

DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Testimony of  
SUZANNE D. CASE  
Chairperson**

**Before the Senate Committee on  
WATER AND LAND**

**Friday, March 23, 2018  
2:55 PM  
State Capitol, Conference Room 224**

**In consideration of  
SENATE CONCURRENT RESOLUTION 45  
AUTHORIZING THE ISSUANCE OF A TERM, NON-EXCLUSIVE EASEMENT  
COVERING A PORTION OF STATE SUBMERGED LANDS AT PUAMANA,  
LAHAINA, MAUI FOR VARIOUS SEAWALL STRUCTURES. A CONCRETE GROIN,  
AND REVETMENT FOOTINGS OF A HISTORIC SWIMMING POOL**

Senate Concurrent Resolution 45 proposes to authorize the issuance of a term, non-exclusive easement covering a portion of State submerged lands at Puamana, Lahaina, Maui, for various seawall structures, a concrete groin and revetment footings of a historic swimming pool. **The Department of Land and Natural Resources (Department) supports this concurrent resolution.**

The current owner of the abutting property, Puamana Community Association (PCA), worked with the Department to resolve the encroachments. The encroachments that were located seaward of the record property boundary were resolved by the execution of a term, non-exclusive easement GL S-6050. The shoreline has moved further mauka, increasing the amount of structures located on state submerged lands. PCA has sought to amend the easement area to account for the additional encroachments.

As required by Section 171-53, Hawaii Revised Statutes, the Board of Land and Natural Resources ("Board") may lease submerged lands "with the prior approval of the Governor and the prior authorization of the Legislature by concurrent resolution". At its meeting on January 12, 2018, under agenda item D-10, the Board approved the amendment of GL S-6050 to include the encroachments seaward of the shoreline. PCA shall pay the State the fair market value of the additional easement area as consideration for the use of public lands. The amount of consideration shall be determined by an independent appraisal.

Thank you for the opportunity to comment on this measure.

**SUZANNE D. CASE**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

**ROBERT K. MASUDA**  
FIRST DEPUTY

**JEFFREY. T. PEARSON, P.E.**  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

Puamana Community Association  
Carl Verley, Chair, Shoreline Erosion Committee  
34 Puailima Place  
Lahaina, Maui, Hawaii 96761  
(808) 661-3424  
carl@puamana.us

BEFORE THE  
**COMMITTEE ON WATER AND LAND**  
OF THE STATE OF HAWAII

IN THE MATTER OF ) SENATE CONCURRENT RESOLUTION  
 ) NO. SCR 45  
Authorizing the issuance of a non-exclusive )  
easement covering a portion of State ) **TESTIMONY IN SUPPORT OF SCR45;**  
submerged lands at Puamana, Lahaina, Maui, ) **EXHIBITS “A” & “B”**  
for various seawall structures, a concrete )  
groin, and revetment footings of a historic )  
swimming pool. )

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**TESTIMONY IN SUPPORT OF SCR 45**

PUAMANA COMMUNITY ASSOCIATION (“Puamana”) and CARL VERLEY, Chair of Puamana’s Shoreline Erosion Committee, an individual and a member of the Puamana Community Association and as interested persons provide the following testimony in support of SCR 45 to the Committee on Ocean, Marine Resources, & Hawaiian Affairs, the Committee on Water & Land and the Finance Committee.

**1. IDENTIFICATION AND INTEREST**

PUAMANA COMMUNITY ASSOCIATION is a Hawaii non-profit, Public Unit Development formed to act as a community association, whose members consist of 230 family dwellings on 30 acres of land. Puamana owns land located at 34 Puailima Place, Lahaina, Hawaii, further identified by tax map key: (2) 4-6-028:001. Transient vacation rentals are permitted at Puamana resulting in a steady stream of tourists visiting the property, using the facilities there, as well as recreating in the ocean fronting the property.

CARL VERLEY (“Verley”) is the Chair of Puamana’s Shoreline Erosion Committee and is also an owner in Puamana.

