# PHOENIX LAKE LOG CABIN RENOVATION BASIS OF DESIGN REPORT

-FOR-

#### THE MARIN MUNICIPAL WATER DISTRICT

JUNE 6, 2016







BY

ROTH/LAMOTTE LANDSCAPE ARCHITECTURE PRESERVATION ARCHITECTURE R. BORINSTEIN CO.

## PHOENIX LAKE LOG CABIN MARIN MUNICIPAL WATER DISTRICT BASIS OF DESIGN REPORT

#### INTRODUCTION

This memorandum intends to assemble work efforts and products related to the development of information and concepts for the future of the Phoenix Lake Log Cabin and its site, and for the Marin Municipal Water District's information and use in directing future work on the site and structure.

This Basis of Design Report constitutes a final submission of materials for a 30% Design Development drawings set. The Basis of Design Report summarizes the preferred design alternative to be pursued.

In addition to this Introduction, the contents of this memorandum include:

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Appendices - Background info (@https://rothlamotte.org/wiki/pages/X6v6V1/30\_DD\_SUBMITTAL.html):

- Phoenix Cabin HSR
- MMWD Use Policy
- MMWD Use Policy statement
- Meeting notes
- Previous Documentation
- Alternative Design Plans.
- Existing Conditions Photos

#### I. PROJECT TEAM

The following have participated in the development of these planning and design efforts:

- 1. MMWD Mike Swezy and Nicholas Salcedo, A/E Team Support and background information.
- 2. GGNPC Sharon Farrell

- 3. Roth/LaMotte Landscape Architecture Gary Roth
- 4. Preservation Architecture Mark Hulbert, Architect
- 5. Costing Bob Borinstein, R. Borinstein Inc.

#### II. DESIGN PROGRAM STATEMENT

The project team has attempted to encapsulate the design and planning efforts and to review the options pursued in the memorandum below and present the design for a Rehabilitation of the Log Cabin and site..

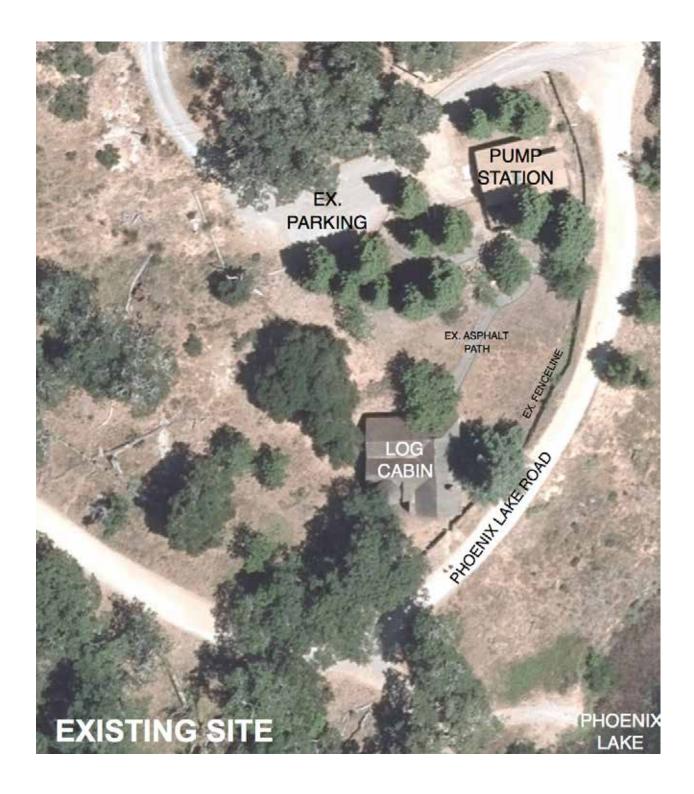
The basic design task has been to determine the best approach for the log cabin and its immediate site in a manner that grapples with current building codes, archaic construction techniques and the continuation of limited public access to the building and grounds. The cabin is a deteriorating structure and its construction typology makes it difficult to ensure its continued use without substantial changes to its structure and possibly its basic layout.

The design program provided five conceptual design alternatives in order to provide a sliding scale of cost and long-term maintenance for the district and yet consider group use for current and future MMWD and One Tam volunteer and educational programming.

From these alternatives, the design team has received MMWD and public direction as to how best to proceed in a manner that satisfies the needs of the District in terms of long-term maintenance, preservation of the historic fabric and the best public use of this place, balanced with budgetary limits and public input. The Full Rehabilitation alternative was established as the preferred design direction by the MMWD watershed committee and public input received during the public open house on February 27th, 2016. The design team has provided herein the preferred alternative for submittal to MMWD staff and Marin County Planning for review and approval.



Phoenix Lake Log Cabin - Front (south), 2016



Phoenix Lake Log Cabin – Existing Site Plan (north is up)

#### III. SUMMARY OF EXISTING CONDITONS (FROM AUGUST 2015 HSR)

#### General:

The Cabin is a single-story, 3-plus room, log-built structure dating to the late-19th century. Its original residential use is no longer, its last use as such possibly dating to the mid-20th century. Per District records, the Cabin was altered in 1940 with interior finish work and a new front patio (replacing a previous porch and cupola). In 1989, the Cabin was restored, including the reconstruction of the original/early front porch and cupola, while upgrading the Cabin and its immediate site for use as a meeting and group use facility. Subsequently, and due to limitations — specifically being located semi-remotely and with challenging access to potential users — the use of the Cabin was ended some 10 years ago and it has largely stood vacant since.

The fact of its lack of use is pivotal to its current status and conditions. It is an aged residential building of unique and vulnerable redwood log construction. Its vulnerabilities are several: environmental, being in a semi-remote, hillside location exposed to wooded outdoor conditions and the concomitant invasions of nature (trees, birds, insects, etc.); and human, being accessible to people yet with only limited custodianship. Interestingly, it is the former of these two factors that dominate its present conditions, as the site and structure have not experienced much in the way of vandalism (ex: loose copper work has not been pilfered, no graffiti, and the interior has not been invaded).

#### Site

Specific site conditions are limited since the Cabin is essentially freestanding and has no specifically related outdoor areas with the exception of parking and an entry path. The parking is located along the driveway above and to the north. The asphalt-paved entry path descends the slope in a meander, arriving at the rear porch. Both parking and entry pathway are improved to no more than a basic extent — the parking is unpaved and circumstantial, and the path while paved is makeshift.

At the front of the Cabin, there is a gate in the fence at the fire road, but which is unused, and there is no associated front entry path.

Other site issues basically include the wooded setting. While a rural structure without any cultivated landscape, tree related conditions are evident. An additional and important site condition is that of birds and pests, the range of which have caused extensive material and structural damage.

#### Exterior:

In general, the Cabin's exterior conditions can be summarized as deteriorating, with decay largely unarrested and with localized structural failure. The only areas and features that appear to be in good condition are the Cabin's overall form, its front door and curly redwood trim boards, some of the logwork, and its non-historic concrete foundations. The 1989 cedar shingle roofing is in good-to-fair condition, yet its ridge and hip shingles having just been replaced. Previously reconstructed logwork is failing structurally and materially, particularly ornamental and trim pieces..

#### Interior:

In general, the Cabin's interior is in fair and relatively stable condition. Interior walls, floors, and ceiling/roofs are variously of wood frame and log construction. The walls and ceiling/roofs appear to be in good condition, whereas the wood floors have been affected by wetness and debris. Some bird/rodent infestation is also in evidence, both in the lower walls and in the attics. Interior doors are in good condition, as is a large brick masonry fireplace/chimney in the former living room.

For existing conditions photos, see appendix.

#### IV. ALTERNATIVES SUMMARY

The alternatives that were pursued are as follows:

- 1. <u>Full Rehabilitation</u> Reconstruct the existing structure and upgrade accessibility and code compliance for limited visitor use.
- 2. <u>Rehabilitation</u> Stabilize and partially reconstruct the structure and upgrade accessibility and code compliance for limited visitor use.
- 3. <u>Partial Retention and Rehabilitation</u> Stabilize and preserve the most intact pieces of the structure and re-build the front area as a covered exterior space to honor the original footprint.
- 4. <u>Mothballing</u> Stabilize and preserve the structure to accepted standards to prevent further deterioration and safety issues
- 5. <u>Removal</u> Remove the building and memorialize the site or create a public picnic and gathering area with potable water, interpretation and seating.

Each option was pursued and has associated site and building plans that are available upon request.

We have provided detailed descriptions of each alternative in the pages below as well as site plans, building plans, cost comparisons for the Preferred Alternative as well as an appendix with background materials and meeting notes that have informed the design process.

#### 1. FULL REHABILITATION – PREFERRED APPROACH

#### A. Design Program Statement - FULL REHABILITATION:

The Full Rehabilitation Alternative would retain and rehabilitate the Cabin for reuse. This alternate would retain the existing and historic Cabin while removing and reconstructing the front porch structures and ornamental features that were added in 1989, including the cupola. Though these added features are, in the HSR, identified as non-historic features that are in poor structural and material condition (see below), the Full Rehabilitation option was the preferred approach for those in attendance at the 2/27/2016 open house review of the designs.

#### Project Description - FULL REHABILITATION:

The Full Rehabilitation Alternative would retain and rehabilitate the Cabin for reuse. This alternate would retain the existing and historic Cabin while removing and reconstructing the front porch structures and ornamental features that were added in 1989, including the cupola. Though these added features are, in the HSR, identified as non-historic features that are in poor structural and material condition (see below), the Full Rehabilitation option was the preferred approach for those in attendance at the 2/27/2016 open house review of the designs.

### BUILDING Alterations and Improvements – FULL REHABILITATION Exterior:

- 1. Selectively remove and replace structurally damaged logs (assume 40%).
- 2. Remove and reconstruct front porch and cupola to match existing.
- 3. Retain existing front chimney and remove existing rear chimney.
- 4. Repair/rebuild existing rear porch with new log post and rail work and new decking.
- 5. Restore and repaint wood window sashes and sills, or selectively replace to match; replace split log window sills where damaged or missing.

- 6. Clean and repair wood shingle roofing and roof drainage (flashing) assemblies. Replace where missing or irreparably damaged (also acknowledging that some roof repairs have recently happened, specifically the replacement of ridge and hip shingles).
- 7. Temporarily and periodically (seasonally) protect exterior log structure from birds with nets and other physical (or sonic) barriers.

#### SITE/LANDSCAPE Alterations and Improvements — REHABILITATION

- 1. Salvage existing fence, replace with lower, split rail fence.
- 2. Remove asphalt path from parking above and replace existing path with on grade trail, built to MMWD trail standards.
- 3. Grade and install accessible concrete paved parking space along access road with boulder retaining wall.
- 4. Regrade area around cabin to allow positive drainage around and away from structure and build new battered, mortared stone wall.
- 5. Septic leach field and tank upgrade or replacement.
- 6. Install interpretive signage to describe history of the site and structure.
- 7. Install pedestrian access and gate from trail below to increase human presence at site.
- 8. Protect existing heritage trees on site. Prune and mitigate existing trees for safety issues.
- 9. Grade new terrace for picnic area with accessible tables, aggregate paving and drinking fountain/water station.
- 10. Improve landscape and plantings in area around cabin as a display of restoration goals for the area.
  - a. Area may be used as a volunteer training area for restoration plantings.
  - b. Restoration of ground plane to locally native grasses and perennials to complement the native oaks, maples and redwoods.

#### 2. REHABILITATION - NOT SELECTED

#### Design Program Statement - REHABILITATION:

The Rehabilitation Alternative would retain and rehabilitate the Cabin for reuse. This alternate would retain the existing and historic Cabin while removing the front porch structures and ornamental features that added in 1989, including the cupola, which are identified as non-historic features that are in poor structural and material condition.

The cupola, porch and related ornamental features were reconstructed in 1989 based on historic photos from cl900. Originally, it must be presumed that the cupola had a purpose, possibly domestic water storage. However, that original cupola and ornamentation were not only long lost but very likely for the same reason that these features are presently being lost — poor structural and material conditions. In addition, the rebuilt cupola is essentially romantic ornamentation, as the cupola has no purpose. Thus, that range of ornamental construction has now been lost twice. It is unknown how long the first iteration lasted, but we know that the initial reconstruction of the ornamentation lasted only about 25 years until it became hazardous and now requires removal. To rebuild the cupola and associated adornments in a similar manner to that done previously would be inadvisable without an understanding that it will require intensive maintenance and replacement of components on a frequent basis. It would be far more realistic, given the conditions of the overall structure and the realities of the District's maintenance load, to remove the ornamentation and rehabilitate the structure in a simplified manner that would minimize upkeep and replacement requirements over time.

#### Project Description - REHABILITATION:

This proposed alternative would rehabilitate the Cabin, add a new front porch with a new log constructed roof, and reconstruct the rear porch log-work and floor. At the interior, selected wood frame walls and wood wall finishes would be removed and the floor level in half of the living room space would be raised to the floor level of the rest of the building. It is likely that potential occupancy of the house would require two toilet rooms, thus the existing bathroom would be eliminated and opened up to a use area, and two separate toilet rooms would be added at the site directly to the rear (west) of the Cabin. Alternatively, seek opinion from County on the possibility of rehabilitating and creating an accessible interior restroom along with the existing uphill restroom.

Site improvements, at minimum, would include upgrading the accessibility to the structure, adding an accessible parking space and accessible restrooms. This objective assumes that the program for the use of the structure includes gathering of ten or more people. Site improvements would include:

- Accessible paving, parking space, and pathways to both the rear and the front door.
- Two new exterior restrooms separated from, but accessible to, the cabin. Battered stone walls to replace the existing wood retaining wall.
- The addition of an outdoor, on-grade, picnic terrace.
- To increase visual access for the public, replacement of the existing grape stake fence with a more open, and lower, split rail fence to allow for better visual access to the structure from the adjacent trail.
- Restoration of plantings and locally native habitat in area immediately surrounding the cabin.

#### SITE/LANDSCAPE Alterations and Improvements – REHABILITATION

- 1. Salvage existing fence, replace with lower, split rail fence.
- 2. Remove asphalt path from parking above and replace existing path with on grade trail.
- 3. Grade and install accessible concrete paved parking space along access road with boulder retaining wall.
- 4. Regrade area around cabin to allow positive drainage around and away from structure and build new battered, mortared stone wall.
- 5. Grade and install two new restrooms behind the cabin. Alternate would be to install vault toilets.
- 6. Septic leach field and tank upgrade or replacement.
- 7. Install interpretive signage to describe history of the site and structure.
- 8. Install pedestrian access and gate from trail below to increase human presence at site.
- 9. Protect existing heritage trees on site. Prune and mitigate existing trees for safety issues.
- 10. Grade and install accessible concrete paved parking space along access road with boulder retaining wall.
- 11. Grade new terrace for picnic area with accessible tables and aggregate paving.
- 12. Improve landscape and plantings in area around cabin as a display of restoration goals for the area.
  - a. Area may be used as a volunteer training area for restoration plantings.
  - b. Restoration of ground plane to locally native grasses and perennials to complement the native oaks, maples and redwoods.

#### **BUILDING Alterations and Improvements - REHABILITATION**

#### Exterior:

- 1. Selectively remove and replace structurally damaged logs (assume 40%).
- 2. Remove existing front porch.
- 3. Remove ornamental log work at front, including ornamental roofs and cupola.
- 4. Remove and salvage brick chimneys.
- 5. Restructure front roof gable (at living room).
- 6. Construct new front porch and steps with new shed-type roof.
- 7. Repair/rebuild existing rear porch with new log post and rail work and new decking.
- 8. Restore and repaint wood window sashes and sills, or selectively replace to match; replace split log window sills where damaged or missing.
- 9. Clean and repair wood shingle roofing and roof drainage (flashing) assemblies. Replace where missing or irreparably damaged (also acknowledging that some roof repairs have recently happened, specifically the replacement of ridge and hip shingles).
- 10. Temporarily and periodically (seasonally) protect exterior log structure from birds with nets and other physical (or sonic) barriers.

