

Piedras Blancas Light Station Association
Minutes
Mechanics Bank Conference Room - Cambria, CA
December 4, 2019

Board Members in attendance: David Cooper (Chair), Harry Thorpe (Treasurer), Sharon Flaherty (Secretary), Jim Harris, Gary O'Neill, Zale Schuster, Ryan Cooper (BLM),
Board Members absent: Holly Gant (PBLSA), John Brass
Others present: Bruce Elster (Shoreline Engineering), Dan Murphy (Wellsona Iron & Engineering)

David Cooper called the meeting to order at 6:00 pm.

Announcements: See Old Business items 3. and 4. David Cooper recognized Holly Gant for her excellent work on the latest edition of the Beacon and on the current draft of the brochure for the capital campaign.

Approval of the Agenda: Agenda was approved with consensus with the two items presented under Announcements moved to Old Business items 3. and 4., and then presented first.

Reports:

1. Secretary Report - M/S/P Minutes of October 28, 2019 approved.
2. Financial Status and Treasurer's Report - See Appendix 1. Harry reported that he will be reapplying for additional co-op funds money.
3. Gift Shop Report- See Appendix 2.
4. BLM Update- See Appendix 3. Ryan stated that a contractor from the BLM found a leak in the fire water distribution system, and will be fixing it. The contractor also verified that the fire water line construction drawings are accurate. Ryan also stated that he will pass out his draft of the current project/management plan for the light station to the board members.
5. Fog Signal Building Restoration – No report as awaiting return of Dan Murphy after his surgery.
6. Tower Report - See Appendix 4.
7. Power Line Report – See Appendix 5.
8. Capital Campaign/Grants Report – See Appendix 6. Also see item 2 under Old Business; plan is for three candidate firms to be presented to board at January meeting.

Old Business:

1. Fresnel Lens Update: Zale expressed his concern over condition of the base of the Lens enclosure stating that it has been environmentally degraded. Since the Lens is estimated to be valued in the \$2-3M range, this condition needs to be addressed as soon as possible. One suggestion discussed is to store the Lens until its future is resolved.
2. Hiring firm to help with capital campaign: David stated that he and Jim plan to present to the board for their consideration at its January meeting three recommended candidates of firms used to implement capital campaigns in the Central Coast.
3. Formal resolution appointing Sharon Flaherty as Secretary: M/S/P "Sharon Flaherty is appointed Secretary for the PBLSA."
4. Bruce Elster presentation: Bruce Elster of Shoreline Engineering led a discussion of his proposal "Light Tower Rehabilitation Engineering Evaluation", dated 1 December 2019 (a copy was provided to the members with the agenda). The following items are noted from that discussion. The design presented used the BLM efforts of Otak (Portland, OR)

and its KPFF report in the 2006-7 era as a starting point. Both the eight-channel tendon design and the construction of the replica top three levels of the proposal were discussed. It was stated that the final report would be presented to the BLM for review by the California state office and then the BLM National Operation Center in Denver, Colorado (probably Barry Shelton), as well as the other regulatory agencies noted. Bruce stated that some items in the Billing and Expenses would not apply to this project, but are included as part of the normal proposal documentation package by Shoreline. There was concern expressed on the commitment of PBLSA funds to the tower proposal versus the other restoration projects (Victorians and the Lens in particular) and the lack of a policy on the retention of PBLSA funds for future use; it was stated that the capital campaign planning should address both of these issues.

M/S/P "The PBLSA Board of Directors moves to approve \$64K for Shoreline Engineering's Light Tower Rehabilitation Engineering Evaluation proposal (dated December 1, 2019 and appended to meeting minutes) for professional engineering services as presented to the Board at its December 4, 2019 meeting."

New Business:

1. None

Discussion Items:

1. None

Board meeting adjourned at 7:37 pm

Minutes recorded by Jim Harris

Appendix 1: Treasurer's Report 12/4/19 – Harry Thorpe

TREASURER'S REPORT for October 2019

1. OPERATIONS INCOME: Last Month: \$12,126.03 YTD: \$54,310.53

PROFIT: Last Month: \$7,019.62 YTD: \$6,664.55

TOWER RESTORATION FUND BALANCE: \$12,662.03

BLM SUPPORT EXPENSE: Last Month: \$8,432.10 YTD: \$118,239.32

BALANCES: PP Bank: \$7,414.39 ASAP: \$35,934.12

2. INVESTMENT BALANCE – FIDELITY INVESTMENTS

Month	Beg Bal	Market Chg	Div/Int	Deposit	W/D	Ending Bal
Oct 2019	566,011.87	1,962.06	1,414.51	--	--	569,388.44
Sept 2019	561,432.36	3,645.71	933.80	--	--	566,011.87
Aug 2019	561,099.22	<834.03>	1,167.17	--	--	561,432.36