## **2. TESTIMONY**

Seawall structures, built in the 1930’s, follow along the shoreline and provide stability and necessary coastal protection for the north part of the property, i.e. TMK (2) 4-6-028:001. In addition, a concrete groin and revetment footings represent part of a historic swimming pool that was also built in the 1930’s as a part of the complex of a former plantation manager’s residence. It has been determined that portions of the seawall structures, the concrete groin and revetment footings of the historic swimming pool encumber a total of 1,895 square feet of state submerged land. Furthermore, the Office of Conservation and Coastal Lands of the Department of Land and Natural Resources (“DLNR”) determined that the structures are existing and non-conforming, in that they were constructed prior to October 1964.

Puamana obtained and paid for a fully executed grant of non-exclusive easement (GL S-6050), dated March 3, 2014 for a total of five (5) shoreline encroachments (identified as Easements “E-1” through “E-5” in the February 2012 Application for Request for State Lands) for the seawall structures, the concrete groin, and the revetment footings of the historic swimming pool, totaling an area of 1,895 square feet (sq. ft.). However, it was later determined by the DLNR that the easements identified in the March 3, 2014 easement agreement (Easements “E-1” through “E-5”) would need to be amended to include additional areas for the seawall and pool structures based on an updated shoreline survey of the property.

The shoreline was resurveyed and the areas encroaching on State land were re-measured with the original, March 3, 2014, Easement E-1 being reduced in area to 533 square feet from 1,115 sq. ft.; Easements E-2 and E-3 increased in area to 1,496 sq. ft. from 357 sq. ft.; and Easements E-4 and E-5 increase in area to 3,336 sq. ft. from 423 sq. ft.; making the combined total of the amended easements: 5,365 sq. ft., an increase of 3,470 sq. ft. over the total granted under GL S-6050. The proposed amended easements now consist of 3 easements: E-1, E-2-A and E-3-A (EXHIBIT “A”). The shoreline survey for TMK (2) 4-6-028:001 was certified on August 3, 2017 by the State Surveyor under the condition that Puamana would pursue the acquisition of easements for the identified encroachments. On January 12, 2018, The Board of

Land and Natural Resources approved the amendment increasing the areas of the easements of GL-S-6050.


The amended easements are subject to Puamana paying the State the fair market value of the amended easements as consideration of the use of public lands to be determined by an independent appraisal.

Structural engineers' opinions on the conditions of the swimming pool (see EXHIBIT "B") indicate that "based on the advancement of the erosion along the south side of the pool, we now feel it to be imperative that the foundation repair/reinforcement process commenced as soon as possible before damage occurs that might make the continued use of the pool impossible. Further delays of a year or more could produce this result." Therefore, without the granting of non-exclusive easements, Puamana will not be able to repair and maintain the encroaching structures, which when degraded through continued erosion will pose a threat to the health and integrity of the near-shore reef environment as well as to surfing and diving areas located makai of the encroachments.

For the above reasons Puamana requests favorable consideration and recommendation to approve SCR 45.