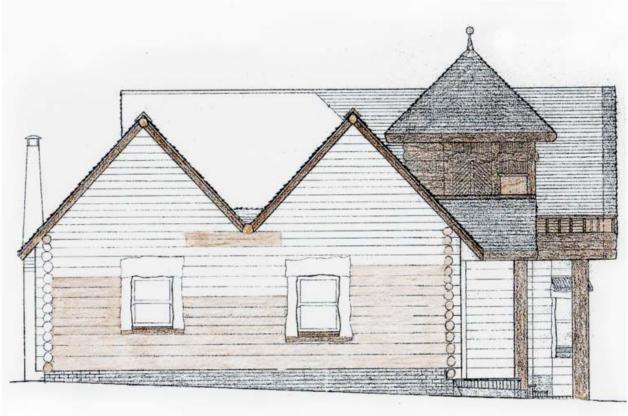
#### Interior:

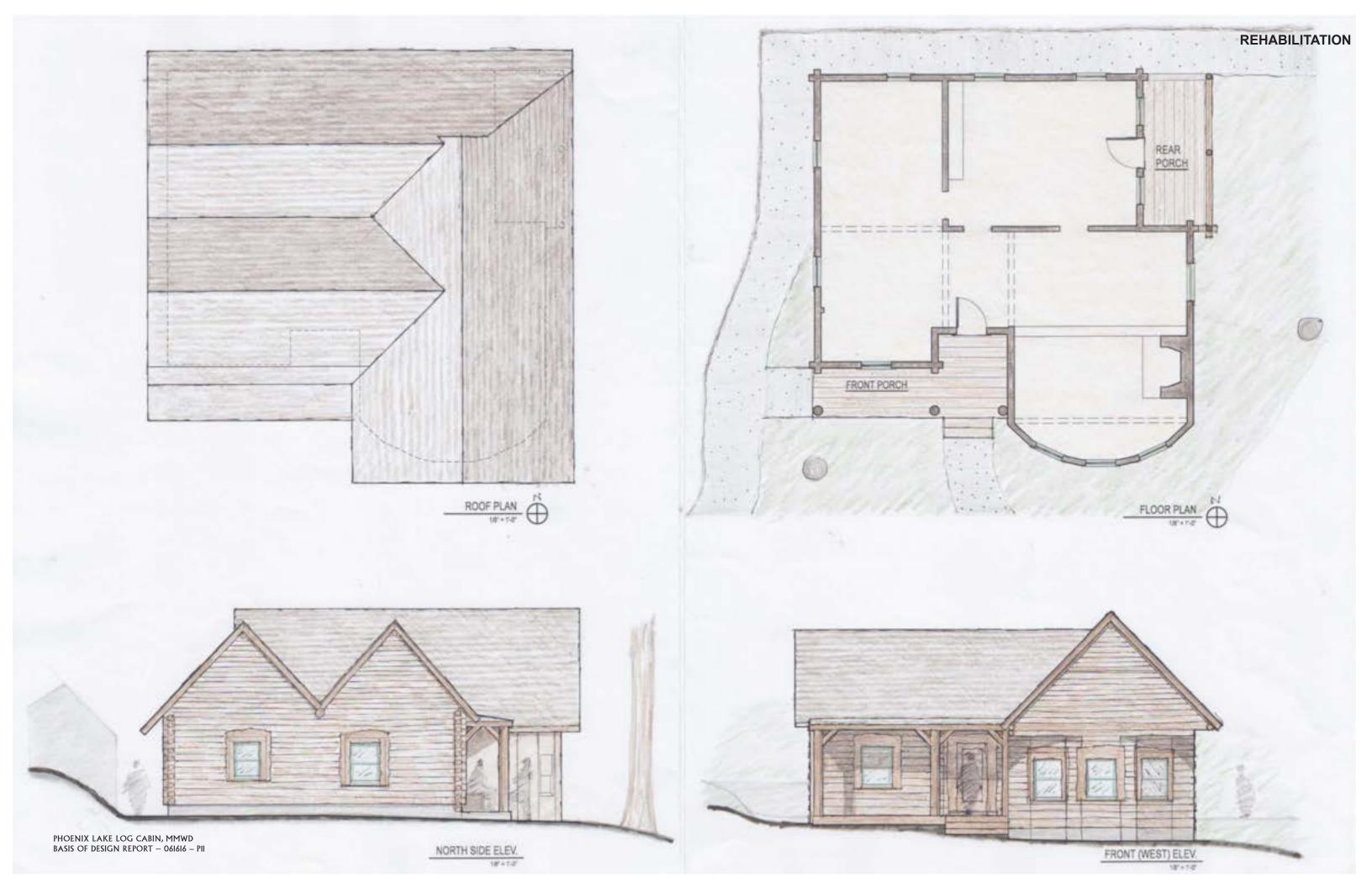
- 11. Remove interior wood frame walls and wood wall finishes. Repair and selectively underlying log work where newly exposed.
- 12. Build new, accessible restroom inside cabin. Remove closet to create required space.
- 13. Log work to be exposed at the interior all interior finishes to be removed.
- 14. Retain interior log walls and ceilings.
- 15. Repair damaged log and wood ceilings.
- 16. Address rodent/pest damage and control. Provide access to attic spaces.
- 17. Retain kitchen cupboard and sink.
- 18. Otherwise, remove kitchen and bathroom fixtures, appliances and equipment.
- 18. Repair and refinish wood floors.
- 19. Construct new floor level in west half of living room.
- 20. Remove lighting. Replace with new lighting throughout.
- 21. If required for programmatic re-use objectives, add connections for internet/wifi.

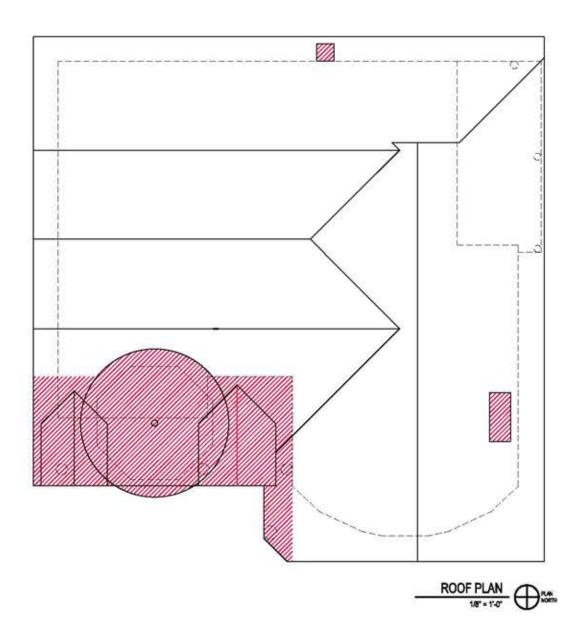


## FULL REHABILITATION





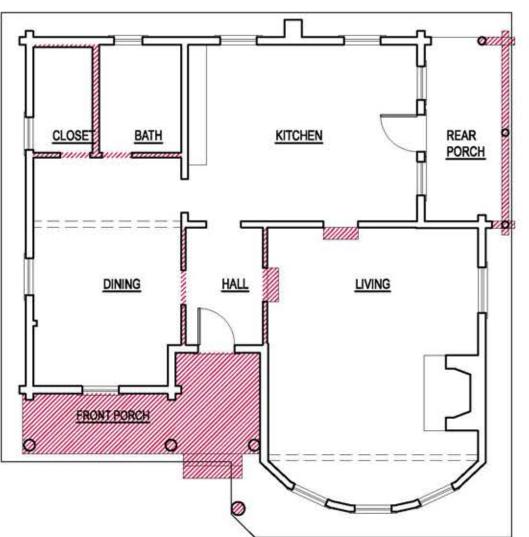


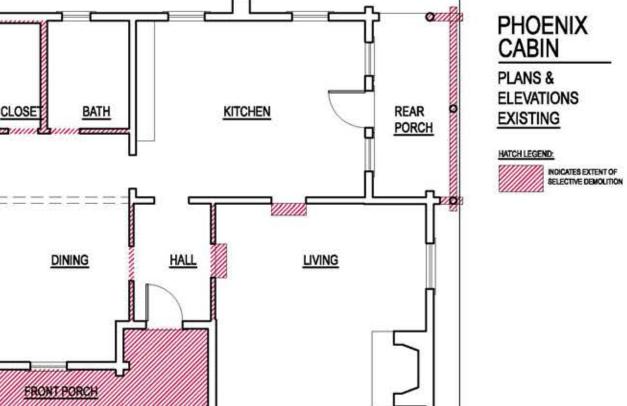




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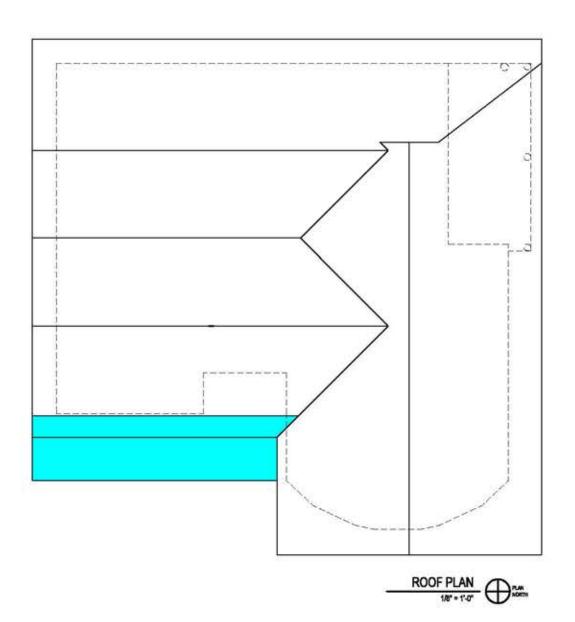
NORTH SIDE ELEV.

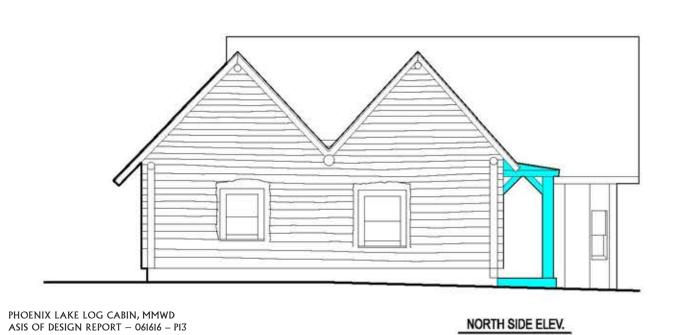


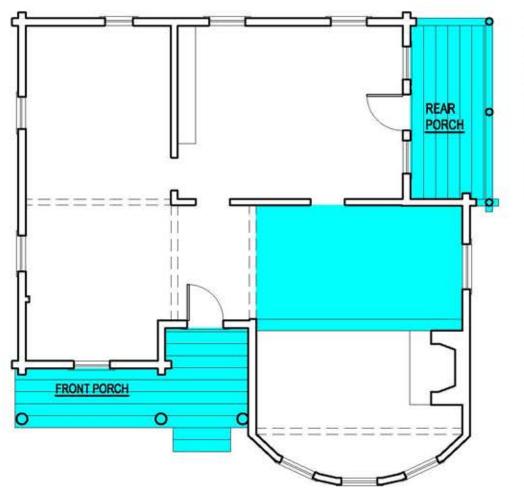


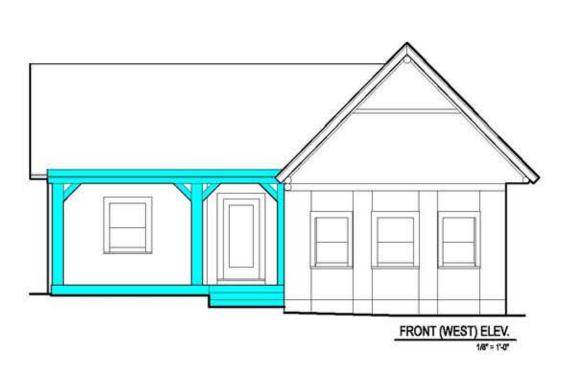
**REHABILITATION** 











REHABILITATION

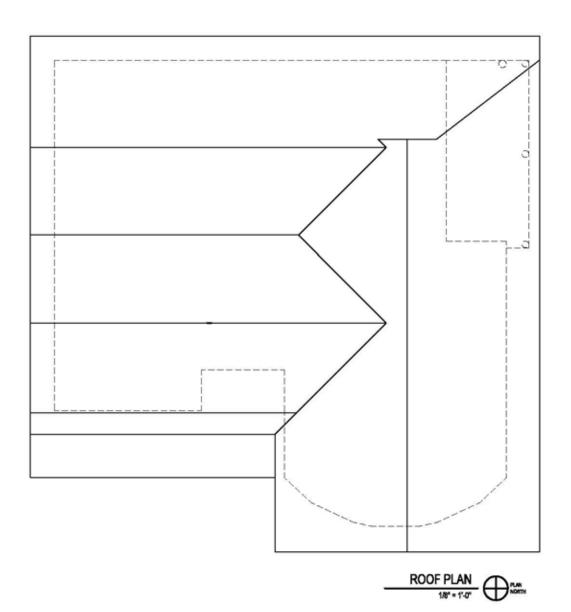
PHOENIX CABIN

PLANS & ELEVATIONS REHABILITATION ALTERNATE

HATCH LEGEND:

FLOOR PLAN
1/6" = 1'-0"

INDICATES EXTENT OF NEW CONSTRUCTION





PHOENIX CABIN
PLANS & ELEVATIONS REHABILITATION ALTERNATE



**REHABILITATION** 



FRONT PORCH

#### 3. PARTIAL RETENTION AND REHABILITATION ALTERNATIVE - NOT SELECTED

#### Design Program Statement - PARTIAL RETENTION/REHABILITATION:

To retain a portion of the existing building in order to reduce the extent of the log cabin and of its interior use area — thus simplify the required rehabilitation and ongoing care of the structure — and to expand the extent of exterior use and program area directly related to the Cabin. Underlying this alternative is the fact that the Cabin is in a diminished and deteriorated state and will require substantial repair and reconstruction for its reuse.

Retention of rear portion of building and redesign, reconstruction of covered outdoor porch and associated site accessibility improvements similar to those noted for Rehabilitation option. It is assumed that group types and numbers will comply with the 25 person maximum allowed in the MMWD Use Policy for the Cabin and grounds.

This alternative is similar in site treatment to that of the Rehabilitation option, but we includes the additional site access features as alternatives that may be used in either alternative to provide improved and defined parking from the current parking area above, improved trail access more in character with the site and design objectives, and access to the front and rear of the structure.

The additional trail connections and restoration activities can be a display garden for MMWD staff and volunteers to show types of best practices for trails and restoration as a training hub for volunteers and an interpretive opportunity for watershed-wide practices.

#### Project Description - PARTIAL RETENTION/REHABILITATION:

This alternate proposes to reduce the extent of the log cabin to the rear/kitchen wing, removing the dining room and the living room, converting the latter into a covered deck area under the existing roof and the former into an open deck area on the existing floor level. The kitchen space would remain as a primary use area. The existing closet space would be combined with the existing bath to create an accessible toilet room and the remaining section of the dining room would be converted to a hallway to serve the restroom.

The reason for selecting retention of the kitchen area versus the dining and/or living area is the high spatial quality of the kitchen space and, in the other half of that wing, an existing bathroom. Were the building to be reduced in size and floor area, those two areas would be of greater use than the open dining and/or living rooms. Yet, this proposal would also retain the form of the living room's roof.

#### SITE/LANDSCAPE Alterations and Improvements – PARTIAL RETENTION/REHABILITATION

- 1. Salvage existing fence, replace with lower, split rail fence.
- 2. Remove asphalt path from above.
- 3. Replace existing path with on grade trail and steps.
- 4. Add additional accessible trail from upper parking.
- 5. Grade and install accessible concrete paved parking space along access road with boulder retaining wall.
- 6. Demo existing wood wall.
- 7. Regrade wood wall area and build new battered, mortared stone wall.
- 8. Regrade area around cabin to allow positive drainage around and away from structure.
- 9. Grade new terrace for picnic area.
- 10. If required by code and use levels, grade and install two new restrooms behind the cabin, including new or upgraded septic system.

- 11. Install new compacted aggregate paving (resin modified) for picnic area and paths.
- 12. Install interpretive signage to describe history of the site and structure.
- 13. Install pedestrian access and gate from trail below to increase human presence at site.
- 14. Improve landscape and plantings in area around cabin as a display of restoration goals for the area.
  - a. Area may be used as a volunteer training area for restoration plantings.
  - b. Restoration of ground plane to locally native grasses and perennials to complement the native oaks, maples and redwoods.

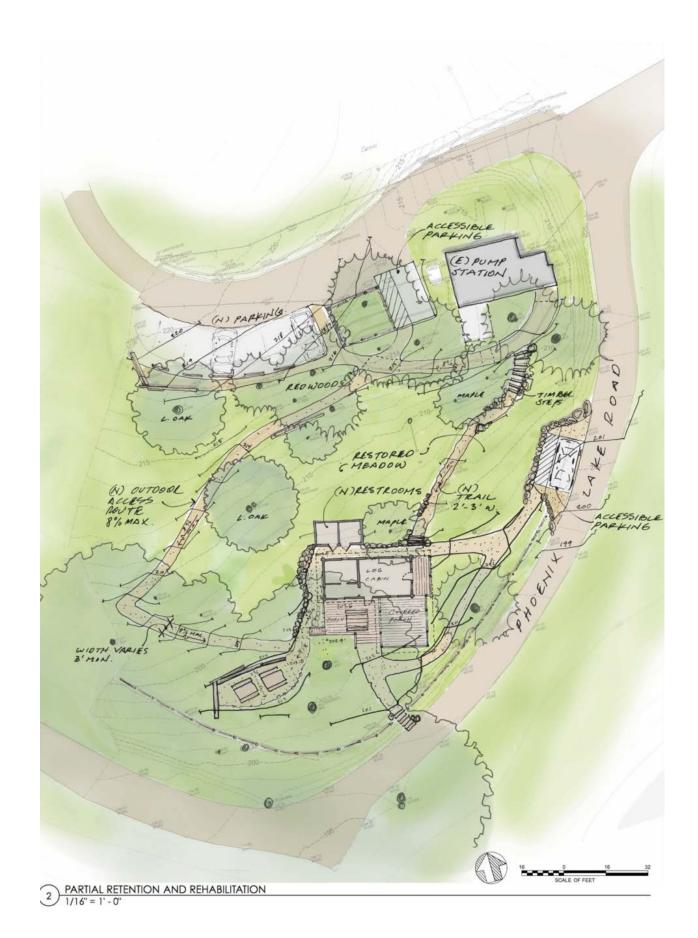
## BUILDING Alterations and Improvements – PARTIAL RETENTION/REHABILITATION Exterior:

