and Building Staff
Rec'd prior to the meeting & posted on: December 8, 2014
(PROPERTY BOUNDARIES ARE APPROXIMATE)

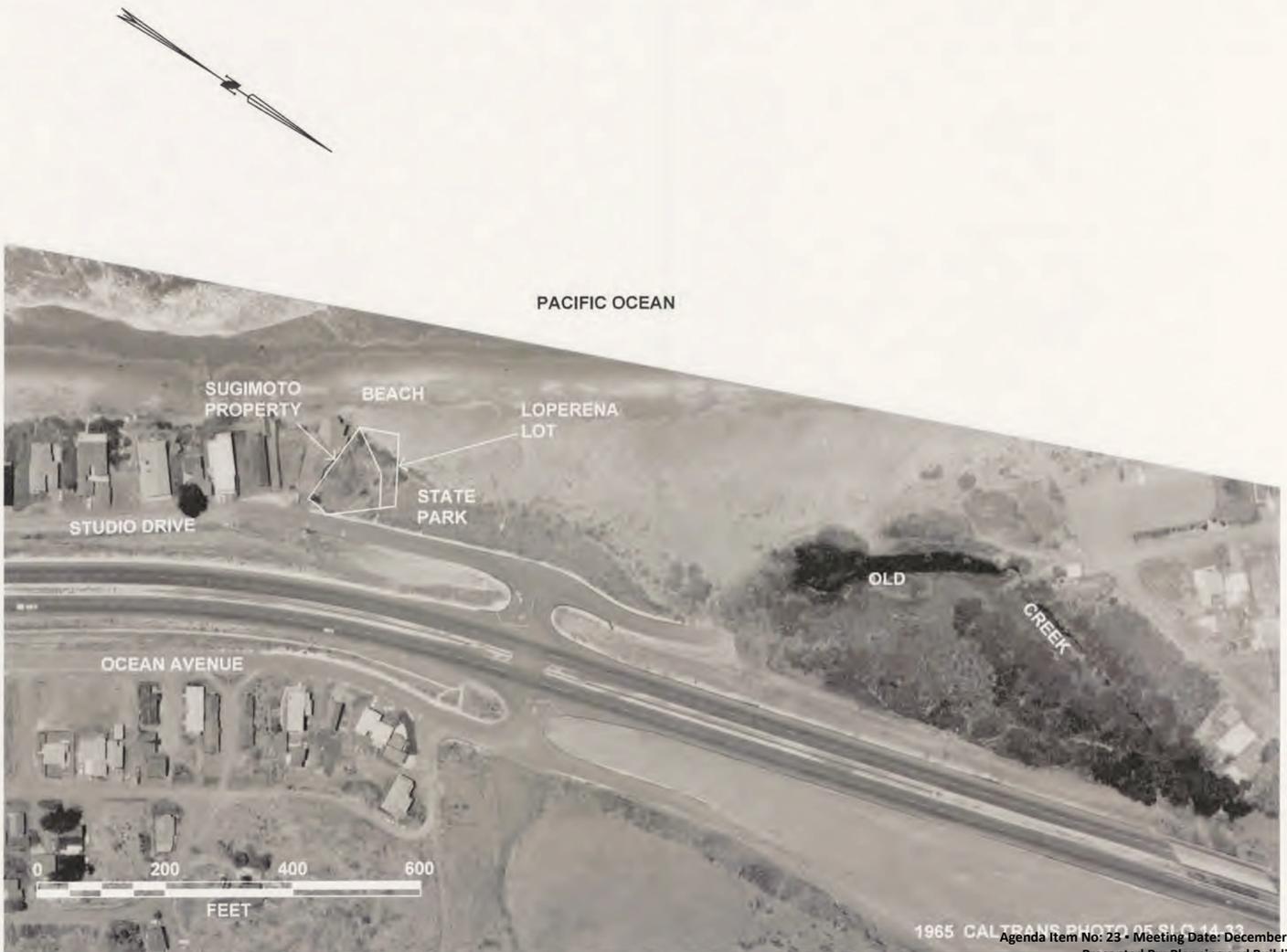


FIGURE 8 - 1965 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 200 FEET)

Agenda Item No: 23 - Meeting Date: December 9, 2014
 Presented By: Planning and Building Staff
 (Received prior to the meeting & posted on December 8, 2014)



FIGURE 9 - 1953 CALTRANS AERIAL PHOTOGRAPH (APPROXIMATE SCALE: 1 INCH = 200 FEET)

12-2-1953 CALTRANS PHOTO V SLO 4-22
 Agenda Item No. 23 - Meeting Date: December 9, 2014
 Presented By: Planning and Building Staff
 Rec'd prior to the meeting & posted on: December 8, 2014
 (PROPERTY BOUNDARIES ARE APPROXIMATE)



late email re. Hearing item no. 23 tomorrow for the Board members
Fw: FINAL comments on latest Loperena report

Ryan Hostetter to: Cytasha Campa
Cc: Annette Ramirez, Catrina Christensen

12/08/2014 04:25 PM

Hi Cytasha,

I just got the info below for the Board to distribute.... I have cc'd the clerk as well. Thank You!

Ryan Hostetter, LEED AP
County of San Luis Obispo
Current Planning and Permitting
(805) 788-2351

----- Forwarded by Ryan Hostetter/Planning/COSLO on 12/08/2014 04:23 PM -----

From: "Robinson, Daniel@Coastal" <Daniel.Robinson@coastal.ca.gov>
To: "rhostetter@co.slo.ca.us" <rhostetter@co.slo.ca.us>, "brobeson@co.slo.ca.us" <brobeson@co.slo.ca.us>
Date: 12/08/2014 03:58 PM
Subject: FINAL comments on latest Loperena report

From: Johnsson, Mark@Coastal
Sent: Monday, December 08, 2014 3:11 PM
To: Robinson, Daniel@Coastal
Subject: FINAL comments on latest Loperena report

Shoreline Engineering, 2014, "Evaluation of bluff geometry adjacent to Loperena property, Minor Use Permit/Coastal Development Permit DCR2005-00216", 14 p. report dated 28 September 2014 and signed by B. S. Elster (CE 32981).