3. OTHER:

- Reviewed September/October transactions – made adjustments.
- Audited 2019 checks/supporting material.
- Transferred \$10,000 ASAP funds for operations/maintenance.
- Completed 2017-2019 audit of ASAP funds.
- Completed Mechanics Bank (Rabobank) signature cards.
- Completed SF 424, 424A and submitted to BLM for replenishment of BLM support funds.
- Deposited Sunset Soiree net amount to P.P. Bank Tower Fund.
- FSB project on hold, pending Dan's recovery.

Harry M. Thorpe, Jr.
Treasurer

Appendix 2: Gift Shop Report 12/4/19 – Holly Gant

NET SALES

*Shaded month indicates lower sales than that same month last year

	Jan	Feb	Mar	Apr	May	Jun
2011	884	1,009	1,354	2,517	1,435	2,216
2012	862	922	1,497	1,812	1,366	2,121
2013	1,848	1,270	1,931	2,849	2,208	3,407
2014	1,853	3,263	3,072	2,447	2,186	2,697
2015	2,873	2,278	2,512	2,604	2,783	3,628
2016	1,798	2,609	2,830	1,988	2,142	2,586
2017	2,196	1,461	2,678	3,909	2,864	3,350
2018	3,077	3,094	3,104	3,316	3,133	3,707
2019	1,015	1,605	2,565	3,350	3,641	4,665

	Jul	Aug	Sep	Oct	Nov	Dec
2011	3,481	2,973	1,733	1,445	1,158	1,837
2012	3,718	3,725	1,951	2,653	1,207	1,344
2013	4,351	4,121	2,314	2,048	1,872	1,965
2014	3,838	4,283	3,045	2,528	1,412	1,635
2015	4,862	4,356	2,609	3,216	2,258	2,157
2016	4,861	3,410	2,716	2,647	1,930	2,103
2017	4,666	3,701	2,218	3,022	2,793	3,491
2018	6,225	4,157	3,383	2,552	1,597	1,730
2019	6,804	4,722	2,070	3,656	2,717	

	TOTAL	Jan - Jun
2011	\$ 22,042	\$ 9,415
2012	\$ 23,178	\$ 8,580
2013	\$ 30,184	\$13,513
2014	\$ 32,259	\$15,518
2015	\$ 36,136	\$16,678
2016	\$ 31,620	\$13,953
2017	\$ 36,349	\$16,458
2018	\$39,075	\$19,431
2019		\$16,841

*Government shutdown effected Dec 2018 and Jan 2019

Fun fact: Resin LH model sales = 51 (including 14 by volunteers at sale price) since October 2018.

Appendix 3: BLM Update 12/4/2019 – Ryan Cooper

Past Events

Native American Presentation

Tammy Whitley came out and gave a great presentation on the Native American presence out here and gave us lots of good incite on the Native American culture.

Projects

Fog Signal Bldg. (FSB):

No progress this month

Lens

Sent emails to Arlyn on October 22 and November 20 with no response. I will call and leave a message.

Victorian

No Progress this month

Water

The BLM State office has just hired a now water expert and I just got her contact info this week. I will be contacting here ASAP.

Flag Pole

No Progress since the last meeting but should be ready to go early 2020.

Painting the LH

Jodie is working on a statement of work. She has contacted the old painters and they have given little help. We are continuing to work on it.

Bathroom / Parking Lot

I have secured the funding for the restroom facility in the bottom parking lot I will be putting out the purchase request early 2020

Miscellaneous

We are looking at raising our fees back to 15 dollars per person like we used to when we first started tours. We are looking at changing when we switch to our summer schedule.