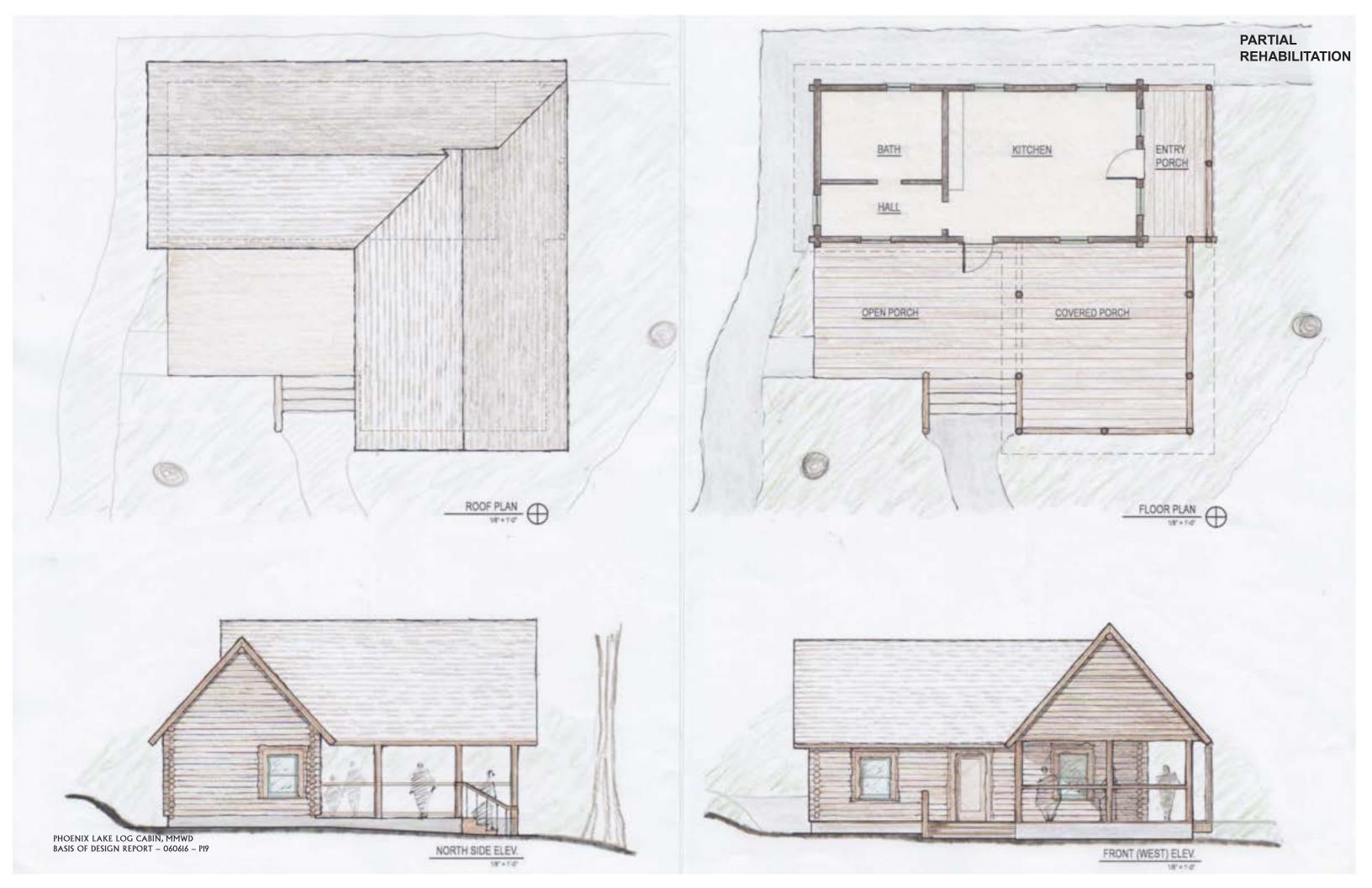
- 1. Selectively remove and replace structurally damaged logs to remain.
- 2. Remove the front porch, dining room and hall wall, floor and roof construction.
- 3. Remove the living room exterior wall, floor, ceiling and fireplace/chimney construction. Retain log roof construction in place (or remove and salvage for reconstruction).
- 4. Salvage all logs in reusable condition; salvage all exterior doors, windows and casings; and salvage all fireplace/chimney brick.
- 5. Construct new exterior log wall at south end of the new east exterior wall using salvaged and, if required, new logs. Reuse existing window and casings in new wall.
- 6. Repair other portions of the new east exterior wall where newly exposed.
- 7. Reuse existing front door and window and their casing at existing door openings in east exterior wall.
- 8. Repair/rebuild existing rear porch with new log work and new decking.
- 9. Restore and repaint wood window sashes and sills to remain, or selectively replace to match; replace split log window sills where damaged or missing.
- 10. Reroof structures to remain.
- 11. Temporarily and periodically (seasonally) protect exterior log structure from birds with nets and other physical (or sonic) barriers.

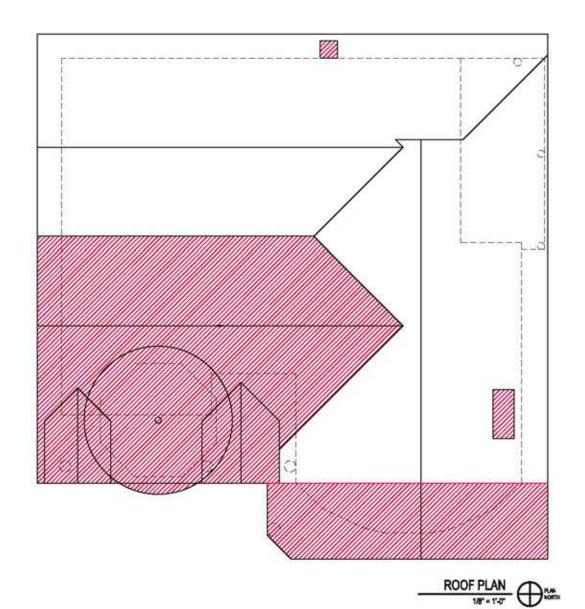
#### Interior:

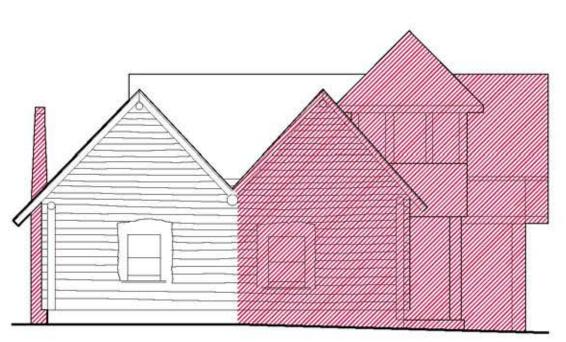
- 12. Retain the kitchen and bath/closet spaces, including the rear portion of the dining room.
- 13. Rebuild floors of former dining and living rooms as exterior decks on one level and with a new set of entry steps and railings.
- 14. Repair/rebuild existing living room roof and front (east) gable and with new supporting log post-and-beam structure; and reconstruct roof eave associate with new east exterior wall.
- 15. Remove existing closet and construct new accessible toilet room with shower.
- 16. Log work to be exposed at the interior all interior finishes to be removed except toilet room to be furred and finished per building code requirements.
- 17. Retain interior log walls and ceilings.
- 18. Repair damaged log and wood ceilings.
- 19. Address rodent/pest damage and control. Provide easier access to attic spaces to enable maintenance.
- 20. Remove interior wood frame partitions to open the spaces up, specifically: the wood frame walls between the vestibule, dining and living room spaces; plus the toilet room and closet walls. The intent being to open the interior up as much as possible for future reuse.

- 21. Retain kitchen cupboard and sink.
- 22. Otherwise, remove kitchen and bathroom fixtures, appliances and equipment.
- 23. Repair wood floors.
- 24. Remove lighting. Replace with new lighting throughout.
- 25. If required for programmatic re-use objectives, add connections for internet/wifi.



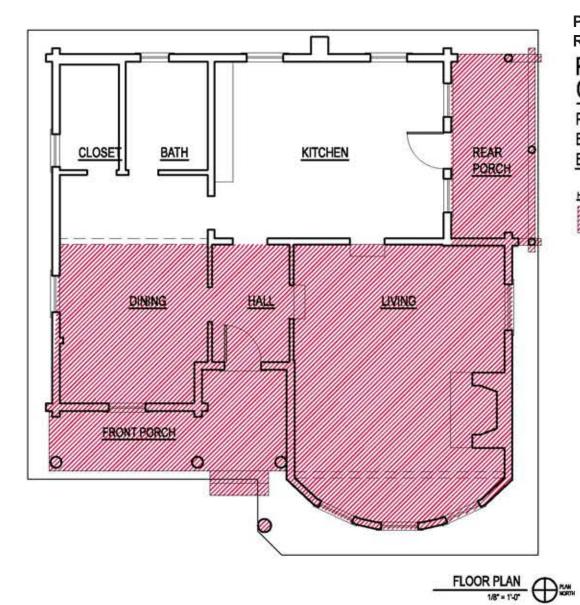






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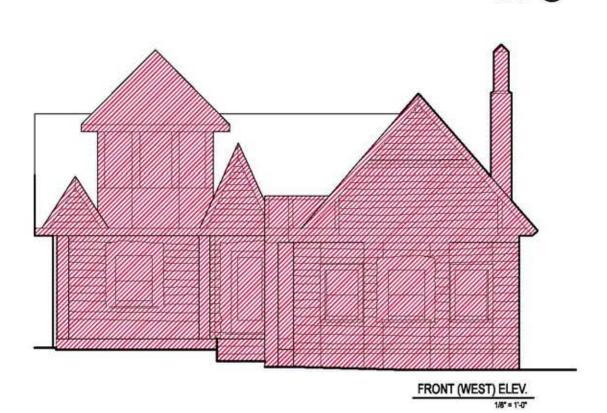
NORTH SIDE ELEV.

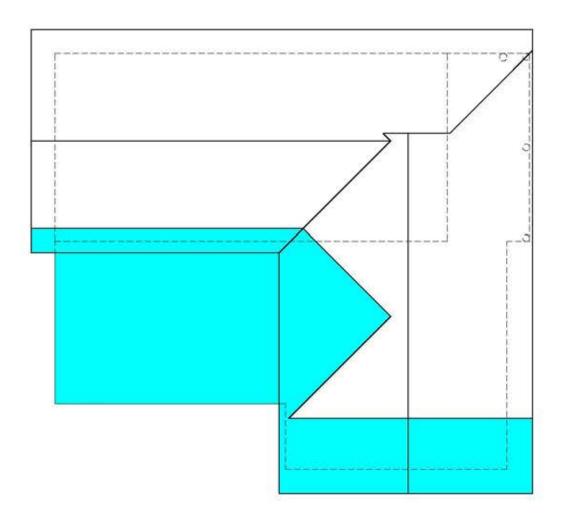




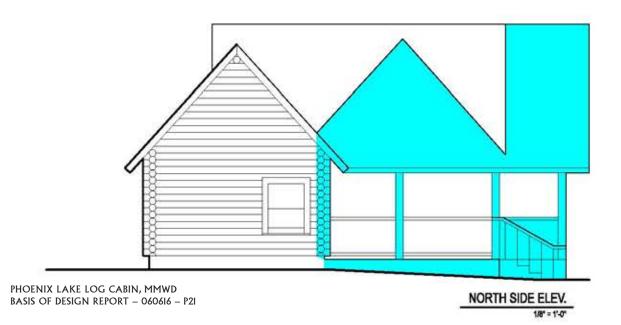
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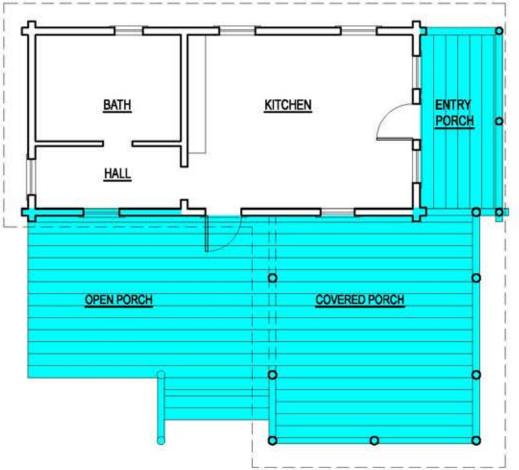
INDICATES EXTENT OF SELECTIVE DEMOLITION





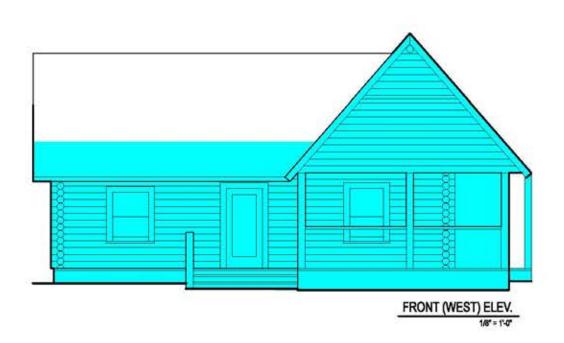


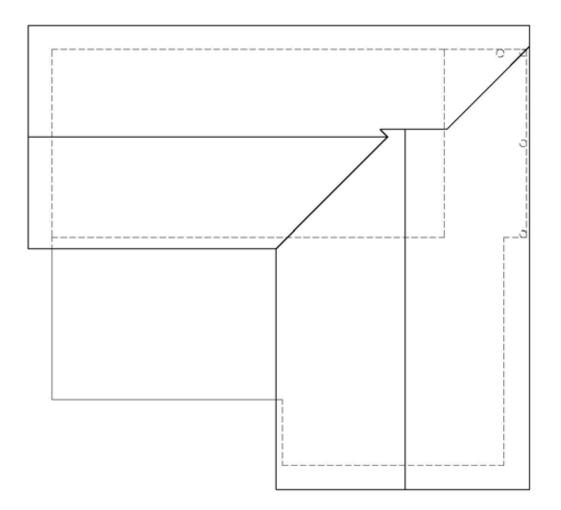




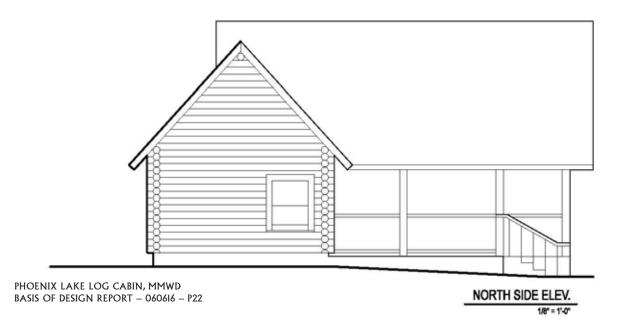


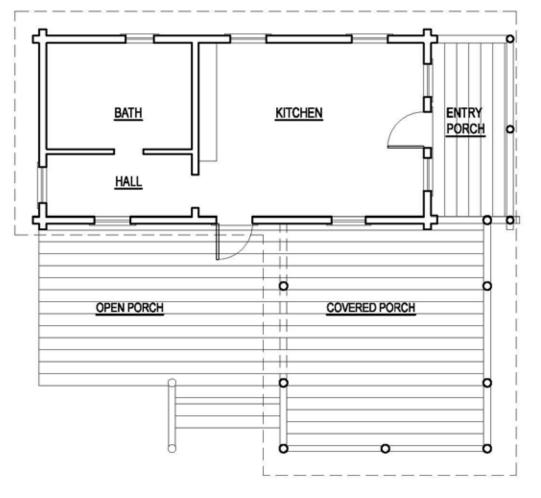








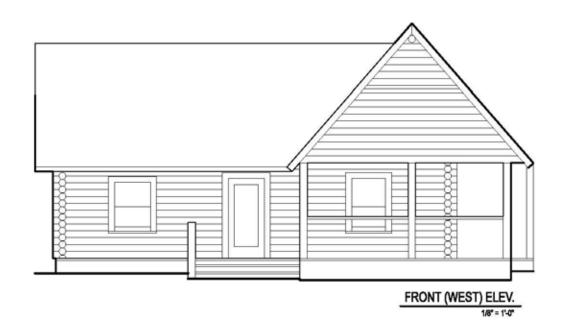


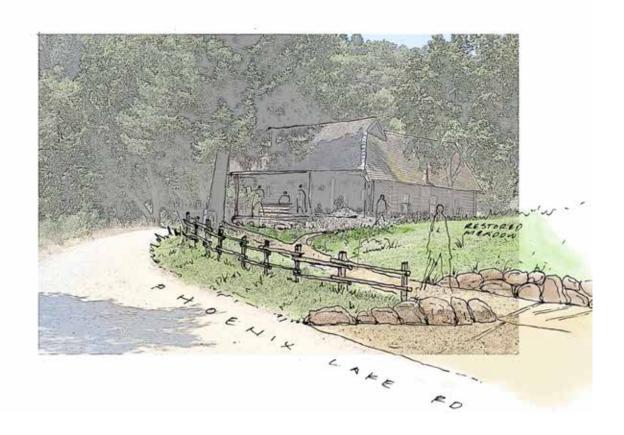


PHOENIX CABIN

PLANS &
ELEVATIONS
PARTIAL REHAB.
ALTERNATE









#### 4. MOTHBALLING ALTERNATIVE - NOT SELECTED

#### Design Program Statement - MOTHBALLING Alternative:

In the absence of a reuse scenario and in lieu of its removal, to temporarily secure the Cabin against the elements and intrusion in order to make it safe and to preserve it from further deterioration.

#### SITE/LANDSCAPE Alterations and Improvements – MOTHBALLING

- 1. Repair and stabilize existing fence.
- 2. Add new fencing surrounding building.
- 3. Remove asphalt path

#### **BUILDING Alterations and Improvements - MOTHBALLING**

- 1. Remove damaged exterior structure and ornamentation.
- 2. Remove and salvage front door.
- 3. Undertake pest control.
- 4. Secure building exterior, including patching openings; blocking up doors and windows (with plywood); repairing roof and roof drainage assemblies; applying bird control netting at walls and eaves.
- 5. Periodically inspect and maintain mothballing, including inspecting and airing-out interior.



#### 5. REMOVAL ALTERNATIVE - NOT SELECTED

#### Design Program Statement - REMOVAL Alternative:

Given the Cabin's ongoing deterioration and lack of use, and in the absence of any potential reuse scenario, its removal would be proposed along with the re-use and restoration of the grounds.

#### SITE/LANDSCAPE Alterations and Improvements – REMOVAL

#### Option 1 – Complete Site Restoration

Design Program – Site Restoration with locally native plans and expansion of public view of the site.