DATED: Lahaina, Maui, Hawaii: March 21, 2018

PUAMANA COMMUNITY ASSOCIATION,  
CARL VERLEY

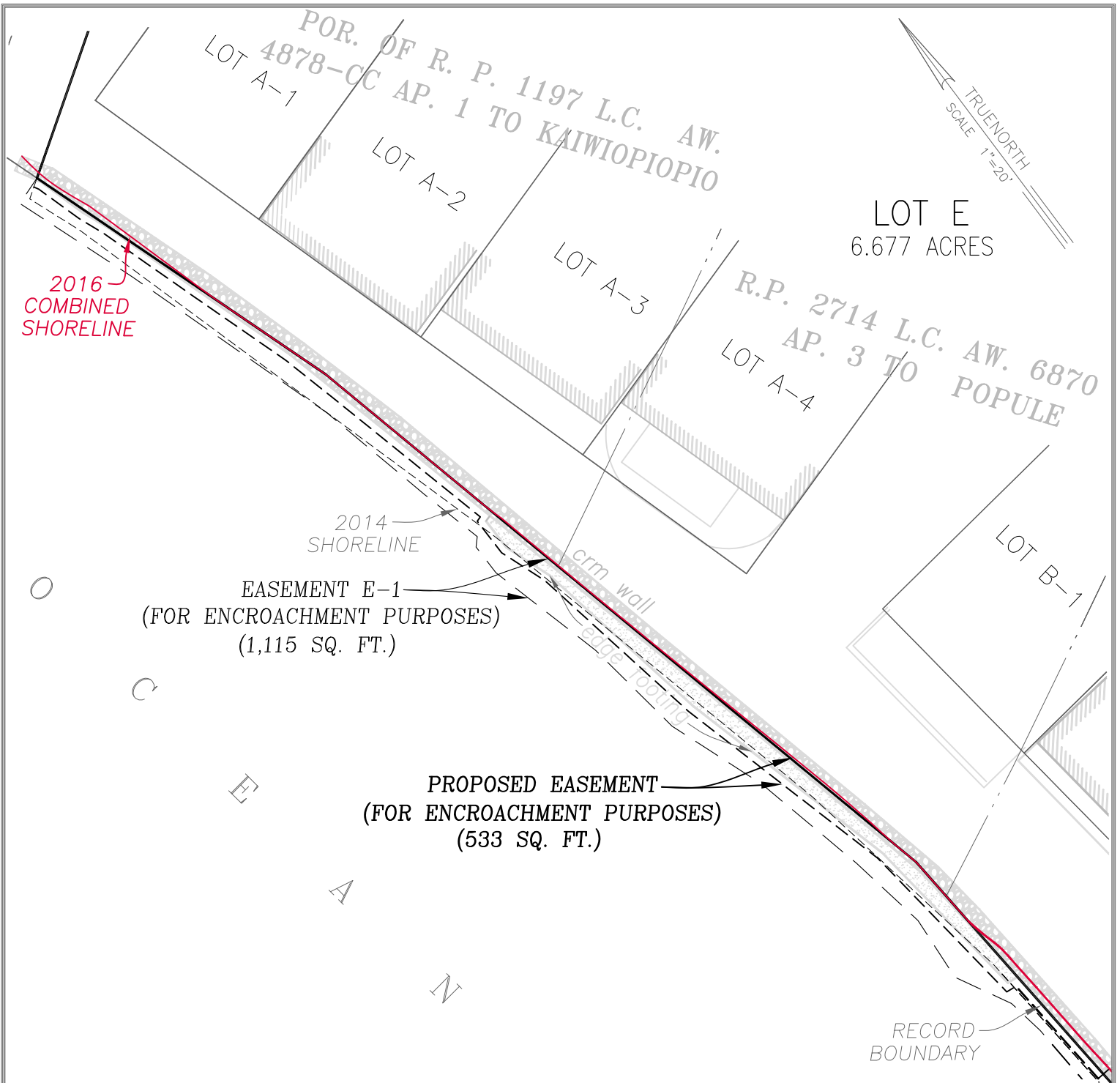


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Chair, Shoreline Erosion Committee

**EXHIBIT “A”**

**Plan maps of the proposed easements that  
Puamana Community Association is requesting be approved.**



**PROPOSED EASEMENT**  
**FRONTING LOT E OF THE**  
**PUAMANA PLANNED UNIT DEVELOPMENT, UNIT 1,**  
**SECTION B, FILE PLAN 1056**  
 SITUATED AT PUAMANA-LAHAINA, MAUI, HAWAII

PREPARED FOR:  
 Puamana Community Association  
 34 Pualima Place  
 Lahaina, HI 96761

PREPARED BY:  
 AUSTIN, TSUTSUMI  
 & ASSOCIATES, INC.  
 1871 WILI PA LOOP, SUITE A,  
 WAILUKU, MAUI, HAWAII 96793

THIS PLAT WAS PREPARED BY ME OR  
 UNDER MY DIRECT SUPERVISION.