Special Event:

Holiday Party	December 7
Meet the Scientists	April 26 (tentative)
Light House Birthday	Feb 15

Educational Outreach:

Monarch Elementary	December 6 & 13
Vineyard Elementary	January 10, 17, 24, 31

Tour Numbers

Month	2014	2015	2016	2017	2018	2019	2020
October	637	605	516	500	506	441	535
November	622	503	474	357	523	433	334
December	404	464	426	273	829	251	
January	661	731	623	266	608	0	
February	573	570	572	284	780	318	
March	696	754	560	502	662	784	
April	663	616	581	666	684	790	
May	432	629	352	572	362	555	
June	658	916	521	787	732	698	
July	1178	990	850	1125	1169	1085	
August	985	809	693	836	1001	819	
September	601	481	442	437	591	374	
Total	8110	8068	6610	6605	8447	6548	

*partial

Appendix 4: Tower Report 12/4/19 – Jim Harris

Bruce Elster has prepared a draft proposal for the PBLSA Board for the next design phase, the Design Level Engineering Evaluation, and will review that document with the Board at this meeting; the document is attached (and copies will be available at the meeting). As can be observed, discussions between Bruce and Dan Murphy have led to further enhancements of the current design approach. The newest enhancement is the approach to restoration of the openings which now consists of removing the existing ironworks, refurbishing the metal, and then replacing it back into its opening. Two salient points in the document are that a preliminary draft with an order of magnitude estimated restoration cost are planned to be available in April and that a not-to-exceed cost for the design work on this phase is \$64K. After the Board's discussion, I recommend that the Board accept the proposal (with any responses to the Board's discussion included).

Proposal from Shoreline Engineering / Bruce Elster

1 December 2019 Job #404-05

Piedras Blancas Lightstation Association PO Box 127

San Simeon, CA 93452

Ref: Light Tower Rehabilitation Engineering Evaluation Professional Engineering Services

Introduction

The Piedras Blancas Lightstation Tower (Tower), constructed in 1874-1875, originally stood at 100 feet in height. The tower now stands at approximately 61 feet in height. The Piedras Blancas Lightstation is on the National Register of Historic Places, and the beacon at the top of the Tower continues in service as an active Aid-to-Navigation (ATON). The structure, in general, consists of:

1. Unreinforced clay brick masonry
 1. Wall thickness range from approximately 1.7 ft to 4.5 ft thick.
 2. Access is made through a single door portal in the east side of the Tower
 3. Six window openings located along the staircase and landings
 4. Central ventilation shafts of varying size and geometry, generally not functional except at the top landing and the roof.
2. 6 inch thick reinforced concrete roof deck structure (added by the Coast Guard in 1948).
3. Prefabricated iron spiral staircase.
 1. The staircase spirals upward within a tapered shaft
 2. Three semicircle iron landings.
4. Navigation beacon at the top of the Tower providing service as an active Aid-To Navigation (ATON).

Previous work on the Lightstation Tower with which the Engineer is associated; or has reviewed, includes:

- Engineer's Report & Seismic Evaluation: Lighthouse Tower Piedras Blancas Lightstation San Simeon, California, dated 29 February 2016 (Bruce Elster, Shannon Abeling)
 - Experimental/Computational Exploration Of Retrofit Strategies For The Piedras Blancas Light Station, dated 18-21 June 2018 (Cole McDaniel, Peter Laursen, Graham Archer, Bruce Elster)
- Shoreline Engineering, Inc 505 Harbor Street
Morro Bay, California 93442 V: 805-772-6466
e: be@shoreline-engineering.net

- Forced Vibration Testing of the Piedras Blancas Lightstation Tower for 3-Dimensional Computational Model Validation, 2016 SEAOC Convention Proceedings, (Cole McDaniel, Peter Laursen, Bruce Elster)
- Structural Evaluation and Analysis, Piedras Blancas Lighthouse, dated September 24 2007, KPFF
- Phase 2 - Light Structural Evaluation, Piedras Blancas Lighthouse Restoration, dated July 28 2006
- Mapping, Tower Cracks, date unknown, Bogacki or Boucher (prior Site Managers)
- Piedras Blancas Lighthouse Rehab, Plans & Details, 21 Nov 1991, US Coast Guard Civil Engineering Unit Oakland
- Construction Plans, Piedras Blancas Lighthouse Tower, filed 17 March 1874, Office of the Lighthouse Board

In developing a rehabilitation strategy for the Tower, a number possible rehabilitation scenarios were considered; but, were not believed to be viable. The Engineer is currently prepared to commence on the rehabilitation evaluation. Briefly, the rehabilitation evaluation will consider:

- Installation of vertical steel bolting within the Tower brickwork with periodic anchor plates to distribute overturning stress more evenly through the Tower.
 - Horizontal reinforcing will be considered to encircle the Tower to improve shear stress resistance.
 - Removal of the exterior ironwork (window/door frames, sills, and miscellaneous). The ironwork will be rehabilitated and then reinstalled in their original positions, maintaining the historic fabric and character.
 - The goal is, in part, to achieve a rehabilitation that will not be apparent to the observer when rehabilitation/restoration work is completed.