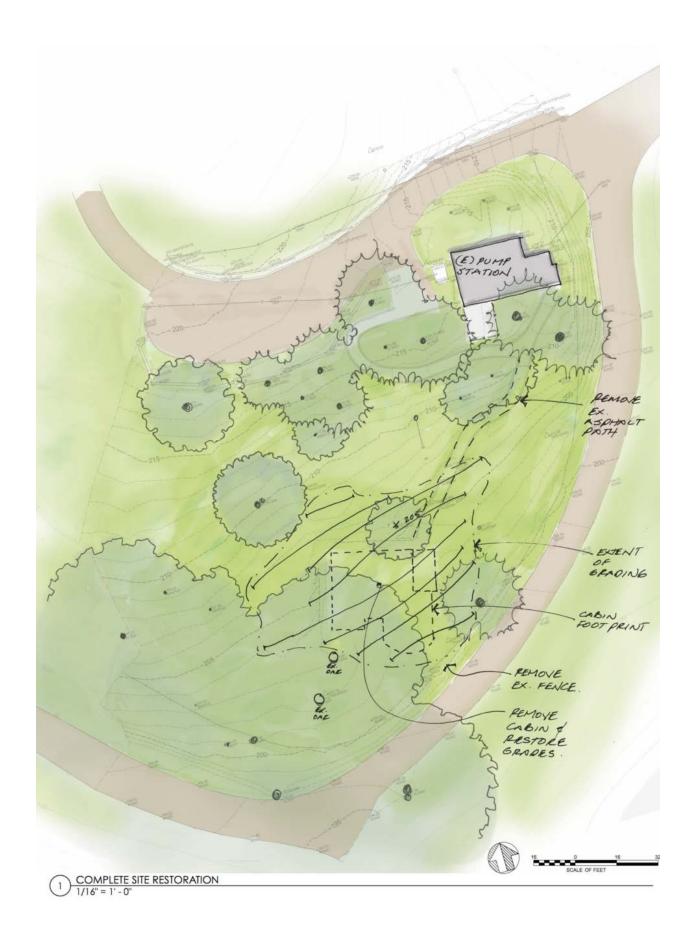
- 1. Remove cabin and restore approximate natural grades to the site.
- 2. Restore site with locally collected native plant species.
- 3. Remove fence
- 4. Add interpretive signage to memorialize site.

#### Option 2 – Site Restoration with Public Gathering Space

Design Program — Public use and enjoyment of the site through basic improvements and re-use of the building pad area to create space for public gathering and picnicking. Work will include site restoration with locally native plans and expansion of public view of the site.

- 1. Create open terrace for picnicking and gathering.
- 2. Remove upper asphalt path, or replace with ongrade, sustainable trail alignment.
- 3. Install log edging with salvaged logs from cabin.
- 4. Install interpretive kiosk and water fountain.
- 5. Install new, accessible paving, resin modified comp[acted aggregate or similar.





#### VI. ANALYSIS OF ALTERNATIVES

Alternative	Plusses	Minuses
Al. Full Rehabilitation (restored/reconstructed cabin with rebuilt cupola/ornamentation)	<ul> <li>Maximum retention of historic structure</li> <li>Maximum historic preservation</li> <li>Additional historical interpretation</li> <li>Maximum interior use areas</li> <li>No environment impact</li> </ul>	<ul> <li>Material and structural limitations</li> <li>Highest cost</li> <li>Highest maintenance</li> <li>Shortest longevity/future restoration</li> </ul>
A2. Rehabilitation (restored/reconstructed cabin without rebuilt cupola ornamentation)	Same as above except no additional historical inter- pretation	<ul> <li>Material limitations</li> <li>High cost</li> <li>High maintenance</li> <li>Short longevity/future restoration</li> </ul>
B1. Partial Rehabilitation (with unpeeled log construction)	<ul> <li>Partial retention of historic structure</li> <li>Partial historic preservation</li> <li>Increased functionality (outdoor use area directly associated w/cabin)</li> <li>Reduced material limitations &amp; maintenance</li> <li>Increased longevity</li> </ul>	<ul> <li>Partial loss of historic structure</li> <li>Medium high cost</li> <li>Unpeeled log maintenance</li> <li>Potential environment impact</li> </ul>
B2. Partial Reconstruction (with peeled log construction)	<ul> <li>Interpretation of historic structure</li> <li>Reduced material limitations, cost &amp; maintenance</li> <li>Increased functionality (outdoor use area directly associated w/cabin)</li> <li>Minimized material limitations &amp; maintenance</li> </ul>	<ul> <li>Loss of historic structure</li> <li>Medium high cost</li> <li>Environmental impact</li> </ul>
C. Mothball (deferred reuse)	<ul><li>Maximum retention of historic structure</li><li>Low cost</li><li>No environmental impact</li></ul>	<ul><li>Temporary solution</li><li>Ongoing maintenance</li></ul>
D. Removal (no reuse)	<ul> <li>Lowest cost</li> <li>No rehabilitation, rebuilding or maintenance</li> <li>Restored site</li> </ul>	<ul><li>Total loss of historic structure</li><li>Environmental impact</li></ul>

#### VI. GOVERNING CODES

#### Historic Building Code:

California Historical Building Code (CHBC)— Calif. Code of Regulations Title 24, Part 8. Effective Jan. 2014, or most current edition.

#### General Building Code:

California Building Code (CBC), Calif. Code of Regulations, Title 24, Effective Jan. 2014, or most current edition.

#### Accessibility:

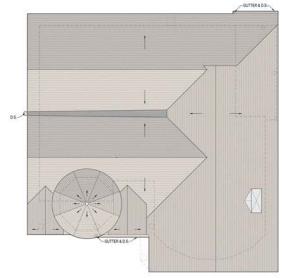
**CBC 2010 ADA** 

#### Use and Occupancy Classification Category:

MMWD to define Use and Occupancy Classification desired, by Code (CBC) reference.

Minor Assembly - less than 10 people = One Bathroom required 10-25 People = Two bathrooms required.

VII. COST COMPARISONS - ATTACHED





**ROOF PLAN** 

**FLOOR PLAN** 







#### FULL REHABILITATION - BUILDING ELEVATIONS

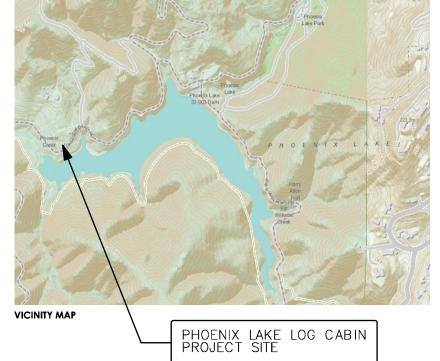


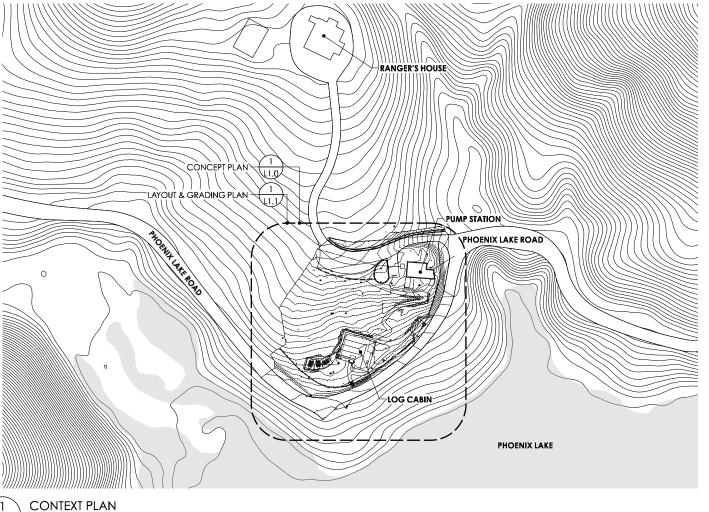












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30% DESIGN DEVELOPMENT NOT FOR CONSTRUCTION

#### **ABBREVIATIONS**

AC --ASPHALT CONCRETE AREA DRAIN A.D. - -**AGGREGATE** AGG. -

ACCESSIBLE GUIDELINES FOR OUTDOOR DEVELOPED AREAS, MOST RECENT EDITION AGODA

AL - -ALUMINUM B.C. --BOTTOM OF CURB B.O. - -BOTTOM OF BOTTOM OF STEP BS - -

B.W. - -BOTTOM OF WALL (FINISH GRADE)

CONC. --CONCRETE C.I.P. CAST-IN-PLACE CJ COLD JOINT CENTERLINE CL - -CSP

CORRUGATED STEEL PIPE

CTR CENTER C.Y. - -CUBIC YARDS DROP INLET D.I. - -(E) --EXISTING EJ **EXPANSION JOINT** F.O. - -FACE OF F.F.E - -FINISH FLOOR ELEVATION

FS - -FINISH SURFACE FINISH GRADE F.G. - -F.L. - -FLOW LINE FTG. --**FOOTING** 

H.D.G.--HOT DIP GALVANIZED GRADE BREAK HIGH POINT

GB HP--L.D. - -LANDSCAPE DRAIN L.O.G. - -LIMIT OF GRADING L.O.W. - -LIMIT OF WORK LP - -LOW POIINT MAX. - -MAXIMUM

MIN. - -

MARIN MUNICIPAL WATER DISTRICT MMWD - -

MINIMUM

(N) --NEW NOT IN CONTRACT N.I.C. - -N/A - -NOT APPLICABLE NOM - -NOMINAL O.C.

ON CENTER PROPOSED (P) --P.A. - -PLANTED AREA

P.T.D.F. - -PRESSURE TREATED DOUGLAS FIR REQUIRED

REQ'D - -REDWOOD RDWD - -SIM SIMILAR SCORE JOINT S.S. - -STAINLESS STEEL

S.A.D. - -SEE ARCHITECTURAL DRAWINGS

S.C.D. - -SEE CIVIL DRAWINGS S.S.D. - -SEE STRUCTURAL DRAWINGS

T.C. - -TOP OF CURB T.S. - -TOP OF STEP T.W. - -TOP OF WALL T.O. - -TOP OF TYP. -TYPICAL T.W. - -TOP OF WALL

UNLESS OTHERWISE NOTED U.O.N. - -VERIFY IN FIELD EXTRA-STRONG PIPE V.I.F. - -XS - -

#### **INDEX**

A2.0

SUB SHEET TITLE OF SHEET

L0.0 COVER / CONTEXT PLAN L1.0 SITE PLAN

FLOOR PLAN & ROOF PLAN

L1.1 LAYOUT & GRADING PLAN PROPOSED ACCESSIBILITY ANALYSIS L4.0 PAVING & FURNISHING DETAILS

CABIN MARIN MUNICIPAL WATER DISTRICT MARIN COUNTY, CA PHOENIX LAKE LOG

Roth LaMotte

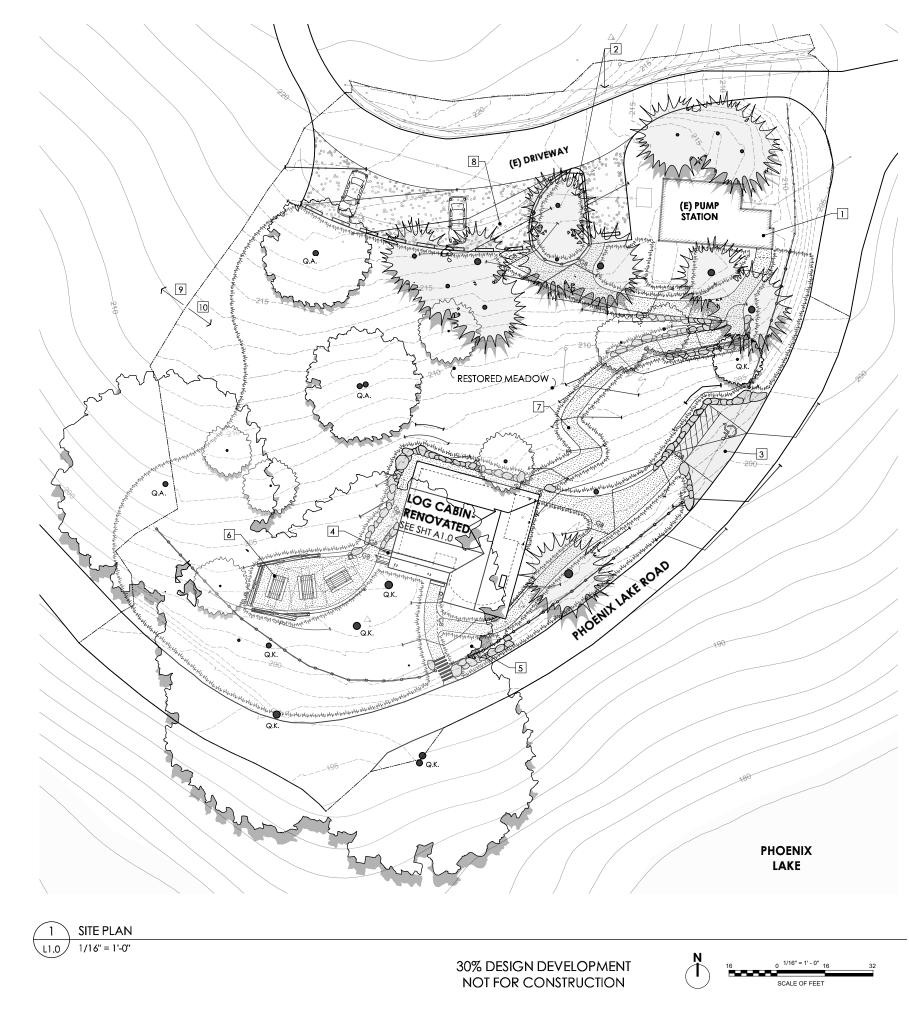
COVER SHEET & CONTEXT PLAN

NO. DATE ISSUE NOTES

NO. DATE REV. NOTES

6/6/16 SCALE AS SHOWN DESIGNED BY GAR DRAWN BY GR/LR CHECKED BY GAR

LO.0





1. (E) RESTROOM - RESTORED

2. (E) WATER LINE

3. (N) ACCESSIBLE PARKING

4. DECK EXTENSION - OPEN BELOW (PUNCHEON STYLE)

5. (N) BIORETENTION AREA - 70 S.F. MIN.

6. (N) PICNIC AREA

(N) TRAIL 3' - 4'W - V.I.F., BUILT PER MMWD TRAIL STNDS.

8. RESURFACE (E) PARKING

(N) WATER FOUNTAIN
- PER MMWD STANDARDS

(N) PICNIC TABLE 1

ADA CLEAR SPACE

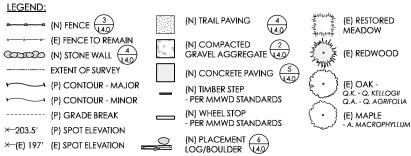
9. SURVEY GENERATED FROM MARIN MAP G.I.S. DATA

10. SURVEY RECEIVED FROM MMWD

\_\_<u>5%\_\_</u> (P) SLOPE

(E) TREE

← FLUSH



6/6/16

DESIGNED BY

DRAWN BY

CHECKED BY GAR

GR/LR

SCALE AS SHOWN

GAR

Roth LaMotte

CABIN

PHOENIX LAKE LOG

CONCEPT PLAN

NO. DATE ISSUE NOTES

NO. DATE REV. NOTES

MARIN MUNICIPAL WATER DISTRICT MARIN COUNTY, CA

NEW WOOD DECKING

NEW WOOD SHAKE ROOFING

(E) EXISTING

(N) NEW

#### PROJECT DESCRIPTION & PROJECT NOTES

- A. THE PROPOSED PROJECT WILL FULLY REHABILITATE THE CABIN INCLUDING SUBSTANTIAL REPAIR, INCLUDING SELECTIVE REMOVAL AND REPLACEMENT OI DETERIORATED LOGS, WHICH MAY NECESSITATE THE SHORING UP OF THE BULDING AND SELECTIVE DISASSEMBLY OF THE LOG WALLS.
- B. THE WORK WILL INCLUDE RECONSTRUCTION OF THE FRONT PORCH AND ITS CUPOLA TO MATCH THE EXISTING, AS WELL AS PARTIAL RECONSTRUCTION OF THE REAR PORCH, GIVEN THE EXTANT STRUCTURAL AND MATERIAL CONDITIONS OF THE FRONT PORCH AND CUPOLA, ALONG WITH THE FACT THE EXISTING CONSTRUCTION IS NON-HISTORIC, ALTERNATIVE MATERIAL AND STRUCTURAL ASSEMBLIES MAY BE CONSIDERED TO ENSURE GREATER LONGEVITY THAN WOULD RESULT FROM THE USE OF UNPEELED REDWOOD LOG CONSTRUCTION.
- C. DOORS AND WINDOWS WILL BE RESTORED AND SELECTIVELY REPLACED.
- D. THE ROOFING WILL ALSO BE REPLACED WITH NEW TO MATCH THE EXISTING.  $\label{eq:decomposition} % \begin{subarray}{ll} \end{subarray} % \begin{su$
- E. AT THE INTERIOR, THE SPACES WILL BE REHABILITATED FOR REUSE, INCLUDING THE ADDITION OF BATHROOMS AND OTHER ACCESSIBLE FEATURES, PLUS BUIL DING SYSTEM MPROYEMENTS.

FULL REHABILITATION WORK SHALL INCLUDE:

#### GENERAL

UNDERTAKE STRUCTURAL PEST INSPECTION AND TREATMENTS.

#### @ EXTERIOR

- RETAIN AND REPAIR EXISTING FOUNDATIONS, INCLUDING REPLACEMENT OF MISSING AND DAMAGED FACE BRICKS, VENTILATION AND FLASHING ASSEMBLIES.
- REPAIR AND SELECTIVELY REMOVE AND REPLACE STRUCTURALLY DAMAGED LOGS:
- THIS WORK REQUIRES REPLACEMENT OF LOGS AT THE BOTTOM OF WALLS.
   THE PRESUMED LOG RESTORATION METHODOLOGY IS TO SHORE AND LIFT THE UPPER STRUCTURE AND ROOF IN ORDER TO DISASSEMBLE AND RECONSTRUCT LOG WALLS.
- EXISTING LOGS AT WALLS WITH CONCEALED FINISHES AT INTERIORS REQUIRE INSPECTION AND EVALUATION AT THE INTERIOR FACE.
- SOME LOG WORK AT THE FRONT BAY, FOR EXAMPLE ARE SPLIT RATHER
  THAN FULL LOGS. DETERMINE FEASIBILITY OF RETAINING SPLIT LOGS OR,
  ALTERNATIVELY, REPLACING SPLIT LOGS AT WALLS WITH FULL LOGS.