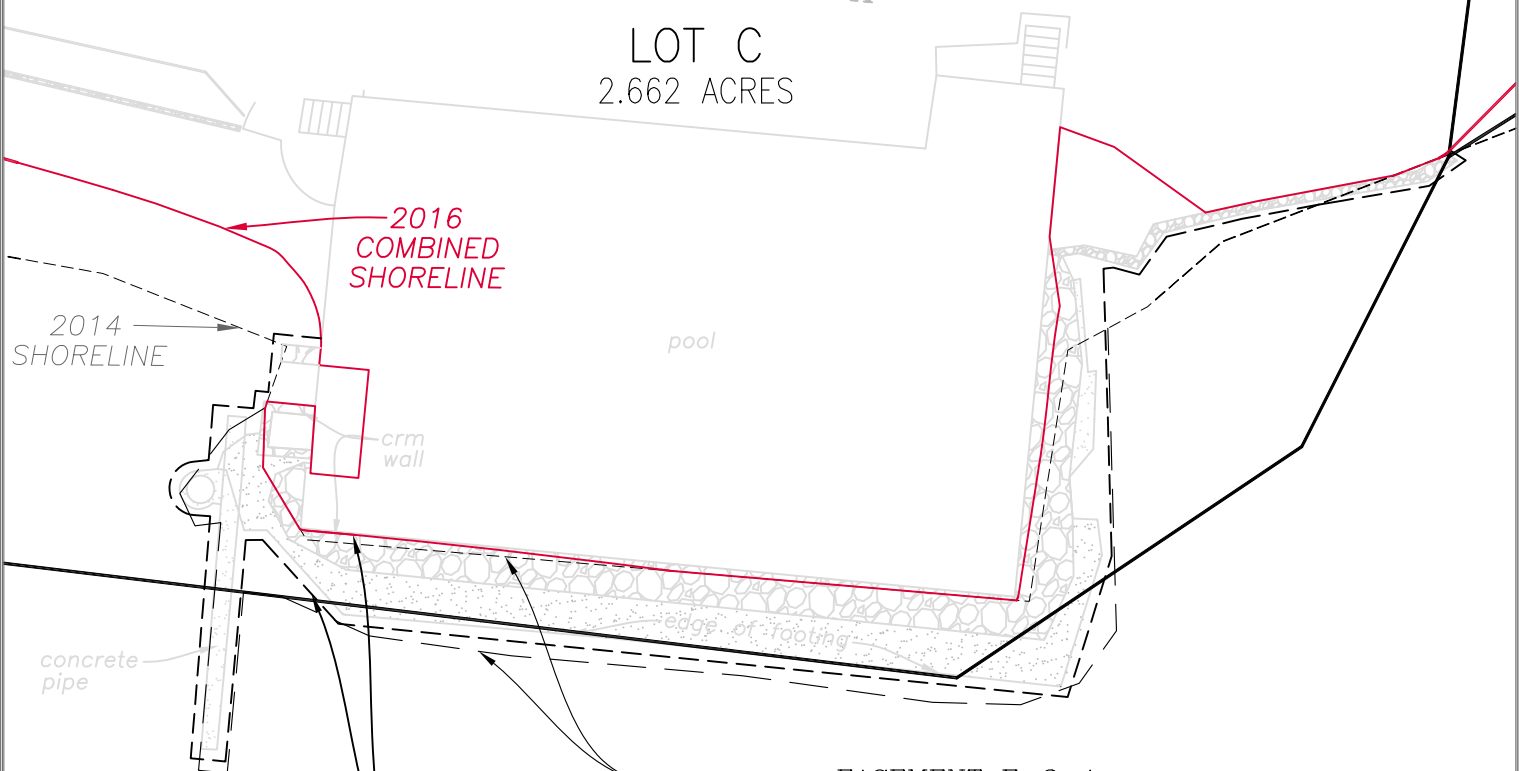
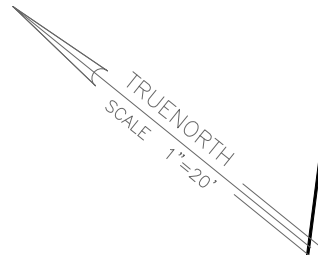
T.M.K.:(2) 4-6-028: PORTION 001