There are, in general, two different phases of activity.
- Design Level Engineering Evaluation (DLEE)
The Design Level Engineering Evaluation is considered to be the next generation of the previously issued Report & Seismic Evaluation. A Design Level Engineering Evaluation will not include evaluations of details. The result would include an evaluation along with proposed rehabilitation strategies. Cost estimates, when include, are generally preliminary order of magnitude estimates.
- Engineering Design & Construction Documents (EDCD)
Engineering Design & Construction Documents is the next level up in engineering design. It would include, in addition to information in the Design Level Engineering Evaluation: detail evaluations, plan preparation, technical specifications, and a preliminary engineer's cost estimate.
It is understood the desire of the Piedras Blancas Lightstation Association (PBLSA) to develop a Proof of Concept Plan and Evaluation to assist in developing a capital program for the rehabilitation of the Tower. Therefore, the Engineer proposes to perform a Design Level Engineering Evaluation to assist the PBLSA in determining the best approach to the rehabilitation of the Tower.

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The Engineer believes the Tower is classified as a designated Essential Service Facility (Risk Category IV). Regulatory review is expected to be made by; but, may not be limited to:

- US Bureau of Land Management (Lead Agency)
 - US Coast Guard
 - California State Historic Preservation Officer (SHPO)
 - California Office of Emergency Management
 - National Oceanic & Atmospheric Administration
- Scope of Services

Work to be prepared by the Engineer will consist, in general, with the preparation of a Design Level Engineering Evaluation (DLEE) along with preliminary plan documents that will support recommendations included in the DLEE. The DLEE could be used for determining appropriate rehabilitation remedies in the future. The Engineer proposes to provide the following services:

1. Development of a finite element computer model (FEM) of the Tower.
 1. FEM will be directed primarily to the stabilization and rehabilitation of the Tower. Modeling will include preliminary consideration regarding replacement of the missing Watchroom and Lantern levels.
 2. The FEM will build on prior work, and will be an idealized modeling that will incorporate mass properties that have been determined through previous testing, and available documentation.
 3. The FEM will be subjected to building code prescribed forces.
 4. The FEM will incorporate rehabilitation elements with the purpose of strengthening the Tower's resistance to seismic lateral forces.
 5. Modeling of the Watchroom and Lantern will be considered. Modeling will incorporate these elements as composite materials in general. The Lantern is proposed to be modeled with bronze elements as original.
 2. Approximate forces generated by a replica watchroom/lantern replacement on top of the Tower.

The information from this work task can be used to determine the feasibility of replacing the watchroom/lantern replacement on top of the Tower. Outside consultation may be required and time for this will be provided on a time-and-materials basis as additional work.
 3. Structural engineering evaluation of the structure will be provided in conformance with the current edition of the California Historic Building Code (CHBC, 2016), California Existing Building Code (CEBC, 2016), California Building Code (CBC, 2016); ASCE 7-16 (Minimum Design Loads for Buildings and Other Structures), and ASCE 41-17 (Seismic Rehabilitation of Existing Buildings), each where applicable, and/or governs design.
 4. An Engineer's Preliminary Order of Magnitude Cost Estimate will be prepared
 5. A written report will be prepared. The written report will include illustrative drawings describing findings and recommendations.
 6. Outside peer review.
 - a. Meet with PBLSA Board. Progress of design development will be made available for review, discussion, and receipt of constructive criticisms.
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- b. Peer review with outside consultants. It is anticipated that Architectural Resources Group (or similar) will be brought in to review design development and offer constructive criticisms. One meeting is provided.
 7. Meetings. Presentation of DLEE reporting in a general context to the public can be made. One such meeting is provided.
 8. Scheduling:
 1. Draft evaluations and preliminary findings will be available for discussion at the beginning of April.

2. The final report and related exhibits will be ready for distribution within three months of presentation of the draft evaluations.
3. In the event circumstances affect the scheduling, the Engineer will coordinate adjustments with the Board.

Statement of Qualifications

The Engineer, through Shoreline Engineering Inc, is a boutique small business, and has been providing professional structural & civil engineering services for more than 40 years, 38 years as a Professional Engineer. Shoreline Engineering, Inc has provided engineering services on a variety of buildings, bridges, shoring structures, near-shore engineering structures, and restoration of historic unreinforced masonry buildings.