I offer the following comments:

- 1) The Shoreline Engineering report made use of orthophotorectified aerial photographs obtained from Caltrans and flown in 1953, in conjunction with an aerial survey flown in 2014, to define the ground surface on and adjacent to the subject parcel in 1953 and 2014. The former approximates the natural topography, before the addition of large amounts of fill during the relocation of Highway 1 in the 1960s, that obscured the natural bluff edge throughout much of the area. I concur that the methodologies employed were appropriate.
- 2) Coastal Commission Staff made several recommendations for obtaining information regarding obtaining the natural topography beneath the artificial fill during a meeting with County staff on 31 July 2014. This method was one method recommended; other methods might have provided helpful information on the State Park parcel to the northwest, but such information has thus far not been provided by the Applicant.
- 3) Although the bluff edge of both the "coastal bluff" and the "fluvial bluff" are only broadly defined on the cross sections that are provided, the plan views show the natural bluff edge to lie landward of the

Agenda Item No: 23 • Meeting Date: December 9, 2014
Presented By: Mark Johnsson
Rec'd prior to the meeting & posted on: December 8, 2014

entire Loperena parcel. Thus, the natural topography and ground surface of the entire parcel is either on the natural bluff face or beach.

4) For reasons indicated repeatedly in previous Coastal Commission staff letters to the County, and at the 31 July 2104 meeting, staff, including myself, believes that the bluff definitely meets the definition of a Coastal Bluff in Section 13577 (h) (2) of the Coastal Act regulations. That is, it clearly has been subject to marine erosion in the recent past. Although parts of the bluff are now covered by fill, it is reasonable to believe that the portions labeled "fluvial bluff" were subject to marine erosion before placement of the fill.

5) The Shoreline Engineering report reaches the following conclusions, without commenting on their significance:

- a. The Loperena property is not located on a coastal bluff.
- b. The bluffs (both coastal and fluvial) landforms have been altered by development adjacent to the Loperena property.
- c. No portion of the pre-development coastal bluff or the fluvial bluff is more than ten feet in height.

With regard to (a), no evidence is provided that the property is not located on a coastal bluff. As described above in (4), and previously, staff continues to believe that the property is located on a coastal bluff.

With regard to (b), it is not clear how the author of the report believes that the landforms have been altered by development adjacent to the property. If the author is referring to the addition of fill, I concur that much of the natural bluff top, edge, and face has been buried beneath artificial fill.

With regard to (c), it is unclear of what the significance would be of the bluff being less than ten feet in height. Nowhere in the Coastal Act regulations nor in the LCP is a figure of ten feet specified for the definition of a Coastal Bluff. The report makes reference to the Commissions outdated Statewide Interpretive Guidelines, but these are not regulatory in nature. Further, as observed by staff analyst Joseph Street:

2014: Bluff appears to exceed 10 ft in relief in all cross sections (N-S 0+30, 0+40, 0+50, 0+60).

1953: In several cases it is difficult to tell based on the cross-section alone where the toe of the bluff is, and without the photos themselves it is impossible to evaluate the accuracy of the cross-sections.

- The 0+60 section was greater than 10 ft from toe to bluff top IF the "hump" between 10-40 ft on the horizontal axis represents the bluff toe; if this feature is just the winter beach profile, then the bluff was less than 10 ft in relief in this cross-section.

- 0+50 cross section: Same issue (bluff relief depends on whether platform/hump at bottom of profile is bluff or beach)

- 0+40 cross section: Again, whether or not the bluff exceeds 10 ft in relief along this cross-section depends on where the bluff toe actually occurs – in this

section, there are two inflection points in the profile that could represent the bluff toe.

- 0+30 cross section: Assuming the lower inflection point (at ~9.5 ft on vertical axis) is the bluff toe, the bluff appears to exceed 10 feet in relief along this cross-section.

The study is incomplete in that it does not examine or attempt to reconstruct cross-sections for the portions of the slope in between the N-S (coastal) and "Fluvial Bluff" cross sections. However, this portion of the bluff was examined by Cleath-Harris (see cross section C-C', figure 1 in the 19 September 2012 Cleath-Harris Report). The estimated bedrock profile (ie, profile with fill material removed) along this cross section would appear to exceed 10 ft in relief (~11 ft to 22 ft).

In summary, the information available in the recent report by Shoreline Engineering and previous in geologic reports (The 19 September 2012 Cleath-Harris report in particular) does not support the conclusion that the bluff at the Loperena property is less than 10 feet in relief, either in its present state or prior to the fill deposition. While it may be the case that the bluff is less than 10 ft in relief along certain cross sections, there appear to be cross sections along which the relief exceeds 10 ft.

I concur with his analysis.

Thus, it appears that the entire parcel is seaward of the bluff edge, whether the bluff is a coastal bluff or an [undefined] "fluvial bluff." The change in orientation of the bluff that the applicant uses to delineate a coastal bluff from a fluvial bluff does not, in my opinion, constitute a change in the bluff from a "coastal bluff" as defined in the Coastal Act regulations (13577 (h)). Thus, as mentioned before in previous letters, this project triggers the coastal bluff setback requirements of the LCP at this location.

I hope that these comments are useful. Please do not hesitate to contact me if you have any further questions.

Mark Johnsson

Mark J. Johnsson, Ph.D. Staff Geologist
California Coastal Commission

johnsson@coastal.ca.gov