SCALE: 1 INCH = 20 FEET

DATE: MAY 4, 2017  
 REVISED: SEPTEMBER 1, 2017

ROYAL PATENT 1112,  
 LAND COMMISSION AWARD 10,427  
 APANA 2 TO NAOA

LOT C  
 2.662 ACRES



EASEMENT E-2-A  
 (FOR CONCRETE GROIN, POOL STRUCTURE  
 AND REVETMENT FOOTING PURPOSES)  
 (1,228 SQ. FT.)

PROPOSED EASEMENT  
 (FOR CONCRETE GROIN, POOL STRUCTURE  
 AND REVETMENT FOOTING PURPOSES)  
 (1,496 SQ. FT.)

O C E A N

**PROPOSED EASEMENT  
 FRONTING LOT C OF THE  
 PUAMANA PLANNED UNIT DEVELOPMENT, UNIT 1,  
 SECTION B, FILE PLAN 1056**  
 SITUATED AT PUAMANA-LAHAINA, MAUI, HAWAII

PREPARED FOR:  
 Puamana Community Association  
 34 Pualima Place  
 Lahaina, HI 96761

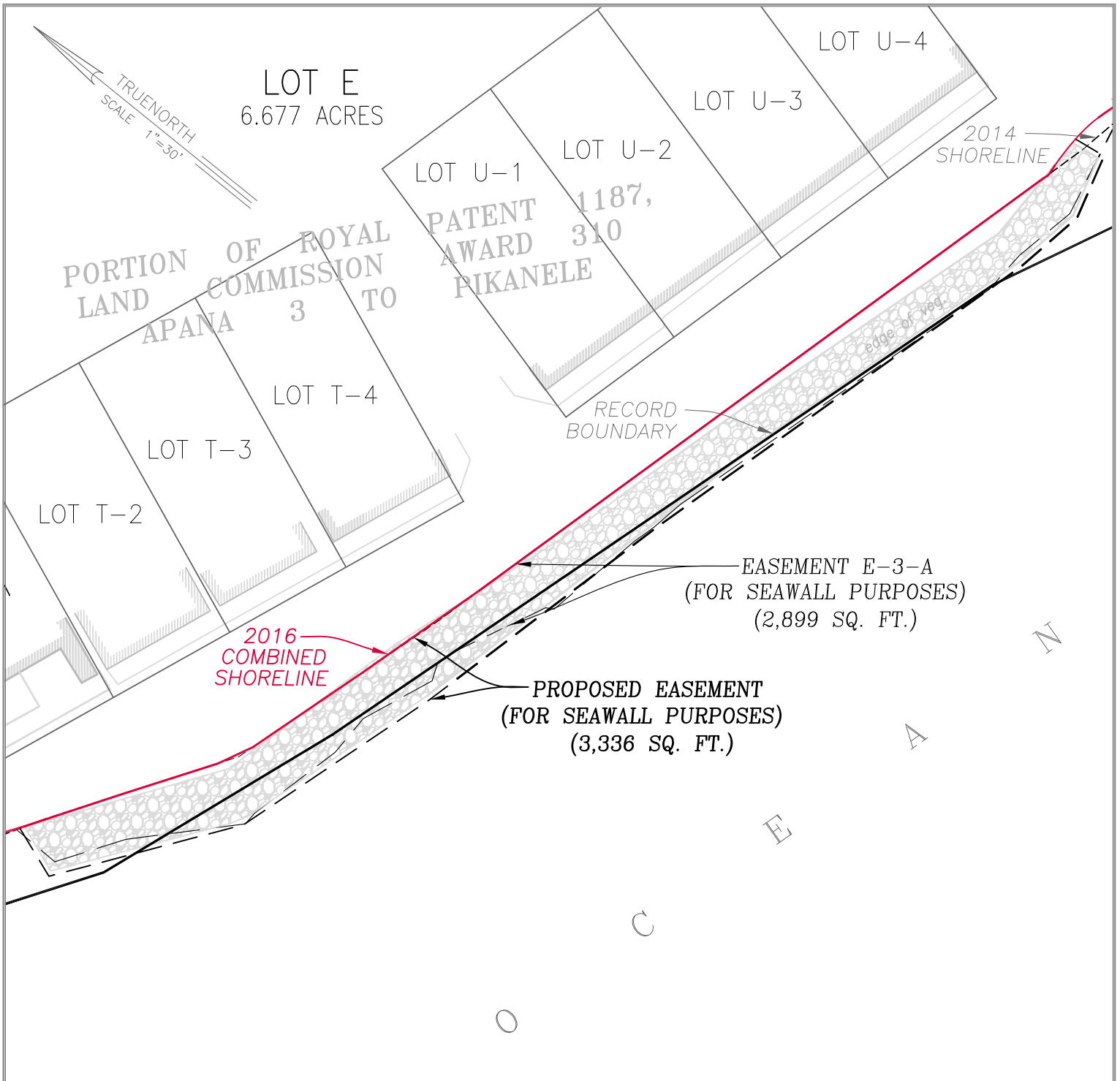
PREPARED BY:  
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SCALE: 1 INCH = 20 FEET