#### EXTERIOR - CONT.

ROOF PLAN

- REMOVE AND REPLACE FRONT PORCH TO MATCH EXISTING, EXCEPT ALTER SPACING OF THE CENTRAL PORCH POST AS PART OF THE RECONSTRUCTION OF THE CUPOLA.
- 4. REMOVE AND RECONSTRUCT FRONT PORCH ROOFS AND CUPOLA. WHILE THE INTENT IS TO REPLACE THE EXISTING CUPOLATO VISUALLY MATCH THE EXISTING UNPELED LOG CONSTRUCTION ALTERNATIVELY. UNPELED LOGS MY EDES SUBSTITUTED, AND THE NEW SUPPORT STRUCTURE MAY REQUIRE ADDITIONAL WOOD OR METAL FRAMING TO BE CONCEALED ALONG WITH POSSIBLE NEW FOUNDATION WORK.
- 5. REMOVE ORNAMENTAL LOG WORK AT FRONT OF LIVING ROOM WING.
- RETAIN AND STRENGTHEN EXISTING FRONT CHIMNEY, REMOVING THE CHIMNEY CAP AND SEALING THE CHIMNEY FROM FUTURE USE.
- . REMOVE EXISTING REAR CHIMNEY AND REPAIR OR REPLACE UNDERLYING LOGS.
- REPAIR AND REBUILD EXISTING REAR PORCH WITH NEW LOG POST AND RAIL WORK AND NEW DECKING, WHILE THE INTENT IS TO REPLACE TO MATCH THE EXISTING UNPEELED LOG CONSTRUCTION, ALTERNATIVELY, UNPEELED LOGS MAY BE SUBSTITUTED.
- 9. RESTORE AND REPAINT WOOD WINDOW SASHES AND SILLS, OR SELECTIVELY REPLACE TO MATCH; REPLACE SPLIT LOG WINDOW SILLS WHERE DAMAGED OR
- 10. REPLACE WOOD SHINGLE ROOFING AND ROOF DRAINAGE (FLASHING)
  ASSEMBLIES TO MATCH EXISTING. ADD GUTTERS AND DOWNSPOUTS AS
  INDICATED.
- 11. PROVIDE NEW EXTERIOR LED LIGHTING AT FRONT AND REAR PORCHES.

#### @ INTERIOR - GENERAL

- 12. SELECTIVELY REMOVE INTERIOR WOOD FRAME PARTITIONS, DOORS AND INTERIOR WALL FINISHES.
- 13. REPAIR UNDERLYING LOG WORK WHERE NEWLY EXPOSED.
- 14. RETAIN INTERIOR LOG WALLS AND CEILINGS.
- 15. REPAIR DAMAGED LOG AND WOOD CEILINGS.
- 16. ADDRESS RODENT/PEST DAMAGE AND CONTROL. PROVIDE ACCESS TO ATTIC
- 17. BUILD NEW, ACCESSIBLE RESTROOM (AT EXISTING BATHROOM), PLUS AN OPTIONAL SECOND TOILET ROOM (AT EXISTING CLOSET).
- 18. REPAIR AND REFINISH WOOD FLOORS.
- 19. CONSTRUCT NEW FLOOR LEVEL IN WEST HALF OF LIVING ROOM.
- 20. UPGRADE AND/OR REPLACE PLUMBING AND ELECTRICAL SYSTEMS.
- 21. ADD INTERNET/WIFI.

#### @ INTERIOR - ROOM-BY-ROOM

#### ITCHEN:

- 22. REMOVE ALL EQUIPMENT AND FIXTURES EXCEPT FOR SINK, TO BE REMOVED AND REINSTALLED, AND BUILT-IN PANTRY CABINET, TO BE RETAINED AND RESTORED.
- 23. REMOVE WOOD WAINSCOTING FROM WEST EXTERIOR WALL; RETAIN, REPAIR AND REFINISH AT NORTH EXTERIOR WALL AND AT EAST AND SOUTH INTERIOR WALLS.
- 24. CLEAN AND REPAIR EXPOSED INTERIOR LOGWORK AT WALLS AND CEILINGS.
- 25. INSTALL NEW WOOD ACCESS DOOR AT ATTIC ACCESS AT UPPER EAST WALL.
  26. RETAIN AND RESTORE DOORS.
- 27. REPLACE CENTRAL LIGHT FIXTURE WITH NEW LED PENDANT AND REPLACE EXISTING WALL MOUNTED LIGHT AT SINK WITH NEW LED WALL-MOUNTED EXISTING.

#### @ INTERIOR - ROOM-BY-ROOM - CONT.

#### LIVING

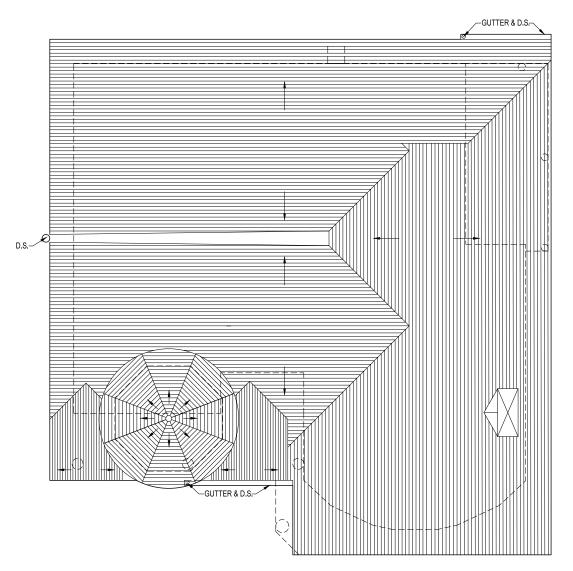
- 28. RETAIN AND CLEAN MASONRY FIREPLACE AND HEARTH; ADD NEW FIXED GRILLE OR DOORS AT FIREPLACE OPENING TO PROHIBIT USE.
- REMOVE WOOD PANELING AT EXTERIOR LOG WALLS, IF FEASIBLE (INSPECTION AND EVALUATION IS REQUIRED TO DETERMINE FEASIBILITY), IF FEASIBLE, RETAIN EXPOSED LOGS AT INTERIOR. WHERE SPLIT LOGS OCCUR (EX: AT FRONT BAY), ALTERNATIVELY REPLACE WITH FULL LOG ASSEMBLIES.
- 30. RETRIM EXISTING WINDOW OPENINGS WITH EXISTING OR MATCHING WOOD TRIM.
- 31. REMOVE WOOD PARTITION AND DOOR BETWEEN LIVING AND ENTRY, REPAIR FLOORS, WALLS AND CEILINGS AT AREA OF REMOVAL.
- ADD NEW WOOD FRAME AND WOOD FINISHED FLOOR AND STEP ATOP REAR PORTION OF EXISTING FLOOR.
- 33. RETAIN, REFURBISH AND RELAMP EXISTING PENDANT LIGHT FIXTURE.

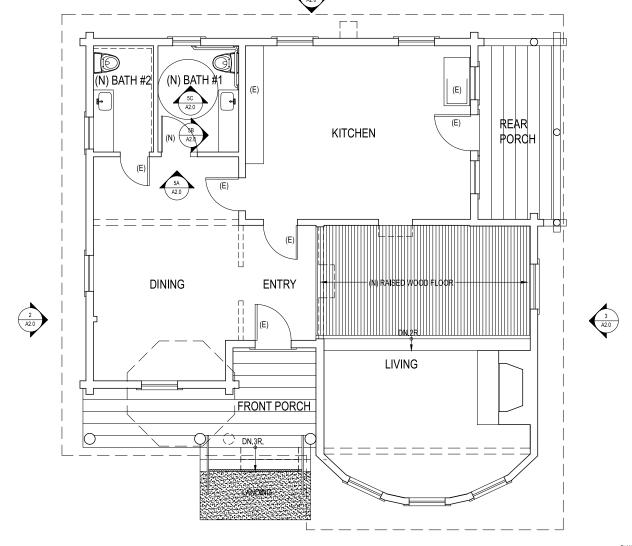
#### DINING

- 34. REMOVE WOOD PANELING AT EXTERIOR LOG WALLS, IF FEASIBLE (INSPECTION AND EVALUATION IS REQUIRED TO DETERMINE FEASIBILITY). IF FEASIBLE, RETAIN EXPOSED LOGS AT INTERIOR. WHERE SPLIT LOGS OCCUR, ALTERNATIVELY REPLACE WITH FULL LOG ASSEMBLIES.
- 35. RETRIM EXISTING WINDOW OPENINGS WITH EXISTING OR MATCHING WOOD TRIM.
  36. REMOVE WOOD PARTITION AND DOOR BETWEEN DINING AND ENTRY, REPAIR
- FLOORS, WALLS AND CEILINGS AT AREA OF REMOVAL.
- 37. CLEAN AND REPAIR EXPOSED INTERIOR LOGWORK AT WALLS AND CEILINGS.
- 38. RETAIN, REFURBISH AND RELAMP EXISTING PENDANT LIGHT FIXTURE.

#### BATH #1:

- REMOVE ALL EXISTING EQUIPMENT AND FIXTURES, INSTALL ALL NEW PLUMBING, ELECTRICAL AND LIGHTING EQUIPMENT AND FIXTURES.
- 40. REMOVE WOOD PANELING FROM WEST EXTERIOR WALL; RETAIN, REPAIR AND REFINISH PANELING AT NORTH, EAST AND SOUTH INTERIOR WALLS.
- 41. REMOVE EXISTING DOOR AND REPLACE WITH NEW 3 FOOT WIDE WOOD DOOR AND OPENING TO MATCH EXISTING.







FLOOR PLAN

1/4" = 1'-0" (22x34 sheet)

1/8" = 1'-0" (11x17 sheet)



PHOENIX LAKE LOG CABIN MARIN MUNICIPAL WATER DISTRICT MARIN COUNTY, CA

Roth LaMotte

NO. DATE ISSUE NOTES
iNo :iDate :iNote

NO. DATE REV. NOTES

:rNo :rDate :rNote

DATE: |5/26/16

**PLANS** 

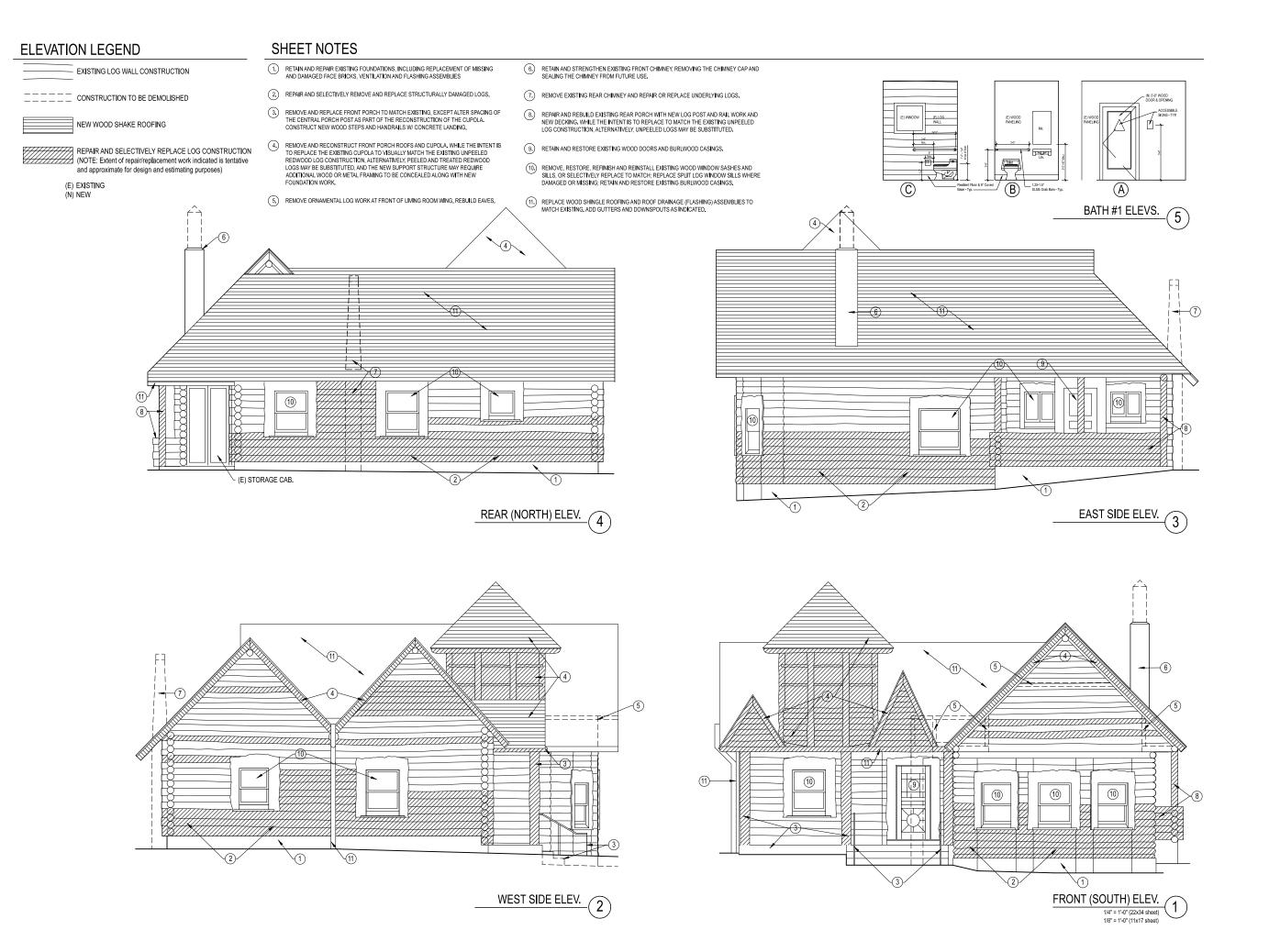
<sup>SCALE</sup> AS SHOWN

DESIGNED BY

DRAWN BY MH CHECKED BY

MH

A1.0



PHOENIX LAKE LOG CABIN

Roth LaMotte
| Landscape Architecture | Landsca

ELEVATIONS

NO. DATE ISSUE NOTES:

NO. DATE REV. NOTES

:rNo :rDate :rNote

DATE: 6/1/16

SCALE AS SHOWN DESIGNED BY MH

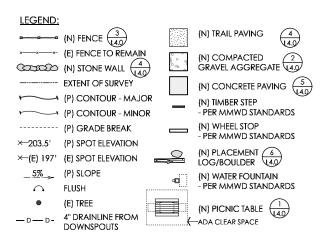
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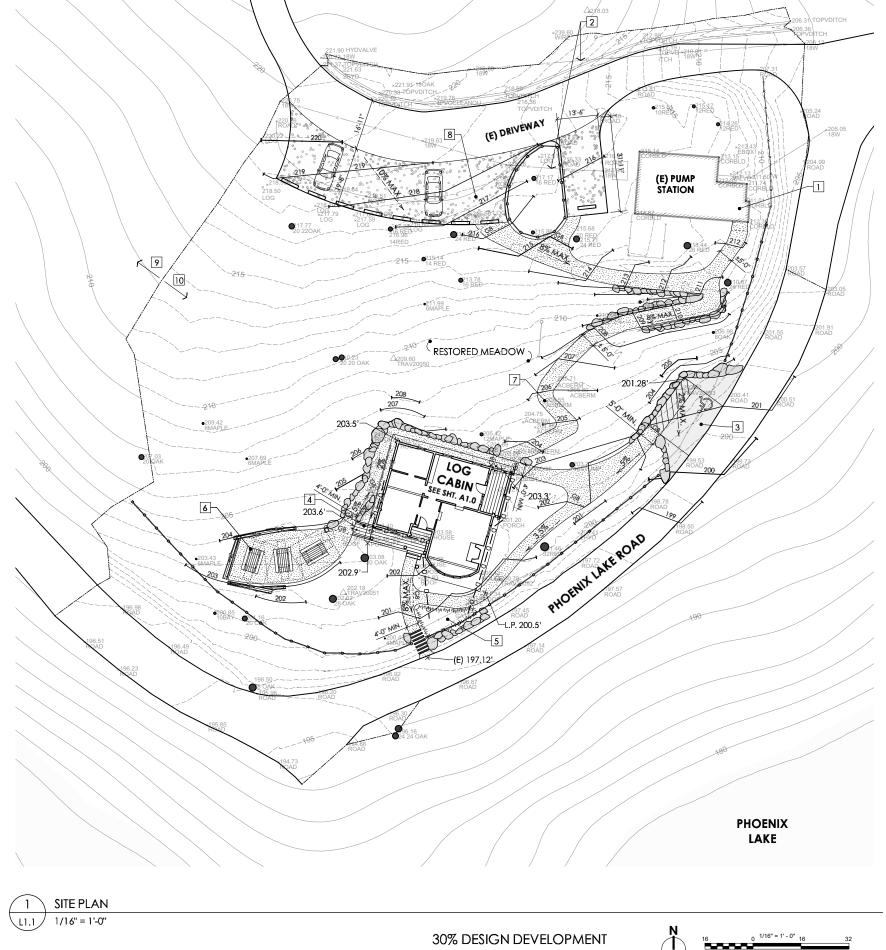
MH

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#### DRAWING NOTES

- 1. (E) RESTROOM RESTORED
- 2. (E) WATER LINE
- 3. (N) ACCESSIBLE PARKING
- 4. DECK EXTENSION OPEN BELOW (PUNCHEON STYLE)
- 5. (N) BIORETENTION AREA 70 S.F. MIN.
- 6. (N) PICNIC AREA
- (N) TRAIL 3' 4'W V.I.F., BUILT PER MMWD TRAIL STNDS.
- 8. RESURFACE (E) PARKING
- 9. SURVEY GENERATED FROM MARIN MAP G.I.S. DATA
- 10. SURVEY RECEIVED FROM MMWD





NOT FOR CONSTRUCTION

SCALE OF FEET

CHECKED BY GAR

6/6/16 SCALE AS SHOWN

DESIGNED BY

DRAWN BY

GR/LR

GAR

Roth LaMotte

CABIN

PHOENIX LAKE LOG

LAYOUT & GRADING PLAN

NO. DATE ISSUE NOTES

NO. DATE REV. NOTES

MARIN MUNICIPAL WATER DISTRICT MARIN COUNTY, CA

#### PHOENIX LAKE LOG CABIN - PROPOSED SCHEME

0011111111111111	I OI I AIII OI IKAVLL	02011121110		
SEGMENT	ACCESS STANDARD	RUNNING SLOPE	CROSS SLOPE	SURFACE TYPE
A - B	CBC	8% max.	2% max.	Concrete
B - C	CBC	<5%	2% max.	Resin Modified Compacted Aggregate
C - D	CBC	<5%	2% max.	Resin Modified Compacted Aggregate
D - E	CBC	1% - 2%	2% max.	Resin Modified Compacted Aggregate
E - F	CBC	<5%	2% max.	Resin Modified Compacted Aggregate
F - G	- G CBC		2% max.	Wood Deck
K*	CBC	2% max.	2% max.	Resin Modified Compacted Aggregate
D - J	CBC	0%	2% max.	Wood Deck
C - I	CBC	<5%	2% max.	Resin Modified Compacted Aggregate
I - H	CBC	3.5%	2% max.	Resin Modified Compacted Aggregate
1 - 2	NA	8% max.	3% - 5%	Resin Modified Compacted Aggregate
2 - 3	NA	8% max.	3% - 5%	Resin Modified Compacted Aggregate
3 - D	NA	8% max.	3% - 5%	Resin Modified Compacted Aggregate
2 - 5	NA	5.1%	3% - 5%	Resin Modified Compacted Aggregate
3 - 4	NA	8% max.	3% - 5%	Resin Modified Compacted Aggregate
6 - 7	NA	8% max.	2% max.	Resin Modified Compacted Aggregate

#### LEGEND

	NA	Not Accessible to CBC ADA Standards					
CBC 2010 California Building Code Chapter 11B Accessibility Standards							
	*	Proposed Picnic Area					

[11] Trail accessibility designation is preliminary and is based upon basic slope, surface and width considerations only. The project is still in schematic design and subject to design refinements due to programmatic or technical considerations that may necessitate minor adjustments to the design foolprint.