Fee Estimate Professional services will be provided as follows:

1. Design development and report preparation.
2. Meetings. Three meetings with the PBLSA Board are anticipated.
3. Outside peer review. One meeting is included.
4. One general presentation to the public, if requested.
5. Professional services will be provided on a time and materials basis per the attached Schedule of Fees, or by modified agreement.
6. The not-to-exceed fee for the Engineer's Professional Services is currently \$64,000.00
7. It is recognized that the scope of service may be modified during the course of the Project. Any adjustments in scope will be coordinated with the Client prior to commencement with work on any additional phase of activity.

General Information and Limitations

Work on the Project is limited to structural and civil engineering only. Outside consultation with others, such as, architects, geotechnical engineers, environmental consultants, regulatory servicing agencies (permits), etc., may be necessary; and are not services provided by the engineer. Shoreline will assist in coordinating the activities of consultants, if required.

Construction documents prepared by Shoreline are limited to those technical aspects related to structural and civil engineering only and will not include, but, not limited to any non-engineering items such as insurance, signage, safety fencing, parking, sanitation.

Shoreline does not provide regulatory servicing. In the event it is necessary for the engineer to assist in the processing of permits, or other similar activities; this work will be provided at the engineer's

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consultant rate. Coordination with regulatory agencies on technical engineering matters is provided at the Principal Engineer's rate.

Professional services provided by Shoreline will be provided in accordance with methods and procedures recommended by respected national and regional organizations, including the American Society of Civil Engineers and the California Building Standards Commission. The degree of professional care provided will be consistent with the level of skill that is ordinarily exercised under similar circumstances by responsible engineers currently practicing in this, or similar, area/s of professional practice.

Any evaluations, calculations, and drawings are the instruments of service of Shoreline. The information contained in those instruments of service are solely for use on this specific project and sited, and shall not be used otherwise without the express permission of Shoreline.

Evaluations, drawings, and the information contained therein, together with the represented ideas shall remain the property of the Client and Shoreline; and, in no way shall be copied or used in connection with any other project without the express written consent of the Client and Shoreline. Visual contact with this notice shall constitute prima facie evidence of acceptance of these restrictions.

If you have any questions or require additional information, do not hesitate to contact our office at your convenience. If this proposal is acceptable to you, please review all the attached documents, and authorize Shoreline to commence work under the terms and conditions herein.

Respectfully submitted,

Accepted

Owner/Authorized Representative Date:

Printed Name, Owner/Authorized

Representative, Title

Bruce S. Elster, PE, Secretary

Attachments:

1. Schedule of Fees

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Labor Rates:

Professional Services:

Project Director

Principal Engineer

Support Engineer

CADD Operator

Consulting Engineer/Expert Witness Depositions/Court Appearances

Subcontractors/consultants:

Rate/Hr

\$200 \$175 \$150 \$125 \$225 \$450

2019 Fee Schedule

• Outside professional services for testing, evaluations, consulting shall be provided under separate agreement with client

Billing and Expenses:

- All bills are due and payable upon presentation of invoicing.
- A monthly late payment charge of one and one-half percent (1 1/2%) per month shall be applied to any unpaid balance due on billing commencing thirty (30) days after the date of the original billing.
- Periodic billing shall become conclusive and binding ten (10) days from the date of receipt of billing unless client notifies consultant in writing of any questions regarding the billing within the ten (10) day period.
- Reimbursable Expenses: Accommodations and meals are billed on a per diem rate of \$250.00 per day. Expenses shall be reimbursed at actual cost plus fifteen (15%) per cent. Reimbursable expenses can include; but are not limited to, coordination with outside consultants, air travel, photocopying, postage, telephone/fax, photographic materials and processing, printing, and reproduction.
- Telephone stand-by time is billed at 1/2 times the engineer's consultant rate.

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Appendix 5: Power Line Report 12/4/19 – Jim Harris

The undergrounding project remains on hold as reported last time. The focus of the work continues on the cost estimate for a sustainable option to allow electric power for the light station with or without grid input using a microgrid system with solar and motor generator input and battery storage. The plan is to meet with Bryan French at the start of the year to take the next steps in this effort.

Appendix 6: Capital Campaign/Grants Report 12/4/19 – Jim Harris/Holly Gant

David and Jim have been working on getting the names and contact information for three Capital Campaign consultants for the Board to consider; we have two and are getting the third recommendation. The plan is to be able to present a candidate to the Board at the January 2020 meeting for their consideration. Holly continues to work on the capital campaign brochure. Due to these planning efforts, there has not been any effort for preparing grant proposals for projects, as that will continue after the planning is completed.