DATE: MAY 4, 2017  
 REVISED: SEPTEMBER 1, 2017



**PROPOSED EASEMENT  
FRONTING LOT E OF THE  
PUAMANA PLANNED UNIT DEVELOPMENT, UNIT 1,  
SECTION B, FILE PLAN 1056  
SITUATED AT PUAMANA-LAHAINA, MAUI, HAWAII**

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DATE: MAY 4, 2017  
REVISED: SEPTEMBER 1, 2017



**EXHIBIT “B”**

**Structural Engineer’s Professional Opinion  
regarding the status of Puamana’s Ocean Pool.**

**Walter Vorfeld & Associates**  
CONSULTING STRUCTURAL ENGINEERS

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April 14, 2015

Job No. 98032

Puamana Community Association  
34 Puailima Place  
Lahaina, HI 96761

Attn: Carl Verley, Board President

Re: Structural Engineering Review Update  
Puamana Pool  
Puamana, Maui, Hawaii

Dear Mr. Verley:

Per the request of the Association, this letter is to update the opinions and recommendations set forth in our letter of report dated July 10, 2008.

On Wednesday, April 15, 2015, with yourself, other members of the board and representatives of Munikeya-Hiraga's office, we met at the Puamana property to revisit the issue of the swimming pool on the point. The purpose of the meeting was to re-examine the effect(s) continuing shoreline recession is having on the foundations of the above-grade pool wall structures. This progress or deterioration, as the case maybe, has been under observation by our office since we were first consulted regarding the pool deck and structure in 1998. It was re-examined in 2003, 2008 and 2010 in addition to our most recent visit.

In 2008 the effects of shoreline recession on the pool retaining structures foundation had negatively progressed to a point where we felt it was imperative that efforts be made to obtain the necessary permits to proceed with structural reinforcement of the pool foundations. Their continued undermining by shoreline erosion and shifting of boulders beneath the perimeter of the pool walls had, in our opinion, advanced to the point where eventual loss of foundation support and failure of the pool walls would undoubtedly occur in the future if remedial action was not undertaken. How long before this would/will occur is difficult to predict, but it was/is felt to be imminent. Our letter of report of 2008 stated that obtaining the required permits to perform the repairs would likely be lengthy and for that reason beginning as soon as possible was recommended.