ACCESSIBILITY STANDARD
2010 CALIFORNIA BUILDING CODE
CHAPTER 11B ACCESSIBILITY STANDARDS.

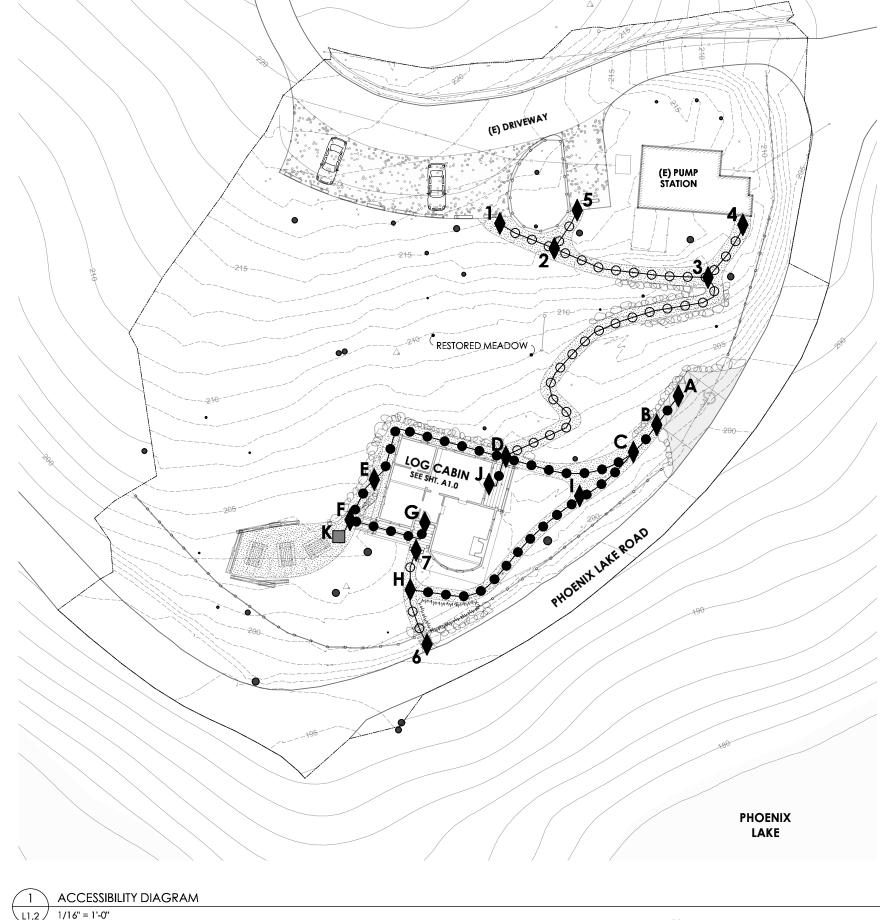
GENERAL NOTES
SLOPES NOTED ARE APPROXIMATE CALCULATIONS BASED
UPON THE SURVEY DATA. ACTUAL SLOPES MAY VARY.

### ADA LEGEND

TRAIL SEGMENT -SEE ACCESSIBILITY MATRIX

PROPOSED PICNIC AREA - SEE ACCESSIBILITY MATRIX PROPOSED TRAIL - NOT ACCESSIBLE, SEE MATRIX

PROPOSED TRAIL - PER CBC 2010 ADA STANDARD, SEE MATRIX



30% DESIGN DEVELOPMENT NOT FOR CONSTRUCTION



6/6/16

DESIGNED BY

DRAWN BY

CHECKED BY GAR

GR/LR

SCALE AS SHOWN

GAR

Roth LaMotte

CABIN

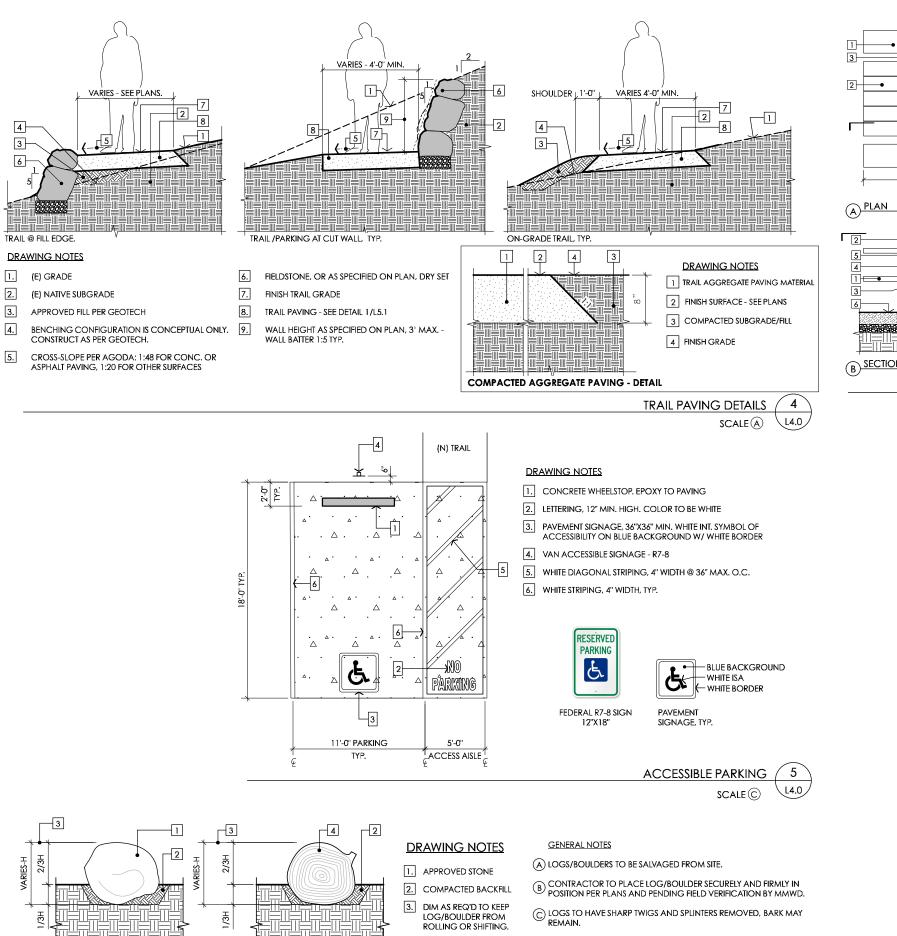
PHOENIX LAKE LOG

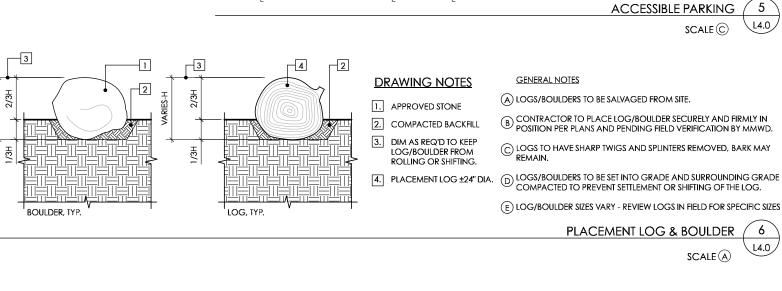
Proposed Accessibility Analysis

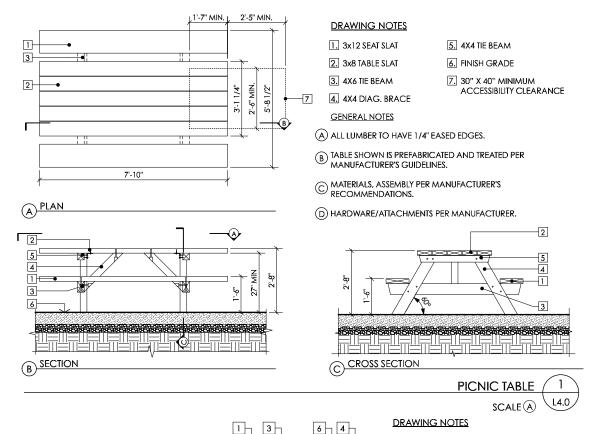
NO. DATE ISSUE NOTES

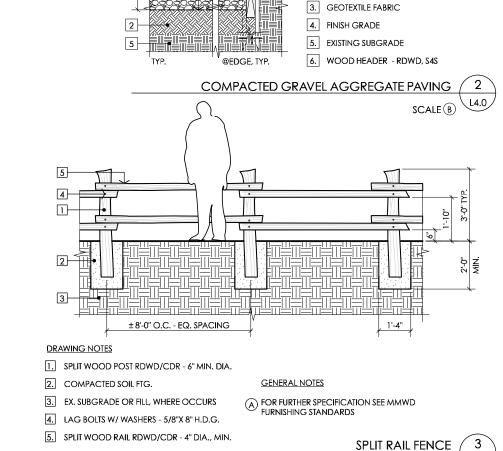
NO. DATE REV. NOTES

MARIN MUNICIPAL WATER DISTRICT MARIN COUNTY, CA









30% DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

SCALE OF FEET

1-1/2" = 1' - 0"

SCALE OF INCHES

**MARIN MUNICIPAL PHOENIX** PAVING & FURNISHING **ETAILS** DATE ISSUE NOTES NO. DATE REV. NOTES 6/6/16 SCALE AS SHOWN DESIGNED BY GAR SCALE (A) DRAWN BY GR/LR CHECKED BY GAR L4.0

Roth LaMotte

ABIN

Ü

LAKE

1. 8" OF 3/8" CRUSHED GRAVEL AGGREGATE PAVING, VIBRATE IN

PLACE & RAKE SMOOTH

2. COMPACTED SUBGRADE/FILL

DISTRIC

WATER

COUNTY,



project management services construction management & estimating

# **Budget Estimate Report** 30% Design Development Phase

# MMWD Log Cabin at Phoenix Lake

Marin County, CA

# **Report Date:**

6/8/16 Submission Draft Rev

# Prepared for:

Roth / LaMotte Landscape Architecture

# Prepared by:

Robert Borinstein R. Borinstein Company



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### **EXECUTIVE SUMMARY REPORT**

6/8/16

Project MMWD Log Cabin at Phoenix Lake

Building & Site Master Plan - Full Rehabilitation w/Rebuilt Ornamentation

Submission Draft Rev

SCHEME DI	ESCRIPTION	PROBABLE		PROBABLE RANGE OF ACCURA			ACCURACY
OCITEME DI	LOCKIF HON		AMOUNT		90%		135%
BASE SCOPE							
A. BUILDING REHA	BILITATION SCHEME						
FULL REHABILI	ITATION w/REBUILT ORNAMENTATION (1b.)	\$	763,000	\$	687,000	\$	1,030,000
B. SITE SCHEME							
REHABILITATE	D SITE W/EXPANDED PARKING (b.)	\$	307,000	\$	276,000	\$	414,000
SEPTIC UPGRA	DE ALLOWANCE	\$	75,000	\$	68,000	\$	101,000
	TOTAL BUDGET ESTIMATE - BASE SCOPE	\$	1,145,000	\$	1,031,000	\$	1,545,000
ALTERNATE SCOPE							
ALT 1 - ADD BA	.TH #2	\$	23,000	\$	21,000	\$	31,000

### SUMMARY EXCLUSIONS:

- 1 FF&E (Furnishings, Fixtures, & Equipment Non Built-in)
- 2 Data & telephone equipment
- 3 Security alarm equipment & devices
- 4 Planting or revegetation for meadow restoration. Assumed to be by District staff or volunteers
- 5 Project soft costs (A&E Fees, Owner's Management Expenses, Builder's Risk Insurance, Capital Campaign Costs, etc)
- 6 Project course of construction contingency. (This is not to be confused with the pre-construction design contingency included in the estimate)
- 7 Inflation escalation Estimates based on present day cost of construction)
- 8 Planning or permit fees.
- 9 Bonds if required

Refer to attached estimate detail



# INTERMEDIATE SUMMARY REPORT

<b>Summary Assembly Description</b>	cription Totals Raw Cost					Totals w/Mark-up						
	N	aw Cost					21 K-(	<u> 1</u> P				
			1,150	sf new bldg	interior foot	print						
A. BUILDING REHABILITATION SCHEME		0.4.700			•	400 407						
B15 Reconstruction - Cupola, Small Dormers, & Front Porch	\$	64,780		/sf bldg	\$	106,427						
B15 Reconstruction - Back Porch & Misc	\$	35,000		/sf bldg	\$	57,501						
B2010 Exterior Walls - Log Rehabilitation	\$	193,500	\$168.26	-	\$	317,900						
B2020 Exterior Windows	\$	10,425	\$9.07	/sf bldg	\$	17,127						
B2030 Exterior Doors	\$	1,900	\$1.65	/sf bldg	\$	3,121						
B3010 Roofing	\$	45,230	\$39.33	/sf bldg	\$	74,308						
C1010 Interior Partitions	\$	400	\$0.35	/sf bldg	\$	657						
C1030 Interior Doors	\$	4,450	\$3.87	/sf bldg	\$	7,311						
C1060 Raised Floor Construction	\$	5,250	\$4.57	/sf bldg	\$	8,625						
C20 Interior Finishes	\$	29,700	\$25.83	/sf bldg	\$	48,794						
D20 Plumbing	\$	9,300	\$8.09	/sf bldg	\$	15,279						
D30 HVAC	\$	1,200	\$1.04	/sf bldg	\$	1,971						
D50 Electrical	\$	28,750	\$25.00	/sf bldg	\$	47,233						
F2010 Building Elements Demolition	\$	12,988	\$11.29	/sf bldg	\$	21,337						
F2030 Pest Control	\$	5,000	\$4.35	/sf bldg	\$	8,214						
Z1050 Temporary Facilities a See Scheme A	\$	16,500	<u>\$14.35</u>	/sf bldg	\$	27,108						
Subtotal Raw Cost of Construction	\$	464,373	\$403.80	/sf bldg								
Mark-ups including 25% contingency	\$	298,542	\$259.60									
<b>Subtotal Cost of Hard Construction</b>	\$	762,914		/sf bldg			\$	762,914				
B. SITE SCHEME												
G10 Site Preparation	\$	8,000			\$	13,143						
G1010 Site Clearing	\$	4,525			\$	7,434						
G1020 Site Elements Demolition and Relocations	\$	3,700			\$	6,079						
G1030 Site Earthwork	\$	7,795			\$	12,806						
G2010 Roadways	\$	4,125			\$	6,777						
G2020 Parking Lots	\$	17,475			\$	28,710						
G2030 Pedestrian Paving	\$	53,600			\$	88,059						
G2040 Site Development	\$	68,700			\$	112,867						
G2050 Landscaping - Soil Retention Measures	\$	10,000			\$	16,429						
G2050 Landscaping	\$	-			\$	, -						
G3030 Storm Water Measures	\$	8,800			\$	14,457						
Subtotal Raw Cost of Construction	\$	186,720										
Mark-ups including 25% contingency	\$	120,041										
Subtotal Cost of Hard Construction	\$	306,761					\$	306,761				
SEPTIC UPGRADE ALLOWNCE							\$	75,000				
TOTAL BUDGET ESTIMATE - BASE SCOPE							\$	1,144,675				



**VARIANCE REPORT** 

Submission Draft Rev

6/8/16

Project MMWD Log Cabin at Phoenix Lake

Building & Site Master Plan - Full Rehabilitation w/Rebuilt Ornamentation

TOTAL BUDGET ESTIMATE - BASE SCOPE

SCHEME DESCRIPTION	30% DD 6/6/16		CONCEPT BGT 12/24/15		VARIANCE	
BASE SCOPE						
FULL REHABILITATION w/REBUILT ORNAMENTATION (1b.)	\$	763,000	\$	763,000	\$	-
REHABILITATED SITE W/EXPANDED PARKING (b.)	\$	307,000	\$	336,000	\$	(29,000)
SEPTIC UPGRADE ALLOWANCE	\$	75,000	\$	75,000	\$	-

\$ 1,145,000

\$ 1,174,000

\$

(29,000)



#### **ESTIMATE NOTES, QUALIFICATIONS, AND ASSUMPTIONS**

**Project:** MMWD Log Cabin at Phoenix Lake

30% Design Development Budget Estimate

**Location:** Marin Country, CA

**Report Date:** 6/8/16

The following is meant to clarify select assumptions used in this 30% design development budget estimate and serves as a supplement to the preliminary design drawings upon which this estimate is based. It does not necessarily constitute a complete narrative of all assumptions included in the estimate.

### **PROJECT DOCUMENTS**

This estimate report is based on a combination of design documents and correspondence with Roth / LaMotte Landscape Architecture including the following:

 Architectural & Landscape Drawings – 30% Design Development for Phoenix Lake Log Cabin dated 6/6/16 as prepared by Roth / LaMotte Landscape Architecture with Preservation Architecture.