Observations made during our recent visit provide evidence that the undermining of the pool retaining structure's foundations has advanced significantly since last observed in 2010. This is especially true along the south-facing side of the pool adjacent to the mouth of Kau'aula Stream where river boulders have been the primary elements supporting the base of the pool walls. The level of the boulders beneath the wall foundation skirt has dropped appreciably since 2008 and 2010, to the point where the mortar and stone foundation apron is breaking away more extensively. Where the boulder level in 2008 was approximately level with the bottom of the foundation apron, it has now dropped well below it, with caverns opening up under the wall that

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10 Ulana Street  
Makawao, Maui, HI 96768  
(808)572-3535  
Fax (808)572-3616

were previously not present. Wave energy is now able to directly attack the cut-stone retaining wall buttress elements (similar to Wailuku Bridge stones) of the original 1935 pool construction. The caverns have formed along about 75% of the south pool wall extending down and around the Makai corner. The average level of the boulder array is now approximately 12-18" lower (more in some locations) than it was, and the bases of the original cut-stone buttress are visible where previously they were not. Recent occurrence of high wind events (Flossie in 2013, Iselle, Julio and Ana in 2014) have likely contributed to the observed boulder recession. Images of the south pool wall in 2008 and 2015, included herein, depict the advancement of the erosion beneath the wall foundation apron. Although the shot angles are not identical, match points provided (specific stones in the wall) can be used as points of reference.

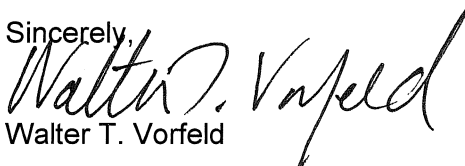
Based on the advancement of the erosion along the south side of the pool, we now feel it to be imperative that the foundation repair/reinforcement process commenced as soon as possible before damage occurs that might make the continued use of the pool impossible. Further delays of a year or more could produce this result. The rate of deterioration since our 2008/2010 observations is quite significant, with the extent of foundation undermining becoming critical.

In 2012 our office prepared preliminary drawings for execution of the foundation reinforcement utilizing a process of injecting urethane foam into the soil/sand/rock material directly beneath the pool and its walls. The material recommended has been used successfully in seawall reinforcement efforts in Hawaii, Florida and other coastal locations in the U.S. that are subject to erosion and shoreline recession. The injected foam material can be used to solidify soil/rock material beneath the wall foundations to a depth of 2-3 feet, resulting in the material being made much more resistant to erosion. The foam essentially cements the rock/soil materials into a solid mass to the depth to which it can be injected.

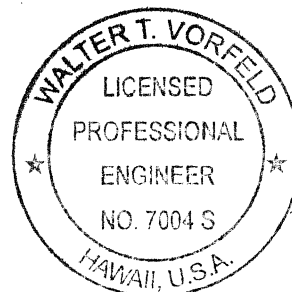
With your permission, we will be talking to one or more contractors familiar with this foam injection process in an effort to better evaluate the procedures we might use and to attempt to estimate what the associated costs might be.

If you have any questions regarding any portion of this letter or require additional information from us please let us know.

Sincerely,

  
Walter T. Vorfeld

WTV/el  
Encls.



EXPIRES: 4.30.2016

## SOUTH FACE OF POOL WALL & FOUNDATION 2008 VS 2015



**POOL WALL & FOUNDATION ALONG  
KA'AULA STREAM (2008)**

ⓐ WHERE SHOWN THIS DESIGNATES MATCHING POINTS OF ROCK ALONG FACE OF POOL WALL



**POOL WALL & FOUNDATION ALONG  
KA'AULA STREAM (2015)**

**Walter Vorfeld & Associates**  
 CONSULTING STRUCTURAL ENGINEERS  
 10 Ulana Street  
 Makawao, Maui, HI 96768  
 (808)572-3535

**COMPARATIVE VIEWS**  
**SOUTH FACE OF POOL WALL**

PUAMANA Job No: 98032  
 LAHAINA, MAUI, HAWAII Date: 4/12/2015

SHT-2