#### **ESTIMATE BASIS**

- 1. This budget estimate report represents the probable cost of "hard construction" as understood at the 30% Design Development phase and is assembled using empirical market data and input from industry professionals. It is not a guarantee of final project cost, which is dependent upon the development of details for the final design as well as upon the methodology of bid solicitation and the bidding climate at the time of award.
- 2. <u>Inflation Escalation Excluded</u>. Estimate pricing is based on our best understanding of present day cost of construction. Inflation escalation is excluded and can be applied by the client based on their anticipated start date. Escalation has been volatile in this present market. Though material and labor pricing has increased at a relatively modest rate, the construction market has been impacted by heavy demand resulting in a recent spike in pricing. It is anticipated the pressure on construction is going to slow to a more normal annual rate over the next couple of years. The client is recommended to apply to the total estimated amount the escalated rate listed below and should be factored to the anticipated mid-point of construction.

Recommended annual escalation (excluded from estimate): 4% to 5% compounded annually

3. <u>Mark-up Factors</u>. The estimate detail represents costs for direct labor, material, and equipment. These direct costs are then subject to a mark-up to capture the general or prime contractor's overhead and profit and general field expenses necessary to manage subcontractors and the site. A design/estimating contingency is also captured in this mark-up structure, which is structured and described as listed below. These factors are progressively applied meaning each factor is applied to the sum of the direct costs and the preceding mark-up factors:

General Expenses: 13% Contractor's Fee: 15% Contractor's Insurance: 1% Design Contingency: 25%

- a. <u>Contractor's General Expenses</u>. A budget has been applied for the general contractor's field expenses and temporary construction required to manage and supervise subcontractors, vendors, and on-site construction activities. This budget is presently factored as a percentage of the cost of construction.
- b. <u>General Contractor's Fee</u>. General contractor's overhead and profit has been included as a combined fee factored as a percentage of cost including the general contractor's expenses.
- c. <u>General Contractor's Insurance</u>. A budget for contractor's insurance is applied as a percentage of cost plus fees.
- d. <u>Contingency.</u> A design and estimating contingency has been factored as a percentage of cost plus fees and insurance and has been applied in response to the preliminary nature of the design documents. As noted in the Exclusions section below, this does not include the owner's course of construction contingency, which is assumed to be carried in a separate owner's budget.

#### **PROJECT NOTES & QUALIFICATIONS**

1. <u>Log Structure Replacement Scope</u>: The scope of log structure work shown on the drawings, at this phase of design, is understood to represent an order of magnitude which is anticipated to require repair treatment or replacement. The condition of the log structure cannot be reasonably understood until the interior face of the logs can be examined after the interior paneling has been removed. While the condition of the interior side of the logs is a concern throughout, the condition of the ½ logs from which the living room bay window wall is constructed, will certainly represent a design challenge once revealed. Additionally, a pull test on the logs will need to be performed to evaluate the integrity of the log cores.

Rather than attempting to quantify the lineal footage of deficient logs and the associated treatment required, this budget report incorporates the input of a contractor with expertise in log construction and estimates the likely labor duration necessary to perform a rehabilitation of this nature based on initial observations.

Even after a more in-depth battery of tests and investigations has been performed on the log structure, a certain amount of scope will remain open for interpretation. Pest damage and rot, not discovered during the investigations are likely to be encountered. Additionally, many conditions, discovered as well as anticipated, may have several possible corrective solutions that can vary significantly in cost. It is somewhat unrealistic to expect that the design team will be able to define the log structure rehabilitation scope necessary for a tight competitive design-bid-build process. The probability for daily discoveries during construction and the associated change order requests may suggest that a cooperative negotiation with a qualified contractor may be worth consideration. It is advisable therefore, for the agency to assess the value of engaging the services of a contractor with expertise in this specialty trade early in preconstruction to help define and establish the scope with the goal of engaging them to perform construction under the necessary negotiated circumstances.

2. Additions & Deletions - Evaluation of Scope. During the evaluation process of project scope by the project client, it should be remembered that individual estimate line items are "raw cost", which represents the direct cost to the general contractor for material, labor, and subcontractors. As noted and defined above, a set of mark-up factors are applied to these raw costs to derive the total anticipate cost of hard construction. When considering the addition or deletion of scope



therefore, the appropriate mark-ups should be applied to these raw costs to gain a more accurate understanding of the anticipated impact to the project budget estimate. An Intermediate Summary has been provided to identify the total cost of the various project assemblies that comprise the estimate.

#### 3. Specific Exclusions.

- a. <u>Furnishings, Fixtures, & Equipment</u>. This is comprised of all non-built-in furniture and cabinets as well as appliances.
- b. <u>Data & Telephone Equipment</u>. The estimate includes a budget for cabling infrastructure for data & telephone but excludes all associated equipment or devices.
- c. <u>Intrusion Security System</u>. The estimate includes a budget for the infrastructure for an intrusion security system but excludes electronic locks and strikes as well all associated security equipment or devices.
- d. <u>Planting or Revegetation for Meadow Restoration</u>. It is assumed that planting and revegetation will be performed by water district staff or volunteers.
- e. <u>Abatement of Hazardous Materials</u>. The cost to remove hazardous materials as well as the cost
- f. <u>Bonds & Permits</u>. The cost of bonds, if required, and the cost of building permits are assumed to be carried in a separate owner's budget. The cost of permits associated with design-build MEPF trades are reflected in the direct trade costs.
- g. Owner Soft and Direct Costs. Owner soft and direct costs are comprised of expenditures such as design and engineering, except for design-build trades, construction management and other consultants, special inspection expenses, capital campaign expenditures, financing, builder's risk insurance, etc.
- h. <u>Utility Service Fees:</u> The cost of utility service hook-up fees can be substantial and should be carried in a separate owner's budget.
- Course of Construction Contingency. The owner should carry a separate course of
  construction contingency in anticipation of change orders resulting from discovery of
  unknown site conditions, design conflicts, and owner generated discretionary changes.
  Typically this contingency is meant to cover not only claims from the contractor but service
  adds by the design team. It is recommended that a factor of 2% to 5% of the total project
  cost (hard plus soft costs) be carried by the owner.
- 4. Quantity Survey Graphics. Quantity survey graphics included in the estimate report should be understood as the estimator's work product and is meant to provide additional information regarding assumptions that constitute the basis of the estimate. The graphics are not comprehensive and in a number of cases the quantities shown on one page represent supplemental quantities to those shown on another page. The broad brush nature of the quantification reflects the schematic nature of the design and estimate at this phase of the planning process.



5. <u>Vendor / Contractor Input.</u>
Consultation and pricing input has been provided for this or similar projects by the following contractors and suppliers:

a. Log Construction & Rehabilitation Fidalgo Restoration (360) 941-0675 Attn: Pete Bird



## 30% DESIGN DESIGN PHASE ESTIMATE ESTIMATE ESTIMATE

Project MMWD Log Cabin at Phoenix Lake

Building & Site Master Plan - Full Rehabilitation w/Rebuilt Ornamentation

Est Date: 6/8/16
Submission Draft Rev

Est by: RMB

Design Docs: 30% Design Development

Issue Date 6/6/16

Structure Footprint 1,365 sf Interior Footprint 1,150 sf

## A. BUILDING SCHEME

imate Deta		au a a 111 -		unit asst	01/4	trade	assembly	audo 9 occurrentia
de	item description	quantity		unit cost	ext	subtotals	totals (	quals & assumptions
B15	Reconstruction - Cupola, Small Dormers, & Front F	orch						
Recor	nstruct cupola (NIC roofing)	1.00 b	ogt	25,000.00	25,000			
	nstruct dormers (NIC roofing)	1.00 b	ogt	7,500.00	7,500			
New f	front porch deck, posts, and roof/eaves	115.00	sf	150.00	17,250			
Recor	nstruct gable & eaves extensoion	1.00 b	ogt	7,500.00	7,500			
Sheat	th cupola	160.00	sf	10.00	1,600			
Sheat	th dormers & gable extension	90.00	sf	7.50	675			
(N) C	lass A wood shake complete - cupola	160.00	sf	20.00	3,200			
(N) C	lass A wood shake complete - dormers /gable extension	90.00	sf	12.00	1,080			
Valley	y sheet metal / flashing (copper) - cupola /dormers	65.00	lf	15.00	975			
	Subtotal					64,780		\$47.46 /sf struct
B15	Reconstruction - Back Porch & Misc							
New r	rear porch deck, posts, and rail	105.00	sf	100.00	10,500			
Misc	structural repairs	1,150.00	sf	20.00	23,000			
Main	chimney (south) remove cap & grout flue	1.00 b	ogt	1,500.00	1,500			
Exteri	ior wall repairs - see B2010				<u>-</u>			
	Subtotal					35,000		\$25.64 /sf struct
B2010	Exterior Walls - Log Rehabilitation							
Remo	ove & salvage interior paneling for some re-use	1,200	sf	15.00	18,000		NIC closet/bath/l	ktichen
	ir wall logs - material allowance	1 b	ogt	20,000.00	20,000			
Repai	ir wall logs - labor allowance	40 da	ays	3,200.00	128,000			
Prep	and chink log joints	1 b	ogt	20,000.00	20,000			
Budge	et - finish skirt treatment	150	lf	50.00	7,500			
	Subtotal					193,500	\$	6141.76 /sf struct
B2020	Exterior Windows							
	ir or new windows double hung (3'9x3'0 nominal)	9 (	ea	750.00	6,750			
Repai	ir or new windows casement (2'9x2'9 nominal)	1 (	ea	500.00	500			
Repai	ir or new windows casement (2'9x2'3 nominal)	1 (	ea	400.00	400			
	ir or new windows casement (2'6x2'3 nominal)	1 (	ea	375.00	375			
Reins	stall salvaged living room bay window trim	3 (	ea	350.00	1,050			
Reins	stall standard window trim	9 (	ea	150.00	1,350			
	Subtotal					10,425		\$7.64 /sf struct
B2030	Exterior Doors							
	entry door misc repair & hardware upgrade		ea	1,200.00	1,200			
Kitche	en door misc repair & hardware upgrade	1 (	ea	700.00	700			
	Subtotal					1,900		\$1.39 /sf struct
B3010	Roofing		_					
	ace roof sheathing	,	sf	5.00	11,500			
	th cupola - see B15		sf	0.00	_			



# A. BUILDING SCHEME

timate Det ode	ail item description	quantity	unit cost	ext	trade subtotals	assembly totals	quals & assumption
Shea	th dormers & gable extension - See B15	s	0.00	_			
	& replace - Class A wood shake complete	2,300.00 s		23,000			
	class A wood shake complete - cupola - See B15	2,000.00 S		20,000			
	class A wood shake - dormers /gable ext - See B15	S		_			
	y sheet metal / flashing (copper)	100.00 If		1,500			
	y sheett metal/flash (copper) - cupola/dormers - See E			- 1,000			
	eral roof sheet metal / flashing (copper)	2,380.00 s		7,140			
	valley scupper & downspout (copper)	1.00 bg		750			
	er - south entry elev (copper)	20 If		400			
	nspout - south entry elev (copper)	2 ea		400			
	er - north elevation (copper)	7 If		140			
	nspout - north elevation (copper)	2 ea		400			
	Subtotal				45,230		\$33.14 /sf struct
C1010	Interior Partitions						
	ame door opening Bath #1	1 bg	t 400.00	400			
	Subtotal	-			400		\$0.29 /sf struct
C1030	Interior Doors						
New	door - Bath #1 - panel to match	1 ea	2,200.00	2,200			
Existi	ing doors - rehab	3 ea	500.00	1,500			
New	attic acces door in kitchen	1 ea	750.00	750			
	Subtotal				4,450		\$3.26 /sf struct
C1060	Raised Floor Construction						
Fram	e raised floor & steps in living room	175 s	30.00	5,250			
	Subtotal				5,250		\$3.85 /sf struct
C20	Interior Finishes						
	n walls at removed partitions	1 bg		1,000			
	paneling at Bath #1 (new & refinish)	300 s		3,000			
	n floor at removed fixtures & partitions	1 bg		1,000			
	wood flooring at new raised floor in livingrm	175 s		3,500			
	ir interior trim at new windows	12 ea		2,400			D (1)
	ish (exist) int wall paneling to remain - allow	1,000 s		3,000			Partial amount
	ish existing wood floor	1,100 s		5,500			
	window frames	12 ea 110 s		4,200 1,100			
	n at ceiling removed bath/closet soffit #1 - lavatory counter	5 If		1,100			
	#1 - RR accessories	1 bo		500			
	repairs & finish at kitchen cabinetry	1 bg		1,500			
	n & point masorny at living room fireplace	1 bg		1,000			
	grill or doors at fireplace	1 bg		750			
	Subtotal	. 25	,. , , , , , , , , , , , , , , , , , ,		29,700		\$21.76 /sf struct
D20	Plumbing				,		,
	#1 - cut & cap existing plumbing	1 bg	t 500.00	500			
	#1 - toilet & new rough-in	1 ea		2,500			
	#1 - sink and new rough-in	1 ea		2,500			
Bath	#1 - floor drain (primed) & new rough-in	1 ea	1,800.00	1,800			
	en - remove and reinstall sink - new rough-in	1 ea		2,000			
	Subtotal			_	9,300		\$6.81 /sf struct
D30	HVAC						
New	restroom exhaust	1 bg	t 1,200.00	1,200			
	Subtotal				1,200		\$0.88 /sf struct



# A. BUILDING SCHEME

Estimate Det	ail				trade	assembly	
code	item description	quantity	unit cost	ext	subtotals	totals	quals & assumptions
D50	Electrical						
	ice upgrade - excluded						
	rical distribution / upgrades	1,150 s	f 5.00	5,750			
	rical distribution / apgrades lust fan power	1,150 s					
	LED kitchen pendant light fixture	1 ea					
	LED kitchen wall mount light fixture at sink	1 ea					
	rbish living room existing pendant light fixture	1 ea					
	rbish dining room existing pendant light fixture	1 ea					
	lighting - Bath #1	1 bg					
	LED fixtures at exterior entries	2 ea		1,600			
Light	circuiting - switching - upgrade w/controls	1,150 s	f 6.00	6,900			
_	alarm incl new panel	1,150 s	f 7.50				
Com	munications distrib - NIC service & devices	1,150 s	f 1.50	1,725			NIC service
Secu	rity/instrusion alarm - infrastructure prep	1,150 s	f 1.00	1,150			NIC system
	Subtotal				28,750		
F2010	<b>Building Elements Demolition</b>						
Rem	ove misc exterior eaves adornment	1 bg					
	log and salvage re-usable adornment	1 bg					
	ove cupola, dormer & soffit add-ons	1 bg					
	log and salvage re-usable cupola, dormer, etc	1 bg	•				
	ove front porch deck	1 bg					
	ove back chimney (flue) - north	1 bg					
	ove windows (include trim salvage)	12 ea	a 100.00	1,200			
	roof - see roofing	4 1	. 050.00	-			
	ove rear porch rail	1 bg					
	ove rear porch slab-on-grade	105 s					
	ove bathroom fixtures	1 bg					
	ove interior partitions & bath soffit	1 bg					
	n living room flooring for new raised floor	1 bg					
OII-N	aul and dispose Subtotal	1 bg	gt 2,500.00	2,300	12,988		
F2030	Pest Control				12,300		
	& fumigate - pests in log structure			5,000			
	Subtotal				5,000		
G3030	Storm Sewer				-,		
	neter drainage - see sitework						
	Subtotal			_	-		
Z1050	Temporary Facilities and Controls						
	struction fencing - see sitework			-			
Erosi	ion control / SWPPP measures - see sitework			-			
	interior finish protection	1 bg					
	rior scaffolding	1 bg	•				
Misc	lift and material handling equipment	1 bg	gt 5,000.00	5,000			
	Subtotal				16,500		
Raw Cost	of Work					464,373	\$340.20 /sf struct
General	Expenses		13.00%	EU 260			
	or's Fee (OH & Profit)		15.00%	,			
	or Insurance		1.00%				
Contract	or mouralice		1.00%	0,079			



# A. BUILDING SCHEME

Estimate Detail					trade	assembly	
code	item description	quantity	unit cost	ext	subtotals	totals	quals & assumptions
Building Permit			0.00%	-			excluded - by District
Contingency			25.00%	152,583			
Cost Escalation -	Excluded		0.00%	-			Present cost of const
							_
Total Budget Est	imate - Hard Construction			298,542		762,914	\$558.91 /sf struct



**ESTIMATE DETAIL REPORT** 

Est by: RMB

Project MMWD Log Cabin at Phoenix Lake

Building & Site Master Plan - Full Rehabilitation w/Rebuilt Ornamentation

Est Date: 6/8/16
Submission Draft Rev

Design Docs: 30% Design Development

Issue Date 6/6/16

### **B. SITE SCHEME**

## REHABILITATED SITE W/EXPANDED PARKING (b.)

stimate Det	tail					trade	assembly	
code	item description	quantity	/	unit cost	ext	subtotals	totals	guals & assumptions
		7						,
G10	Site Preparation							
Cons	struction Fencing	1,200.00	sf	5.00	6,000			
Tem	p erosion control & SWPPP measures	1.00	bgt	2,000.00	2,000			
	Subtotal					8,000		
G1010	Site Clearing							
Clea	r & grubb for grading	13,000.00	sf	0.25	3,250			
Clea	r & grubb for meadow restoration	8,500.00	sf	0.15	1,275			
	Subtotal					4,525		
G1020	Site Elements Demolition and Relocations							
	features	1.00	bgt	500.00	500			
Exist	ting asphalt path and curb from upper parking	1,100.00	sf	2.00	2,200			
Off-h	naul and dispose	1.00	bgt	1,000.00	1,000			
	Subtotal					3,700		
G1030	Site Earthwork							
	for accessible parking at road		bgt	1,500.00	1,500			
	for expanding clear around building		bgt	1,000.00	1,000			
	ling & cut for trail & parking paving subgrade	3,300	sf	0.75	2,475			
Misc	perimeter grading & gravel parking	9,400	sf	0.30	2,820			
	Subtotal					7,795		
G2010	Roadways			0.00	4 500			
	rel tread - misc repairs road to upper parking		bgt	3.00	1,500			
Grav	rel tread - Phoenix Lake Rd disturbed by grading	875	SŤ	3.00	2,625	4.405		
00000	Subtotal					4,125		
G2020	Parking Lots	475		45.00	7.405			
	crete surfacing & base - Lower parking spot		sf	15.00	7,125			
	ing - Lower parking spot	1	bgt	500.00	500 200			
_	age - Lower parking spot rel tread - new upper parking		bgt sf	200.00 3.00	6,300			
	el stops - gravel parking el stops - gravel parking spot	2,100	ea	350.00	3,150			
	age - Upper parking spot		bgt	200.00	200			
Olgin	Subtotal	,	byt	200.00		17,475		
G2030	Pedestrian Paving					11,410		
	regate trail - lower parking to/around cabin	1,100	sf	18.00	19,800			
	s - road to cabin entry	•	ea	200.00	1,400			
	regate surfacing = Picnic node	600	sf	18.00	10,800			
	regate accessible trail - Upper parking to cabin	1,200	sf	18.00	21,600			
55.	Subtotal	-,-30				53,600		
G2040	Site Development					,		
Rock	retaining walls at building perimeter	85	lf	150.00	12,750			
	retaining walls at road accessible parking	60	lf	150.00	9,000			



# B. SITE SCHEME REHABILITATED SITE W/EXPANDED PARKING (b.)

Estimate Detail					trade	assembly	
code item description	quantity	,	unit cost	ext	trade subtotals	assembly totals	quals & assumptions
เษา นองเท่าเกา	quantity		unit ovol		Juniolais	เงเนเง	γααίο α ασσαπρίισπο
Rock retaining walls at accessible trail from upper lot	100	lf	150.00	15,000			
Fence - repair/rebuild existing wood	270	 If	50.00	13,500			
Fence - new - around tree at upper parking	80	lf	75.00	6,000			
Fence - gates	2	ea	1,000.00	2,000			
Wood bridge - cabin porch to picnic node	30	sf	75.00	2,250			
Picnic node border logs	1	bgt	300.00	300			
Picnic tables		ea	1,800.00	5,400			
Misc site features - rocks and trail border	1	bgt	2,500.00	2,500			
Subtotal		-			68,700		
G2050 Landscaping - Soil Retention Measures							
Erosion control blanket at construction perimeter	5,000	sf	2.00	10,000			
Subtotal					10,000		
G2050 Landscaping							
Planting at construct permeter - Exclude - by Agency	4,300	sf		-			
Planting at restored meadow - Exclude - by Agency	15,200	sf					
Subtotal					-		
G3030 Storm Water Measures							
Drain field around north and west side of cabin	80	lf	75.00	6,000			
Bio-retention basin	80	sf	35.00	2,800			
Subtotal					8,800		
Raw Cost of Work						186,720	]
Conoral Evnonces			12 000/	04.07.4			
General Expenses			13.00%	24,274			
Contractor's Fee (OH & Profit)			15.00%	31,649			
Contractor Insurance			1.00%	2,766			Dudget by
Building Permit			0.00%	-			Budget by owner
Contingency			25.00%	61,352			December 1 15 11 1
Cost Escalation - Excluded			0.00%	-			Present cost of const
Total Budget Estimate - Hard Construction				120,041		306,761	]



**ESTIMATE DETAIL REPORT** 

Est by: RMB

Project MMWD Log Cabin at Phoenix Lake

Building & Site Master Plan - Full Rehabilitation w/Rebuilt Ornamentation

Est Date: 6/8/16
Submission Draft Rev

Design Docs: 30% Design Development

Issue Date 6/6/16

Structure Footprint 1,365 sf

Interior Footprint 1,150 sf

**BUILDING ALTERNATE** 

timate Detail ode item description	quantity	unit cost	ext	trade subtotals	assembly totals	quals & assumption
,	quantity	um ood	OAL	Jubiotaio	totalo	qualo a accumption
C20 Interior Finishes						
Wall paneling at Bath #2 (new & refinish)	280 sf	10.00	2,800			
Patch floor at removed fixtures	1 bgt	300.00	300			
Bath #2 - lavatory counter	5 If	250.00	1,250			
Bath #2 - RR accessories	1 bgt	500.00	500			
Subtotal				4,850		\$3.55 /sf struct
D20 Plumbing						
Bath #1 - toilet & new rough-in	1 ea	2,500.00	2,500			
Bath #1 - sink and new rough-in	1 ea	2,500.00	2,500			
Bath #1 - floor drain (primed) & new rough-in	1 ea	1,800.00	1,800			
Subtotal				6,800		\$4.98 /sf struct
D30 HVAC						
New restroom exhaust	1 bgt	1,200.00	1,200			
Subtotal				1,200		\$0.88 /sf struct
D50 Electrical						
Exhaust fan power	1 ea	500.00	500			
New lighting - Bath #2	1 bgt	500.00	500			
Subtotal				1,000		
F2010 Building Elements Demolition						
Remove wall closet paneling & soffit	1 bgt	1,000.00	250			
Subtotal				250		
Raw Cost of Work					14,100	\$10.33 /sf struct
General Expenses		13.00%	1,833			
Contractor's Fee (OH & Profit)		15.00%	2,390			
Contractor Insurance		1.00%	2,390			
Building Permit		0.00%	209			excluded - by District
Contingency		25.00%	4,633			excluded - by District
Cost Escalation - Excluded		0.00%	4,033			Present cost of const

## PROJECT DESCRIPTION & PROJECT NOTES

THE PROPOSED PROJECT WILL FULLY REHABILITATE THE CABIN INCLUDING SUBSTANTIAL REPAIR, INCLUDING SELECTIVE REMOVAL AND REPLACEMENT OF DETERIORATED LOGS, WHICH MAY NECESSITATE THE SHORING UP OF THE BUILDING AND SELECTIVE DISASSEMBLY OF THE LOG WALLS.

- THE WORK WILL INCLUDE RECONSTRUCTION OF THE FRONT PORCH AND ITS CUPOLA TO MATCH THE EXISTING, AS WELL AS PARTIAL RECONSTRUCTION OF THE REAR PORCH. GIVEN THE EXTANT STRUCTURAL AND MATERIAL CONDITIONS OF THE FRONT PORCH AND CUPOLA, ALONG WITH THE FACT THE EXISTING CONSTRUCTION IS NON-HISTORIC, ALTERNATIVE MATERIAL AND STRUCTURAL ASSEMBLIES MAY BE CONSIDERED TO ENSURE GREATER LONGEVITY THAN WOULD RESULT FROM THE USE OF UNPEELED REDWOOD LOG CONSTRUCTION.
- C. DOORS AND WINDOWS WILL BE RESTORED AND SELECTIVELY REPLACED.
- D. THE ROOFING WILL ALSO BE REPLACED WITH NEW TO MATCH THE EXISTING.
- AT THE INTERIOR, THE SPACES WILL BE REHABILITATED FOR REUSE, INCLUDING THE ADDITION OF BATHROOMS AND OTHER ACCESSIBLE FEATURES, PLUS BUILDING SYSTEM IMPROVEMENTS.

#### FULL REHABILITATION WORK SHALL INCLUDE:

GENERAL UNDERTAKE STRUCTURAL PEST INSPECTION AND TREATMENTS.

#### @ EXTERIOR

- RETAIN AND REPAIR EXISTING FOUNDATIONS, INCLUDING REPLACEMENT OF MISSING AND DAMAGED FACE BRICKS, VENTILATION AND FLASHING ASSEMBLIES.
- 2. REPAIR AND SELECTIVELY REMOVE AND REPLACE STRUCTURALLY DAMAGED
- THIS WORK REQUIRES REPLACEMENT OF LOGS AT THE BOTTOM OF WALLS. THE PRESUMED LOG RESTORATION METHODOLOGY IS TO SHORE AND LIFT
- THE UPPER STRUCTURE AND ROOF IN ORDER TO DISASSEMBLE AND RECONSTRUCT LOG WALLS. EXISTING LOGS AT WALLS WITH CONCEALED FINISHES AT INTERIORS REQUIRE INSPECTION AND EVALUATION AT THE INTERIOR FACE.
- SOME LOG WORK AT THE FRONT BAY, FOR EXAMPLE ARE SPLIT RATHER THAN FULL LOGS, DETERMINE FEASIBILITY OF RETAINING SPLIT LOGS OR. ALTERNATIVELY, REPLACING SPLIT LOGS AT WALLS WITH FULL LOGS.

- REMOVE AND REPLACE FRONT PORCH TO MATCH EXISTING, EXCEPT ALTER SPACING OF THE CENTRAL PORCH POST AS PART OF THE RECONSTRUCTION OF THE CUPOLA.
- REMOVE AND RECONSTRUCT FRONT PORCH ROOFS AND CUPOLA. WHILE THE INTENT IS TO REPLACE THE EXISTING CUPOLA TO VISUALLY MATCH THE EXISTING UNPEELED LOG CONSTRUCTION, ALTERNATIVELY, UNPEELED LOGS MAY BE SUBSTITUTED, AND THE NEW SUPPORT STRUCTURE MAY REQUIRE ADDITIONAL WOOD OR METAL FRAMING TO BE CONCEALED ALONG WITH POSSIBLE NEW FOUNDATION WORK.
- REMOVE ORNAMENTAL LOG WORK AT FRONT OF LIVING ROOM WING.
- RETAIN AND STRENGTHEN EXISTING FRONT CHIMNEY, REMOVING THE CHIMNEY CAP AND SEALING THE CHIMNEY FROM FUTURE USE.
- REMOVE EXISTING REAR CHIMNEY AND REPAIR OR REPLACE UNDERLYING LOGS.
- REPAIR AND REBUILD EXISTING REAR PORCH WITH NEW LOG POST AND RAIL WORK AND NEW DECKING. WHILE THE INTENT IS TO REPLACE TO MATCH THE EXISTING UNPEELED LOG CONSTRUCTION, ALTERNATIVELY, UNPEELED LOGS MAY BE SUBSTITUTED.
- RESTORE AND REPAINT WOOD WINDOW SASHES AND SILLS, OR SELECTIVELY REPLACE TO MATCH; REPLACE SPLIT LOG WINDOW SILLS WHERE DAMAGED OR
- REPLACE WOOD SHINGLE ROOFING AND ROOF DRAINAGE (FLASHING) ASSEMBLIES TO MATCH EXISTING. ADD GUTTERS AND DOWNSPOUTS AS INDICATED.
- 11. PROVIDE NEW EXTERIOR LED LIGHTING AT FRONT AND REAR PORCHES.

#### @ INTERIOR - GENERAL

- 12. SELECTIVELY REMOVE INTERIOR WOOD FRAME PARTITIONS, DOORS AND INTERIOR WALL FINISHES.
- 13. REPAIR UNDERLYING LOG WORK WHERE NEWLY EXPOSED.
- 14. RETAIN INTERIOR LOG WALLS AND CEILINGS.
- 15. REPAIR DAMAGED LOG AND WOOD CEILINGS.
- 16. ADDRESS RODENT/PEST DAMAGE AND CONTROL. PROVIDE ACCESS TO ATTIC
- 17. BUILD NEW, ACCESSIBLE RESTROOM (AT EXISTING BATHROOM), PLUS AN OPTIONAL SECOND TOILET ROOM (AT EXISTING CLOSET).
- 18. REPAIR AND REFINISH WOOD FLOORS.
- 19. CONSTRUCT NEW FLOOR LEVEL IN WEST HALF OF LIVING ROOM.
- 20. UPGRADE AND/OR REPLACE PLUMBING AND ELECTRICAL SYSTEMS.
- 21. ADD INTERNET/WIFI.

#### @ INTERIOR - ROOM-BY-ROOM

- 22. REMOVE ALL EQUIPMENT AND FIXTURES EXCEPT FOR SINK, TO BE REMOVED AND REINSTALLED, AND BUILT-IN PANTRY CABINET, TO BE RETAINED AND RESTORED.
- 23. REMOVE WOOD WAINSCOTING FROM WEST EXTERIOR WALL; RETAIN, REPAIR AND REFINISH AT NORTH EXTERIOR WALL AND AT EAST AND SOUTH INTERIOR WALLS.
- 24. CLEAN AND REPAIR EXPOSED INTERIOR LOGWORK AT WALLS AND CEILINGS.
- 25. INSTALL NEW WOOD ACCESS DOOR AT ATTIC ACCESS AT UPPER EAST WALL. 26. RETAIN AND RESTORE DOORS.
- 27. REPLACE CENTRAL LIGHT FIXTURE WITH NEW LED PENDANT AND REPLACE EXISTING WALL MOUNTED LIGHT AT SINK WITH NEW LED WALL-MOUNTED

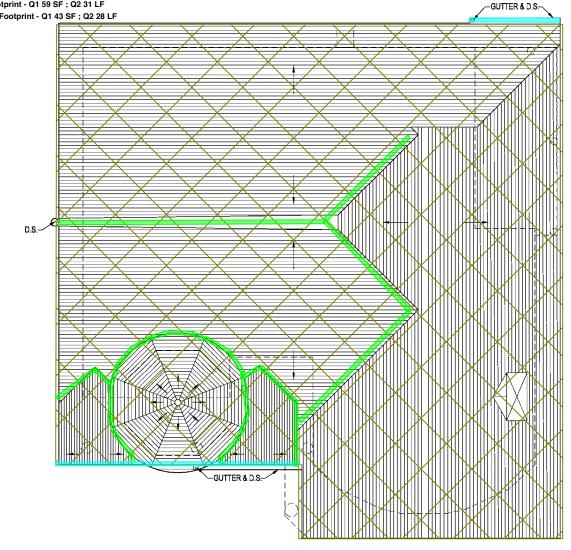
# @ INTERIOR - ROOM-BY-ROOM - CONT.

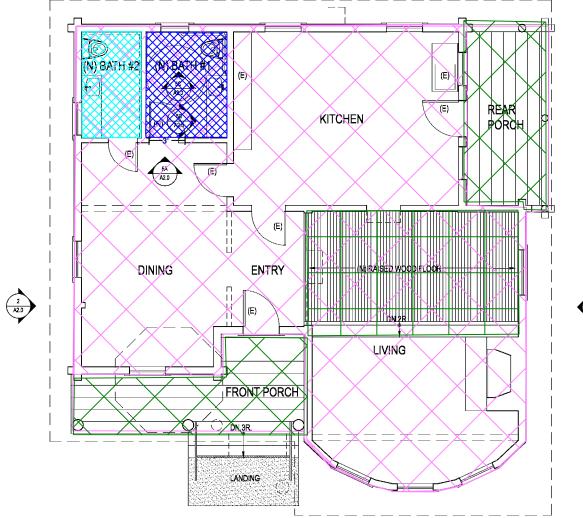
# 28. RETAIN AND CLEAN MASONRY FIREPLACE AND HEARTH; ADD NEW FIXED GRILLE OR DOORS AT FIREPLACE OPENING TO PROHIBIT USE.

- 29. REMOVE WOOD PANELING AT EXTERIOR LOG WALLS, IF FEASIBLE (INSPECTION AND EVALUATION IS REQUIRED TO DETERMINE FEASIBILITY). IF FEASIBLE, RETAIN EXPOSED LOGS AT INTERIOR. WHERE SPLIT LOGS OCCUR (EX: AT FRONT BAY), ALTERNATIVELY REPLACE WITH FULL LOG ASSEMBLIES.
- 30. RETRIM EXISTING WINDOW OPENINGS WITH EXISTING OR MATCHING WOOD TRIM.
- 31. REMOVE WOOD PARTITION AND DOOR BETWEEN LIVING AND ENTRY, REPAIR FLOORS, WALLS AND CEILINGS AT AREA OF REMOVAL.
- 32. ADD NEW WOOD FRAME AND WOOD FINISHED FLOOR AND STEP ATOP REAR PORTION OF EXISTING FLOOR
- 33. RETAIN, REFURBISH AND RELAMP EXISTING PENDANT LIGHT FIXTURE.

- 34. REMOVE WOOD PANELING AT EXTERIOR LOG WALLS, IF FEASIBLE (INSPECTION AND EVALUATION IS REQUIRED TO DETERMINE FEASIBILITY). IF FEASIBLE, RETAIN EXPOSED LOGS AT INTERIOR. WHERE SPLIT LOGS OCCUR, ALTERNATIVELY REPLACE WITH FULL LOG ASSEMBLIES.
- 35. RETRIM EXISTING WINDOW OPENINGS WITH EXISTING OR MATCHING WOOD TRIM. 36. REMOVE WOOD PARTITION AND DOOR BETWEEN DINING AND ENTRY, REPAIR
- FLOORS, WALLS AND CEILINGS AT AREA OF REMOVAL.
- 37. CLEAN AND REPAIR EXPOSED INTERIOR LOGWORK AT WALLS AND CEILINGS.
- 38. RETAIN, REFURBISH AND RELAMP EXISTING PENDANT LIGHT FIXTURE.

- 39. REMOVE ALL EXISTING EQUIPMENT AND FIXTURES, INSTALLALL NEW PLUMBING, ELECTRICAL AND LIGHTING EQUIPMENT AND FIXTURES.
- 40. REMOVE WOOD PANELING FROM WEST EXTERIOR WALL; RETAIN, REPAIR AND REFINISH PANELING AT NORTH, EAST AND SOUTH INTERIOR WALLS.
- 41. REMOVE EXISTING DOOR AND REPLACE WITH NEW 3 FOOT WIDE WOOD DOOR AND OPENING TO MATCH EXISTING.







(3) A2.0)

NO. DATE REV. NOTES :rNo :rDate :rNote

ISSUE NOTES

DATE: 5/26/16

Roth

ABIN

O

LOG

PHOENIX LAKE

**PLANS** 

NO. DATE

:iDate

iiNo

MARIN MUNICIPAL

DISTRICT

COUNTY,

AS SHOWN

DESIGNED BY

DRAWN BY

CHECKED BY MH

ROOF PLAN 2 Page 15 of 16

FLOOR PLAN 1/4" = 1'-0" (22x34 sheet) 1/8" = 1'-0" (11x17 sheet)

